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J A M E S G. W A K L E Y, M.D.

PROPRIETORS:

THOMAS H. WAKLEY, F.R.C.S., AND JAMES G. WAKLEY, M.D.

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Observations

ON THE

TREATMENT OF HÆMORRHOIDS
BY "CRUSHING."

BY GEORGE POLLOCK, F.R.C.S. ENG.,

SURGEON TO ST. GEORGE'S HOSPITAL.

IT had long been a consideration with me that the method of treating hæmorrhoids by ligature, or by clamp and actual cautery, was usually followed by much more pain than should necessarily be attendant on measures adopted to relieve successfully a patient suffering from piles. Indeed, as all surgeons must have observed, the suffering subsequent to an operation proved sometimes to be so severe, that it made me think some alternative could surely be had recourse to which, while it secured the removal of the hæmorrhoid, would possibly render the subsequent condition comparatively one of little suffering or discomfort.

The ligature, however skilfully and carefully applied, destroys the life of the part by degrees only; the portion in its grip does not die instantaneously, and consequently must naturally be a source of more or less suffering till the death of the part is effected. Its application is often followed by very great pain, never without some, and often accompanied by severe spasm of the sphincter, though of course, as regards pain, much depends on the temperament of the patient. No doubt it may be considered as safe an operation as any in which a ligature and a wound are concerned; and it is absolutely efficacious in the hands of one familiar with its details. But in no instance, as far as my experience extends, can it prove both painful—not unfrequently very painful. Mr. Curling on this point says, the sufferings of the patient after the operation vary a good deal, and though in some they are slight and soon subside, in others "they are severe and prolonged, and accompanied by restlessness and want of sleep."¹

The more recently adopted mode of treatment by clamp, scissors, and actual cautery, though, perhaps, somewhat less painful, is still sufficiently severe to occasion much subsequent suffering, and often for some days. A burnt wound must in most cases be attended by more pain, heat, and discomfort than a clean-cut surface: œdema, retention of urine, spasm of sphincter, bearing-down pain in the rectum, are all more or less the common accompaniments of both these methods of treatment.

It is but right, however, that I should quote shortly the opinions of Mr. Curling on the comparative merits of the two operations. His experience in the treatment of hæmorrhoids, is perhaps not excelled by anyone, while his judgment must be respected by all. Mr. Curling says: "Considerable difference of opinion exists as to which operation, the cautery or the ligature, is the best on the score of freedom from suffering, safety, and speedy recovery without confinement. As respects after-pain there is little to choose if care be taken to incise freely before the ligature is applied, and both operations are equally free from danger. The advocates of the cautery have, it is true, magnified the risks of the ligature. But after a lengthened experience I can state that, with one exception, no fatal case of operation by ligature has occurred either in my public or private practice. In 1868 a man aged fifty-two, upon whom I had operated in the London Hospital for internal piles, and afterwards for fistula, was seized with pyæmia, followed by numerous abscesses, and, after a protracted illness of five months, died. Erysipelas and pyæmia have also followed, though very rarely, the operation by cautery. Some amount of danger must be incurred in every kind of operation, serious results sometimes arising from the slightest causes, and the removal of piles cannot be expected to be exempt from risks which may attend a trifling puncture of the finger." "I continue to

give the preference to the ligature, as more convenient to the surgeon and less alarming to the patient. The operation by cautery is more tedious than by ligature, a matter of little moment when the patient is insensible, and special care is necessary in using the cautery to guard against after-hæmorrhage. In a favourable case the patient is able to leave the couch somewhat sooner, and recovery is, on the whole, somewhat more rapid than after ligature, as the healing of the sores does not commence till after the separation of the ligature, a process occupying four or five days, whereas the eschar or superficial slough produced by the cautery is cast off sooner."²

In considering whether any modified process, likely to be followed by less pain, could be substituted for the methods already alluded to, while at the same time perfect relief could be equally ensured, it occurred to me that any thorough and instantaneous destruction of a part is usually comparatively painless—in the injury itself and in its sequence. A heavy weight falling on a finger or toe, and completely crushing the part, is seldom attended by much pain then or subsequently. Nor under such circumstances does much bleeding occur. A man hit by a bullet in soft tissues is known to have been ignorant of the receipt of the injury until the trickle of blood is observed in the neighbourhood of the wound, and thus it occurred to me that if a pile could be rapidly and effectually destroyed at its base by some instrument which in its action would be analogous to that of crushing the part included in its bite, the vessels of the crushed portion would not be very liable to bleed when the surface of the pile was removed, and the nerves being bruised by this proceeding would be less liable to be followed by pain.

It is now some two or three years since I commenced to put in practice these views. The earlier attempts to crush the base of the pile were occasionally partial failures as regarded the perfect freedom from hæmorrhage. Either from want of proper construction the clamp did not effectually spoil the tissues at the base of the piles; or perhaps from too much of the protruding mass being taken up at a time to enable the clamp to act efficiently, or from some other unexpected cause, some bleeding would occur after the clamp was removed, the pile having been cut away; and this had to be dealt with by ligature. Seldom, however, were more than two or three ligatures necessary, and never was troublesome or recurring hæmorrhage encountered. As successive cases continued to be treated in this manner, any defects of the clamp became manifest, and gradual improvements were made. Still the theory, that crushing the base of the pile should entirely obviate the occurrence of hæmorrhage on the separation of the pile and subsequent removal of the clamp, was not as yet fully realised by the results. Sometimes we had no bleeding; sometimes three or four vessels might be required to be ligatured. But still the one satisfactory result observed in all cases thus treated was that the subsequent pain was quite an insignificant matter. It is not wished to imply in this statement that no one ever complained of pain; but in contrast to the pain attendant on ligature, or that noticed after the application of the hot iron, certainly that which has been observed after this system of rapid crushing, may almost be said to be a *minus* quantity. One patient complained of pain for about three hours. In all cases patients have expressed themselves free from severe pain, and many have hardly complained of any after an hour or two. One, who had some years previously undergone an operation by ligature, expressed his extreme gratification at the almost entire absence of even discomfort after the first effects of the ether had gone off.

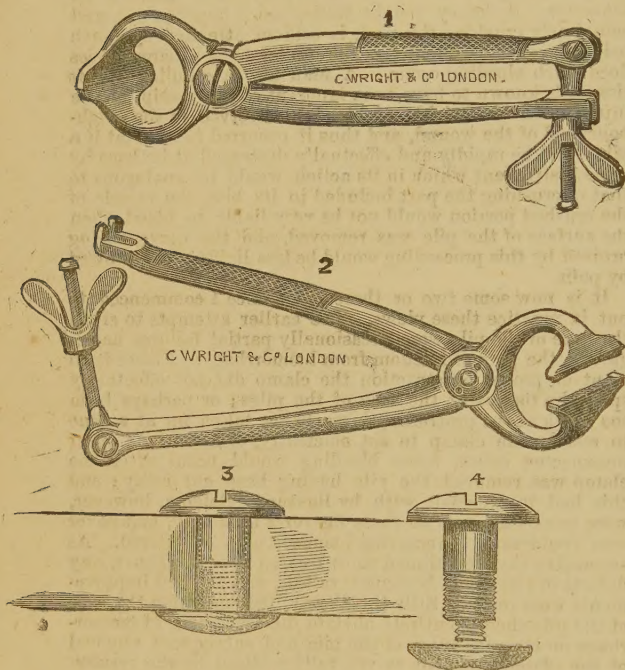
The application of the heated iron to the surface of a fresh cut wound must not only necessarily make it a very painful one, but burning the surface necessarily converts it into a more extensive slough, which has to be thrown off before healing commences. The slough to be shed after the application of the clamp now used by me, is very thin and quite superficial, and is soon cleared away. The œdema following this method of relief is but little compared to that which is often observed to follow the application of the ligature or the cautery. Having now tested all these methods of treatment not a few times, I cannot but express my very strong conviction that, compared with the results of ligature or cautery, the pain and subsequent discomfort after crushing are really trifling. But apart from the question of pain or bleeding, the operation itself is rendered very simple

¹ Curling on Diseases of Rectum, p. 57. Fourth edition.
No. 2966.

² Ibid., pp. 63, 64.

by the use of this kind of clamp, and in that point alone we venture to think it will be considered an improvement by those who care to test it for the removal of hæmorrhoids.

Messrs. Wright and Co., of New Bond-street, and Messrs. Weiss and Co., of the Strand, have made several clamps for me, each being some improvement on the last; but the most perfect, and that now used, was made by Messrs. Wright, at the suggestion and under the superintendence of Mr. Benham, at present a pupil at St. George's Hospital. His mechanical skill has not only been the means of effecting improvements in this and other instruments, but gives promise of great service in many respects, as a thoughtful and successful inventor. His own description of the clamp is appended, and will be readily understood with the aid of the illustrations given herewith.



The process of the application of the clamp remains to be described. The patient suffering from hæmorrhoids, being prepared for the operation in the usual manner, is to be placed under the influence of ether. He is then turned on his left side; the right leg to be well flexed and fixed with a strap, which is to be carried under the knee and round the neck. The pile to be removed is to be drawn well down by pronged hook, or forceps. The clamp is then to be applied to the base of the pile, and at once tightly and firmly closed by the action of the screw at the end of the handles. The portion of pile which protrudes *inside* the lips of the clamp is then to be removed by a pair of curved scissors. The clamp may afterwards be retained, still grasping the stump of the pile for any time the operator may consider desirable. Our usual custom is to retain it from half a minute to a minute. If the pile be large and thick it may be well to retain it for a rather longer period. This process is, of course, to be repeated according to the number of masses to be got rid of.

Since this last clamp has been used, one or two little vessels have bled after the base of the pile was relieved from the grip of the instrument; nothing more, however, than would have ceased without interference in a short time. But to keep the patient clean, and to avoid giving any cause for uneasiness, a ligature had better always be applied at once to any suspicious bleeding point rather than run the risk of its continuance. A ligature applied under such conditions is known not to cause any subsequent pain, and in its effects is not to be compared for a moment to the pain occasioned by a ligature placed through or round a pile. In fact, pain, as already mentioned, is not often complained of when the patient has recovered from the effects of ether, even though two or three ligatures may have been applied to as many

bleeding points. It is better, however, to avoid all risk of bleeding by securing any continuous oozing point. Every surgeon familiar with operations connected with the lower bowel is aware of the necessity of proper respect for any trifling point of bleeding, and it is far better to secure it while the patient is quiet and under the influence of ether, than to run the risk of having to attend to it later. Still it will generally be found that very little is required in this respect after the pile has been thoroughly crushed by the forceps described. In the various cases as yet so operated on, no such accident has followed; but on the principle that it is always better in surgery to avoid a difficulty than have to overcome one, we recommend the securing of any suspicious bleeding point than to run the risk of its continuing to bleed, or trusting to the chapter of accidental arrest.

Having now tested this operation in many cases of hæmorrhoids, and feeling satisfied that, as regards pain, it is preferable to treatment by ligature or cautery; that as regards its efficiency, it is equal to either; and as regards the operation, it is essentially simple and satisfactory, it is but right that it should be brought more generally to the notice of the profession than can be done by its performance alone in the operating theatre of St. George's Hospital, or in the smaller sphere of private practice. The experience of not a few years in hospital work will perhaps be some justification for my venturing to recommend an operation which to my mind presents a simplicity that places it within the reach of any practitioner, and at the same time renders it one of far less suffering to the often too sensitive patient who may be the subject of hæmorrhoids. I need only add, that the subsequent dressing employed after the operation is completed, is as simple as the operation itself. "Tarred cotton," as prepared by Messrs. Bell & Co., of Oxford-street, or that prepared with salicylic acid, with warm bathing, is the only local application employed until the sores are healed.

The following are Mr. Benham's remarks on the construction and mechanical advantages of the clamp:—"1. It is so constructed as to form a multiplying double lever of the first kind, the fulcrum being formed by the joint, the resistance by the tissues acted on, and the power by the thumb-screw at the other extremity of the clamp. 2. The parallelism of the jaws is governed by the joint; for the former being situated in close proximity to the latter, any appreciable lateral spring is prevented, especially as the substance of metal forming this part of the structure is of great strength—hence all the strain is thrown upon the joint—the construction of which is as follows: The opposing surfaces are of large size, are accurately fitted together, and are connected by a lock-nut, so that it is almost impossible for the jaws to spring from their parallelism in the slightest degree. 3. The opposing surfaces of the jaws are *not horizontal*, but are inclined at an angle of 45° , which has the following advantages—(a) Besides a jamming, there is a grinding movement; (b) The power in overcoming the resisting forces is represented as two equal forces, acted upon by their resultant at an angle of 45° ; (c) By this inclination it pulls the surface of the bowel close to the jaws—this being an immense advantage, especially if the operator be unable to draw the tissues, to be acted upon, close to the opposing jaws. 4. That portion of the clamp which forms the handles is so constructed as to admit of a slight spring or elasticity, when the screw is firmly applied, has the following advantage—namely, if, when the clamp is first applied to the tissues, they do not yield, they may be made to do so by the gradual crushing power which is brought to bear by the elastic recoil of the handles.

"The following is a rough estimate of the mechanical advantages gained, the calculation being somewhat under than above the estimation:—1. The extremity of the handles being four times further from the fulcrum than the jaws, an advantage is gained of four to one. 2. The screw which is attached to the extremity of the handles having a pitch of one-eighth to the inch, and the radius of the thumb-screw being one inch, there is a gain of eight to one, and if the screw be applied with a force of only 20 lb., we have $8 \times 20 \text{ lb.} = 160 \text{ lb.}$ "

It may hereafter prove advantageous to use this powerful clamp in various other operations, in which the removal of parts may be desirable without the intervention of the knife; such, for instance, as a portion of the tongue, pendulous tumours, &c.; but, as yet, I have entirely confined its use to the treatment of hæmorrhoids.

BRIEF NOTES OF A VOYAGE TO BRAZIL.

By THOMAS B. PEACOCK, M.D., F.R.C.P.,

HONORARY CONSULTING PHYSICIAN TO ST. THOMAS'S HOSPITAL, AND
CONSULTING PHYSICIAN TO THE HOSPITAL FOR DISEASES OF
THE CHEST, VICTORIA PARK.

HAVING recently paid a visit to Brazil, I think a short account of my voyage may not be without interest.

Leaving Southampton by one of the mail steamers in the afternoon, the first stage of the voyage, to Lisbon, is generally accomplished in about four days; but in our case, in consequence of the vessel having to call at Cherbourg, and of our being detained outside the bar of Lisbon by fog and a heavy swell, the voyage occupied five days. Thence to St. Vincent, Cape Verde Islands, is about six days' steaming, and from St. Vincent to Pernambuco occupies about the same length of time, and the voyage from Pernambuco to Rio is accomplished in about five to six days; so that the whole time from Southampton to Rio is about twenty-two days, though with the powerful steamers of the Royal Mail Company the time could probably be easily reduced by one or two days. The distance measured on the chart is 5170 nautical miles, or probably, taking the actual course of the ship, 6200 nautical miles.

In going out we went through the Canary Islands, passing within about eight miles of Santa Cruz, the capital of Teneriffe. I was disappointed in not getting a good view of the Peak; but we passed it at night, and though it was bright moonlight, the island was covered with a dense mass of cloud.

St. Vincent is a very remarkable island. It consists of ranges of mountains which, though picturesque in their outlines, being entirely devoid of verdure, are not pleasing. It, in fact, resembles an immense cinder, and seems to be composed of masses of lava with intervening layers of volcanic ash. The bird rock which arises abruptly from the sea to a considerable height at the entrance of the harbour of Porto Grande shows this structure very conspicuously. The island of Santo Antonio, which lies to the north-west of Porto Grande, is a great contrast to the island of St. Vincent, having some appearance of luxuriance, and producing vegetables and fruit in abundance. This difference is probably partly due to the soil being less porous than that of St. Vincent, and partly to its position exposing it more directly to the north-east trade wind, and so giving it a better supply of moisture, either in the form of rain or dew. On both the occasions of my being at St. Vincent on the voyage out and home, the island of St. Antonio was enveloped in a thick mist, though the sky at St. Vincent was quite clear. It is the opposite or north-east side of St. Antonio which is the most productive, and that side is the most directly exposed to the trade wind.

From St. Vincent, in lat. $16^{\circ} 34' N.$ and long. $25^{\circ} 1' W.$, to Pernambuco, in $8^{\circ} 3' S.$ lat. and $34^{\circ} 49' W.$ long., is 1614 nautical miles, and the time occupied in the voyage six days. The first land which is usually made on approaching South America is the coast about the city of Olinda. This city is beautifully situated on a high and well-wooded point of land projecting into the sea—indeed, it is said to owe its name to the beauty of the site. Immediately after passing Olinda Pernambuco comes into sight; here the larger vessels anchor in an open roadstead two or three miles from the land, but smaller vessels enter the harbour. This is formed by a reef of rocks which rises abruptly from a depth of three and a half to four and five fathoms. Inside the harbour is shallower, and there are two entrances into it, one to the west of the lighthouse, and between it and an old Dutch fort, which can only be used by boats and small vessels, the other with deeper water further to the east. The reef is spoken of by Mr. Darwin as "perhaps the most artificial-looking natural structure to be seen in any part of the world. He describes it as running in a perfectly straight line for several miles, parallel to and a short distance from the coast. Its surface is level and smooth; at high-water it is covered, but at low-water the summit is left dry, and it might then be mistaken for a breakwater erected by Cyclopean workmen. On this coast the currents of the sea tend to throw up in front of the land long spits and bars of

loose sand. In former times a long spit of this kind seems to have become consolidated by the percolation of calcareous matter, and afterwards to have been gradually upheaved, the outer and lower portions during this process having been worn away by the action of the sea, and the solid nucleus left as we now see it. Although night and day the waves of the open Atlantic are driven against the outside of this wall of stone, yet the oldest pilots know of no tradition of any change in its appearance. This durability is due to a tough layer, a few inches thick, of calcareous matter wholly formed by the successive growth and death of the small shells of serpulæ, together with some few barnacles and nulliporæ, which are hard, very simply organised sea-plants."

In front of Pernambuco the reef has been built upon so as to form a pier; and ordinarily the water in the harbour is perfectly quiet and smooth, but occasionally the swell rolls entirely over the reef, producing rough water inside. The reef has a width of from thirty to sixty yards, and it is composed of an obscurely stratified hard sandstone.

Pernambuco consists of three towns—Recif, Santo Antonio, and Boavista. The first is built at the side of the harbour, and contains only warehouses, offices, and establishments connected with the shipping. In the other towns, which are separated from Recif by the harbour and a small river, the streets are wider than in most Brazilian towns, and the shops are good and apparently well supplied with articles of European manufacture. Altogether, Pernambuco is one of the largest and best towns in Brazil, and it is the seat of a large export trade in sugar and cotton, which are brought down from the interior by railway.

From the complete exposure of the coast off Pernambuco to the swell of the South Atlantic driven by the south-east trade wind, the landing from the ships in the roadstead is often difficult; but as the native boats are large and powerful and the boatmen very expert, accidents seldom if ever occur; but the landing is sufficiently difficult to try the nerves of inexperienced voyagers. The fishermen use a kind of raft or catamaran, called "jangada," with which they go out to sea many miles.

The next port, which is reached after about thirty-six hours' steaming, is Bahia or San Salvador. This, as the name indicates, is situated upon a large bay, partly protected towards the south east by the island of Itaparica. The town is built around a smaller bay within the larger one. It was formerly the capital of Brazil and is still a large and important place, and has the advantage of being much more healthy than Rio. The city consists of an upper and lower town. The latter is built upon the shore of the bay, and is chiefly occupied by establishments connected with the shipping. The upper town is situated on a ridge, rising 500 or 600 feet from the sea. This contains the private residences and many churches. Formerly it was very difficult of access from the shore, and visitors used to be carried up the steep incline by negroes in a kind of palanquin or open sedan chair; now, however, there is an elevator, by which persons are rapidly transferred from the lower to the upper level. The upper town consists chiefly of one long, narrow, irregular street, running on the ridge parallel to the bay, and as the ground inclines rapidly on each side there are at intervals beautiful views into the country and to the bay. In the suburbs the better class of houses stand separately in small gardens. The Passeo Publico, about a mile from the centre of the town, is situated on a high point, overlooking the bay, and is rich in tropical vegetation. Here for the first time I saw the Royal or Imperial Palm, the *Oreodoxa oleracea*, the Pandanus or screw pine, and various other tropical trees. The Fan palm is common in the gardens at Bahia, and mango trees are very common. A sail of about three days from Bahia brings the ship to the entrance of the harbour of Rio, passing during the voyage the rocks and islets of the Abrolhos and Cape Frio. As we approached Cape Frio there was a very marked change in the climate, the heat being sensibly diminished, from the existence of a cool current which flows up the east side of South America. After arriving off the north-east coast of South America the temperature of the seawater was regularly $84^{\circ} F.$, while off Cape Frio it was only 80° to 82° , and to this greater coolness of the sea the comparative freshness of the atmosphere off Cape Frio is doubtless due.

The city of Rio, as is well known, is placed in a large and almost landlocked bay, surrounded by mountains of very picturesque, almost grotesque, forms, attaining very considerable elevation, and clothed in their lower slopes with most luxuriant vegetation. The entrance to the bay is

between two forts situated on rocky elevations—St. Julian and Santa Cruz. It is very narrow, scarcely a mile in width, though within the entrance the bay expands, and it runs a considerable distance inland, and is broken into numerous smaller bays with intervening promontories, and studded with numerous rocky islands. On the left side of the entrance are situated the Sugar-loaf and the Corcovado mountains, respectively attaining heights of 1270 feet and 2272 feet. More towards the sea is the Gavia, a very curiously-shaped hill, 2575 feet high, and further inland are the peaks of Tijuca, the highest attaining a height of 3316 feet. On the right hand side of the bay are situated the Organ mountains, picturesque peaks of still greater elevation.

The city of Rio is situated on a peninsula jutting out into the bay on the south-western side, and not far from the entrance. The site is low and level, and does not afford any natural facilities for drainage, and the attempts which have been made to improve it do not appear to have been very successful. The outlet of the drains is into a small bay within the larger one, through which there can be very little current, instead of being carried into the open sea. The entrance to the bay is too narrow to admit of a free sweep of tide, and the mountains which surround the town, though they add greatly to the beauty of the site, must interfere with the free perfilation of air. The supply of water is also at present very defective. The streets are narrow and the houses built very closely together, and closed at the back. I have also reason to believe that very many of them lack the proper arrangements for cleanliness and comfort. It is therefore no cause for surprise that the town is very unhealthy, and that yellow fever prevails, more or less, during the hot season every year. Arrangements are being carried out for an increased supply of good water to the town, and it is to be hoped that this will lead to an improvement in its sanitary condition. Though, however, Rio itself is so unhealthy, there are at short distances from the city localities that are in every respect unexceptionable. The Europeans generally reside during the unhealthy season at hotels or country houses on the hills a few miles out of town; and of these Tijuca, about eight miles from Rio and 800 feet above the sea, is one of the most popular places of residence. I myself lived while there at Anderye Grande, at an hotel on the side of a mountain about four miles from Rio, and 400 feet above the bay. Here the mornings and evenings were delightfully cool, and the hotel commanded a beautiful view down a forest-clad valley, with Rio and the Organ mountains in the distance; and I have every reason to believe that the place was quite healthy.

From the peculiar form of the mountains around Rio, the impression would be conveyed that they owe their origin to volcanic action, but this is not the case. They consist of primitive rocks—quartz, granite, gneiss, sienite, &c. It is the opinion of Agassiz that the country has been subjected to the action of glaciers, and this opinion he founds upon the existence of travelled boulders in situations which they could scarcely occupy unless conveyed thither by ice.

I should have wished to obtain some information in reference to the climate of Rio and Brazil, but in this I have very imperfectly succeeded. From the great extent of the country, which ranged from 4° of North latitude to 33° 40' South latitude, a distance of about 2600 miles, it will readily be understood that the temperature must vary greatly in different parts. At Para, in the north, it has a mean of 81° F., and a range of from 76° at night to 85° in the day; at Ceara the range is from 83° to 75°; at Pernambuco from 77° to 86°; and at Bahia from 75° to 85°. The temperature of Rio is somewhat less, while at Rio Grande do Sul, in the south, it is 44° in the winter and 85° in the summer. At the River Plate the temperature is said to have an average of 65°. Of the rainfall I am unable to give any specific statement, but from the number of running streams and the extreme luxuriance of the vegetation, it is evident that there must be a large fall of rain.

(To be concluded.)

On the 16th ult., a large number of the inhabitants of Ottery St. Mary and its vicinity, assembled in the Town Hall for the purpose of asking Dr. Whitby to accept a proof of the estimation in which he is held by those among whom he has practised for nearly twenty-eight years. The testimonial consisted of a gold watch, value £25, and a purse of 150 guineas.

A THIRD SERIES OF CASES OF STONE IN THE BLADDER TREATED BY LITHOTRITY AND RAPID EVACUATION OF THE FRAGMENTS (BIGELOW'S METHOD).

BY WALTER J. COULSON, F.R.C.S. ENG.

CASE 1.—Edward S—, aged fifty-nine, living in Yorkshire, came under observation Feb. 16th, 1880. He complained of the ordinary symptoms of stone in the bladder, and had suffered from them for about three years; had only once noticed a little blood in the urine. Not subject to gout or rheumatism; no family history of stone; has not suffered from pain in the back or loins. Frequency of micturition is now the most prominent symptom; he passes urine nearly every quarter of an hour during the day. The secretion is of a pale-sherry colour, has an alkaline reaction, sp. gr. 1018, and deposits mucus and phosphates. The patient's general health is good. A small calculus is readily detected on sounding.

On Feb. 19th, the patient being under the influence of ether, and the narrow meatus urethræ having been incised with a bistourie cachée, I crushed the stone about twenty times, using the fenestrated lithotrite. Bigelow's apparatus with the curved evacuating tube was then applied, and the detritus removed. Owing to the rigidity of the enlarged prostate, some little difficulty was experienced in the introduction of the tube. In order to overcome this, I had recourse to a method which I can confidently recommend for adoption in all similar cases. Having passed the tube down the urethra as far as it would go, I attached the bottle and gently injected a little water. The fluid, finding its way into the bladder, dilated the urethra, and the tube readily followed. On completion of the operation, the bladder was examined with the non-fenestrated instrument, and no fragments were detected. The operation lasted twenty-four minutes, and was well borne by the patient. The weight of the fragments removed was seventy grains.

Two hours after the operation the patient passed urine freely; there was no trace of blood, and only slight pain in the urethra. At 10.15 P.M., temperature 99°, pulse 72, the patient comfortable in every way. On the following day the condition was perfectly satisfactory; no pain, no débris in urine, which was passed freely. The patient was allowed to sit up on the 21st, and on the 23rd (the fourth day after the operation) he was free from all symptoms of calculus.

CASE 2.—Joseph L—, aged seventy-one, came under observation March 2nd, 1880, suffering intensely from symptoms of disease of the urinary organs. He stated that more than twenty-five years ago he began to notice brick-red sediment in his urine, and occasionally larger fragments. There was at first not much local irritation, but a few years later micturition became very frequent, and he suffered from pain at the end of the penis, and smarting along the urethra. About sixteen years ago he appears to have had an attack of acute cystitis, which was at the time attributed to "catching cold." The symptoms were very severe, and the urine subsequently became very offensive, and often contained a great deal of blood. The intensity of the symptoms afterwards abated, but about four months ago they again became very severe. When first seen the patient was passing urine every half hour, and suffering intense pain, which was greatly aggravated by jolting. The urine was very offensive, strongly ammoniacal, with a copious white gelatinous precipitate consisting of pus cells, phosphates, and much vesical epithelium; sp. gr. 1012. The patient had a careworn look indicative of severe suffering, and had lost flesh rapidly during the last few months. No history of gout or rheumatism, and no apparent hereditary tendency to those affections or to calculus; the patient had always lived freely. A large calculus detected on examination.

On March 4th, ether having been administered, I crushed the stone nearly fifty times, using a fenestrated lithotrite. The parts were much relaxed, and on that account there was some difficulty in introducing the instrument. After using the curved tube and thoroughly washing out the bladder, the lithotrite was reintroduced and the fragments repeatedly

crushed. The tube was again used and a quantity of débris removed, but there were still many fragments left in the bladder. The patient was under the influence of ether for forty-seven minutes, and upon the whole bore the operation well, but owing to his condition it was not thought expedient to prolong the sitting. The weight of the fragments removed was 210 grains. After the operation a warm poultice was applied to the supra-pubic region. On the evening of the day, temperature 102°, pulse 100. Some pain in passing water; urine clear, without offensive odour; no débris.

On the following day the patient was comparatively comfortable; had had a good night, and there had been no rigor. The pain in passing urine was somewhat less, and the calls to do so less frequent. Ordered a suppository containing half a grain of morphia. In the evening a quantity of grit was passed. Forty-five ounces of urine were voided during the twenty-four hours succeeding the operation. On the second and third days the condition of the patient was satisfactory. The urine was abundant and free from offensive odour, and contained several fragments. On the fourth day after the sitting the urine again became offensive, and the muco-purulent deposit increased in quantity.

On the 10th of March the operation was repeated, the patient being, as before, under ether. I made eleven distinct crushings, after having with some difficulty secured what from its size appeared to be a second calculus. The operation lasted about half an hour. In consequence of the patient's weak condition it was not thought advisable to persevere with the operation, during which, however, sixty-five grains of débris were removed. In the evening the patient's condition was comparatively satisfactory; there were no rigors, and the urine was free from blood. Pulse 100, temperature 103°. Some pain above pubes and in passing urine. The morphia suppository was repeated. On the following day the pulse and temperature were normal. Forty-five ounces of urine were passed in the twenty-four hours succeeding the operation. During the next three days the patient's condition still further improved. The urine, however, contained a great quantity of pus and vesical epithelium, and had a slightly ammoniacal odour.

On March 15th the patient was submitted to a third operation. The fenestrated lithotrite was first used, and was followed by Bigelow's apparatus. The non-fenestrated lithotrite was subsequently introduced, and several small fragments were crushed in succession. The bladder was then washed out as before, and débris weighing sixty grains was removed. The operation lasted thirty-five minutes. The patient, however, appeared much weaker than previously, and it was deemed unsafe to prolong the administration of ether. In the evening the patient expressed himself as feeling more comfortable. Temperature 100°; pulse 96; tongue moist; no thirst.

On the following day the temperature and pulse were normal; urine free from blood, but containing muco-purulent matter. No débris passed. On the second day after this sitting the patient's condition appeared to be so far improved that he was allowed to take a short drive. On March 18th he was reported to be still better, the urine was clearer, and the pain less troublesome. Ordered a mixture consisting of the decoctions of uva ursi and tritium repens. The improvement continued until the 21st of the month, when he began to complain of great pain in the bowels and in passing urine, and of thirst and loss of appetite. The tongue became dry, and the abdomen tympanitic. On the following day all the symptoms were aggravated, the meteorism increased, vomiting and hiccough took place, and the urine dribbled away involuntarily. The patient died at 2 A.M. on March 23rd.

Post-mortem examination sixty-three hours after death.—Body fairly nourished; signs of decomposition evident. Heart and lungs healthy. In abdomen evidences both of recent and old-standing peritonitis. Bladder adherent to neighbouring organs, its walls thickened and pulpy, breaking down on slight pressure; all its coats in an advanced stage of degeneration; its cavity filled with pus; a single tiny calculus, of the size and shape of a pea, was found imbedded in the pulpy mucous membrane of the posterior wall. No fragments discoverable. Ureters much dilated, and filled with pus. Numerous abscesses in both kidneys.

CASE 3.—Martin O—, aged fifty-four, came under observation April 6th, 1880, complaining of the ordinary symptoms of calculus in the bladder. He stated that during the last five years he had passed several small calculi, and

that, for some time before these began to appear his urine was often high-coloured, and deposited a pinkish sediment and particles of gravel. During the last nine months the pain and frequency of micturition had become much more troublesome, and his urine had several times contained blood. The pain apparently was not increased by movement; it was most marked at the end of the penis. The patient had always lived freely. There was no family history of gout or rheumatism. His urine, when examined, was found to be of a light sherry colour, with an acid reaction and a deposit of urates, uric acid, and vesical epithelium; sp. gr. 1015. A calculus detected on sounding.

On April 7th, the patient being under the influence of ether, I passed a fenestrated lithotrite, and found that the bladder contained several calculi. These were crushed eighteen times in succession, and Bigelow's straight tube subsequently introduced. This, however, became blocked up by a collection of fragments, and had to be removed, and the washing out was completed with the aid of a curved tube. On withdrawal, the bladder was examined with a non-fenestrated lithotrite and a sound in succession, but no fragment could be detected. The operation lasted thirty minutes, and was well borne by the patient. The weight of the fragments removed was one hundred grains.

The operation afforded complete relief to all the symptoms, and was not followed by any local or constitutional disturbance. The urine showed no traces of calculus, and on the third day after the operation the patient expressed himself as freed from all his previous symptoms.

Remarks.—The second of these cases presents, in all its features, a marked contrast to the other two. The duration of the symptoms, their severity, and the obviously profound constitutional disturbance conspired to render the patient a very unpromising subject for any operative procedure. The first and second sittings were, however, followed by far less local and constitutional irritation than might have been expected; and had the patient been able to sustain a more prolonged administration of the anæsthetic, it is probable that the bladder would have been freed from all fragments at the second sitting. The third operation was not immediately followed by any symptoms indicative of the approaching fatal termination. These did not appear until the sixth day, the patient's condition in the interval being so far satisfactory that he was allowed to take a short drive. The state of the urinary organs, as revealed by the autopsy, clearly demonstrated the impossibility of a successful result, and that temporary relief of the patient's sufferings was all that could have been attained. For many years the symptoms had been indicative of the presence of a calculus in the bladder, and the marked pathological changes were exactly those usually found in cases of long standing where proper surgical aid has not been afforded. With regard to the operation in this case, the difficulty in passing the tube, due to the extremely flaccid condition of the urethra, is a point worthy of notice. Instead of gliding over the surface, the tube was felt to be continuously resisted in its passage by a fold of the lining membrane and wall of the urethra. In the first case, the difficulty in introducing the tube was due to the enlargement of the prostate and consequent rigidity of the prostatic portion of the urethra. It is most important in all such cases to avoid using force. I have reason to believe that in one if not two recent instances a fatal result has followed unsuccessful attempts to introduce the full-sized evacuating-tube. It is obvious that if by a protracted operation we thoroughly break up a calculus and then fail to relieve the bladder of the numerous sharp fragments we have made, we expose the patient to serious risk, and his prospects will in all probability be further impaired by repeated but unsuccessful attempts at introducing the evacuating-tube. The plan of injecting a little fluid, as described in the notes of the first case, will be found to answer equally well, whether the difficulty be due to the above-mentioned causes, or to another sometimes met with—viz., the adhesion to the urethral mucous membrane of pulverulent débris. Obstruction from this cause was experienced in one of the cases recorded in THE LANCET, Jan. 31st, of this year. While taking care not to injure the urethra by the introduction of the tube, it is, of course, equally necessary to avoid pinching and lacerating the mucous membrane of the bladder when using the lithotrite. This accident is likely to occur if the lithotrite be pressed against the base of the bladder so as to produce a hollow into which the stone may fall, and it may be guarded against by adopting Civiale's method, in which contact with the vesical walls is as far as

possible avoided. In none of my cases was there any trace of blood in the urine passed after the operation. The results in the first and third cases of the series now reported must be regarded as eminently satisfactory, and well illustrate the advantages of Bigelow's method. No local or general disturbance was set up by the operation, while the relief afforded was immediate and complete.

Harley-street, W.

ON GLYCERINE IN FLATULENCE, ACIDITY, AND PYROSIS.

By SYDNEY RINGER, M.D.,

AND

WILLIAM MURRELL, M.D.

AN old gentleman, who for many years suffered from distressing acidity, read in a daily paper that glycerine added to milk prevents its turning sour, and he reasoned thus: "If glycerine prevents milk turning sour, why should it not prevent me turning sour?" and he resolved to try the efficacy of glycerine for his acidity. The success of his experiment was complete, and whenever tormented by his old malady he cures himself by a recourse to glycerine. Indeed, he can now take articles of food from which he was previously compelled to abstain, provided always that he takes a drachm of glycerine immediately before, with, or directly after, his food. He recommended this treatment to many of his friends—sufferers like himself—and one of these mentioned the above circumstances to us.

We have since largely employed glycerine, and find it not only very useful in acidity, but also in flatulence and pyrosis, and that it sometimes relieves pain. We meet with cases where flatulence, or acidity, or pyrosis is the only symptom, but more frequently these symptoms are combined. Some patients rift up huge quantities of wind without any other symptoms than depression of spirits; in others we get flatulence and acidity, one or other predominating; and we meet with others who suffer from acidity, flatulence, and also pyrosis. In all these various forms we find glycerine useful, and in the great majority of cases very useful. We do not mean to say that in all cases it is superior to other remedies for these complaints; indeed, in several instances it has only partially succeeded, where other remedies at once cured. On the other hand, in some cases glycerine speedily and completely succeeded, where the commonly used remedies for acidity and flatulence completely failed. We do not pretend to estimate its relative value to other remedies; we are only anxious to draw attention to its virtues.

Gas is in some instances formed in the stomach, in others in the large intestine, in some patients in both. Our observations were made on stomach flatulence, and as glycerine is so readily absorbed we should hardly expect that it would influence the formation of wind in the colon, except given in large doses, and when it acts as a slight laxative, and so expels the putrefying mass which forms the wind.

In some cases it removes pain and vomiting, probably, like charcoal, by preventing the formation of acid acids, which irritate delicate and irritable stomachs.

We suggest that it acts by retarding or preventing some forms of fermentation and of putrefaction. J. Mekulics¹ shows that glycerine prevents putrefaction of nitrogenous substances, as of blood diluted with water, which speedily decomposes at the ordinary temperature of the air. Two per cent. of glycerine retarded decomposition for twenty-four hours; 10 per cent. for five days. If the fluid were placed in the hatching oven, then 2 per cent. retarded decomposition for several hours, 10 per cent. for forty-eight hours, and 20 per cent. altogether prevented putrefaction. He also proves that glycerine destroys bacteria and prevents the formation of septic poison, though it will dissolve and preserve the septic poison itself.

Dr. E. Murk² finds that 2 to 3 per cent. will delay lactic fermentation in milk from eighteen to twenty-four hours.

Burnham Wilmot, 1860, says glycerine preserves meat so that after several months' immersion the meat is sweet and

can be eaten; and Demarquay proves that both animal and vegetable substances may be kept for six weeks to two months by glycerine.

Glycerine, however, does not prevent the digestive action of pepsin and hydrochloric acid; hence, whilst it prevents the formation of wind and acidity, probably by checking fermentation, it in no way hinders digestion. We administer a drachm to two drachms either before, with, or immediately after food. It may be given in water, coffee, tea, or lemon and soda water. In tea and coffee it may replace sugar, a substance which greatly favours flatulence, as, indeed, does tea in many cases. In some instances a cure does not occur till the lapse of ten days or a fortnight.

A CASE OF LITHO-NEPHROTOMY.

By E. HOOPER MAY, F.R.C.S.,

SURGEON TO THE TRAINING HOSPITAL, TOTTENHAM.

MRS. B—, aged fifty-five, a pale but fairly healthy-looking woman, complained, in July, 1879, that her urine was thick and very offensive, and that for some time past, though able to perform her duties, she had not been feeling well. The urine was found to contain pus. Upon examination on the 17th September, a large tumour was found on the right side of the abdomen, occupying the space between the last rib and the crest of the ilium, and bulging anteriorly and into the loin. This was believed to be a suppurating kidney, and the opinion received confirmation from the fact that although at the time of the examination the patient had been passing clear healthy urine, almost immediately after the manipulation she passed a quantity which was thick and offensive. On the 15th October the patient was admitted into the Tottenham Training Hospital. During the preceding three weeks there had been more or less pyrexia. The tumour had increased in size, and the urine, which had varied, was clear. When thick, it had been found to contain a large quantity of muco-pus and many blood-cells, but no casts. The history of the case was briefly as follows:—Thirteen years ago the patient had a sudden attack of vomiting, and pain in the right side, which lasted for a week. A lump, about the size of an egg, was found by the doctor, examination of which caused great pain, followed within a day by its disappearance, nothing abnormal being noticed about the urine. About a year later she had a similar attack, the pain lasting eight weeks. At this time she was seized with a straining sensation, and passed a large quantity of thick urine, after which the lump disappeared; and until recently she has continued free from all urinary troubles.

Dec. 4th.—Since last note the patient has continued much the same. The urine has varied in quantity from twenty to forty-nine ounces in the twenty-four hours, it has been acid and free from albumen, and has been occasionally thick and offensive. The escape of pus with the urine has always been followed by a sense of relief to the patient. She has felt able to sit up easily in bed, whilst before the size of the tumour had impeded such movements.

In consultation with my colleague, Dr. Lichtenberg, it was determined to open the cyst through the abdominal wall, after inducing adhesion by the method advocated by the late Dr. Simon of Heidelberg. The most prominent part of the tumour having been selected, two long silver exploring trocars were introduced in a line with the anterior border of the axilla, at the distance of five centimetres from each other, and two others in a transverse direction midway between the two first, and two centimetres apart.

Offensive pus flowed from each cannula. A small quantity was thus allowed to escape, and afterwards the cannulas were stopped and carefully fastened in.

11th.—The patient had continued much as before the introduction of the trocars. The tumour was slightly reduced in size, and upon it a circular area, of which a line drawn from one vertically-placed needle to the other formed the diameter, was prominent. In this line, from needle to needle, an incision was carried through the abdominal wall and into the cyst; a considerable quantity of offensive pus escaped, and, on introducing a director, a stone was at once felt. This was grasped by a lithotomy forceps with some

¹ Archiv. f. Klin. Chirurg., Bd. xxii., Heft 2, 1878.

² Virchow's Archiv., 1879.

difficulty, owing to its size and position, but it was found impossible to move it. The incision being somewhat enlarged, the finger was introduced to its full extent, and the stone could then be just reached. It was felt to be very large, and so firmly fixed across the pelvis of the kidney, that it could not be moved. It therefore became necessary to relinquish the attempt, for, owing to the position of the stone, no ordinary instrument could be used to divide it. After this operation a large drainage-tube was kept in the sac, which was washed out twice daily with a solution of salicylic acid. The condition of the patient improved through the next three weeks, and the temperature was but little above normal.

Jan. 1st, 1880.—Being provided with a cutting forceps of which the blades could be introduced separately, I proceeded to remove the stone. The wound, which had considerably closed, had to be enlarged, and then the blades of the forceps were introduced. The portion B being cut off the stone was easily caught by a lithotomy forceps, and by a slight twist raised from its bed, to which it closely adhered. The finger then being introduced, another portion, A, was felt imbedded in its calyx, and was easily extracted. The calculus weighed 1·3 ounces, and appeared to consist of lithic acid with a very thin covering of phosphates. A slight bleeding followed, but this was soon over, and the drainage-tube was replaced.



Actual size, weight 630 grains.

In the evening the condition of the patient appeared satisfactory, but at 11 P.M. she began to complain of severe pain and became collapsed. After a while she rallied, and the next morning (Jan. 2nd) she seemed comfortable, but the abdomen was full. Temperature 100° in the morning, 101·5° in the evening.

Jan. 3rd.—Abdomen rather fuller; urine welled up through the tube. An enema was followed by good evacuation. Morning temperature 100·3°; evening 99·6°.

On the 4th the tympanites had increased. An enema was followed by another evacuation. In the evening she wore an anxious expression and felt sick. Temperature 101·3°. Afterwards the sickness increased so that nothing could be retained. Ice was given and the abdomen covered with lint frequently soaked in lead and spirit lotion, after which the sickness soon abated. The next day the temperature rose to 103°, and for three days after remained high, and there was great tympanitis, but being kept under the influence of opium she had little pain or sickness.

On January 12th the urine contained a good deal of pus, and smelled badly. The abdomen was getting less distended and softer. Morning temperature 99°, evening 100°.

13th.—Urine clear and pale. About this time it was noted that there was no albumen in the urine, which was always acid, and the condition of the patient was such as to lead to the expectation that she would make a good recovery.

15th.—The abdomen very soft and flat. She was beginning to enjoy food, but had a bad cold.

18th.—Coughed up rusty sputa. Evening temperature, 103·2°.

22nd.—Patient had become drowsy, and the urine was found to contain a large quantity of albumen, a subsequent examination revealing the presence of a multitude of tubercasts. After this the patient became gradually worse. The chest symptoms increased, there was oedema of the face and legs, and she died on the 31st of January, the thirty-first day

after the removal of the calculus. The wound through the abdominal wall had for some time been healed, except the sinus kept open by the drainage-tube.

At the post-mortem examination the apex of the liver was found to be firmly adherent to the upper extremity of the incision, and there were adhesions between the kidney and the colon, but no sign of general peritonitis. There was also near the incision a small collection of pus. The right kidney had shrunk to about its natural size; it consisted chiefly of thickened pelvis and calyces, little of the gland tissue remaining. The ureter was pervious, but much smaller than its fellow. The left kidney was congested.

Remarks.—Surgical literature does not appear to be rich in precedents for such an operation. The monograph¹ of the late Professor Simon of Heidelberg may, perhaps, be said to have exhausted the subject at the time of its publication. In this admirable treatise the author alludes to two cases published by Dr. Andrews and the late Mr. Callender in the 9th vol. of St. Bartholomew's Hospital Reports, and one of these is the only case alluded to which bears a close resemblance to that now under consideration. In this case Mr. Callender removed through the loin a large renal calculus, weighing more than 1·55 ounces; the patient, already worn out by pain and suppuration, dying three days afterwards. In the remarks suggested by it Mr. Callender says:—"I may also add that the term litho-nephrotomy has been used for the case here reported to distinguish it from other operations of a comparatively insignificant nature." Besides cases of nephrotomy (or the removal of stone from the kidney by cutting through the muscles of the back), to which allusion is made by Mr. Callender in the paper just referred to, one of a similar nature was reported in the *Gentleman's Magazine* for 1733.² It is there stated that "Mr. Paul, a surgeon at Stroud, extracted from the kidneys of a woman, by an incision through her back, a rough stone as large as a pigeon's egg, and made an entire cure, the first of the kind ever performed in this kingdom." But Mr. Callender also refers to an article on nephrotomy, so-called, in the *Cincinnati Lancet*, by Dr. Kearney, "in which, referring to the literature of the subject, he shows that the greater number of cases of so-called nephrotomy have been simply instances in which abscesses connected with disorganised kidneys have been opened, and the calculi extracted." How little of the surgeon's skill is required in these cases was once illustrated by the appearance of a renal calculus in a poultice which had been applied to a swelling in the loin of a patient whose case had not been thought to require medical assistance till this unexpected event alarmed his friends.

The advantages claimed for operations through the abdominal wall are the comparative thinness of the structures covering the tumour, and also that in this situation the incision being carried directly into the dilated pelvis, the substance of the kidney suffers less injury, and the risk of hæmorrhage is thereby greatly lessened. In the case of a large-branched calculus, it may be added that the attempt to withdraw it is made at much greater advantage through the pelvis of the kidney than in the direction of its branches through the substance of the kidney itself.

The operation practised in this case was designed and carried out by Simon for cases of pyonephrosis and hydro-nephrosis, and has been more recently performed by another German surgeon, and the success attending it in their hands led to its adoption in this instance.

High Cross, Tottenham.

COLOUR-BLINDNESS: ITS EXAMINATION AND PREVALENCE.

BY DR. B. JOY JEFFRIES.

IN THE LANCET of October 25th, 1879, Mr. Herbert W. Page regretted that he could not have been present at the Cork meeting of the Association to take part in the discussion on colour-blindness opened by my friend Dr. Swanzy. I also regret that I could not accept the polite invitation extended to me on that occasion. Had Mr. Page and myself met and taken part in this discussion I am assured he would not have written what he did in that

¹ Chirurgie der Nieren. 1876.

² Medical Times and Gazette, December 13th, 1879.

number of the journal. I first saw the article a few days since, or I should have replied to it ere this. Mr. Page's original article in THE LANCET of Jan. 13th, 1877, I commented on in the *Chicago Railroad Gazette* of May 9th, 1879; I then showed that there was no positive proof afforded of the engineer Pepper, in the Arlesby accident, not being colour-blind, which defect would have explained his neglect of the danger signal.

I would here call the attention of Mr. Page and others to what Professor Holmgren has written upon the points he touches on in this recent article, which points I am induced to criticise. A large part of the practical portion of Professor Holmgren's book will be found incorporated in my recent monograph, "Colour-blindness: its Dangers and its Detection," to be had of Trübner and Co., London. How the colour-blind see is there very thoroughly explained. Mr. Page says, "I, for one, should have no objection whatever to travel with a colour-blind engine-driver so long as he knew and could recognise—no matter by what sense—the colours indicative of danger, of caution, or the reverse."

The community will not agree with Mr. Page when they learn the truth—viz., that the colour-blind distinguish between a red and green light by a difference in intensity only. A locomotive engineer does not, moreover, have the two to compare presented at the same time. I have repeatedly tested the colour-blind in the lights by methods similar to Professor Holmgren's in order to prove to those interested that simply a difference in intensity made a difference of colour. A dim green becomes a red, a bright-burning red a green or white light. A correctly chosen depth of "London-smoked glass" will cause a colour-blind to think the lights coloured, and represent to them the red and green lanterns. Professor Holmgren says precisely the same: "Ask any superior official of a road if he would be willing to take charge of and run a locomotive, assuming the responsibility, when uncoloured signals alone were permitted, and a full light meant 'danger,' a medium one 'attention or caution,' and a strong one 'road clear.' If he says no, tell him that these are just the conditions under which every colour-blind engineer has performed his duties. The absurdity is evident at once."

I would recall the case of the Swiss engineer found by Dr. Minder, who turned a petroleum lantern up and said it was then white, part way down and then it was what others called green, and very low down it was a red light. This is also a perfect reply to Mr. Pole in his article on Daltonism in the May number of the *Contemporary Review*, 1880.

But Mr. Page says afterwards that he found a red-green blind engineer among the men sent to him to be tested. "The man had been an engine-driver for many years. He persisted in his knowledge of the signal-colours; but he was obviously red-green blind. When discharged from his place he admitted he was perfectly unable to distinguish these two colours." As Mr. Page would have risked his own life with such a driver he could hardly recommend the man's discharge. Fortunately, the authorities of the London and North Western Railway Company took a different view of the matter, as all railway officials will do when they finally thoroughly understand the conditions. It is unfortunate that an examiner does not appreciate the practical and subtle danger. How the colour-blind escape detection in everyday life, and how colour-blind railway employees (of whom there are about 3 per cent.) get on as they do, is of itself worthy of special study. I cannot, of course, enter upon it here. It is discussed in full in my monograph.

I have specially to criticise what Mr. Page has said in reference to Professor Holmgren's test. It does not seem possible that he has thoroughly understood it. He speaks of using twenty-two colour-cards as an "allied method," and "fulfilling the conditions of a good test." Professor Holmgren's is one of comparison, but wholly different from Seebeck's or Nilson's. In Germany, notably by Dr. Cohn of Breslau, the test has been used, not as directed by Professor Holmgren. An experience of over thirty thousand examinations has shown me the necessity of carrying it out *strictly as directed*, and that Professor Holmgren's very elaborate and minute directions are all worth carefully studying by anyone desirous of detecting colour-blindness with certainty.

But, as Professor Holmgren has well said, *seeing the test carried out by one familiar with it is a great advantage*, and in Sweden the railroad surgeons were therefore especially instructed by him *de visu*. Mr. Page says that he has spent *three-quarters of an hour* on one person with his own

and Stilling's cards. That case could have been decided in *five minutes* on the Holmgren's method by any examiner familiar with the test and the laws of colour-blindness, the colour-blind's perception being more limited is more strict than ours. Any variance from certain laws shows the experienced examiner at once that his directions are not understood, or that the examined is stupid. Directions are easily and quickly repeated, in pantomime if necessary from want of a common language, and no stupidity is insurmountable. Attempts at deception are as quickly recognised. All Mr. Page says about the colour-stupid, if I may use the expression, being likely to be classed with the colour-blind, assures me that he cannot be familiar with Holmgren's worsted test as carried out by the experts who have reported their results from different parts of the world. When tests calling for colour names have been used, of course from 10 to 20 or 30 per cent. have been reported colour-blind, for example, in France. Holmgren's test excludes all this, and tells us with absolute accuracy who are deficient in colour perception.

Mr. Page says, speaking of the colour-stupid, "to expect such persons to sort delicate tints of saffron, puce, lavender, or salmon, would be as absurd as to expect an untutored ear to appreciate and distinguish all the subtle varieties of note and tone which combine to make the richest melodies of Beethoven or Wagner." "Because uneducated and unlearned men cannot sort Holmgren's skein is, to my mind, the very poorest evidence of their being colour-blind. Not three weeks ago a man was before me who had a defect of this kind in an extreme degree, made evident by an examination of thirty-five minutes. Had he been left to himself to sort Holmgren's worsted, how great is the chance that he would have been regarded as colour-blind." Now Professor Holmgren's test calls for no such sorting. A peculiar shade of green is shown the examined, and by pantomime or words he is directed to pick out of the heap of little skeins of variously coloured worsteds, "all of that colour, lighter or darker." If colour-blind he quickly exposes himself. If not colour-blind he as quickly shows that he is not, or he shows that he does not understand the directions by disobeying the strict laws which govern the colour-blind's choice. The magenta worsted then decides which form of colour-blindness we have, if any. Children of four years, and adults of no education and hardly any intelligence, have never answered for me in ten minutes, and then only to convince the bystanders that they were not colour-blind. Mr. Page has had to devote three-quarters of an hour by the methods he used to a single adult. No wonder that he "looks with more than suspicion upon all statistics which have been drawn from the examination of hundreds of persons in a short space of time." For myself, I must defend the statistics given in my book, and my further ones since then reported up to thirty thousand. I perfectly understand and can detect ignorance of colours and lack of appreciation of colours, as also slowness of decision as to colours, due to want of education and familiarity with colour objects in everyday life. In all cases I watch most carefully the hands and face of the examiner, since they tell us so much. The great value of Holmgren's test is that we get at the effect of colour on the brain by the movements of the hands responding to this effect. I am entirely assured of the truthfulness of my results, and they correspond with those of the best European observers using the same method. By it uncivilised tribes have been examined with like results as to percentage of colour-blindness.

"Again," Mr. Page says, "if we are to arrive at any right estimate of the average of true colour-blindness, our examinations must be made amongst those who neither by lack of education nor by want of observation and cultivation can be included in the classes to which I have specially referred." All the scholars of the public schools of Boston and Baltimore whom I tested were above the primary classes. Besides these I tested of the professors and students of the Johns Hopkins University, Harvard University, Yale College, Brown University, Institute of Technology, Boston, Amherst College, 1436, finding fifty-six colour-blind, or about four per cent. Whilst of course I knew some stayed away from my examination because they were colour-blind, others came to find just what was the difficulty with their chromatic sense. Mr. Page's proposed test of the members of the British Medical Association at the Cambridge meeting will be a very good one if *all* will submit to the proof. The value of my work in our schools was, that *all* the scholars were examined. As congenital colour-blindness does not alter,

the statistics from the young are of the same value as from adults. With Holmgren's method the members can be tested at the rate of one hundred in an hour, if they would present themselves sufficiently rapidly to do what is required. In my examinations at the various colleges and universities above-mentioned I was surrounded by men of culture and science, ready to criticise each and every decision I gave. The truth is, however, that the proof of colour-blindness by Holmgren's method is so palpable as to leave no doubt in the mind of an intelligent observer.

One other point I must set Mr. Page right on. He says: "Investigators seem agreed that colour-blindness is much less frequent amongst women. Why? Because from their youngest days women have 'had to do' with colours in the petty adornments of millinery and dress; and it is only from lack of the same opportunities of cultivating it that men's sense of colour is inferior to theirs." Here Mr. Page is quite in error. The frequency of colour-blindness in males is a sexual difference, as abundant observation and thousands of tests have shown. The colour-blind girl or woman acts precisely as a colour-blind man when tested, notwithstanding all his training, &c. When being tested, the difference is that women and girls *work about twice as quickly as males*. As we go down the social scale they will more and more imitate men in their way of performing Holmgren's test, for instance. Mr. Page's suggestion is, of course, the one which immediately occurs in explanation of the extraordinary difference between men and women, but it is not the correct interpretation.

Whilst I was writing this, my friend, Colonel Head, surgeon U.S. Army, here stationed examining recruits, brought to my office a sergeant who was re-enlisting. The man was very intelligent. He told the names of colours with surprising correctness. He would have no doubt passed almost any examination based on this method alone. By Holmgren's test he had been in less than a minute shown to be completely red-blind by the examining surgeon, and in consequence of this defect he had been denied admission to the Signal Corps. My examination confirmed this diagnosis. To the green test he placed reddish-browns and greys; to the magenta, blues, and to the red, dark-brown and dark-green. The man knew of his defect from being laughed at for his mistakes at home. Strawberries and cherries he admitted he could not detect except by their form. I speak of this case here as showing that even in the aniline colours of the best worsteds we do not have *pure* colour. In all the lighter reds and greens there was enough of the colour this man could see—namely, *yellow*—for him to be able to say they were what other people called *red* and *green*, and so he did. And he thus voluntarily explained himself. Asked to match from the 150 skeins of worsteds the colour of the delicate new leaves of linden trees just outside of my window, he selected a yellowish-brown. Now, with aniline-dyed worsted we undoubtedly get the *purest* colours at present, aside from all other practical considerations. They far surpass in this respect the pigments on paper to be found in stores. Not having seen the twenty-two coloured cards Mr. Page tested with, I cannot state positively, but my experience would tend to show that there are but very few red- or green-blind who could not sort such cards correctly on account of the impurity of the pigments.

I entirely join hands with Mr. Page when he says: "Not less strongly than those who have expressed their views on the subject am I convinced of the vital moment of examining railway servants and sailors for sight and colour-blindness." I am striving for the establishment by law of this control in the United States. So far I have induced but one State, Connecticut, to pass legislative enactments. It is, of course, a mere question of time for all the others. Regulations concerning visual form and colour-blindness are in force in the United States army, navy, and marine hospital service; the last includes *all pilots*. The method adopted for medical officers is Holmgren's.

It is because I have been for the last few years especially engaged in urging legislative control that I have felt called upon to criticise some of Mr. Page's statements. The test for visual power I hold to be as necessary as that for colour-blindness, if not more so. I have the direct testimony of Professor Holmgren in Sweden, and Professor Donders in Holland, that these examinations should first and last be made by *medical experts*, and never left to "district inspectors." This in the interest of the *employé*, the shareholder, and the travelling community.

Boston, Mass., U.S.A.

TINEA TONSURANS ACCOMPANIED BY ALOPECIA AREATA.

By ALFRED SANGSTER, M.B.,
PHYSICIAN IN CHARGE OF SKIN DEPARTMENT, CHARING-CROSS
HOSPITAL.

J. G—, aged seven, according to his mother's statement first had ringworm about twelve months ago; his sister had ringworm three years ago. The patient came to the outpatient department with well-marked diffuse ringworm (chiefly over the occipital region), the affected surface being scaly and sparsely covered with hairs, some long, some short and stubble-like. Below and to the left of the superior angle of the occiput was a round patch of alopecia areata about the size of a crown piece. The patch had not quite the typical appearance of the last-mentioned disease, being somewhat pink and to a trifling degree rough; towards its margin were recognised the short, clubbed hairs characteristic of alopecia areata, while immediately beyond, for the greater part of the circumference of the patch, was the ringworm surface before alluded to.

Microscopical examination of such scales and débris as could be scraped from the bald surface showed epithelial scales with a few groups of spores, like ringworm spores. Examination of the clubbed hairs showed them to be highly pigmented, almost opaque. As regards the presence of fungus, nothing like the trichophyton was seen, but in such hairs as were less opaque there was a certain granular appearance (Hart. oc. 3; obj. 8 tube out), the granules in places being arranged in wavy lines, as if packed between the fibre-bundles of the hair. The specimens were mounted in glycerine, and still show the above appearances. Abundance of ringworm fungus was found in the hairs in the immediate proximity of the alopecia patch.

In the Pathological Society's Transactions (1874, p. 209), Mr. Waren Tay has recorded a case of alopecia areata associated with ringworm. In his paper similar observations by Hutchinson, Hillier, and Fox are alluded to, so that it would seem that the association is not a remarkably rare occurrence.

In the above-narrated case the presence of spores, like ringworm spores, among the débris scraped from the bald patch, might have been accidental, considering the proximity of the ringworm. However, most observers have found fungus like the trichophyton in the bald patches complicating ringworm. The question then arises, Are the bald patches true alopecia areata? bearing in mind how rarely (if ever) fungus is detectable in uncomplicated cases of the latter affection. If true alopecia areata, the further question suggests itself, Has this disease any relation to ringworm? And if so, what relation? Mr. Hutchinson has, I believe, long been decided that a relationship exists between the two diseases in question.

THE TREATMENT OF COMPOUND FRACTURE WITH COMPOUND TINCTURE OF BENZOIN.

By FERGUS M. BROWN, L.R.C.P. EDIN.

SOME time ago I read a communication on the treatment of the external wound in cases of compound fracture by the tincture of benzoïn, and I resolved to try it when I had the opportunity.

On the 27th of August, 1878, I was sent for to see Mrs. R—, a widow, who had broken her leg. As I was four miles from home in an opposite direction, and her residence was five miles from my house, I had to drive a distance of nine miles. I found her lying on the bed, the right tibia being pushed through the skin, about an inch protruding. I sent for the nearest medical man, but he was out; so I gave chloroform myself, and before I could reduce the fracture it was necessary either to enlarge the wound or saw off the projecting piece of bone. I first enlarged the wound, but being still unable to bring the ends into apposition, I was compelled to use the saw. Next I put it up in an inside and outside splint, bound with three straps made of

girth-web and buckles. The leg was then laid on its outside, and the wound simply covered with a few folds of lint steeped in compound tincture of benzoin. From time to time I had to desist during the operation for the purpose of giving another whiff of chloroform. There was no assistance save that of an ignorant female farm-servant, but my patient kept up well, though her age (sixty-eight) was against her. She had sustained the injury by falling from an apple-tree, where she had been gathering the fruit. Next day the leg felt perfectly comfortable, and after the first five days I saw her only about every third day. I did not move the splints or lint till Oct. 12th, on which day I put on a strong starch bandage. The following day, with the help of a crutch, she came downstairs. My last three visits were on Dec. 1st, 10th, and 31st; and now, with a high-heeled boot, she walks about, and attends to her housekeeping and farming as she did before the accident. There never was the least unfavourable symptom, nor was there a drop of pus.

My next case was that of a working timber merchant, Mr. L—, aged fifty, almost a total abstainer, who, in superintending the removal of a large tree, was struck by the small and free end swinging round, the horses being attached to the large end. Both bones of the leg were smashed into pieces. There was, however, but a small external wound about the middle of the fibula. I put the leg up in the same way as the last case. Next morning the whole leg from the knee to the ankle was one enormous blister; this I pricked, and covered the whole surface with lint soaked in tincture of benzoin. From the day I first saw him, 7th April, 1879, until he was out attending to his business in a starch bandage by the 1st July, he had not a single bad symptom. I should add he was the most patient man I ever saw; always took things in an easy way. He had a peculiarity I have not seen or heard of before: did he at any time eat an egg he was certain to have an action of the bowels within ten minutes.

I have not attempted to go more minutely into these cases, as there is nothing important in them; but occasionally country practitioners are at a loss for some remedy for wounds which will obviate the necessity of going every day long distances to dress trifling injuries.

Wansford.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

UNIVERSITY COLLEGE HOSPITAL. (THROAT DEPARTMENT.)

REPEATED EXPECTORATION OF HYDATID MEMBRANE; NO
PHYSICAL SIGNS OF HYDATID DISEASE EITHER
IN THE CHEST OR ABDOMEN.

(Under the care of Dr. POORE.)

G. R—, aged twenty-nine, attended as an out-patient on April 2nd, 1879, taking with him some pieces of false membrane, which he stated that he had expectorated on March 26th. He had been under the care of Mr. Shoppee, of Kentish-town, and from that gentleman and the patient the following facts were elicited. About four years before he had been laid up for eighteen weeks with attacks of hæmorrhage from the lungs, for which he was treated by Dr. Peter Rawlins. On inquiry of Dr. Rawlins it was ascertained that these attacks were genuine attacks of hæmoptysis, and very severe. Dr. Rawlins further stated that a year previous to these attacks the patient had suffered from aggravated double pneumonia. Between the attacks of hæmoptysis and December, 1878, the patient enjoyed good health. Just before Christmas, 1878, during the prevalence of a sharp east wind, he coughed up a piece of membrane the size of half a crown. He continued his work, however (that of a night storekeeper on the railway), till the 19th of

March, 1879, when he was suddenly seized with an attack of hæmoptysis, in which he lost "a quarter of a pint of blood." He took to his bed, and on March 22nd coughed up a piece of false membrane, and on March 26th coughed up more false membrane. There was no history of dyspnoea. The membrane had on each occasion been coughed up suddenly, and the patient attributed his attacks to the east winds which were blowing at the time.

When seen at the hospital on April 2nd the patient looked somewhat anæmic and delicate. Temperature 99° 8'; pulse 100. Tongue rather big, and slightly fissured on the surface; tonsils red and slightly enlarged, with some amount of secretion lying in the crypts of the left tonsil. The mucous membrane of the epiglottis and larynx was rather red, and a little mucus could be seen lying in the fossa between the epiglottis and the tongue. The vocal cords were healthy. The trachea was plainly visible as far as the bifurcation, and appeared healthy. The urine was healthy, containing neither albumen nor sugar. A very careful examination of the lungs revealed a possible slight deficiency of expansion in the left infra-clavicular region, but no other abnormality of any kind. The signs elicited by percussion and auscultation were throughout those of health. No increase of liver dulness; abdomen normal.

The membrane was in three or four pieces, which collectively were sufficient to cover a crown-piece. It was grey, translucent, smooth, and could be split into several layers. It had the naked-eye characters of hydatid membrane, but under the microscope it presented a granular appearance, and neither fine laminations nor hooklets were detected at the first examination.

On April 24th he expectorated some more membrane, and again a small piece on June 16th, and on both these occasions the lamination characteristic of hydatid structure was plainly observable, although no hooklets were to be detected. Both these attacks of expectoration were attributed by the patient to a chill. On being asked for a description of his sensations when the membrane came up, the patient said that he felt "a fluttering at the chest" (pointing to the sternal region), and then the membrane came up with a cough, but without a feeling of sickness. He was sure it came up the windpipe.

Repeated examinations of the chest and abdomen revealed no physical signs, except the doubtful want of expansion of the apex of the left lung mentioned above. The patient had never been out of England.

Remarks.—The main interest in the case consists in the absolute absence of any physical signs indicative of an hydatid tumour in either the thoracic or abdominal organs, although the pieces expectorated would lead one to suspect that the cyst must have been of no inconsiderable size. The history of repeated hæmoptysis is quite characteristic of hydatid disease. The confidence with which the patient ascribed his attack to the condition of the weather is a point of some interest.

KENDAL COTTAGE HOSPITAL.

CONGENITAL ATRESIA OF THE VAGINA.

(Under the care of Mr. R. T. LEEMING.)

M. A—, aged nineteen years, married eighteen months, was admitted on Jan. 16th, 1879. She had never menstruated, but suffered from pains in the back and around the abdomen for several years.

On examination a hard tumour larger than a foetal head was found in the abdomen immediately above the pubes, and instead of a vagina there was a large rounded protrusion covered with mucous membrane tightly stretching the vulva. Examination per rectum proved that the abdominal tumour and vaginal protuberance were one.

An opening of three-quarters of an inch was made in the centre of the vaginal protuberance, and the confined menstrual discharge came away in the form of a very thick treacly fluid to the extent of over two quarts. The parts were covered well with carbolic oil. Two days later the incision was extended towards the meatus urinarius and perineum. On digital examination there was a perfect vagina and os uteri. A tent of carbolic tow was introduced, and external antiseptic dressings were used. The patient had a restless night, and on removing the dressing next morning about half a pint of albuminoid leucorrhœal discharge escaped. There were no symptoms of constitutional dis-

turbance until the second night after the operation, when the patient had several rigors. At 10 A.M. temperature was 103° F. On the dressing being removed a quantity of fetid pus, but of a laudable colour, escaped. On examination with the speculum this discharge was seen welling from the uterus, the os being dilated to the size of a threepenny piece, the parts being swollen. The vagina also participated in the general inflammatory action. The glands in both groins were enlarged and very tender on pressure. Instead of the ordinary dressing a speculum was now introduced and fixed, filled tightly with carbolic tow, so that the discharge might escape. Five grains of quinine, with ten drops of sedative solution of opium, were administered every four hours.

The inflammatory fever lasted for four days, the temperature, mornings and evenings, varying from 100° to 102°. The secretion now became of an albuminoid nature, which soon ceased with a subsidence of the irritative fever and swelling of the inguinal glands.

Before leaving the hospital, about three weeks after the operation, a normal menstrual flow took place.

The case was entirely lost sight of until April 29th this year, when on a journey into the country Mr. Leeming met her medical attendant, who informed him that the patient had been delivered of a full-grown female child after a natural labour, three days previously. Mr. Leeming visited her, when her expression of countenance, instead of being dull and half idiotic as previous to the operation, was bright and intelligent, and she said that after she left the hospital she was quite a different woman, and had never been so well.

TOTARA DISTRICT HOSPITAL, ROSS, NEW ZEALAND.

HYDATIDS OF LIVER; ASCITES; MULTIPLE ABSCESES;
DEATH.

(Under the care of Dr. R. H. BAKEWELL.)

J. B—, an Englishman aged forty-two, a miner, was admitted June 17th, 1878. This patient was in the hospital when Dr. Bakewell took charge in October, 1878. He was then suffering from black jaundice, the tint of the skin being that of a very dark mulatto. He was much emaciated and very weak. The urine was very dark from bile; the fæces were clay-coloured. The liver-edge could be felt at the level of the iliac crest on the right side, while the left lobe formed a prominent and conspicuous smooth and rounded tumour about three fingers' breadth below the umbilicus. He had previously been tapped several times for ascites, and the girth of the abdomen taken at the umbilicus was now 42½ inches. The respiration was short and difficult, and although he had been tapped only a fortnight before, he pressed for a repetition of the operation. His legs were anasarctous and very tense. On Oct. 3rd he was tapped. The quantity of fluid was not exactly measured, but it filled about three-fourths of an ordinary iron bucket. To take five grains of iodide of potassium three times a day; and to have iodine liniment applied over the region of the liver.

On Oct. 16th he had very much improved. The girth round the umbilicus was 37 inches, mostly caused by flatus, from which he suffered very much. Acupuncture of the legs had been performed on the preceding day. The dullness on the right side was increasing upwards, and was now complete up to an inch below the spine of the scapula; no respiratory sound could be heard in the lower half of the right lung posteriorly. There were friction-sounds and some pain; respiration was puerile in the upper half and on the left side. Distance from left nipple to umbilicus 12½ inches; from right nipple to umbilicus, 12½ inches; semi-circumference of chest, right side 17½ inches, left side 16½ inches.

On the 28th, the left lobe of liver was punctured with a fine trocar; nothing came away but turbid reddish serum, which contained blood and liver cells; very little pain was caused. At this time, owing to the marked prominence of the left lobe, there was a suspicion of cancer. Nothing like cancer-cells could be discovered. A copious pustular eruption appeared on the face. The iodide of potassium was omitted. A few days after, the eruption having disappeared, a smaller dose of the iodide of potassium, together with twenty minims of syrup of the iodide of iron, were given three times a day. Meanwhile there was no further accumulation of fluid in abdomen or legs.

On Nov. 2nd, the measurements were, from umbilicus to right nipple, 12 inches; to left, 11½ inches; semi-circumference same as on Oct. 16th; greatest girth of abdomen, 40 inches. On Dec. 2nd, measurements from right nipple to mid-sternum, 3½ inches; from left, 3½; from umbilicus to both nipples, 12½ inches; abdominal measurement as last month. To take five grains mercury pill daily. On Jan. 2nd, 1879, the circumference of the abdomen was 40 inches; from umbilicus to right nipple, 11½ inches; to left, 11½ inches. On Feb. 2nd, abdominal circumference was 41½ inches; from nipples to umbilicus, 12 inches. Some enlargement and tenderness of mammary glands.

At this time the enlargement was clearly owing to the gradual growth of the liver, and not to the accumulation of fluid in the peritoneum. The wasting and emaciation were so extreme that it was thought advisable to discontinue the iodine. Small doses of dilute nitro-muriatic acid in quassia were given instead, and the nitro-muriatic acid sponge-bath employed.

Up to March 7th he had been taking a large quantity of milk daily; this was diminished. Early in the morning of this day (about 3 A.M.) sudden and severe rigors occurred, with vomiting and pain in tumour. Temperature at night 104°. On the 11th the pain under the right scapula was severe. Cough was very troublesome. There was no expectoration, nor any moist sounds. The tumour was rapidly increasing, and the emaciation was very great. Acupuncture was occasionally practised in legs to relieve tension, but there had been no accumulation of fluid in peritoneum since October. On the 12th fluctuation was well marked in the right eleventh costal interspace. This was explored with a hypodermic syringe, and clear fluid was withdrawn. The spot was then tapped, and about three ounces were taken; no more could be obtained, though the trocar was driven well home. That day and the next rigors occurred, and two or three more exploratory punctures were made, but the abscess could not be reached, and nothing but hydatid fluid was removed. On the morning of the 13th the surgeon-superintendent was called up by the night watcher in the belief that the man was dying. Respiration was very rapid and shallow, the pulse small, feeble, and rapid, and the patient presented a most ghastly spectacle. His colour was darker than ever, and he was emaciated to the last degree. Nevertheless he still persisted in saying that he should get well, and that if he could get rid of the swelling he should be all right. With the exception of this delusion his mind was clear almost to the last, but about 8 A.M. on the morning of the 14th he became semi-comatose, and died two hours afterwards.

Necropsy, made about four hours after death.—Weather very hot. No signs of decomposition. Hypostatic congestion of all the lower parts of the body. Skin of an intense yellow colour, verging upon brown. On opening the abdomen the liver was found to form an immense tumour overlying most of the abdominal viscera. An incision was made into the left lobe, and some pints of pus came away. Another abscess was opened before the liver was removed, and also a large hydatid mother-cyst in the right lobe. With some difficulty the liver was removed, but this could not be done without opening another hydatid cyst. It was then weighed, with most of the loose hydatids, of which there were hundreds, varying in size from that of an orange to less than that of a pea. It then weighed 16½ lb. It was thought that if the liver had been removed without opening the abscess and cysts, it would have weighed at least 20 lb. The kidneys were deeply stained with bile, but were otherwise healthy. The right lung was much compressed, and in a state of red hepatisation. The left was emphysematous, but otherwise healthy. The other organs presented nothing worthy of particular notice. The brain was not examined.

Remarks by Dr. BAKEWELL.—This case was somewhat remarkable on account of the enormous development of hydatids without their having caused perforation of the diaphragm, or any part of the peritoneal investment of the liver. Hydatid tumours of the liver are exceedingly common in these colonies, but usually long before they attain the size they did in this case they perforate the liver, and are discharged through the lung, or an abscess is formed which breaks into the bowel. Those cases are the commonest in which the diaphragm is perforated. In such the disease, though long and tedious, is often cured. In one instance which came under my care in private practice the patient had been spitting up hydatids from the lungs for eighteen months. The symptoms all ceased after the continuous use

of a decoction of the tree-fern root for six weeks. It is noteworthy that there was no trouble from ascites after iodine had been employed externally and internally, although the growth of the tumour was only for a time arrested.

The diagnosis of hydatids of the liver is often attended with much difficulty. The presence or absence of the hydatid fremitus on percussion depends on the greater or less depth of the hydatid in that portion of the liver which is percussed. Hydatid fremitus was not observed in J. B.—'s case until a few days before death, and then an exploratory puncture proved that a hydatid cyst was situated immediately beneath the walls of the chest, with nothing but a thinned diaphragm between it and the intercostal muscles.

HYDATIDS OF RIGHT LUNG; OBSTINATE DRY COUGH;
FORMATION OF WHITE FIBRINOUS CLOT IN HEART;
DEATH.

J. M. S—, a Swede, male, aged fifty-three, a gold miner, was admitted Dec. 4th, 1878. On admission he complained chiefly of internal hæmorrhoids, which bled a good deal. He was a fair-complexioned man, of highly nervous temperament, had led a solitary life, being what is called amongst miners a "halter"—that is, working by himself. He had been very unfortunate, and was very silent and reserved. He complained of a troublesome cough. An examination of the chest was carefully made, and repeated daily after admission for some time. Nothing could be detected except a small patch somewhat dull, situated posteriorly on the right side, just below the spine of the scapula. The patch was of an oval shape, and not larger than the longitudinal section of a walnut. Breathing was coarser over this spot, and local resonance was slightly increased. The uvula was elongated, and as it was thought that this might have something to do with the cough, a gargle of capsicum and tannin was ordered, together with some compound tincture of camphor and sulphuric acid.

On Dec. 9th, the cough being still troublesome, a small blister was applied to the right side. On the 12th the cough was still troublesome. Sputa very slight, but just tinged with blood. Ordered four ounces of wine daily, twenty minims of tincture of belladonna thrice daily, and to continue the gargle. On the 16th the cough was as bad as ever, and disturbed the other patients. There was no change in the lung. It was found that when his attention was drawn off the cough ceased for a time. On Dec. 22nd the dulness had extended greatly; there was no notable hæmoptysis, but the sputa were white, and occasionally tinged. On the 28th considerable hæmoptysis occurred, and the dulness was rapidly increasing. From this time until his death various remedies were tried to allay the cough, but all of them afforded only temporary relief. He had porter, milk, cod-liver oil, and good meat diet, but still he continued to grow weaker and thinner. On January 20th the breath had an extremely offensive odour, suggesting gangrene of the lung. The right chest measured one inch more than the left in line of nipples. There was considerable œdema in the right lumbar region; none in the left. On the 23rd there was dulness with complete absence of respiratory murmur over the right chest posteriorly from the spine of scapula. The dulness was bounded by the posterior wall of axilla. Fœtor of breath persisted.

Though the man was obviously growing weaker, there was nothing to indicate any immediate danger, or to require any particular watchfulness at night. On the night of the 25th he was seen by the surgeon-superintendent as usual. On the morning of the 26th he was found sitting up in his usual posture, quite dead. One of the patients in an adjoining ward had heard him coughing until about 1 A.M., but no sound was made that led him to suspect anything extraordinary.

Necropsy.—A hydatid cyst was found occupying the lower half of the right lung. The walls of the cyst were in part gangrenous. The contents were a number of hydatids and foul-smelling pus, mixed with fluid. The liver was healthy. The right auricle and ventricle were filled up with white fibrinous clots. Nothing else noteworthy was observed.

Remarks.—Although the symptoms on admission were ambiguous, and the physical signs obscure, yet the persistence of the cough, coupled with the existence of a small but well-defined patch of dulness in the posterior part of the right lung, just below the spine of the scapula, suggested a hydatid tumour. For some time it was doubtful whether it

might be that or a nodule of cancer, or possibly lobular pneumonia undergoing caseous degeneration, but the comparative rarity of either of these two diseases, and the frequency of hydatids, rendered the hypothesis of hydatid disease the more probable. In view of the increased dulness, the hæmoptysis, the fetid breath, without any of the physical signs of a cavity, or of pneumothorax, the diagnosis was rendered all but certain. Dr. Bakewell was about to aspirate the dull part of the chest, to remove the fluid, and had determined to do so on the very day the patient died. Fortunately the operation was not performed.

A third case of hydatids of the lung and liver was admitted in a moribund state, but as the friends would not allow a post-mortem it is not worth while to record the symptoms.

Medical Societies.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

Basic Cavity of the Lung treated by Paracentesis.

THE concluding meeting of this Society for the session was held on the 8th ult., J. E. Erichsen, Esq., F.R.S., President, in the chair. Only one paper was read and discussed. It dealt with the comparatively novel subject of the operation of paracentesis of pulmonary cavities, and was contributed by Dr. R. Douglas Powell and Mr. R. W. Lyell. The case recorded was one of basic cavity following on pneumonia, and complicated with bronchiectasis. The operation afforded remarkable relief for some weeks, when the expectoration again became fetid, and death ensued from an attack of pleuro-pneumonia of the opposite lung. The paper discussed at length the indications for the operation, and reviewed the cases hitherto published.

The following is an abstract of the paper on a case of Basic Cavity of the Lung treated by Paracentesis, by Dr. R. DOUGLAS POWELL and Mr. R. W. LYELL. The case related was that of a man aged forty-nine, of previous good health but intemperate habits, who, in December, 1878, had had bronchitis, followed, in the ensuing February, by pleuro-pneumonia and fetid expectoration. He improved after a time, but relapsed again in July, and in August was admitted into the Middlesex Hospital under Dr. Powell's care. On admission the physical signs showed consolidation of the lower lobe of the right lung, with excavation of its central portion, the cavity signs being centred about the level of the seventh dorsal spine in the line of the angle of the scapula. There was considerable hectic, diarrhoea, and anorexia. The breath and expectoration were extremely fetid, the latter being muco-purulent in character, and very abundant, amounting to about one pint in the twenty-four hours. The area of excavation having been carefully marked out, the operation of paracentesis was performed by Mr. Lyell on Sept. 11th. A medium-sized aspiration-trocar was first thrust in at the eighth space mid-scapular line, and a free incision having been made through the tissues down to the intercostal membrane, the fine trocar was withdrawn, and a full-sized hydrocele trocar inserted, which, after slightly enlarging the opening, was in its turn removed, and a large drainage-tube introduced. Carbolic dressings were applied. A moderate quantity of secretion escaped from the wound (which gave rise to no serious bleeding), and the discharge subsequently from the tube, although free, was never abundant. The expectoration and cough, however, at once almost entirely ceased. The wound was dressed daily under the carbolic spray with the view of disinfecting it and the cavity, and injections of Condy's solution were used. On October the 2nd there was some return of fetor of breath, that of the discharge from the tube having never quite been corrected. Some trouble was occasioned by the tube slipping out, its reintroduction being hindered by encroaching granulations, and the tube was felt to strike against some impediment deep in the lung. The channel was kept dilated, however, and the patient improved in strength, and on the 20th was transferred to the Brompton Hospital. Fœtor of sputa returned towards the end of the month, however; although the amount expecto-

rated continued to be very scanty, the patient lost ground rapidly, and was finally seized with pleuro-pneumonia on the opposite side, of which he died on the 31st October, fifty days after the operation. The post-mortem examination revealed the presence of several intercommunicating cavities in the lower lobe of the right lung. This lobe was firmly adherent throughout, and a drainage-tube passing through the eighth intercostal space entered a contracted cavity which was connected with the main cavity by a short dilated bronchus. This small cavity must have been closely subpleural and was the very lowest of the series; although at so high a level as the eighth space, it was only separated from the diaphragm by $\frac{1}{2}$ inch. It was evident that in contracting upon the tube the wall of the cavity had come in contact with and partially occluded its extremity. The rest of the lobe was densely consolidated by fibroid growth surrounding bronchiectatic cavities. There was broncho-pneumonia and effusion on the left side. The rest of the lungs was emphysematous. In their remarks upon the case the authors comment upon the infrequency with which the base of the lungs has been tapped, and point out that the immediate cessation of cough and expectoration after operation in this case was a fact very encouraging to future interference with such cavities under more favourable circumstances, and afforded a valuable hint respecting the importance of disinfecting lung cavities. For it was clear from the small amount of the discharge compared with the great previous quantity of expectoration that the bulk of that expectoration had been yielded by the bronchi, irritated by the acid fluids and gases in their passage from the cavities. Whilst advocating the puncture of chronic basic cavities in suitable cases, the authors deprecated interference with apex cavities, on the ground of its being rarely necessary or useful, and are averse, save in exceptional instances, to making incisions into acute basic abscesses of the lung. In the present case, however, the operation had undoubtedly been postponed too long, the patient having come under observation too late. The diagnosis of the case from empyema was touched upon, and the several steps of the operation discussed; the use of a large trocar in preference to the knife being advocated. In future cases, too, the authors would prefer to choose the centres of the cavity rather than its lowest point for puncture where it is situated in the posterior lobe of the lung.—Dr. SYMES THOMPSON remarked upon the clearness with which the authors had stated the difficulties of the operation, as well as its advantages and disadvantages. They had shown how the cases to be selected should be those of a chronic disease—owing to the probable non-adhesion of the pleura in acute cases, which might get well if left alone. The time at which operative interference was called for was an important question; it should not be postponed too late, nor on the other hand hurriedly undertaken, when there was a fair prospect of recovery without it. Owing to the diagnostic difficulties the operation was not likely to become a common one, for cases in which a pulmonary abscess sufficiently superficial could be diagnosed are few. But when there were grounds for believing in the existence of such a cavity, with adherent pleura and condensed lung, the question might be entertained; and the paper read would aid in the conclusion arrived at.—Dr. BARLOW said that no treatment of suppurating cavities could be satisfactory which did not allow of free drainage. In this case the opening was a sinuous one. He presumed that in such cases a complete cure could not often be looked for; but if free vent were given to the fetid pus, life might be prolonged by operation. To afford this free escape he would urge, from his experience of empyema, the making of a double opening, which dispenses with the necessity of injections (and he had seen two or three patients die suddenly during injections into the pleural sac). Then, as one can never be certain in what way a sinus is going to heal, the double opening allows the surgeon to remove the tube when nature indicates. He had observed that those cases of empyema which were treated by single openings took longest to heal. Another point was the fixation of the tube. He had known it to escape into the cavity, and had also found it difficult to replace it if it had become pushed out of the sinus. When a single tube is used the plan at the Children's Hospital is to tie the tube in and to leave it flush with the surface—a point insisted on by Mr. Lister. The method of stitching the tube by sutures to the edge of the wound answers at first, but he had seen such stitches give way. With a double opening no such difficulties arise.—Dr. SILVER pointed out that the point under discussion was

the operation of tapping the lung.—Dr. C. T. WILLIAMS said it was important to discriminate the nature of the case. Cases of bronchiectasis following interstitial pneumonia were not very suitable for operation, since in them the alteration of the bronchial tubes was general throughout the lung, and the cavities mostly multiple; so that if tapped in one place, the expectoration might still continue fetid. In one case he had recorded a needle was passed into a bronchiectatic cavity, without result; and a second tapping succeeded in evacuating the contents of a limited empyema, which might have been caused by the original paracentesis. In ordinary phthisis, the apex cavities, as a rule, drain themselves, so that no operation would be called for in them. The case referred to in the paper where Mr. Erichsen operated was one of phthisical excavation and profuse expectoration, with pyopneumothorax. In that case it would have been impossible to have used a short tube, as suggested by Dr. Barlow. He concluded by hoping that the operation described in the paper would have a fair trial.—Dr. REGINALD THOMPSON said the most important point was the conservative side of the question—the attempt to prevent the opposite lung from becoming infected with septic matter inhaled from the affected side. When that risk was imminent it was clear the operation was justifiable. The procedure might be adapted to another class of cases—viz., when rapid and extensive sloughing of one lung takes place in individuals of broken-down constitution. In such a case timely puncture might prolong life by preventing the secondary involvement of the other lung.—The PRESIDENT said that, from a surgical point of view, the essential thing was to maintain drainage. Antiseptics were not needed, and were useless in such cases. In the case he saw with Dr. Williams the fetor was excessive before operation; but after the free opening had been made into the chest this fetor almost at once ceased. To maintain drainage the opening should be very free, and the tube made of rigid material, so that it might not be compressed by the chest wall. In the case mentioned he used a vulcanite cannula. The injection of antiseptic fluids only excited irritation. As to the operation itself, he would adopt Mr. Hilton's plan of dilating the wound by dressing forceps rather than that of free incision, so as to avoid hæmorrhage. In Dr. Williams' case, rapid and very extensive subcutaneous emphysema almost immediately set in, being increased by violent cough. No ill consequences ensued, for although the gas which entered the tissues must have been charged with foul products, it was perfectly innocuous.—Mr. HOLMES added, that in a case of emphysema from communication with the rectum no irritation was produced in the tissues by the gas.—Dr. POWELL, in reply, said that the operation was one about which so little was known that it required all possible light to be thrown upon it. He agreed with Dr. Symes Thompson as to the difficulty of deciding when to interfere. In this case the disease was shown subsequently to consist of bronchiectatic cavities; but he could not help thinking it had originated in an abscess of the lung, to which the bronchiectasis was secondary. He had at present under his care at Brompton Hospital a patient with a large basic cavity, and, in addition, widespread disorganisation of the lung. It would be risky to attempt a double opening into these cavities. In the present case the opening was really made too low; an outlying cavity was tapped, but if the opening had been higher it would have entered the middle of the main cavity. The tube was made flush with the surface. The immediate cessation of expectoration after the tapping was remarkable, showing that a small amount of fetid acid material would set up much bronchial irritation. He was familiar with the cases of sloughing pneumonia mentioned by Dr. R. Thompson; possibly in future such cases might be dealt with on this plan. The drainage was the pith of the matter, and antiseptics were found in this case to set up much irritation. Various kinds of tubes were used in the case, the last employed being one with a wire in it.—Mr. LYELL, in reply, said that the plan pursued in opening into the lung was of great importance. In this case he used a trocar and cannula as a preliminary expedient for tapping the cavity; so that in case it had not been reached at first it might have been attacked at another spot; and there was less risk of hæmorrhage on this plan. All kinds of tubes were used; and he found the most convenient form for security was one with a large shield by which it could be strapped on to the chest. If he were to do the operation again he should prefer a metal tube. Mosler in his case used a silver tube. It was impossible to have made a double

opening; nor did the condition of the patient permit of the operation being prolonged. The cessation of fetid expectoration showed that the cavity had been effectually drained. The result of using injections was to show that they were so irritating as to be a drawback rather than otherwise. Mosler employed an atomiser for this purpose—a preferable plan to syringing. The expectoration did not become fetid again until after the lapse of three or four weeks.

The Society then adjourned until October.

OBSTETRICAL SOCIETY OF LONDON.

At the meeting on June 2nd, Dr. W. S. Playfair, President, in the chair,

Dr. CHALMERS showed for Dr. McLaurin a Fœtal Monster in its seventh month. There was a single head, and the bodies were united in front as low as the umbilicus. The monster presented by the feet, and was expelled by the natural forces.

Dr. CHAMPNEYS showed a specimen of a Retroflected Uterus, in which the wall on the concave side of the curve was much thicker than the other.

Dr. GALABIN showed Microscopic Sections illustrating the Pathological Anatomy of Erosion of the Cervix. The first closely approximated to true ulceration. Epithelium was entirely lost, as well as the normal papillæ, and the tissue resembled granulation tissue. It was bounded by intact squamous epithelium towards the os as well as on the other side. The second resembled an extension outwards of a surface resembling the interior of the cervical canal, but with hypertrophy of tissue in a villous form, as described by Ruge and Veit. The apparently eroded surface was covered with cylindrical epithelium.

Dr. CLEVELAND showed a full-term Child, the subject of a large Encephalocele, from the practice of Mr. G. S. Walker of Kilburn. The mother had a severe mental shock about a fortnight after quickening. The tumour was about the size of a cocoanut. The child lived forty-four hours, and died of inanition.

Dr. T. CHAMBERS showed a Tumour diagnosed as Fibro-cystic of the Uterus, which he had that day removed with the ovaries by abdominal section antiseptically. The incision was twelve inches. The broad ligaments were transfixed and tied, the cervix enclosed in the author's parallel clamp, the tumour cut away, and the cervix afterwards transfixed and tied. One artery was not controlled by the clamp, and required separate ligature.—Dr. BANTOCK said that in applying a parallel clamp to the cervix the tissues at each side, containing numerous vessels, could not be sufficiently compressed to prevent bleeding. Some circular pressure was necessary. Moreover, he had found that, however tight ligatures might be at first, they become loose after a time on account of the nature of the uterine tissue.

Dr. C. H. CARTER read notes of two cases of Extra-uterine Fœtation, with results. The first patient, aged thirty-eight, was admitted as an urgent case of extra-uterine fœtation. She was in a very critical state; pulse 150. There was a tumour towards the right side as high as the umbilicus, and continuous with a soft doughy mass occupying the pouch of Douglas. Menses had ceased, and she had supposed herself pregnant in December, 1878. In April, 1879, she was in St. Bartholomew's Hospital, under Dr. M. Duncan, with supposed retroversion of the gravid uterus, and an attempt was made to push up the swelling. At the end of August she passed a large substance by the vagina, and was readmitted in September. Extra-uterine fœtation was then diagnosed, the fœtal heart having been heard on her first coming to the out-patient room, but afterwards ceasing. The uterine probe entered six inches into the abdominal hardness, and the point felt as if less than the thickness of the unimpregnated uterine wall covered it. The patient left against advice. A fortnight before her admission, under the author, on January 13th, 1880, she was seized with abdominal pain. A superficial abscess, pointing near the umbilicus, was opened on the 26th, and fetid pus and debris let out. On Feb. 12th a piece of bone was felt by a probe, the opening was enlarged, and the fœtus extracted. The placenta did not come away with the fœtus, and the discharge was very offensive for three days. A discharge

took place per vaginam on the 23rd, and the patient afterwards quickly recovered. The second patient, aged thirty-four, was admitted in July, 1879, for what was supposed to be pelvic cellulitis. The uterus was fixed, and there was a swelling on the left side up to about an inch above the iliac crest. She went out on October 8th, the swelling being smaller. At the end of October some fetid bones were passed per rectum, and she was readmitted in December. Discharge of bones went on until May, when some large flat pieces were nipped in two, and extracted. The author thought that if he had diagnosed this case in the earlier stage he should have been justified in endeavouring to evacuate the cyst through the abdomen. He said that the incision was not made with strict antiseptic precautions, though the cavity was frequently washed out with carbolic lotion. He had not examined the fluid for bacteria.

Dr. GRAILY HEWITT presented a report on Sixty-seven Cases of Uterine Distortion or Displacement, treated during seven years at All Saints' Institution for Ladies suffering from illness, 127, Gower-street. The cases were those treated during seven years, from May, 1872, to May, 1879. The patients were governesses, ladies dependent on their own exertions in various ways, wives of curates, &c. Age varied from eighteen to thirty. The cases comprised various forms of uterine displacement, associated often with great weakness, with a slow but disguised form of starvation, and more or less complete inability to walk or move about in the ordinary manner. In several cases the patients were bedridden, in others power of locomotion was so impaired that employment had to be relinquished; in others the malady, though not so severe, had been found intractable. Great weakness, more or less inability to walk (uterine dyskinesia), and general malnutrition were coupled with various degrees and forms of uterine distortion and displacement, causing pain on locomotion, sickness, menstrual irregularities, &c. The sixty-seven cases are resolved into two classes—(a), 45 of anteversion or flexion; (b), 22 of retroversion or flexion. (a) Thirty single, 15 married. Severity of some of these may be judged of by the time required for treatment. One, a case of chronic invalidism, was under treatment fifteen weeks at intervals spread over thirteen months. Another, whose most distressing symptom was obstinate sickness, was cured satisfactorily only after two years and a quarter, and spent twenty-five weeks in the institution. A completely bedridden case, with hysterical symptoms of long standing, was under treatment over one year, thirty weeks in the institution. The cure was finally complete in these cases. Other similarly obstinate cases were mentioned. In one case of chronic anteversion not long under treatment circumstances prevented a return for further treatment, and after upwards of a year the affection proved fatal. (b) Retroversion or flexion cases, fourteen single, eight married. One patient required fourteen weeks' treatment, the chief symptom being sickness. In another treatment was afforded at intervals during over two years, the uterus was much retroflected, and the ovaries dragged downwards; locomotion, impossible at first, was finally fairly restored. One was a case of almost complete paraplegia complicated by a spinal injury, but the power of locomotion was greatly affected for the better under treatment. Of the whole sixty-seven a very large proportion were restored to health and usefulness. The treatment adopted was as follows: The patients were kept recumbent, in the dorsal position in cases of forward displacement, in the semi-prone position in cases of backward displacement. In most of the cases, semi-starvation being recognised as existing, sometimes of some years' standing, food easily assimilable was frequently given, sometimes every hour; in case of sickness, nutrient enemata. Some cases required months of careful dietetic treatment to restore the general strength. To restore the uterus to its proper condition simple measures were employed; in some cases positional treatment, such as prone or dorsal or knee-elbow position, systematically and frequently. But in most cases other measures were necessary. In cases of forward displacement the cradle pessary, in backward the Hodge pessary, were employed. The sound was used at intervals to aid in restoring the uterus to its proper shape when that organ was found hardened in its distorted shape. The sponge bath, frictions of the skin, great care to prevent constipation, were often subsidiary measures. The principles adopted were, to gently elevate the fundus uteri, to straighten the canal, to avoid what was likely to interfere with mechanical restoration, to nourish the frame and harden the tissues by careful feeding, and thus harden and set the uterus in its

normal shape. The cases offered (1) strong evidence of the connexion between the health of the body generally and that of the generative organs, especially of the uterus; and they show that, if the strength be not adequately sustained during the growing age, the uterus is liable to suffer, and to become weak and incapable of resisting the physical strain and tension of an ordinary active life. It was quite easy to trace in the early history of the cases this almost universal predisposition. These considerations showed that local uterine treatment cannot be expected to be permanently successful, unless measures be taken to remedy the extreme general weakness. The physical change most evident in the uterine tissues in cases of prolonged insufficiency of food is softening and loss of tonicity. (2) A second general conclusion is the remarkable frequency with which these patients were affected with physical powerlessness, an incapability of locomotion varying in degree. This peculiar symptom the author has termed "uterine dyskinesia." It was present in a marked form in almost all the cases, and in most it was the prominent symptom. Physical exertion produces a temporary exaggeration of the existing internal malady, gives pain, and is thus given up; hence a helpless invalidism in many cases. This physical inability is not imaginary or fanciful, though often erroneously so considered. (3) Another general remark is as to the frequency of sickness or nausea as a troublesome symptom and complication in these cases. The cases prove that distortions and displacements of the uterus when aggravated or increased temporarily or persistently by particular exertion are liable to produce an exceedingly troublesome form of sickness or nausea. This is a reflex symptom. A secondary effect is starvation. Later on the stomach itself becomes diseased, and the power of secreting gastric juice is more or less lost.—Dr. GERVIS had seen cases in which the postural method had been adopted for many months with only the result of impairment of the patient's health. He would fear that, if fully carried out, it would benefit the position of the uterus only to the damage of the patient's general health. Dr. Hewitt spoke of leaving pessaries undisturbed for several months. He thought they ought to be removed at moderately short intervals, for the sake of observing the position of the uterus as well as for cleanliness. His belief as to flexions was that their importance largely depended upon the amount of obstruction induced by them in the cervical canal. He had for some time treated very few cases of ante flexion with pessaries, but rather by dilating the cervical canal with uterine bougies, with a very satisfactory result.—Dr. ROUTH believed that uterine disease, as a cause of mental symptoms and even insanity, was often overlooked. But he could not concur with the practice of keeping patients so long reclining, and thought that general debility and other symptoms were likely to be aggravated thereby. He differed also as regards the use of the cradle pessary, from which he had never seen any good result. In the case of ante flexion he believed that nothing short of an intra-uterine stem would cure the patient.

On the motion of Dr. BANTOCK, seconded by Dr. ROGERS, the discussion of Dr. Graily Hewitt's paper was then adjourned until the next meeting.

Reviews and Notices of Books.

Chirurgie Antiseptique: Principes, Modes d'Application et Résultats du Pansement de Lister. Par le Dr. JUST LUCAS-CHAMPIONNIÈRE, Chirurgien de la Maternité l'Hôpital Cochin. Deuxième édition. Paris: J. B. Baillière et Fils. Londres: Baillière, Tindall et Cox. 1880.

Antiseptic Surgery: an Address delivered at St. Thomas's Hospital, with the subsequent Debate, &c. By WILLIAM MACCORMAC, M.A., F.R.C.S.E. & I., Surgeon and Lecturer on Surgery, St. Thomas's Hospital; Consulting Surgeon to the French Hospital. London: Smith, Elder, and Co. 1880.

It is a characteristic circumstance that the antiseptic method of dressing wounds should have been conceived and perfected as a scientific system by an English surgeon, and that an account of its history and a full description of all its details should have been published first in Germany and then in France. Though more than fourteen

years have elapsed since Mr. Lister recorded his earliest attempts to devise an antiseptic mode of dressing wounds, it is barely a month since the first systematic work on the subject in the English language left the press. Germany has long possessed a copious and extensive literature relating to antiseptic surgery, and France has not been far behind, but in England the only descriptions that have been given have been such as may be gathered from the lectures, discussions, and records of cases published from time to time in the various medical periodicals. Even now, the appearance of Mr. MacCormac's book is an accidental phenomenon, arising out of an address which the author delivered at St. Thomas's Hospital before the members of the South London Branch of the British Medical Association. That address, our readers may remember, formed the text of an interesting debate, in which a large number of the leading surgeons of the metropolis and of the provinces took part, and afforded likewise an opportunity for Mr. Lister to reply to some of the more recent criticisms of his method. There was, we are told, at first no thought or intention of reproducing in print either the address or the debate, but, acting on the suggestion of Mr. Spencer Wells, Mr. MacCormac agreed to undertake the task of editing the remarks and comments of the various speakers who took part in the discussion, with a view to publishing them in a separate form. The remarks of each speaker have been revised, corrected, and occasionally amplified. In order to increase the general interest of his book, and to make it more useful to students and practitioners desirous of becoming acquainted with Mr. Lister's antiseptic method, Mr. MacCormac has added a short statement of the more important points connected with the theory on which the method is based, and a description of the antiseptic materials in common use and the manner of their preparation. The last chapter is devoted to some of the practical applications of the antiseptic system, including its employment in military surgery. Altogether Mr. MacCormac's book must be regarded as a valuable and interesting contribution to modern surgery. It is not only a compendium of the opinions of the best surgeons of the present day on the nature and causes of wound diseases, and the best modes of preventing them, but it contains a large yet sifted mass of illustrative facts gathered from every trustworthy source. There is scarcely any question of practical importance that Mr. MacCormac has not fully considered. His book must long remain the best, as it is the first, in our language on the subject with which it deals.

Equal praise must, however, be given to Dr. Lucas-Championnière's work. Though differing somewhat in structure and plan, the aim of both the works named at the head of this notice is identical—namely, to make known the principles of Mr. Lister's antiseptic method, and to teach the best mode of carrying it out in practice. It is needless to say that both authors are uncompromising believers in the theory of the germ-origin of purulent and putrefactive wound-diseases, and in the efficacy of Mr. Lister's plan of obviating them. Both speak with the authority of experience, and with a confidence inspired by success. Dr. Lucas-Championnière, after describing the slow but steady growth of opinion in favour of Listerism during the past four or five years in the Paris hospitals, declares that in some of the hospitals formerly reputed very unhealthy the most formidable operations are done with the same security as if in the purest air of the country. He says that Mr. Lister's method affords all the external advantages of the country, combined with all the resources of well-appointed hospitals. Like other advocates of Listerism, he claims for this method a complete immunity from purulent infection. Nélaton, who was among the most successful of operators, was wont to say that the man who should abolish purulent infection

would deserve a gold statue. Dr. Lucas-Championnière would award this statue to Mr. Lister, inasmuch as purulent infection has disappeared from the list of wound complications wherever Mr. Lister's plan is properly carried out. Dr. Championnière promises six additional advantages to those who adopt Listerism—namely, a disappearance of the accidents of wounds even in the worst media, a regularity of repair hitherto unknown, a surgery without suppuration, habitual primary union of wounds, an unprecedented rapidity of healing of wounds, and the possibility of safely performing operations otherwise dangerous and even culpable. We are assured that by strictly adhering to Mr. Lister's plan we may not only diminish the mortality after operations, but ensure more speedy recoveries, and with less risk and damage to the general health. This is an aspect of the question that has not yet been adequately considered. If we may trust statistics (and within certain limits we may trust them), the net gain of life from the antiseptic plan of dressing wounds must be very great. The precise amount is not estimable. But the bare question of life or death is not all that should be thought of. Patients may survive an operation, but at the ruinous cost of broken health and incurable constitutional derangement. These contingencies are referred to by Mr. MacCormac and Dr. Lucas-Champonnière, and were very emphatically dwelt on by Sir James Paget in the remarks he made during the debate at St. Thomas's Hospital. "I have," he said, "spoken only of the mortalities after operations; but a mere escape from death is not all we have to wish for. It is not enough that a patient should just escape with his life; it is desirable that he should not be in danger from fever or from erysipelas, or any other acute disease, nor yet from chronic pyæmia or long-continued suppuration, or any other malady introduced or aggravated by the operation. He should be cured with as little illness as possible, and with as little increase as possible of the tendencies to tuberculosis or any of the degeneration of internal organs which may be associated with the disease for which the operation is done." Now, it is in this direction that the advocates of antiseptic surgery will have to work. In future it will not be sufficient to give the mortality returns alone, but also to record the temperature, the rate of repair, the presence or absence of suppuration, of traumatic fever, of septicæmia and of other wound-accidents, and the duration of treatment. In this way shall we best appreciate the alleged advantages of the antiseptic system. The teachings of modern pathology all point in this direction. They not only controvert the old notion that suppuration is a harmless and even a beneficial process, but favour the opinion that in any degree pus formation is a possible source of constitutional infection, which may manifest itself as septicæmia, pyæmia, tuberculosis, or by degenerations in the internal viscera. The ideal aim of the surgeon must more than ever be to get wounds to heal quickly, for then, as a rule, they will also heal safely and pleasantly. The advocates of the antiseptic system aver this can only be done by practising the antiseptic method. Those who are not already familiar with the details of Mr. Lister's method cannot have a better guide than one, or both of the works mentioned above.

An Elementary Text-book of Botany. Translated from the German of D. K. PRANTL. The Translation revised by S. H. VINES, M.A., D.Sc., F.L.S. London: W. Swan Sonnenschein and Allen. 1880.

ALTHOUGH the condensed style in which this book is written makes it to teem with facts and scientific phraseology, and deprives it of a strictly "elementary" character, yet there is no doubt that it will be read and appreciated by many students of the subject. The book was written—the preface tells us—to meet the demand for a less extensive work than that of Professor Sachs, but based upon the same

plan; and it has already passed through three German editions. The author plunges at once into his subject by dealing in the opening pages with the rather intricate matter of phyllotaxis and other points in morphology. Then follow sections on the anatomy and physiology of plants, which are written plainly, and serve to bring into prominence this interesting but still incomplete department of botanical study. The fourth part is that of classification—the Cryptogams are split up into three groups, the Thallophyta, Muscineæ, and Pteridophyta; and considerable attention is paid to the description of their characters. Then come the Phanerogams, which are arranged on a somewhat different plan from that most familiar to us in this country. In an appendix the relation between the English classification and that adopted in this work is given. It is in this part, indeed, that the reader will find himself most in difficulty, owing to these technological differences and to the extremely condensed form in which the characters of the plants are described. The book is copiously illustrated, and has been rendered into readable English. It is not by any means the first German text-book on this science that has been translated into our tongue; and in its severely scientific construction it appears less attractive to the English student than works of some of our own authors. Although there is a copious index, there can be no doubt that an equally careful glossary would add to the value of the book.

The Watering-places and Mineral Springs of Germany, Austria, and Switzerland. A Popular Medical Guide. By EDWARD GUTTMANN, M.D. London: Sampson Low and Co. 1880.

THIS is, as it professes to be, an essentially popular book, and is intended for the general and not for the medical public, although many members of our profession will, doubtless, be thankful for a guide like that which Dr. Guttman has produced, and which furnishes the reader with many common facts it is essential to know. The work is divided into four parts. The first furnishes those general considerations concerning travelling, diet, climate, and bath life which must be taken into account by all who intend trying the effect of balneo-therapeusis. The second part is devoted to a topographical review of the watering-places, and gives information of a kind which one finds in Murray's, Baedeker's, and similar handbooks; while the third and fourth parts review the subject from the point of view of the chemical composition of the waters and their various applications, and the particular applicability of special climates to special cases. The work seems to be comprehensive and accurate in the main; but we notice on glancing through it that the picture of Ems does not represent the Ems of the present day, but the Ems of a century since probably; that the map gives a very imperfect notion of the railway lines, especially in the Black Forest; and we have looked in vain in the index for any notice of Rippoldsau and the baths adjacent to it, or of Niederbronn or any other watering-place in the Vosges mountains.

New Inventions.

CALVERT'S CARBOLIC-ACID FUMIGATOR.

MESSRS. CALVERT have sent us a capital, handy apparatus for diffusing carbolic acid in a state of vapour. It consists of a strong cast-iron stand to hold a heater. Above this is fixed an iron cylinder perforated at the sides, and having at the top a cup-shaped cavity with a small perforation at the bottom. Into this cavity is poured carbolic acid mixed with water, in the proportion of two parts of the acid with one of water; and this, trickling down upon the heater within, previously made red hot, is rapidly converted into

and diffused as vapour. An iron hook is attached to the apparatus, to aid in the easy manipulation of the several parts. The apparatus is very compact and convenient of carriage, and is especially fitted for the work of an inspector of nuisances who may have to use carbolic-acid vapour for disinfecting purposes.

A FLUSHING-PAIL.

MR. W. BENNET sends us for examination two tin pails: one to contain water for domestic use; the other to be used solely for water intended for hand-flushing a watercloset. The larger pail is a well-made article with cover, and will hold two gallons. The smaller pail will contain a gallon, and it differs from ordinary pails in having an obliquely placed perforated diaphragm within it. When the contents of the pail are cast into a watercloset, the water within the part partially cut off by the diaphragm passes out less rapidly than the greater bulk of liquid in the other part of the pail, and serves, in Mr. Bennet's estimate, to secure the trap of the closet-pan being duly charged after the flushing. Mr. Bennet has distributed a considerable number of these cans among the tenants of houses in Liverpool courts. He seems of opinion that the flushing-can will render unnecessary the attaching of flushing apparatus or special cisterns to waterclosets, or the ventilation of soil-pipes when connected with the simplest form of watercloset. In both these matters his observations run counter to experience.

The Lancet Commission ON THE MEDICAL USE OF WINES.

II. WHITE BURGUNDY WINES.

IN our previous issue we pointed out that white Bordeaux wines are but little known and appreciated in this country, although the red kinds are freely prescribed and consumed. White Burgundies are even less known than white clarets, and, with the exception of those classed under the name of "Chablis," are rarely seen except in some foreign restaurant, and even then are seldom tasted by the English consumer, although he may be fairly well acquainted with the red Burgundies, such as Beaune, Chambertin, Pommard, Nuits, &c., and perhaps have heard of the Clos de Vougeot or La Romanée Conti. It is a question of some interest, why the white wines, which are frequently superior in true vinous flavour, mellowness, and fragrance, and more stimulating in proportion to their contained alcohol, are thus neglected for red wines of the same locality and vintage. Is it because that, as a rule, the cheaper white French wines are less astringent and somewhat thinner than the corresponding red wines, and that the more expensive and full-bodied ones are certainly sweeter than the English palate is accustomed to? Moreover, dyspeptics, with a tendency to acid fermentations, can undoubtedly take many red wines with some freedom and occasionally with advantage; and this they can rarely do in the case of most white French wines. The older and well-matured wines are, as a rule, too sweet, and the thinner ones are very apt to cause, or at any rate aggravate, those forms of indigestion which give rise to acidity, heartburn, &c.

The best white Burgundies imported into England are the Montrachet and Meursault wines, and they are remarkably improved by keeping for some years. The best vintages now obtainable are those of 1865 and 1870, and although their alcoholic strength is much less than the crude fortified ports and sherries so freely prescribed, they are vastly superior in most cases in which stimulants should be ordered. White wines of the adjacent districts are generally classed as Burgundies, and are labeled Chablis, Pouilly or Rully, if not even Meursault or Montrachet. Most of the white wine from this neighbourhood passes under the

generic name of Chablis, although true Chablis, we are told, but rarely comes into this country, and as specimens vary even more than white clarets, great caution must be exercised in recommending their use.

Specimens of very good Chablis have been submitted to us [Coindreau, Dotesio, Fearon and Sons], all at an average price of 30s. per dozen, and we analysed one of them with the following results:—

	(E.)	In 100 vols.
Total solids ...	...	1.89
Grape sugar ...	...	.05
Fixed acid ...	...	.61
Volatile acid ...	...	.13
Absolute alcohol	{ by weight ...	8.86
	{ by volume ...	11.00

If we compare this with the analysis of the cheaper white Bordeaux wines, we find a slight increase in the fixed acid, but there is somewhat less alcohol and total solids, with a marked decrease in the percentage of grape sugar. Clinically speaking, these wines are more stimulating, although they contain a little less alcohol; they are slightly more acid, but their special importance is the almost complete absence of any unfermented sugar. We should not recommend them as general tonics, or as refrigerants, unless very largely diluted, and we should hesitate to order them for a dyspeptic patient, or one who was liable to or had suffered from gout. A diabetic could take them if diluted as a beverage for assuaging thirst, or undiluted as a dinner-wine, with even more impunity than most white clarets. Like the latter, they have a slightly aperient rather than a constipating effect, and this must be remembered if they are ordered for delicate invalids with any tendency to diarrhoea. For general medicinal purposes, as tonics and aids to digestion, we should choose the cheaper white clarets in preference to the ordinary specimens of Chablis, although the latter are much fuller in flavour, mellow, and more exciting.

A wine marked Meursault, at 54s. per dozen [Dotesio], of delicate flavour and more body, contained a slightly larger percentage of alcohol and less fixed acid, but otherwise on analysis differed but very little from the preceding.

	(F.)	In 100 vols.
Total solids ...	...	1.98
Grape sugar ...	...	.08
Fixed acid ...	...	.48
Volatile acid ...	...	.13
Absolute alcohol	{ by weight ...	10.77
	{ by volume ...	13.34

As an example of the most expensive white Burgundies we selected for analysis a specimen of Montrachet, 1870 vintage, at 80s. per dozen [Pfungst and Co.] It had great body, a pure mellow flavour, and a delicious fragrance, and was as choice a wine as could be desired by anyone.

	(G.)	In 100 vols.
Total solids ...	...	1.99
Grape sugar ...	...	.31
Fixed acid ...	...	.46
Volatile acid ...	...	.12
Absolute alcohol	{ by weight ...	12.08
	{ by volume ...	14.93

Except in the slight increase in alcohol and a decidedly larger (four times as much) percentage of sugar, there is but little difference between this and the former specimen, although in every respect it was a far superior wine. We must again insist, therefore, on the obvious fact that chemical analysis cannot give more than a few crude results to guide us in our choice of wines for clinical purposes. Although containing much less sugar than the old Sauterne of the same vintage (*vide* analysis C in previous number), a diabetic should also avoid such a wine as the above. But for a primarily stimulating and afterwards slightly sedative effect, an old Montrachet can be placed side by side with the best Sauternes, even the famous Château d'Yquem.

Another specimen of Montrachet, 1876 vintage, at 30s. per dozen [Barnard and Co.], was a remarkably delicate and sound wine, and shows that good white Burgundies can be procured by the invalid at even a less price than fortified wines of any reasonable degree of maturity. The advantage of such a restorative as a good Burgundy wine, in which the alcohol is less than 15 per cent. by volume, must be so obvious to every practitioner who has to deal with tardy convalescence after fevers, operations, &c., that we can only express our surprise that these valuable wines are so seldom prescribed.

THE LANCET.

LONDON: SATURDAY, JULY 3, 1880.

THE General Medical Council will meet next Wednesday at 2 o'clock. We should be disposed to prognosticate that the meeting will not be a very long or important one. It is, of course, never possible to say how long a very unimportant subject may occupy the Council. Occasionally it seems to spend more time over trifling matters than over serious ones. But, all things considered, we should not expect the meeting to occupy more than two or three days. There is really an absence of any great work to be done. The time of meeting must be highly inconvenient to some members, especially those connected with the Scotch universities. The change of Parliament, interrupting the inquiry by a Select Committee, and the determination of the Government to take the interval of the session to consider the subject of medical legislation, have a paralysing effect on the Council and the Corporations as regards any active work, and will dispose them to do nothing but what is urgently in the way of their duty. Under these circumstances we may suppose that the Council will not have a long sitting.

It is probable that amongst the few questions of interest which it will be called on to consider, one will be that of the Dentists Act, and the question of repeal or amendment in it. It is well known that the Council has been memorialised on this subject by two different bodies in favour of two very different courses, fulfilling our anticipations that the Council will find itself hindered in its general work by reason of its duties under the Dentists Act. Nothing is more certain than that the Dentists Act has given great dissatisfaction to the profession, and to most of those members of the dental specialty who have had a professional education and who hold full professional qualifications. The admission to the dental register of thousands of persons destitute of all previous professional status must have surprised them as much as it has grieved those who by very different ways have attained to medical registration. The grievance of the latter is not less because the Medical Council and the medical corporations gave their sanction to the Dentists Act, and are placed at a great disadvantage now in asking either for its repeal or its material amendment. At its approaching meeting the Council will have to consider a memorial from the Association of Surgeons Practising Dental Surgery, asking for the amendment or the repeal of the Dentists Act of 1878. They complain that whereas the Act was intended to make provision for the registration of surgeons "specially qualified to practise as dentists," and the highest estimate of the number of those so qualified was not more than 2000, more than 5000 persons have been so registered. In consequence of the want of interpretation of the terms dentistry and dental surgery, each person claiming registration has interpreted these words according to his own wish and fashion, and so many persons have been placed on the Dentists' Register without any claim to be considered "specially

qualified." The Association of Surgeons Practising Dentistry sees no chance of the Medical Council acting efficiently in the removal of names improperly registered until the words "specially qualified" are clearly interpreted. And they maintain that the Medical Council, "a large and important body, meeting at rare intervals," is not the body best fitted to administer the Dentists Act.

But the Medical Council will have another memorial from the Representative Board of the British Dental Association, expressing ample satisfaction with the Dentists Act and the Medical Council, and the gratified feelings with which the dentists find themselves registered under the auspices of the Council, and reminding the Council, very naturally, of their general approval of the Dentists Bill. It is most desirable that whenever medical legislation takes place opportunity should be taken to define what dentistry is, and to confine persons not surgeons to the use of such titles as will not mislead the public—titles in which dentistry shall appear as the principal calling, and not surgery, as many of the recently-registered dentists would imply by their way of putting their titles. The Medical Council is bound to abate, as far as its influence goes, the harm done by the admission of unfit persons to the Dental Register. One or two cases of application to be registered in the Medical Register on curious grounds have been referred to the General Council by the Executive Committee.

One other subject, almost an annual, will perhaps claim a little of the Council's attention—namely, the question in dispute between it and the Irish Branch Council as to the proper mode of procedure in cases where alterations in, or additions to, the Register have to be made. But the question seems pretty nearly settled in favour of the views of the Irish Branch.

One thing the Council ought to do, and that is not to separate without agreeing to urge on the new Government the critical situation in which all medical bodies are placed by the late dissolution of Parliament, just when a Select Committee was engaged in investigating the changes necessary in the Medical Acts. In the absence of other business that can long occupy its time, the Council cannot better spend an hour or two than in formulating such a representation, and in making the Government understand that there can be no satisfactory action on the part either of the Council or of the corporations, until they are put into a more assured position, and one more consistent with the interests of the public and the profession than the present.

THE Bill brought into the House of Commons by Mr. DILLWYN to amend the laws relating to lunatics foreshadows the course which legislation must take if we are to escape from the difficulties which surround the existing laws and practices as to the care and management of lunatics. The provisions of the Bill manifest an accurate appreciation of the cardinal defects of our present system of lunacy administration, and, which is of not less importance, show that its promoters have rightly, as we think, apprehended the principles upon which measures directed to their removal must be based. Briefly, the Bill provides for the initiation of a plan for the gradual acquisition by the public of private asylums, and the placing of these institutions on a public footing; also, for the more assured development of the

functions of these asylums as *hospitals*—in other words, as places for the medical treatment and cure of lunacy as contrasted with their function as *retreats*—that is to say, as places where the safety of the lunatic is alone in question.

So far as the first principal object is concerned, it is idle to blink the fact that until private asylums cease to exist we cannot hope for a healthier state of feeling among the public as to the treatment of lunatics in asylums than now prevails. It matters less that this feeling is chiefly an affair of sentiment than that it exists, and, on the one hand, interposes a formidable obstacle to the just curative treatment of lunacy; and, on the other hand, is apt to manifest itself in fashions most injurious to the credit and dignity of the profession, and to the true welfare of the lunatic. The influence of this state of feeling has been unfortunate in every way by subordinating the true curative treatment of lunacy to secondary conditions affecting the restraint of the lunatic. It underlies in our public asylums that tendency to the grandiose architectonic provision for, and histrionic management of, the lunatic which stands for treatment in the minds of perhaps the greater number of the persons who take an interest in these portentous establishments; while in the private asylums it is contented with certain prettinesses of arrangement quite irrespective of the curative object which should be had in view. In both cases the lunatic is the ultimate sufferer, and in relations to the private asylum public feeling often brings about the very thing which it would obviate—namely, the prolonged detention of the patient.

Up to the present moment the private asylum has seemed a necessity, if the exigencies of lunacy among all classes of the population were to be duly met; and this form of institution has given, and still gives, occasion for the display of talents which have ranked their possessors (for example, CHARLTON, TUKE, CONOLLY, the FOXES, and others, too many to mention) among the most honoured names in medicine and in the list of benefactors of the human race. But not even these names have availed to disabuse the public mind of the suspicions that attach to institutions which in reality are commercial undertakings specially privileged by law to infringe the liberty of the subject, as no other private enterprise is permitted to infringe it, and which in too many instances are valuable properties, the medical element being superadded and subordinate. The time has come when public opinion may be prepared to solve this question in the only way in which, we believe, it admits of a satisfactory solution—namely, by supporting Parliament in a course of procedure which would enable defined public authorities to acquire private asylums by purchase and convert them into public institutions. One way in which this may be done is set forth in detail in the Bill. Mr. DILLWYN would authorise justices of counties and boroughs to raise money or issue bonds on terminable annuities for the purchase of private asylums, or the construction of new establishments by which these may be replaced. Whether a proposition of this sort, involving consequences of such magnitude, should not emanate from the Government rather than a private member, we do not propose to discuss here.

So far as the second principal object of the Bill—namely, the development of the curative functions of the asylums as contrasted with their seclusionary functions—is

concerned, the provisions are of great moment, and, we apprehend, open to few objections. They would provide for a check upon the issue of certificates of lunacy and the admission of patients to an asylum in a way which would seem to obviate all danger of the issue of improper certificates, while at the same time facilitating the early treatment of the mentally afflicted. To these ends the appointment of a "Medical Visitor" would be continued, but medical superintendents, honorary or salaried officers of any hospital for nervous diseases, or of an asylum in the district to which the Visitor may be appointed, or medical men engaged in private practice would be debarred from holding the appointment; while medical coroners, medical officers of health, and qualified professors or teachers of a medical or scientific subject in any university, college, or medical school would be eligible for it. The Medical Visitor would have the duty of visiting and examining all patients immediately after their admission into an asylum, and of doing other acts, in view of the interests of the public and patients, in relation to admissions and discharges. With the object of promoting the more ready and earlier entrance of patients into asylums, and facilitating curative treatment, it is proposed to make provision for the issue of emergency certificates, signed by a single medical man, and which shall have force for only forty-eight hours, unless countersigned in the interval by the Medical Visitor after an examination of the patient. Other provisions relate to the more effectual supervision of asylums, and the voluntary seclusion of the insane; and all show an intelligent regard for the protection of the patient from improper confinement, while tending to develop the more truly curative element of asylum treatment, and to relieve the sufferers with mental disease from the stigma which the law now casts upon them.

THE announcement which we made last week, that the Governors of St. Thomas's Hospital had passed the scheme approved by the Charity Commissioners for the admission of paying patients into the hospital will seem at first sight an unimportant matter; most people will regard it as merely a step in the carrying out of an already determined and approved course. We have heard so much of the proposal to convert one block of the hospital into a separate hospital or home for remunerative paying patients, and the arguments for and against the scheme have been so fully discussed, that it was hardly expected that under cover of this scheme great and radical changes were to be introduced into the hospital itself. Some two years ago, when first the proposition of admitting paying patients was mooted, strong opposition was raised by the medical staff and by the profession at large against a plan which would impose additional unpaid labour upon the staff, and might place them in an invidious position as regards their professional brethren. The plan was, it was understood, abandoned; and a separate Home Hospital, independent of the control or services of the staff, was decided upon, concerning the details of which the medical officers were understood to have given some counsel.

It is almost incredible, we say, that, after such a conflict and decision, the treasurer and governors should have come to such conclusions as are now made public. In saying this, we do not for the moment raise the question whether the

proposed scheme is right or wrong, beneficial to the hospital or the reverse; this may be considered later. The scheme as approved by the Charity Commissioners is divided into two separate branches: first, the establishment and regulation of a hospital for remunerative paying patients, to be called the St. Thomas's Home, which is to be conducted entirely apart from the medical and surgical staff; and, secondly, the admission into the general wards of "poor paying patients," who shall pay only so much as will cover the cost of their maintenance. It is to the latter subject that we now draw attention. The scheme runs as follows:—

"1. That as many patients as could be contained in the remaining two wards of Block No. 2 (that is to say, fifty-two) shall, upon their agreeing to pay the actual cost incident to their reception and treatment, be received as vacancies occur into eleven of the general or ordinary wards of the hospital in equal numbers, and so that not more than five patients shall be in any one of such wards at the same time. 2. *That the provisions, with regard to applications for admission of poor paying patients into the hospital, and to the determination of each patient's term in the hospital, shall be the same as those hereinbefore contained concerning remunerative paying patients.*" 3. The charge to be three shillings a day. 4. Payments to be weekly and in advance. "5. Poor paying patients admitted into the hospital under the present scheme will be treated in exactly the same way as the ordinary patients for the time being are treated, and must in all respects conform to the regulations from time to time prescribed by the treasurer and house committee for the due government and management of the hospital. The payments, to be made as aforesaid, will entitle them to their board, medicine, and medical and surgical attendance and appliances, and to be nursed and attended by the nursing staff of the hospital."

It must be observed that in this scheme there are two important points wherein the condition of these patients will differ from that of the ordinary patients, quite apart from the fact of payment. The provisions for admission of remunerative paying patients, referred to in the second clause, are to the effect that all applications are to be made to the treasurer and house committee, or in cases of emergency to the treasurer alone; and that they have an absolute discretion in the matter. They are not to be admitted by the resident medical officer, who is usually responsible for the admission of suitable cases. Nor is the physician or surgeon in charge of the ward to judge either of the suitability of the case or of the time of discharge, as is always the case in well-regulated hospitals, and, we believe, in St. Thomas's. In other words, one out of about every five patients (we judge from the statistics) shall be selected by the treasurer on the ground of his ability to pay a guinea a week, and shall be removable only at his pleasure, the physician and surgeon having no option as to his admission or discharge, and the patient claiming medical and surgical attendance as being "entitled to it." In what position does this leave the physicians and surgeons? As the scheme stands no increase in the number of beds occupied is proposed; so that each one must submit to have five of his beds, at present occupied by cases of urgency or interest, taken up by guinea patients. In the case of the smaller wards devoted to special diseases, the proportion of such patients will be much larger than in the general wards. Into these wards, we apprehend, the cases most urgently needing special treatment or operation, selected from the out-patient practice, are admitted. In what position will the obstetric

physician or ophthalmic surgeon be if he is compelled to forego his right of admission to one-half or one-third of his beds? Many other objections might be urged, but the point on which we desire to dwell is that these changes have apparently been introduced without the consent of the staff, and are very different from those sanctioned by previous engagements. It is true that the treasurer stated, in a general way, that the senior physician and senior surgeon had expressed approval of the scheme. But we have no evidence either that the entire scheme was submitted to them, or that they were authorised to speak or act for the remainder of the twenty or more members of the staff, upon whom the whole matter must have come as a surprise. It is not probable that the staff would quietly eat their own words, or go back from their carefully considered and recorded resolutions. Their existence and rights are practically ignored in the report. It may, perhaps, not yet be too late to amend the scheme in such a way as to clash least with the interests of the staff and of the profession generally. It would be a very different matter if patients were admitted in the ordinary way, and provision made for the levying of a suitable payment from those capable of affording it. Such a plan would be far less open to abuse, and would not trench on the rights of the staff or of the patients. We have no doubt that there are now many patients admitted in the ordinary way, and on proper grounds, who could well afford to pay for their board and medicine, and even something for lodging, and it would be no injustice to them, or to the medical attendant to accept or even to enforce such payment after proper inquiry. Many would probably be only too glad to make the return to the hospital for the services rendered. But a rate of three shillings a day for board, medicine, *medical and surgical attendance*, and nursing, does not sound well, to say the least. If the present plan is enforced, difficulties will spring up on every side. We can hardly suppose that the staff will tamely submit to a change which, in the mode of its introduction, is a grave affront to them as a body, and in its substance injurious to their interests. However cogent the reasons for its adoption, they may well complain that they are fully capable of appreciating and yielding to them if necessity urges; but "upon compulsion, no," must be their motto if they would retain their self-respect. If they have changed front and rescinded their former resolutions, they owe it to themselves and to the profession publicly to state the grounds upon which they have so done.

What is the position of the question as regards the patients and the poor generally? Much has been said of the necessity for increasing the accommodation for really needy and poor patients. And this is how it is to be done: by taking away fifty-two beds now actually occupied by the really poor, for those nominally poor who can pay a guinea a week, and choose to do so. This is to last until such time as a sufficient profit has been realised by the "remunerative" patients as to enable the governors to open two new wards. This may be by the year 1900, if the estimated and somewhat chimerical profits are to any extent realised, which would much surprise us. We doubt, indeed, whether in the first five years the expenses, together with a fair rate of interest on the initial expenditure, will be paid. If it be so nominally, it will be only by taxing the general resources

of the hospital for things not entered in the nominal expenditure. Space forbids our entering into the financial details, but they are an amusing as well as instructive study. It appears that it is possible to board "remunerative paying patients" at £6 a year less per head than nurses and wardmaids. This looks like profit, at any rate. We could wish that the governors had had the wisdom to try the humbler and more justifiable plan of taking moderate payment from those able to afford it, without embarking upon an expensive and hazardous experiment, which will severely strain the relations of the hospital to the profession and the public, and place themselves in a position from which it may be difficult to withdraw.

THE question of Hospital Registration raised by a correspondent in another part of our present number is one of considerable importance. It is not the first time that attention has been directed to the prevailing diversity in methods of hospital registration, and the experience of the Pathological Society's committee, quoted by our correspondent, is by no means an isolated instance of the difficulty, or almost the impossibility, of obtaining parallel information on special points of observation in the records of the registrars of different hospitals. It must be borne in mind that the general adoption of a system of registration by the metropolitan hospitals is a comparatively recent event. There are few hospitals which have pursued the present plan of registration for twenty years. Then not only do the methods followed differ almost at every hospital, but it happens that even at the same institution the registration may vary much in scope and quality, almost from year to year. Such changes are a necessary consequence of the brief tenure of office of a hospital registrar, for in the absence of any well-defined plan it often happens that an incoming registrar desires to "improve" on his predecessor's method. This is seen in the increasing elaboration of reports which are published annually by many hospitals. No better illustration of the lack of uniform registration at the different hospitals could be given than these reports afford. The advantages of uniformity have often been insisted on, not only in the plan of drawing up reports, but in the manner in which the registration is itself carried on. The question arises whether it be possible to take steps to ensure such uniformity, and in what manner it could be enforced. Were our hospitals under the guidance of some central authority, were they controlled by the State or the municipality, it would be an easy if not a necessary measure to ensure a perfect system of registration. But at present these institutions go each their own way in the management of their affairs, and are as independent of each other in the manner in which they compile statistics as they are in their modes of admitting patients or of nursing them. So, then, there seems no better way than that suggested by Mr. HOWLETT, which we commend to the attention of all present and past hospital registrars, and by means of a Hospital Registration Committee, a sufficiently comprehensive scheme might be drawn up for general adoption. We believe this would do good in more ways than one. It would tend to bring into closer relations institutions that work for the same ends; it would facilitate the labours of

those who are in search of information upon special points, and this would be a distinct gain to medical science. We might also then look for the annual publication of a series of reports which would be drawn up on the same lines and do credit to our metropolis. Still we must recognise the existence of several difficulties in the way of initiating and carrying out such a scheme. It would require many concessions to be made on the part of each hospital, which naturally deems its own plan the best. But there is no reason why the scheme should not be set on foot, seeing how great are the advantages that may be expected to accrue from it.

Annotations.

"No quid nimis."

THE COLLEGE ELECTION.

THE annual election of members of the Council of the Royal College of Surgeons took place on Thursday, the 1st inst. As we have previously announced, the vacancies were caused by the death of Mr. Hancock, the retirement by rotation of Messrs. Busk and Curling, and the resignation of Mr. Simon. The candidates in the order of seniority are: Mr. William Cadge, of Norwich; Mr. William Adams; Mr. Joseph Lister, F.R.S.; Mr. Thos. Bryant; Mr. Sydney Jones; Mr. J. Whitaker Hulke, F.R.S.; Mr. Thos. Smith; and Mr. M. Berkeley Hill. Voting began at two o'clock, and continued till five. The results were:—

Mr. CADGE ...	...	...	174,	plumpers	14
Mr. BRYANT ...	...	...	170	"	15
Mr. LISTER ...	...	...	169	"	1
Mr. T. SMITH ...	...	...	136	"	13
Mr. Hulke ...	...	...	107	"	6
Mr. Adams ...	...	...	87	"	6
Mr. Hill ...	...	...	51	"	6
Mr. S. Jones ...	...	...	45	"	4

As we explained last week, Mr. Simon's term of office would not, under ordinary circumstances, have expired until the year 1884. Section 14 of the Charter, 7th Vict., provides that whenever a vacancy occurs in any other way than by the retirement by rotation of a member of the Council, the Fellow elected as the substitute member shall hold office until the person in whose room he is chosen would have been liable to go out of office. Mr. T. Smith, having been elected by the smallest number of votes, is, in accordance with the bye-laws, the substitute member for Mr. Simon, and will accordingly have to retire by rotation in 1884.

In the evening the Fellows dined at the Albion Tavern, Sir James Paget, Bart., taking the chair.

INCURABLE DISEASE.

MALADIES which cannot be "cured" are the opprobria of medicine as an art, and, for the most part, they are not less the enigmas of medicine as a science. It should not, however, be hastily assumed that cases which cannot be cured must therefore be regarded as beyond the hope of recovery. There is a wondrous power of *self-cure* in the organism, and many a sufferer condemned by the "Faculty" has been relieved by Nature. It is most desirable that this should be borne in mind, for two principal reasons: first, because hope is itself a great specific, even for diseases which seem to be beyond the reach of any remedy, and nothing so greatly tends to destroy the natural chances of recovery as the depression produced by an adverse prognosis, which is often amusingly falsified by the facts of experience: second, it is

a most irrational position to take up that *any* malady is incurable. How can the scientist possibly feel sure of the proposition on which he erects his postulate? If it be generally difficult to prove a negative, it is absolutely impossible to do so when that negative is one that excludes the possibility of recovery from a disease. If the practical physician assumes that a case is incurable, he shuts himself out from the field of inquiry and experiment, where a remedy may be found. We are led to make these remarks by signal proof of the *impolicy*—to take no higher ground—of the position we condemn. Patients who are said to be suffering from incurable maladies go to adventurous practitioners, who try empirical remedies, or to “quacks,” and recover after they have been “given up.” The results of this procedure are to be traced in the advertisement columns of the lay newspapers, in which “cures” for incurable diseases abound; and it is absurd to suppose that no good follows their use. The *post hoc* is not the *propter hoc*, but that counts for nothing, to the public, to the physician who has “waited on events” while he tried his method, or to the quack who reaps the credit of a success he has neither earned nor deserved. These persons do not cure the cases they claim to have benefited, but the cases do get well. And the *modus operandi* is this: A distinguished and able practitioner makes a diagnosis or gives a prognosis which sounds like a death-knell. The patient and his friends are disheartened, and for the time hopeless. By and by hope revives, and in the moment of its rekindling, or after several successive collapses and recoveries of the spirits, the patient falls under the care of some one who, honestly or dishonestly, with or without knowledge, professes to be able to “cure” the case. It is true, perhaps—though even the most expert clinicians may be occasionally mistaken—that the disease is incurable, but the case may nevertheless “recover;” and it does recover under the stimulus of hope and perhaps good regimen. Contempt is poured on science, and quackery or empiricism triumphs. The issue is most satisfactory to the patient, but not so to the medical man. The moral of the tale does not need to be pointed. It lies on the surface. The category of “incurable” diseases should be reduced, and no case ought to be “given up” or condemned; for while there is life there is hope, and hope itself may, and does, cure even diseases which Science, in its supposed omniscience, asserts to be incurable, the physician being fooled.

THE HUNTERIAN MUSEUM.

IN his interesting annual report on the state of the collection under his care Professor Flower states that the total number of specimens added to the Pathological Department since his last report amounted to sixty-five, among which are many valuable preparations contributed by the medical officers of the Samaritan Free Hospital. There is also a curious illustration of recovery from severe injury in the skeleton of a beluga or white whale (*Delphinapterus leucas*), which had suffered from complete lateral dislocation of the atlas from the occipital condyles, many years before death, resulting in bony union in this abnormal position, with consequent very great contraction of the spinal canal. The animal (one of great rarity in the British seas) was taken near Dunrobin Castle, Sutherlandshire, in June last year, and its skeleton was sent to London for the purpose of preservation for the museum attached to the Castle; but when the condition of the bones of the cervical region was discovered, the Duke of Sutherland very generously relinquished his intention of keeping it, and presented it to the museum, as the most suitable locality for the remarkable and perhaps unique specimen.

The collection of specimens of Comparative Anatomy has received an important addition in a series of brains of various kinds of mammals and birds, seventy-five in number,

presented by the Zoological Society through the assistance of the late Professor Garrod, F.R.S. Some beautiful demonstrations of the anatomy of the horse's foot by means of sections have also been added. The series of preparations illustrating human anatomy, both by means of mounted dissections and transverse frozen sections, has been continued, and several additions have been made to the series of bones marked to show the spaces occupied by the attachment of the muscles, contributed by Mr. S. G. Shattock, Curator of the Museum of University College.

The very large male specimen of the giant salamander (*Sieboldia maxima*) from Japan, upwards of four feet in length, which had been kept for many years in the Gardens of the Zoological Society, having died during the last winter, was secured for the Museum by purchase, as previously no portion of this interesting form of animal was contained in the collection. The skeleton, a considerable part of which is cartilaginous, and would therefore have been lost if dried in the usual way, has been carefully prepared as a spirit specimen, and all the viscera have been dissected and mounted.

In the Osteological Department the celebrated “Barnard Davis” collection appears, but as this has already been described in THE LANCET we proceed to another valuable addition to it, through the liberality of Mr. Luther Holden, President of the College. It is a collection of remains of natives of the islands of the Western Pacific, consisting of a complete skeleton of a man from Erromango, seven skulls from Ovalau, in the Fiji Islands, and eleven crania and heads preserved in a remarkable manner, hitherto quite unknown, from Mallicollo, a small island in the New Hebrides group. Forster, who accompanied Captain Cook in his visit to these islands in 1774, says: “In Mallicollo we observed that the greater part of the skulls of the inhabitants had a very singular conformation; for the forehead, from the beginning of the nose, together with the rest of the head, was much depressed and inclining backwards, which causes an appearance in the looks and countenances of the natives similar to those of monkeys.” These skulls fully confirm the accuracy of this description, and show that the peculiar conformation is evidently due to artificial compression in infancy, exactly according to the manner of the ancient Peruvians, which is the more singular as the practice is not known to exist in any other of the numerous islands of the Pacific.

Amongst other additions to the series of Human Osteology, Professor Flower specially calls attention to a very remarkable skull of a microcephalic idiot, the only example of the kind in the Museum, presented by Dr. John Shortt, Surgeon-Major in the Madras Army, who has also been at considerable trouble and expense in collecting a large series of crania of natives of Southern India, which were previously among the desiderata of the Museum. Four skulls of Zulus, obtained on the field of Isandhlwana, in December last, by Mr. H. F. Fynn, resident magistrate, and forwarded by Colonel C. B. H. Mitchell, Colonial Secretary at Natal, at the request of Dr. R. J. Mann, are of great interest; and it is to be hoped that they are only the precursors of a more extended series from the same part of the world, for collecting which the late military operations must have afforded considerable opportunities.

Amongst the donors are several members of the Council of the College and public institutions, as the Zoological Society, the Governors of St. Bartholomew's Hospital, &c. To the surgical instrument department, which was founded by the late Sir William Fergusson, Dr. Humphrys, F.R.C.S., has contributed the amputating case of the late Sir Astley Paston Cooper, Bart.; and Mr. R. Davy, F.R.C.S., a lever for compressing the common iliac artery per rectum; Mr. Andrew Maclure, a field tourniquet; and Mr. E. Davies, Laennec's stethoscope, &c.

THE DIAGNOSIS OF RABIES AND HYDROPHOBIA.

A CORRESPONDENT, Mr. Hopkin Davies, relates, in another column, the particulars of a case of hydrophobia which deserves attention on account of a singular diagnostic error on the part of a veterinary surgeon. Our readers will remember that a few weeks ago we mentioned the ravages committed by a dog, obviously rabid, at Taibach. The letter of Mr. Davies supplies some subsequent particulars. The dog, it seems, after having him shot, was buried; but the carcase was exhumed two days later, and an examination made by a local veterinary surgeon. The opinion said to have been given by him as to the nature of the disease from which the animal suffered is, we would fain hope, unique in the annals of veterinary practice. Some wool was found in the dog's stomach, and hence the dog was not rabid, but its conduct was amply accounted for by the uneasiness occasioned by the wool! Now, it is not always possible to say, from examination after death, whether a dog has or has not suffered from rabies. We say this advisedly, bearing in mind a case in which one of the most intelligent and experienced veterinary surgeons in England gave as his opinion, that a certain dog did not die from rabies, the characteristic appearances being absent, when the subsequent history of the outbreak made it certain that the disease was rabies. But if there is one morbid appearance thoroughly characteristic of the disease it is the occurrence of foreign bodies—wood, coal, wool, &c., in the stomach of the animal—objects on which it has exerted its propensity to bite. And this most characteristic evidence of rabies was, it is alleged, regarded as proof that the disease was not rabies at all. The symptoms, as we noted at the time, were characteristic, and the post-mortem appearances, so far as described, were characteristic also; and now we learn the sad corroborative proof in the occurrence of hydrophobia, in well-marked form, in one of the bitten persons, commencing on the twenty-first day, and running a rapidly fatal course. How forcibly do the subsequent particulars of this outbreak suggest the urgent need there is for the official diffusion of knowledge of the early symptoms of rabies, and, if we may trust the reports supplied to us, it appears also that such information would not be superfluous even to members of the veterinary profession.

THE SANITARY CONDITION OF DUBLIN.

THE long looked-for report of the Royal Commissioners appointed last September to inquire into the sewerage and drainage of Dublin, in so far as such affected the sanitary condition of that city, has at last appeared. The two Commissioners, Robert Rawlinson, Esq., C.B., C.E., and Dr. MacCabe, Inspector under the Local Government Board for Ireland, in their report, state that the house-drainage in Dublin is extremely defective, and that this is the case in all classes of houses; that the river Liffey is polluted from the inflow of sewage, especially during the periods of drought and warm weather; and that with the extension of the city and the completion of main-sewering the contamination will be greatly increased; while a fuller and more complete flushing of drains and sewers will also add to the impurity. In 1879 Dublin contained 24,840 houses, of which no less than 9760 were let in tenements, and of these 2400 were occupied by more than one family, and were in a condition which rendered them unfit for human habitation. To sum up, the Commissioners believe that the main sewers have been improved but not completed; that new sewers are required, and the entire system more fully ventilated; that house drains are very defective; that privy accommodation is generally bad throughout the

poor quarters of the city. They regard the tenement houses as the principal cause of the excessive high death-rate, being dilapidated, dirty, ill-ventilated, overcrowded; so that disease, a craving for stimulants, and extreme poverty are thereby fostered. Moreover, public scavenging is inadequately performed; there is no municipal system of private scavenging. There is also no adequate provision for baths and washhouses specially adapted and planned for the use and benefit of the working classes. They regard the Liffey as being polluted by the sewage of the city so as to be offensive, although apparently not directly injurious to the health of the inhabitants; so that they cannot hold it accountable for the high rate of mortality which has prevailed and continues to prevail within the districts which it traverses. The Commissioners, while regarding the improvement of the house-drainage of Dublin and of the tenement houses, better scavenging, and filth removal as matters urgently necessary in the interests of public health, are also of opinion that the sewage of the entire city and of its suburbs ought to be so disposed of as no longer to constitute a nuisance.

HOME HOSPITALS.

THE first of the hospitals founded under the auspices of the Home Hospital Association was formally opened on Monday last, the opening ceremony being performed by the Bishop of Winchester. The hospital, which is called Fitzroy House and is situated on the north side of Fitzroy-square, is well adapted for a trial of the objects which the Association have in view—that of providing first-class accommodation for those in good circumstances who require nursing. It may be questioned whether, in some respects, the Association have not aimed too high; the accommodation which is afforded suggesting wealth and luxury rather than modest competence as a condition of entry. Everything which could be done with the material at their command seems to have been done by the committee. The adaptation of a private house, however spacious and well-built, to hospital purposes is always a work of difficulty, and the success attained reflects credit on all concerned. The sanitary arrangements are very good, the drainage being especially well managed, and so constructed as entirely to obviate the danger of sewage poisoning. The possibility of ventilation of each room is very thorough, in some parts suggestive of treatment by hyper-ventilation, but as it is mainly by means of windows it is doubtful whether it will be capable of maintenance when the wards are in actual use. The total absence of bed-curtains, or of any provision for them, though in accordance with the best tenets of modern hygiene, may possibly not meet with the approval of the patients, when combined with ventilation through open windows. But in all other details the comfort as well as the health of the patients, and the cheerfulness of their surroundings, have been carefully studied.

But it must be pointed out that this is, after all, only a nursing home, not a hospital proper, and that in one respect there is a serious want, which will inevitably be felt in a large number of cases—the absence of any resident surgeon. No doubt the committee have carefully considered this point, and have concluded that the possible inconveniences might be greater than the probable benefit. But it is one of the great advantages of a hospital that there is always on the spot some one to be appealed to, and to act at once in cases of emergency; nor can this be met in the case of acute illness, or of fresh and unexpected symptoms, by calling in any neighbouring medical man who may chance to be at home. It is true that this state of affairs is what exists in private houses, but this sort of hospital should be prepared to admit cases of operation, for instance,

which require skilled assistance, and are rarely performed, or are treated at a great disadvantage, in private houses.

So far as it goes the institution deserves encouragement, and should the management be judicious it will, no doubt, be successful, and may be the precursor of other similar hospitals adapted for a somewhat less wealthy class of patients than those for whom the present one is designed.

FAINTING IN CHURCH.

It seems strange at first sight, but not at all wonderful when we come to look closely into the conditions and circumstances of the case, that fainting in church should be a frequent occurrence, and in some congregations even reach the proportions of an epidemic. There can be no question that the ventilation of many churches and places of worship, which are wont to be crowded, is radically defective, and the vitiated atmosphere inevitably affects the weakly as a powerful depressant. This is a matter which requires attention. Medical officers of districts might bring more influence to bear on churchwardens and the wardens of chapels, that measures may be taken to receive the ingress of pure air without draught and the escape of foul vapours. Meanwhile it cannot be doubted that there is room for a little serious argument on this subject, and ministers might do well to remonstrate from the pulpit with congregations in which the "habit" of fainting is prevalent. In some of the chapels attached to lunatic asylums there are special apartments for the accommodation of epileptics who have "fits." It would almost seem that in some churches and chapels there should be rooms set apart for the retirement of those who contemplate fainting.

THE NEW CARDIAC SEDATIVE.

THE interesting experiments of MM. Sée and Bochefontaine on the action of erythrophleine, to which we called attention last week, deserve a more detailed description. In 1876, MM. N. Gallois and E. Hardy discovered in the *Erythrophleum guineense*, a leguminous plant, an alkaloid, erythrophleine, which they found to possess poisonous properties, and a remarkable action on the heart. The latter suggested to MM. Sée and Bochefontaine the probability that this alkaloid might be found useful in cardiac diseases. They therefore instituted a series of preliminary investigations into its physiological action, and especially into those effects which could be recorded by the graphical method. They have communicated the results to the Académie de Médecine. They examined first its effects upon frogs, and subsequently those upon rabbits and dogs. The latter series are the most important. Hypodermic injection was chiefly employed. A centigramme, introduced beneath the skin of a dog, had no effect. Twice the quantity killed a large dog in two hours. They found that while one milligramme per kilogramme of body weight had no appreciable effect, a milligramme and a half was fatal in a few hours. The toxic power of erythrophleine appears thus to be about the same as that of Homolle's digitaline. The first sign of the toxic effect consists of restlessness, followed by a period of weakness, and this by vomiting or efforts at vomiting. The latter are the true initial symptoms of the toxic action, and, if the dose of the poison is not too great, they may cease. The animal then quickly returns to its normal condition. The circulatory apparatus is affected in a manner somewhat similar to the digestive. The intra-arterial pressure is increased, the pulse becomes irregular and then retarded. The retardation is characterised by the force of each pulsation, and by the uniformity of the intra-arterial pressure, which is not modified by the respiratory movements, as it is in the normal state. This period is followed by another, in which the pulse is extremely quick and feeble. The influence of the respiratory movements on the blood-pressure reappears,

the intra-arterial tension gradually lessens, the cardiac pulsations become weaker and weaker, and cease for a moment from time to time, and are at last permanently arrested. The respiratory movements seem to be directly influenced by the poison, as well as secondarily by the effect on the circulation. At first they are, as a rule, slightly slower and deeper than normal. When the heart's action is accelerated towards the end, the respirations are frequent and extremely energetic. In almost all the experiments the movements of respiration ceased at the same time as those of the heart, but in several cases the movements recommenced, and continued with energy for one or two minutes. The poison has a distinct action upon several parts of the nervous system. Thus faradisation of the peripheral portions of the pneumogastric nerves in the neck does not arrest the heart of an animal under the influence of erythrophleine as it does that of a healthy animal, and faradisation of the central extremities of these nerves does not accelerate the heart as it does in a healthy animal. Nevertheless, this procedure causes the same rise in pressure as under normal conditions. Immediately after death the heart is found in diastole, flaccid, but full of blood. Sometimes the ventricles present a tremulous movement similar to that which is seen after they have been faradised. Usually the heart has not lost its electrical contractility. The pneumogastric nerve retains its action on the stomach. The excitability of the phrenic nerves is, however, lessened or even lost, while that of the sciatic nerve, and of the sympathetic, is not diminished. We are promised some further observations on the therapeutic uses of the drug.

WEAK-BACKED CAB HORSES.

THE attention of the officers of the Society for the Prevention of Cruelty to Animals should be drawn to the number of weak-backed horses worked in the cabs which crowd the streets of London. In some cases there is reason to suspect the existence of disease, which may be accompanied by great pain. Several instances of a painful nature have been noticed within the last few days, in which the animal has with difficulty commanded the movements of its hinder limbs, and, though going fairly well, has strained severely at starting. Commonly, of course, difficulty in starting proceeds from other causes; but there seems reason to fear that in a considerable proportion of cases actual disease is overlooked. Considering the hard terms on which cab-drivers hire their horses, and the work they are compelled to do in order to earn a small pittance for their families, the stress of the law to put down this evil should be made to fall on the owners, and it would be well to inaugurate a systematic inspection of the stables at times when the horses are in, and when a visit from the inspectors is not anticipated! If the work is to be done at all, the Society must take it up; the officials appointed to discharge the duty do not seem to take any interest in the matter.

EPIDEMIOLOGY IN THE LABORATORY.

THE researches of Dr. Burdon-Sanderson, Mr. Duguid, and Dr. Greenfield on anthrax in this country, and of M. Pasteur on fowl-cholera, are apparently about to give us an insight into some of the more recondite problems of epidemiology, and to furnish us with clues to further research of the most hopeful nature in the practical as well as theoretical aspects of epidemic diseases. From the researches of the first-named gentleman we learn in what fashion a virulent disease by being passed through the bodies of another class of animals and subjected to certain processes of cultivation may be deprived of its virulence, and become in this milder form, when inoculated, protective against the more virulent forms of the same infection. We

learn also that the poison of anthrax may multiply indefinitely in certain media outside the body of an infected animal, and, so propagated, retain its properties for periods of years in a latent form, and regain its activity and pristine virulence when exposed to suitable conditions. Dr. Burdon-Sanderson's and Dr. Greenfield's papers on Anthrax in the last number of the *Journal of the Royal Agricultural Society* show how important are these researches in view of some of the greater questions of epidemiology. M. Pasteur's investigations regarding fowl-cholera lead to the same broad conclusions as the researches of the English investigators on anthrax, and we can well understand how, on the floor of the Academy of Medicine the other day, he, with the boldness of genius, expressed a hope that it would be possible to produce a variola of minimised power, the equivalent to vaccine lymph, in the physiological laboratory, and so release ourselves from dependence upon the passage of the virus through bovine animals for a protective lymph. It is in this direction, and not as concerns small-pox and the virulent maladies of animals alone, that these researches tend, and with most hopeful prospect.

"A BILL TO AMEND THE VACCINATION ACTS."

THE following is the text of the measure to which we referred last week :—

"Be it enacted by the Queen's most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows :
1. This Act may be cited as 'The Vaccination Act, 1880.'
2. This Act shall be construed as one with the Vaccination Act of 1867, the Vaccination Act, 1871, the Vaccination Act, 1874, and those Acts and this Act may be cited together as 'The Vaccination Acts, 1867 to 1880.'
3. After the passing of this Act no parent of a child shall be liable to be convicted for neglecting to take or to cause to be taken such child to be vaccinated, or for disobedience to any order directing such child to be vaccinated, if either (a) he has been previously adjudged to pay the full penalty of twenty shillings for any of such offences with respect to such child ; or, (b) he has been previously twice adjudged to pay any penalty for any of such offences in respect of such child."

ROYAL UNIVERSITY OF IRELAND.

THE Senate of the newly-constituted University held its first meeting last week under the presidency of the Duke of Abercorn, Chancellor. In accordance with the charter, the Senate proceeded to elect a Vice-Chancellor from among their members, and Lord O'Hagan, Lord High Chancellor of Ireland, was appointed. A committee, consisting of twelve members, was then appointed to draw up a curriculum of examinations for the several Faculties, and a scheme of statutes, rules, and ordinances for the University ; also, a financial scheme for providing fellowships, scholarships, prizes, and the general maintenance of the University, and to determine on a site and suitable buildings.

THE THERMO-CAUTERY.

OUR Edinburgh correspondent writes : "Professor Spence observed lately, in speaking of the relative merits of the thermo-cautery and the knife in excision of the tongue, that the cautery was chiefly valuable in dividing the mucous membrane that stretched between the organ and the oral cavity, as thus much troublesome hæmorrhage might be avoided ; but that for all other stages of the operation the knife was probably more satisfactory. As regarded the means of gaining access to the tongue, one might either split the jaw or divide the cheek according to circumstances. Mr. Joseph Bell removed a tumour from the parotid region

which implicated the sheath of the carotids, using the thermo-cautery ; and among other operations we have had lithotomy, ovariectomy, and trephining for abscess in the head of the tibia."

GUY'S HOSPITAL.

AT the adjourned meeting of the Court of Governors, held at Guy's Hospital on Wednesday, the 30th ult., the matters in dispute between the medical staff and the Treasurer were referred for investigation and report to a special committee, consisting of the following gentlemen : Sir Thomas Acland, Sir Trevor Lawrence, Messrs. C. Barclay, R. Harvey, Samuel Hoare, and Shaw Stewart. We understand that the committee has at once commenced its sittings.

OPEN CARRIAGES FOR HIRE.

THIS is the season when invalids and children are especially likely to be benefited by drives in the open air. Close cabs and carriages are of no use for the purpose, and it is difficult to procure suitable vehicles from the livery stables. Why do not some of the more enterprising cabmasters send out a few of the class common at the sea side ? Surely these conveyances would find full employment around the Parks and in drives about the outskirts. It is strange that the experiment is not tried. The number of persons of limited means who desire open flies during the warm weather must be very considerable. This is a small matter that comes under the notice of general practitioners, particularly in the more populous districts, almost daily while the brief season of "summer in London" lasts.

MICROFILARIÆ.

AT the last ordinary meeting of the Quekett Microscopical Club fresh communications were received and read from Dr. Manson, of Amoy, confirming and extending his researches respecting the nematoid hæmatozoa of man. New species of filariæ infesting the heart and bloodvessels of birds were also described ; likewise a new species of fluke, found by Dr. Ringer in the lungs of a Portuguese. In Dr. Manson's opinion this parasite, also encountered by him, is not an unfrequent cause of hæmoptysis in the Chinese. It has been named *Distoma Ringeri*.

A SPECIAL meeting of the Listowel Dispensary Committee was held last week at the request of the Local Government Board for Ireland, for the purpose of obtaining their views on the evidence given at the recent sworn inquiry into the charges preferred against Dr. Fitzmaurice, medical officer of the district, and of eliciting an opinion as to the manner in which he had discharged his duties generally during his term in office. After reading over the evidence, the Committee did not consider the charges proved, and unanimously gave their opinion to that effect. The Local Government Board have since exonerated Dr. Fitzmaurice from all the accusations made against him.

ON June 25th Mr. Richard Davy compressed the abdominal aorta by means of a metal lever introduced into the rectum, in a case of excision of cancer of the uterus, performed by Dr. Potter. The operation was almost entirely bloodless, and the pulsation in both femoral arteries was completely arrested. This procedure has not been followed by any untoward result.

ON Tuesday evening a Russian, who had been found lying insensible in Aldersgate-street, and had been placed in the infirmary attached to the City of London Union, at Mile-end, in a paroxysm of madness, attacked a man named Harris, and killed him by smashing his head with repeated blows with a chair. Was not this a case of delirium tremens ?

THE *Norwich Argus* has the following:—"Eliza Gedge, aged fourteen, was admitted an inmate of the Norfolk County Asylum at Thorpe in January, 1876, as an epileptic patient. She came from Burton Turf, in the Smallburgh Union, and was the daughter of one Martin Gedge, supposed to be a wherryman. On the early morning of the 2nd inst. she was put into a bath, prepared by the deputy head nurse, Clara Rump, by two attendants named Chilvers and Burdett. She was taken out again and conveyed to her ward, when it was found that she was severely scalded: she died from the effects on the evening of the 5th. On the 7th a post-mortem examination disclosed the fact that death was due to collapse of and shock to the system, caused by scalding. There was ulceration of the small intestine, one of the symptoms of burns or scalds, which alone would have caused death in a short time."

A SECOND death from hydrophobia occurred in Edinburgh last week. The patient, a young man from Loanhead, had been bitten in the hand two months ago, while assisting some others to kill a stray dog. Suspicious symptoms first developed themselves on Monday night (June 21st); he was admitted to the infirmary on Thursday, and died early on the following morning. No benefit was received from the administration of chloroform or chloral. Post-mortem examination was not allowed. A highly-coloured and sensational account of the case appeared in one of the local papers.

SEVERAL cases of fever, erroneously termed "famine fever," have recently occurred in the west of Ireland; but on an inquiry being instituted they have proved to be cases of typhus fever. Measures have been adopted for the relief of the sufferers, and every precaution will be taken to prevent the further spread of the disease.

MR. EDWARD HYACINTH O'LEARY, L.K.Q.C.P.I., of Birmingham, against whom a verdict of manslaughter was returned by a coroner's jury, at an inquest on the body of a parish patient, has been dismissed by the stipendiary magistrate, who remarked that he should not be justified in committing Mr. O'Leary for trial.

THE proposal to establish a University College in Liverpool appears to be receiving considerable favour. Already a sum of £60,000 has been collected in furtherance of the project, the amount required being £75,000, or an annual income of £3000.

THE new Bill to regulate the practice of medicine in the State of New York, which requires all physicians to present their diplomas and register before the 1st of October, 1880, has passed the Legislature and received the Governor's signature.

SEVEN acres of land in Park-lane, Croydon, have been purchased by the Local Board of Health for the purpose of being converted into an ornamental public park. The cost of the land, laying out, &c., is estimated at £14,000.

IN consequence of want of funds to meet the necessary expenditure, the Board of Meath Hospital, Dublin, have been compelled to close twenty-five beds, which will be reopened at the earliest opportunity.

DR. BATEMAN, of Norwich, has been elected a corresponding member of the Psychological Society of St. Petersburg.

THE Herts Convalescent Home is to be opened on the 21st of October by H.R.H. the Princess Christian.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Liverpool (estimated population 1880, 538,338).—Dr. Stopford Taylor's report for the year 1879 shows a birth-rate of 39.5 and a death-rate of 27.5. The low temperature of the winter months and generally of the year was followed by a great increase in the deaths from lung diseases; but the cold and stormy summer was accompanied by a lessened number of deaths from diarrhoea, these indeed being fewer than ever before recorded in the borough. "In a great community like ours," observes Dr. Taylor, "there will always be a large amount of animal and vegetable matter undergoing decomposition, and the atmosphere will contain various noxious effluvia; it will therefore be readily understood how the past summer was so healthy when we consider how putrefaction was retarded by the cold, the atmosphere washed of its impurities, the street-drains cleansed by the rain, and the perfusion of the courts and narrow streets promoted by the high winds." "Fever" ("typhus" of the Registrar-General's nomenclature) continues to decline in Liverpool, and Dr. Taylor confidently hopes that it will shortly become a disease of comparatively rare occurrence there. The deaths from fever were only 248 in 1879, as compared with an annual average of 493 for the preceding ten years. Scarlet fever and measles were the most prevalent of the infectious diseases occurring during the year. No less than 3857 cases of infectious diseases were reported to the health officer, and of these 710 were removed to hospital, 244 by the sanitary officers.

Under the Contagious Diseases (Animals) Act, 1878, 2099 cow-keepers and dairymen made application for registration, but of these only 1223 had their applications granted. Among the items of sanitary work done in 1879 we notice especially the conversion of 2115 privies into waterclosets, and the addition of 1018 pipe-ventilating shafts, fitted with Archimedian extractors to the sewers. We are glad to note this diminution in the number of the execrable privies which still discredit many parts of Liverpool, and the increased and increasing ventilation of the sewers.

Dr. Taylor has some interesting observations upon the returns of sickness required by the Local Government Board in relation to Liverpool. The difficulties of preparing the returns in that borough would appear to be insuperable. It would seem, for example, that in the parish of Liverpool alone, with a population of 205,338, between 20,000 and 30,000 sick persons pass yearly through the parish hospital on Brownlow-hill. There is also the Mill-road Hospital of the West Derby Union, which contains not only the sick paupers of Everton (population 128,477), Kirkdale (population 55,371), and West Derby wards (population 61,832), but those from Bootle, Walton, and West Derby &c., outside the borough. And there is the Toxteth Workhouse Hospital outside the borough, which accommodates the sick paupers from the Toxteth wards (population 87,320) within the borough. During the year 1878, 188,416 cases were treated gratuitously in the Medical Charitable Institutions of Liverpool, besides pauper cases—a number, Dr. Taylor remarks, "far beyond anything that could be expected in any English city or town, and can only be accounted for by many people attending first at one institution and then another, and thus being enumerated over and over again."

Reading, Urban (estimated population 40,000).—Dr. Shea reports for 1879 a death-rate of 19.2 per 1000 population (1878, 22.2), and a birth-rate of 36.7 per 1000. With the exception of measles, there was no particular prevalence of zymotic diseases, and "summer diarrhoea" was entirely absent. Reading would appear to be increasing rapidly, and it would seem doubtful from Dr. Shea's report whether the activity of the sanitary authority fully keeps pace with the augmenting sanitary needs of the place as to houses and population. It is true that Dr. Shea refers to the recent adoption by the sanitary authority of a series of bye-laws, but he observes that these bye-laws are not so stringent as the "model" bye-laws of the Local Government Board. The sanitary authority does not appear to have either

hospital accommodation or proper disinfecting apparatus, although both, it may be presumed, are necessary to effective sanitary work in an important town like Reading.

Taunton (Rural and Urban).—Dr. Henry J. Alford sends us his reports for the year 1879. The rural sanitary district of Taunton (population in 1871, 20,565) had a birth-rate of 25·8 per 1000 population, and a death-rate of 18·5. The mortality during the year was considerably above the average of the preceding six years, apparently owing to the severe weather which prevailed in the early months of the year, and which caused a high death-rate from respiratory disorders. But the cold summer which followed was not without its advantages, for there were no deaths from infantile diarrhoea. The urban sanitary district of Taunton (population in 1871, 15,446) had a birth-rate of 29·8 per 1000 population, and a death-rate of 23·9. Dr. Alford remarks, however, that the health of the town in 1879 was good, although the death-rate was high. The inclemency of the weather in the earlier part of the year cut off a great number of old people, but there was a steady diminution in the number of deaths from preventable diseases, "those diseases which in former years caused so heavy a mortality, and which are due so largely to a total disregard of the laws of health, both on the part of the authorities and the public at large." Dr. Alford relates a curious incident of an explosion from the accidental ignition of light carburetted hydrogen which had accumulated in the large vaulted receiving tank at their sewage works. Insufficient means for ventilation of the tank had been provided, and the gas had collected beneath the arched roof. The man in charge having opened the tank, and lowered into it an unprotected lamp, the gas ignited explosively, injuring the man and damaging the vaulted cover. In both reports Dr. Alford refers to the completion of the infectious-disease hospital erected by the two authorities, and of the advantages which have already been derived from its use.

Cambridge, Urban (estimated population 34,000).—Dr. Bushell Anningson reports a diminution of mortality in 1879 as compared with 1878, chiefly from the lesser number of deaths which occurred from zymotic diseases in the former years. The death-rate of 1879 was 18·0 per 1000 population, and the birth-rate 27·0 per 1000. There would appear to have been a decrease of mortality from pulmonary phthisis since the more complete drainage of the district. In some places the subsoil water, Dr. Anningson states, has been lowered 6 ft. The prevalence of zymotic diseases presented little for remark during the year, except in the case of diarrhoea. This malady was almost wholly absent (although very prevalent in 1878), and to this absence was chiefly due the diminished mortality. The results presented by the supervision of the town for sanitary purposes are not, Dr. Anningson observes, as satisfactory as could be wished, and he indicates certain insufficiencies in the Public Health Act, 1875, and the Artisans and Labourers' Dwellings Act, which interfere with the effectual action of a sanitary authority in certain matters.

THE MUNICIPALITY OF LONDON BILL.

Mr. Firth, Mr. Thorold Rogers, and others have prepared and brought into the House of Commons a Bill for creating a Municipality and County of London. In the preamble the Bill sets forth that it is expedient there should be instituted for London one central representative municipal authority. It proposes to term this authority the "Municipality of London," and to give it all the powers and authorities now vested in and exercised by the Lord Mayor, aldermen, and commonalty of the City of London, the Metropolitan Board of Works, the metropolitan vestries and district boards, and all other bodies, boards, officers, commissioners, or other person or persons exercising municipal functions under any statute, local or otherwise, within the metropolis. The Bill further proposes to constitute the metropolis a county of itself, by the name of the County of London, and to make provision respecting justices of the peace and county officers and others in and connected with the County of London. In place of the present districts into which London is now divided, the Bill would substitute forty municipal districts. Plans attached to the Bill show the existing districts and the districts contemplated in the proposed measure.

MUNICIPAL MORALITY.

A deputation of the Rotherham Town Council had an interview with the President of the Local Government

Board for the purpose of inducing him to assent to a loan of £6000 from the Public Loan Commissioners for provisional sewerage works. The Town Council were called upon to divert the sewage of the borough from the river Don, and, in support of their application, they stated that the insanitary state of particular districts of the borough "exceeded description." They wanted the loan to do certain provisional works, while they could mature a more comprehensive scheme, and added, if the loan were refused and an epidemic were to break out, they should hold the Local Government Board responsible! Mr. Dodson very properly refused to grant the loan. The scandalous condition of parts of the borough and of its sewerage described by the deputation was, in fact, the result of the deliberate neglect for years by the local authority of their sanitary duties; and the application for a loan for provisional works was simply an application for costly delay at the expense of the ratepayers. Mr. Dodson would be prepared to consider the question of a loan when a properly-matured plan was submitted to him.

REPORTS OF THE MEDICAL SUPERINTENDENTS OF THE STOCKWELL FEVER AND SMALL-POX HOSPITALS.

The reports of the medical superintendents of the Stockwell Fever and Small-pox Hospitals (Dr. P. H. McKellar and Dr. Francis R. Bernard), for the year 1879, contain little but the movement of patients during a comparatively uneventful year so far as these hospitals are concerned. The patients admitted into the fever hospital under Dr. McKellar numbered 1001, of whom 813 suffered from scarlet fever, 106 from enteric fever, 39 from typhus, and 43 from other diseases. No instance occurred of any of the patients contracting illness in the wards other than that he or she was affected with at the time of admission; and no instance came to Dr. McKellar's knowledge of persons who had visited the wards for the purpose of seeing friends dangerously ill having become infected themselves or conveying infection to others. The patients admitted into the Small-pox Hospital under Dr. Bernard's care numbered 146. The available figures as to the mortality from the disease in this hospital, in relation to admissions since its opening in 1871, seem to show a marked declension; and Dr. Bernard expresses the opinion that this may be due to recent improvements in the sanitary condition of the hospital and to systematic measures of thorough cleansing. Dr. Bernard, indeed, attaches a degree of importance to general insanitary conditions in the development of small-pox not usually held with reference to that disease.

THE REGISTRATION OF INFECTIOUS DISEASES IN BLACKBURN.

We learn from a correspondent in Blackburn that the Town Clerk of that municipality has given it as his opinion that it is a duty of the Medical Officer of Health "to visit and inspect all cases of infectious disease as defined by the Act." We fail to find a definition of infectious disease in the Blackburn Improvement Act of 1879, or any description of the duties of a Medical Officer of Health; and if the Medical Officer of Health is performing his duties according to the Regulations of the Local Government Board, we shall be surprised to find that Board interpreting them, so far as they relate to infectious disease, in the same sense as the Town Clerk of Blackburn.

SMALL-POX IN BATH.

At a meeting of the Bath Board of Guardians, on the 16th ult., a report was read from the Finance Committee setting forth that 178 cases of small-pox had been received into the workhouse during the epidemic of small-pox just ended, and recommending gratuities to the various officials, of the Guardians, medical and others, upon whom had been thrown extra work, and who had been exposed to special risk by the outbreak. The report was agreed to.

At a meeting of the Bristol Sanitary Authority on the 17th ult., Mr. Davies referred to the Vaccination Amendment Bill now before Parliament, and expressed his apprehension that the contemplated relaxation of the penal provisions of the Vaccination Act would have a most injurious influence upon the maintenance of efficient vaccination in Bristol. A conversation took place upon the subject, and the clerk to the Authority and Mr. Davies were instructed to prepare a memorial, setting forth how the Vaccination Act had worked

in Bristol, and the good effects it had had, and expressing the fear of the Authority that the result of the Bill, if it became law, would be to lessen the amount of vaccination, and thus promote the increase of small-pox.

On the 14th ult. a sewage-farm of fifteen acres, which has been prepared for the Sanitary Authority of Halsted, in Essex, by Messrs. Bailey Denton, Son, and North was first brought into operation. The sewage has to be lifted on to the land, and this is effected by a windmill having a self-acting sail thirty feet in diameter, and driving a Noria chain-pump, to which are attached forty-six buckets, each carrying a gallon.

The Corporation of Liverpool have come to an arrangement with the Conservators of the Severn Fishery District, and the latter have withdrawn their opposition to the scheme of the Corporation for taking water from the upper affluents of the river.

VITAL STATISTICS.

HEALTH OF LARGE ENGLISH TOWNS.

The unusually low rate of mortality that has recently prevailed in our large English towns still continues. In twenty of the largest English towns, estimated to contain in the middle of this year seven and a half millions of persons, or nearly one-third of the entire population of England and Wales, 5204 births and 2716 deaths were registered last week. The births were 19 above, whereas the deaths were no less than 559 below, the average weekly numbers during 1879. The deaths were within one of those returned in the preceding week, and were equal to an annual rate of 18.9 per 1000, against rates declining steadily from 22.7 to 18.9 in the ten preceding weeks. During the past twelve weeks of the current quarter the death-rate in these towns has averaged only 20.6 per 1000, against 23.7, 22.6, and 22.6 in the corresponding periods of the three years 1877-78-79. The lowest death-rates in the twenty towns last week were 12.6 in Brighton, 14.4 in Bristol, 15.2 in Norwich, 15.3 in Plymouth, and 15.7 in Salford. The rates in the other towns ranged upwards to 21.5 in Sunderland, 23.1 in Nottingham, 23.6 in Liverpool, 24.0 in Manchester, and 27.1 in Oldham. The comparatively high death-rates in these last-mentioned towns were, with the exception of Nottingham, due to excessive zymotic fatality.

The deaths referred to the seven principal zymotic diseases in the twenty towns, which had been 406 and 419 in the two preceding weeks, further rose last week to 432; these included 123 from scarlet fever, 103 from whooping-cough, 76 from diarrhoea, and 63 from measles. The annual death-rate from these seven diseases averaged 3.0 per 1000 in the twenty towns; it was but 0.7 and 0.8 in Wolverhampton and Leicester, whereas it ranged upwards to 5.6 and 7.6 in Salford and Sunderland. Scarlet fever showed the largest proportional fatality in Salford, Sunderland, Bradford, and Newcastle-upon-Tyne; measles in Oldham and Sunderland; and whooping-cough in Liverpool, Manchester, and Birmingham. Two deaths were referred to diphtheria in Salford. Small-pox caused 14 more deaths in London and one in Manchester, but not one in any of the eighteen other large towns. The number of small-pox patients in the Metropolitan Asylum Hospitals, which in the two preceding weeks had been 221 and 229, further rose to 237 on Saturday last, a higher number than in any week since the beginning of April, 1879; 47 new cases of small-pox were admitted to these hospitals during last week, against 31 and 50 in the two previous weeks. The number of patients in the Highgate Small-pox Hospital was 11, against 13 and 9 in the two preceding weeks.

The fatality of lung diseases showed a further decline last week. The deaths referred to diseases of the respiratory organs in London, which had been 230 and 198 in the two preceding weeks, further fell last week to 176, and were 19 below the corrected weekly average; 94 deaths were referred to bronchitis, and 52 to pneumonia. The annual death-rate from diseases of this class did not exceed 2.5 in London, whereas the rate from the same diseases was equal to 4.1 in Liverpool, and 3.1 in Salford.

HEALTH OF LARGE SCOTCH TOWNS.

In eight of the largest Scotch towns, having an estimated population of rather more than a million and a quarter persons, the annual death-rate last week averaged 20.5 per 1000, against 24.8 and 20.6 in the two preceding weeks;

this rate exceeded by 1.6, or 8 per cent., the average rate in the twenty large English towns. The rates last week in the eight Scotch towns ranged from 13.1 and 19.1 in Greenock and Aberdeen to 27.3 in Perth, and 27.6 in Paisley. The 95 deaths referred to the seven principal zymotic diseases in the eight towns showed a decline of 3 from those returned in the previous week, and included 22 from diarrhoea, 21 from whooping-cough, 18 from measles, and 12 from scarlet fever. The annual death-rate from these seven diseases averaged 3.8 per 1000 in the eight towns, against 3.0 in the twenty English towns; this zymotic rate, which was but 1.3 and 3.0 in Greenock and Aberdeen, ranged upwards to 6.4 and 7.8 in Paisley and Perth. The 21 deaths from whooping-cough showed a considerable decline from recent weekly numbers; of these, 8 occurred in Glasgow and 4 in Edinburgh. The 13 fatal cases of fever showed a slight further increase upon those returned in the two preceding weeks; 9 occurred in Glasgow, 2 in Dundee, and 2 in Perth. The fatality of fever again showed a marked excess upon the fever fatality in the twenty large English towns, and was proportionately greatest in Perth. The deaths from measles, which had been 28 and 24 in the two previous weeks, further declined to 18, of which 10 occurred in Glasgow, and 4 in Edinburgh. The 12 fatal cases of scarlet fever included 6 in Glasgow, 3 in Edinburgh, and 3 in Leith. The deaths in these eight towns from acute diseases of the respiratory organs (bronchitis, pneumonia, and pleurisy), which had been 116 and 88 in the two preceding weeks, further declined last week to 79, and were equal to an annual rate of 3.2 per 1000. The rate from the same diseases in London last week did not exceed 2.1 per 1000. The recent excess of mortality in the Scotch towns has been due to the high death-rate from lung diseases, and from zymotic diseases.

THE HEALTH OF DUBLIN.

The last return shows a further improvement in the health of Dublin. The annual rate of mortality within the city, which had been equal to 42.5 and 39.3 in the two preceding weeks, further fell last week to 32.7 per 1000, a lower rate than has prevailed in any week since the beginning of April. The annual rate of mortality in Dublin during the past twelve weeks of the current quarter, without any correction for defective registration, has averaged no less than 36.8. In London, during the same period, the death-rate has not averaged more than 19.5 per 1000. The 197 deaths in Dublin last week included 48, or 24 per cent., which were referred to the seven principal zymotic diseases, against 65 and 53 in the two preceding weeks; 19 resulted from small-pox, 9 from measles, 8 from fever, and 5 from scarlet fever. The annual death-rate from these seven diseases was equal to 8.0 per 1000 in Dublin, against 2.7 both in London and in Edinburgh. The fatal cases of small-pox, which had been 13 and 14 in the two preceding weeks, further rose last week to 19, and exceeded the number returned in any week since the end of February, 1879.

THE MORTALITY OF ST. PETERSBURG.

The mortality of St. Petersburg for the week ending the 15th May numbered 759 (507 males and 252 females). The deaths from "typhus" were 155, the largest number from any one cause; and next in order came pulmonary phthisis, 119. Thirty-six deaths were assigned to "blood-infection." In the following week, ending the 22nd May, the total mortality fell to 689 (480 males and 259 females). Again the deaths from "typhus" (127) were most numerous; 44, moreover, were attributed to maculated typhus (*typhus pourpre*); 10 to diphtheria; and 123 to pulmonary phthisis.

HEALTH MATTERS GENERALLY AT HOME AND ABROAD.

LORD BEACONSFIELD ON CEMETERIES.

The sanitary spasm which seized Lord Beaconsfield when he addressed the House of Lords on the third reading of the Burials Bill forms a curious episode in the political history of that remarkable man in recent years. The cynical indifference which he manifested towards public-health matters when lately in office was not less incongruous with his apophthegmatical utterance immediately previous to entering upon office,—to wit, *sanitas sanitatum omnia sanitas*,—than his fulmination against burial-grounds, on health considera-

tions, in the discussion on the Burials Bill. There was a painful want of reality in the expression of opinion that the time was at hand when we should become convinced that the institution of churchyards is one which is highly prejudicial to the public health, and that it would be a much wiser step if we were to say that the time has arrived, seeing the vast increase of population in this country and the increase we may contemplate, when we should close all these churchyards, and take steps for furnishing every community with a capacious and ample cemetery. The confusion here between the burial requirements of communities in towns and communities in villages and hamlets, and the relations of the increase of population to these several communities as regards questions of health and of fact, is, it seems to us, hopeless.

MEDICO-SANITARY NEWS FROM RUSSIA.

It is reported that the measures for the sewerage of Warsaw advance only very slowly. Two years must elapse, it is said, before even the preparatory works will be completed. — The project of certain zemstvos to establish dispensaries for the poorer classes of their population is prevented from being fully carried out by certain privileges which, according to existing law, are attached to free dispensaries belonging to private individuals. — The *Voice* remarks that "one of the most deplorable aspects" of the present imperfect sanitary organisation which exists in Russia is the want of proper means for transporting the sick of all kinds to hospital. — The *Odessa Messenger* "deplores" the failure of municipal administration in that city, observing that, with a population of 200,000, there are neither hospitals nor asylums of sufficient capacity to meet the wants of the community. It refers also to the want of markets, and particularly of a cattle market, for the reception of cattle brought into the city—a deficiency peculiarly felt in view of dealing with contagious epizootic diseases. These important needs are sacrificed to the building of a grandiose theatre—two already existing in the city, and one of these of very great dimensions. — The Central Committee for the Protection and Aid of Wounded Soldiers have latterly been giving particular attention to those who have suffered from wounds and injuries to the eyes. MM. Strebnitsky and Talke, "oculists," have been visiting the soldiers thus injured in various parts of the empire, with a view to their assistance pecuniarily and otherwise. — Diphtheria is reported to be declining in Podolia. This result is attributed to the energetic measures which have been adopted for limiting the disease by the local Red-Cross Society. The Society has given 48,000 roubles towards the fund for dealing with the malady.

THE NEW YORK STATE BOARD OF HEALTH.

An Act has passed the Senate and Assembly of the State of New York establishing a State Board of Health. The Act provides for six Commissioners (two to be medical, who may be graduates of good standing from any State) holding office for three years. Three of these Commissioners are nominated by the Governor and confirmed by the Senate; the other three are selected and appointed by the Governor from the health commissioners of the municipal boards. The health officer of the port of New York, the attorney-general, and the director of the State Survey are appointed *ex officio* members. The Commissioners appointed are as follows:—Hon. Erastus Brooks, John S. Delavan, M.D., and Elisha Harris, M.D. (nominated by the Governor and confirmed by the Senate), Professor C. F. Chandler, E. M. Morse, M.D., and J. G. Hunt, M.D. (appointed by the Governor), W. M. Smith, M.D. (health officer of the port of New York), the Hon. Hamilton Ward (Attorney-General of the State), and James T. Gardner, C.E., director of the State Survey (*ex officio*).

MEDICAL AID IN RUSSIA.

The Russian journal the *Voice* takes a gloomy view of the position of the poorer classes of the empire with reference to medical assistance. It derives its data from the report of the Medical Department of the Imperial Government for the year 1878. There was a greater pressure upon the public means for medical assistance in that year than in 1877, and the insufficiency of the resources to meet the demands made upon them was in consequence most conspicuously shown. The applications for aid far exceeded the number of beds available for the sick, and very many, therefore, could not

have such care as they needed for the proper treatment of their ailments. No less than 7000 patients were refused admission into the hospitals of St. Petersburg, in 1878, for lack of room. The proportion of hospital beds to the population of the empire is given as 1 in 1540. Over a million cases of sickness were prescribed for by the medical staffs as out-patients, but doubts are expressed as to the value of treatment in this fashion under the circumstances in which the poorer Russian classes live. The hospitals in the rural districts rendered great services, not less than 657,126 patients having been treated in them during the year. The average mortality in the Russian hospitals in 1878 was 8.6 per cent. of the admissions, and it ranged from 2.4 per cent. in the hospitals of the territory of Semipalatinsk to 12.7 per cent. in the hospitals of the government of Oufa. The mortality in the hospitals of St. Petersburg was 11.3 per cent.

DUBLIN SEWERAGE.

An extensive series of sewerage works are at present being constructed by the Corporation of Dublin at the north side of the city, and will be completed in about eight or nine months. The districts at present completed or in course of construction comprise various portions of the city, which heretofore were in a most insanitary condition. When the main drainage scheme is completed these sewers will be connected with it; but until that time arrives the greater portion will discharge their contents into the different main sewers, having outlets to the river. There is no doubt that when the north and south contracts are finished that they will have an appreciable effect on the health of those residing in those particular districts.

OPHTHALMOLOGICAL SOCIETY FOR GREAT BRITAIN AND IRELAND.

A MOVEMENT was set on foot several months ago by some gentlemen in London interested in the progress of ophthalmic medicine and surgery for the establishment of an Ophthalmological Society for the United Kingdom. The efforts of its promoters have been so far successful that a large number of the leading ophthalmic surgeons in the three kingdoms, and several physicians who take a special interest in diseases of the eye in their medical aspects, have consented to form the nucleus of the Society. The first meeting of those who had been invited to take a share in its inauguration was held on the evening of the 23rd ult., at the rooms of the Medical Society of London. About thirty of the sixty gentlemen who have already joined were present, including most of the leading London ophthalmic surgeons and several from the provinces, and resolutions were passed constituting the Society and appointing officers. The chair was occupied by Mr. Bowman, who opened the proceedings with an able address. Mr. Bowman began by alluding to the much more important rank assigned to ophthalmology in the present day by our medical corporations, schools of medicine, and general hospitals than formerly, and paid a tribute to the long array of great English surgeons and oculists of the first half of the century who contributed so largely to place the theory and practice of the ophthalmic branch of surgery on a rational and scientific basis. The great advance in our knowledge of the nature and rational treatment of disease which was the immediate result of the improved methods rendered possible by the discovery of the ophthalmoscope and other instruments of exact research was dwelt upon, especially in relation to ophthalmic medicine and surgery. In alluding to the immense modern growth of ophthalmology and the natural tendency in a department so extensive, and in some directions complicated, to fall into still further subdivisions, the origin of the present movement was briefly alluded to as the outcome of a want which had been long felt and which there had been more than one attempt to supply. A very general need was felt of greater facilities for encouraging work, discussion, and publication in ophthalmology. The only difficulty had been in deciding on the means most likely to be successful; whether a special Ophthalmological Society would be likely to prove more useful and meet with more support than the alternative plan of a special section at some one of the older

Societies. It was thought that the latter plan would have the fewer advantages, especially since some steps in that direction had, it was understood, been taken several years ago without any result. It was held that the sole objection to a separate special Society was that it might tend to encourage narrowness of view and work; but that this objection might fairly give way before the greater facilities for work which it would afford, more particularly as the Society already contained amongst its members a number of physicians and surgeons who were not specialists. An earnest hope was expressed that in the active co-operation of such colleagues the Ophthalmological Society would find much of its strength. In conclusion, it was not to be forgotten—it was indeed to be insisted upon—that of all the subdivisions of medicine, ophthalmology more than any other exemplified the means and methods which all should strive to master and employ who aimed at becoming worthy practitioners of the healing art.

The Chairman then proposed to the meeting, as the basis on which the Society should be formed, the following resolutions:—That the Society publish Transactions, and meet about five times a year, ordinarily in London; that the subscription be one guinea a year; that members should in future be elected by ballot; that the management be in the hands of a committee consisting of the President, Vice-Presidents, Treasurer, Secretaries, and nine other members.

It was proposed by Mr. Critchett and seconded by Dr. Hughlings Jackson, and carried unanimously: "That an Ophthalmological Society of the United Kingdom be formed," a hope being entertained that it would also embrace among its members those practising in India and the Colonies.

It was next proposed by Mr. Brudenell Carter, seconded by Mr. Henry Power, and carried *nem. con.*: "That honorary members, whose number shall not exceed four, be elected from gentlemen pre-eminently distinguished in ophthalmology or in the sciences bearing upon it."

It was proposed by Mr. John Couper, seconded by Dr. Allen Sturge, and carried *nem. con.*, that the following gentlemen form the Committee of the Society for the first year:—President: Mr. Bowman, F.R.S. Vice-Presidents: Mr. Critchett, Mr. Hutchinson, Dr. Hughlings Jackson, F.R.S., Mr. Teale (Leeds), Mr. Walker (Edinburgh), Mr. Swanzy (Dublin). Treasurer: Mr. Streetfield. Secretaries: Dr. Stephen Mackenzie, 26, Finsbury-square, E.C.; and Mr. E. Nettleship, 4, Wimpole-street, W. Other Members of Committee: Mr. J. E. Adams, Dr. Barlow, Dr. Brailey, Mr. Brudenell Carter, Dr. Gowers, Mr. Higgins, Mr. Hulke, F.R.S., Mr. Henry Power, and Mr. Waren Tay. As an amendment, Mr. Vose Solomon, whilst entirely approving the selection of names as regards London, moved, and Mr. Lloyd Owen seconded: "That, in order to make the committee as representative as possible, the number be increased by the addition of nine extra-metropolitan members." Messrs. Couper, Brudenell Carter, and Adams were opposed to the enlargement. Mr. Henry Power, agreeing in the main as to the disadvantages of large committees, suggested that three members might be added to the committee representing ophthalmic centres out of London. This suggestion was accepted by Mr. Solomon, and put from the chair, but lost.

It was proposed by Mr. Frederick Mason, and seconded by Mr. Spencer Watson, and carried *nem. con.*: "That the committee be empowered to draw up rules, to be submitted to the Society at its second meeting in the autumn of the present year."

A vote of thanks to the Council of the Medical Society of London, for the use of their rooms, was moved by Mr. Streetfield, and seconded by Mr. Higgins. The proceedings terminated with a cordial vote of thanks to the chairman, proposed by Dr. Gowers and seconded by Mr. Waren Tay.

Applications for membership, and intimations of intended communications, should be sent to the secretaries.

THE SERVICES.

THE AFGHAN WAR—CABUL FORCE.

OUR correspondent at Sherpur, writing last mail, reports the general health of the troops in Sir Donald Stewart's Division as very good. The force in the Logar valley under Sir Frederick Roberts, V.C., were in excellent condition and spirits, and although they had so far not exchanged a

shot with the enemy the "outing" had done them good. The days, although somewhat hot, 84° being registered in a tent at noon, were followed by cold nights, when a blanket was still a necessity.

A large number of Cabulees and Ghilzais wounded at the late action of Charasiab have been despatched to Cabul, and are treated by the medical officers in the dispensary, which is in the full swing of useful and humane work in the city.

Deputy Surgeon-General A. Smith, C.B., who arrived with Sir Donald Stewart, has, by virtue of seniority, become Principal Medical Officer of the army in Afghanistan, Deputy Surgeon-General H. Hassard assuming medical charge of General Roberts' Division. Men and officers are alike eager for a return to India as soon as the weather is sufficiently cool to allow of a return march through the Khyber; one and all are heartily sick of Cabul and the war generally.

By the retirement of Surgeon-Generals C. A. Gordon, C.B., and E. Gilborne, two more Deputy Surgeon-Generals will obtain promotion to the higher grade, Deputy Surgeon-Generals Sir A. D. Home, V.C., K.C.B., and W. A. Mackinnon succeeding to the vacancies. Sir Anthony Home remains at Madras, as Principal Medical Officer, and Dr. Mackinnon, who is at present in Hong Kong, will proceed to Malta, to assume the medical administration of that important station.

Surgeon-Major John Warren has been appointed to the medical charge of the Battery of Royal Horse Artillery stationed in St. John's Wood Barracks.

ADMIRALTY.—Staff Surgeon Alexander Turnbull, M.D., has been promoted to the rank of Fleet-Surgeon, with seniority of 2nd June. Fleet-Surgeon Thos. Browne, to Yarmouth Hospital, to date from the 1st July; Fleet-Surgeon Dr. Duncan Hilston, to Yarmouth Hospital, in charge, to date from the 1st July; Surgeons Henry T. Cox, to Bermuda Hospital; Robert F. Yeo, to Haslar Hospital; and Thos. M. Sibbald, to the Northampton.

Correspondence.

"Audi alteram partem."

A UNIFORM SYSTEM OF REGISTRATION OF DISEASE IN HOSPITALS.

To the Editor of THE LANCET.

SIR,—The importance of the subject of registration of diseases in hospitals has not received the attention it merits from the governing bodies of these institutions. A considerable amount of very valuable information might be gathered from the large number of cases which must of necessity pass through the hospitals in the course of a year; and, from experience, I can state positively that a very considerable portion of this information is wasted, owing to the variety of the systems of registration at present in vogue. It is true that the subject is not entirely neglected, but only those who are brought into immediate contact with the cases are able to derive any benefit from them. The work of registration should be conducted in such a manner that the profession at large might be able to obtain satisfactory statistical and general information on any class of cases. Every hospital has at present an independent method more or less theoretically perfect, but in few cases capable of being carried out in detail. By a little pressure they can be reduced under one of two heads—the first, in which the registrars themselves record the cases; the second, in which the students perform the same duties subject to the supervision of the registrars—a work in many cases of superhuman labour. It is impossible at the present time to obtain satisfactory data from more than one or two hospitals, owing largely to this want of uniformity in method, a want which has already made itself felt, as the following quotation from the report of the special committee appointed to inquire into the subject of pyæmia, septicæmia, and purulent infection, will show:—

"Before passing from this part of the subject we would observe that, considerable as the number of cases collected in these statistics may be, still, spread as they are over a

number of years, they are insufficient to found definite conclusions upon, but may prove useful as suggesting points for future inquiry. They would have been, however, more conclusive than they are had the whole material of the London hospitals been available; but, unfortunately, owing to the absence of any uniform system of keeping the registers throughout the metropolitan hospitals, information given in some reports is not mentioned in others. It would be of immense value, especially in determining the etiology of disease, in points relating to their predisposing causes, if a uniform system of registration were adopted for all the metropolitan hospitals." (Trans. of Pathological Society, vol. xxx., p. 8.)

It is to this great want of *uniformity* that I desire especially to call attention. If such an influential body of men as the medical and surgical registrars of the London hospitals were to meet together and consider the subject, it would be possible for them to draw up such a system of registration as would include all the good points of the varied systems now in vogue, and one capable of universal adoption. It would be impossible, then, for any special committee to make such a statement as that to which allusion has been made, and which will remain for ever as a blot on the well-intended but ill-directed labours of the present system of registration.

I am, Sir, yours, &c.,

E. H. HOWLETT, F.R.C.S.,

Late Surgical Registrar to King's College Hospital.

June 28th, 1880.

"SLEEPING GIRLS."

To the Editor of THE LANCET.

SIR,—Will you allow me space in which to refer to a case—"The Sleeping Girl of Turville"—about whom a communication from Mr. Hayman, of Stokenchurch, appeared in the pages of your journal of the 12th ult.

This girl, now twenty-one years of age, has, it appears, been lying on her side with her hand under her face, and without apparent adequate means of sustenance, since March, 1871. She was alive on the 15th of May last. She has been "visited by numerous medical men from all parts, and, I believe," says Mr. Hayman, "without any exception, with more or less scepticism,"—i.e., I apprehend, as to the one position having been maintained for so long a period, and her alleged "fasting"—not perhaps to be accepted in its *severest* sense.

Such cases have not been uncommon. I remember to have had one in every respect similar whilst at the Royal Free Hospital. The facts in relation to which might be of use if turned to account in the treatment of another such case.

The patient, a girl of about the same age as Mr. Hayman's patient, was from a village in Essex, where she had long been popularly known as the "sleeping beauty," and largely visited by persons from far and near, mostly moved by such various phases of emotion as the sense of the supernatural would awaken. There was no deception, actual or intended. The doctors, the clergy, even the village conjuror, had been tried, but without benefit; at last she was sent to one of the large London hospitals, but still in vain.

When she came to the hospital under my care she took the position in bed assumed by Mr. Hayman's patient—apparently asleep, with a subdued sigh and a gentle movement of the body on each inspiration, but still alive to a cup or spoon containing liquid food when applied to her lips. Of this she took but little, and of solid food, as far as I knew, none—showing on how small a quantity of sustenance the body can be kept alive. I do not remember whether the stomach-pump was used, but I think not; for a remedy soon occurred to my mind, and with the consent of the friends I lost no time in making trial of it.

I had a grain of tartar emetic placed on the back of the tongue. The girl began to show signs of awaking to the dismal consequences of the salt's activity. She soon sat up, and was persuaded to assuage her trouble by draughts of lukewarm water, and later to solace them by a little brandy as well. When these effects had subsided, she relapsed into her former condition, when, after an interval of twenty-four hours, another dose was administered, and was followed by like effects. She was much disgusted with the process, but after another period of

wakefulness she once more relapsed. A third dose was ordered, *in her hearing*, when she roused herself, and once and for all refused to submit. The remedy had done its work; the patient took food, got out of bed, began to move about the ward, and, with the terrors of the "third dose" before her mind, made such recovery that in the course of a very few days she packed up her boxes and started home.

The "sleeping beauty" was thus transformed into a useful handmaiden in her mother's cottage; and a few years ago, happening to be in the neighbourhood, and being reminded of the incident, I called, and found her a robust, active and intelligent young woman, still with a keen recollection of the occurrence I have related, not unmixed with gratitude.

I am, Sir, your obedient servant,

June 16th, 1880.

JOHN GAY.

HYDROPHOBIA.

To the Editor of THE LANCET.

SIR,—On the 25th of May a dog, supposed to be rabid, was seen in the neighbourhood. This animal bit the following persons to my own knowledge:—W. M., on the calf of the leg; Mary R., on the right ear and right thumb; D., on the left cheek; H., G., and F., on the forearm; E., on the hand; and, besides, five dogs and two oxen. The brute was followed up, shot, and subsequently buried. On the 27th the carcass was exhumed, and a post-mortem examination was made by a local veterinary surgeon, whose verdict was that the dog was not afflicted with rabies, and who asserted that his mysterious conduct was caused by some wool found in the stomach, which produced intense uneasiness.

All the wounds of the fore-mentioned were immediately washed out and cauterised with strong nitric acid, and poultices were applied, and one was also excised. With the following exception none of these cases have hitherto evinced hydrophobic symptoms.

On the 15th of this month I was asked to visit Mary R.—I found her very restless and feverish. She had previously complained of giddiness and of a varying temperature, being at one time very hot and at another extremely chilly. I next saw her on the morning of the 16th, and immediately made my diagnosis as hydrophobia. The following symptoms characteristic of this disease tended towards confirming the above—viz.: (1) Frequent convulsive seizures caused by the least excitement; (2) acute sensibility of the general surface; (3) spasms of the respiratory muscles and of the muscles of deglutition.

I immediately placed the case under the care of a trained nurse, ordered the room to be darkened, and the bed to be surrounded with thick gauze curtains, so as to prevent any currents of air passing over the patient, and to exclude all rays of light, since both the above excited the convulsions. I also prescribed bromide of potassium and aromatic spirits of ammonia, with a view to lessening the acuteness of the paroxysms. She had an intense horror of fluids, and the simple act of pouring out a liquid for her in her hearing, or even mentioning the name of water, was sufficient to bring back the most violent convulsions.

About the thirty-sixth hour after the first appearance of the disease the symptoms gradually subsided, the acute sensibility disappearing entirely. She remained in this state till her death, which took place from exhaustion at 4 o'clock on the afternoon of the same day. What makes this case all the more curious is that, although she had previously entertained the most inveterate horror of all liquids, she asked for water about half an hour before she died.

Of the dogs, two were immediately shot, and the remaining three evinced very peculiar symptoms—one of them died after a day's indisposition, and the owners were prompted to destroy the other two.

Lastly, one of the oxen became mad, and was shot on the 22nd, and the conduct of the surviving one is so much out of the common that the owner is treating it with popular remedies for this disease.

In conclusion, I would ask, if the dog was not rabid, how can these symptoms be accounted for?

I remain, Sir, yours very faithfully,

J. HOPKIN DAVIES,

Surgeon to the Margam Copper Works.

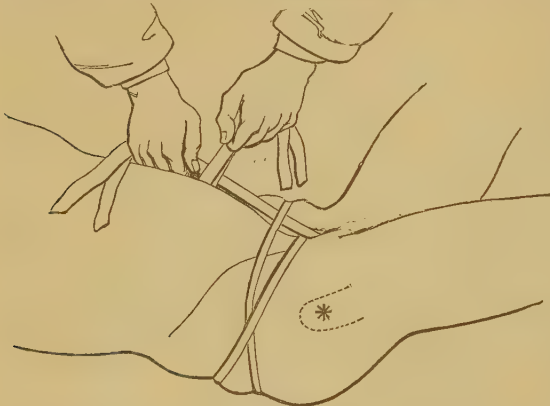
Tir Caradoc, Taibach, June 26th, 1880.

THE ARREST OF HÆMORRHAGE DURING AMPUTATION AT THE HIP-JOINT.

To the Editor of THE LANCET.

SIR,—The question of the best method of arresting hæmorrhage during amputation at the hip-joint has been recently discussed at the Clinical Society and in your columns. I should like to be allowed to draw attention to an application of Esmarch's elastic tourniquet—not, as far as I can discover, mentioned in his "Surgeon's Handbook," though it has probably been often employed before—which I found, in amputating at the hip in a boy fourteen years of age, answer its purpose perfectly, without causing the slightest inconvenience to the operator.

The limb was first elevated in order to render it bloodless, and when this result had been obtained the pelvis was raised from the table, and the india-rubber band was placed loosely in the perineum, after slipping it through two loops of bandage, one in front and one behind, which were drawn across to the opposite side of the body and held firmly above the iliac crest by an assistant. The two ends of the india-rubber band were then drawn rapidly and tightly outwards, were crossed below the iliac crest of the side on which the amputation was to be performed, and were then made to encircle the pelvis once, passing on the opposite side between the iliac crest and the great trochanter. The arrangement of the loops of bandage and of the india-rubber band will be gathered from the accompanying sketch.



* Great trochanter.

This method has the advantage of compressing the vessels in the posterior flap as well as the commencement of the common femoral, and it enabled me to perform the oval amputation quite bloodlessly, and as slowly as was desired. As the band does not pass round the waist, no fear need be entertained of its interfering with respiration. It remains to be seen whether it is equally applicable to the large thigh of a muscular adult as to the small one of a boy of fourteen.

I am, Sir, yours truly,

RICKMAN J. GODLEE.

Henrietta-street, Cavendish-square, June, 1880.

"THE LANCET" COMMISSION ON WORKHOUSE INFIRMARIES.

To the Editor of THE LANCET.

SIR,—In reference to your introductory remarks in your issue of the 22nd ult., in favour of an entire separation of the sick poor from the pauper class, I beg to offer the following remarks in support of your proposition, based on an experience of over twenty years as one of the guardians of the Cork workhouse, which contains at present a population of 2683 persons.

The great object that we all ought to have in view is the prompt and efficient relief of the destitute and the sick poor at the lowest possible cost consistent with the efficient treatment of them.

The massing-up of human beings composed of all the varied classes in workhouses, such as the convicted and unconvicted criminal, the drunkard and vicious of both

sexes, together with the well-conducted destitute poor persons, is a sad mistake; the system tends to perpetuate crime and all its sad accompaniments, while an increasing poor-rate declares in unmistakable language the evil results of our poor-law system.

Separation of those classes appears to me to be the only remedy. Why should the honest, well-conducted poor man or woman, who seeks hospital relief, be placed in a ward with the rogue and vagabond? Why should the former, when recovering, be compelled to sleep in a bed with the latter? Why should the innocent child over three years of age, when sent in for hospital treatment to a workhouse, be placed in the adult wards of the hospital? Is it not proved by experience that evil associations are the ruin of our people. Yet in all the Irish workhouses will be found no separate wards for the well-conducted and the badly-conducted classes, notwithstanding that the workhouse regulations appear to provide for the separation of the children from the adults; and although they have separate wards to live in when they are in health, strange to say, when they become sick they are placed in the hospitals with the adults. Imagine for a moment a young lad associating in a sick-room with a pickpocket or a thief. Here lies the root of one of our sources of criminals, and it is no wonder that our workhouses under these circumstances should supply the ranks of the criminal classes.

Let a beginning be made, such as you suggest, in the way of separate hospitals, removed altogether from workhouses, where the working man or his wife or children can receive medical treatment without the danger of the evil associations of a workhouse; and when they are recovered and fit to leave the hospital, let them not be permitted to remain, as they are in workhouses. "Once in a workhouse always in a workhouse" is becoming a proverb, and although the annual mortality in the Cork workhouse is upwards of 600, the numbers in the house are steadily increasing, and they will continue to do so until a separate hospital is provided, or the healthy persons kept in some other institution.

I am, Sir, yours &c.,

Cork, June 6th, 1880.

WM. D'ESTERRE PARKER.

ON THE EXCISION OF OBSTRUCTION AT THE NECK OF THE BLADDER.

To the Editor of THE LANCET.

SIR,—Mr. Teevan's reply furnishes a complete warrant for my calling in question his statement, that there are "hundreds of men now alive to whom Mercier has restored the faculty of free and natural micturition." He quotes Mercier's own statement as follows:—"Car mes opérations s'élèvent au moins au nombre de trois cents;" but it will scarcely perhaps be believed that this is only half the sentence; the other half, omitted by Mr. Teevan, being: "certains de mes malades ayant été opérés plusieurs fois," proving that Mercier himself is desirous to explain the large and incredible number of his cases by saying that on several he has operated many times. The other writers named by Mr. Teevan speak not on their own authority, but only on that of Mercier, like Mr. Teevan, not having done the operation themselves. Mr. Gouley, whom he cites in his favour, particularly speaking of the operation with disapproval.¹

What now becomes of the number of patients? And, still more important, what becomes of the value of the operation itself, which must be so often repeated? As to these cases of Mercier's, all performed more than thirty years ago, it would be curious to speculate on the ages of the old gentlemen supposed still to be perambulating Paris. The fact is, as I originally stated, a few cases were done by Mercier only or chiefly many years ago; the proceeding has long since fallen through as useless and dangerous, and no surgeon of eminence in Paris ever does it.

I must omit, as irrelevant to the present subject, the consideration of the side-issue started by Mr. Teevan, of the removal of prostatic tumours, whether accidentally or purposely, in the operation of lithotomy or by the special device of cystotomy. What I undertook to impugn was Mr. Teevan's advocacy of Mercier's operation of incising and excising prostatic obstructions by means of instruments passed down the urethra.—I am, Sir, yours, &c.,

Wimpole-street, June 25th, 1880.

G. BUCKSTON BROWNE.

¹ See his work, p. 300.

ON A NEW METHOD OF EXCISING THE KNEE-JOINT.

To the Editor of THE LANCET.

SIR,—I am sorry again to occupy your space with a letter on this subject, but Mr. Wright's letter of June 19th conveys an erroneous impression, which I am anxious to remove. When I claim that patients operated on by my method of preserving the ligamentum patellæ and the tissues in front of the joint uninjured, get earlier movement of the limb than those operated on in the ordinary way, I mean, that they get earlier power over the limb as a whole, and are able to get about sooner, and not that they have a movable joint, as Mr. Wright seems to understand.

In answer to his query, "Whether any movement of the knee-joint, after excision, is compatible with a stable support for the body?" I would say that I have seen two persons, one in my own practice and one in that of another surgeon, who, after excision, had movable knee-joints, with useful limbs, and were able to walk or run without mechanical aid. These cases, however, are quite exceptional, and the result of accident rather than design.

I am, Sir, your obedient servant,

WILLIAM KNIGHT TREVES, F.R.C.S.

Margate, June 26th, 1880.

CHIAN TURPENTINE IN CANCER.

To the Editor of THE LANCET.

SIR,—Just at present, while the administration of Chian turpentine is being advanced as a remedy for cancer, it seems only right to bring forward some evidence in its favour, and that, too, when its merits are being prejudiced, for the remedy as yet has not had a fair time of trial. The great difficulty in procuring the drug, and the substitution of a spurious article for it, are most likely to bring discredit on the remedy.

The following case which has come under my observation is worthy of record, and is one of great interest, as it bears directly on the subject in question.

A lady, aged forty-seven, of full habit, came under my care some months ago, suffering from symptoms that plainly told she was the victim of malignant disease of the womb. As no hope was given, it was thought advisable to see some specialist, and one of repute was accordingly called in; but the case was one that admitted of no doubt, and an opinion to this effect was expressed a second time,—“There was nothing to be done but to soothe, to give morphia, to the end.” Just about this time there was some mention made of the recent discovery of Professor Clay, and it was resolved to give his remedy a trial. The patient was then seen by him, now nearly ten weeks ago, and the Chian turpentine administered. After a little disappointment signs of improvement commenced to show themselves, and the result so far is most gratifying. Here, then, was a case of a most fatal kind, as to the nature of which there was no shadow of doubt. Under the influence of the true Chian turpentine this tumour, which was of a very formidable size, is now gradually diminishing—“melting away,” as described by Professor Clay, and the structure, which was formerly hard, that peculiar stony hardness *sui generis*, has now become softer, more resilient; in fact, more like uterine tissue.

I have no desire to make any comment, but wish to state the facts of the case just as they are.

I remain, Sir, yours truly,

Birmingham, June 17th, 1880. RICHARD DRURY, M.D.

To the Editor of THE LANCET.

SIR,—I have for some weeks been treating two cases of carcinoma uteri with Chian turpentine; in one case the pain has been neither so severe nor constant as formerly, but in neither case can I discover any arrest in the progress of the disease. The Chian turpentine I have been using was from the stock of a most respectable chemist, who assures me he has had it in his possession many years. It is only right to add that I submitted a sample to Professor Clay, which he pronounced to be spurious.

I am, Sir, yours, &c.,

J. STEWART.

Victoria House, West Hartlepool, June 28th, 1880.

DUBOISIN.

To the Editor of THE LANCET.

SIR,—Permit me to make some remarks on the great strength of the duboisin drops now employed—four grains to the fluid ounce. I have used the extract of duboisin for various forms of ophthalmic disease coming under my notice since the early part of 1877, when I first discovered its properties. I find two grains of crude extract of duboisin are equal in strength when applied to eyes to two grains of atropine sulphate dissolved each in the same bulk of water. The strongest preparation I use is ten grains of extract in an ounce of water. How much duboisin this represents I am unable to say, as I have not yet had a sample of duboisin for experiment, but think half a grain or less of it to the ounce will be ample for all ophthalmic purposes. There can be little danger of poisoning from duboisin I should think, as I never was able to kill a warm-blooded animal with it even in very large doses.

I trust in future duboisin for the eye will not be made of such great strength.

I am, Sir, yours truly,

Brisbane, April 16th, 1880.

J. BANCROFT, M.D.

NAVAL MEDICAL SERVICE.

To the Editor of THE LANCET.

SIR,—There is throughout this department a general thankfulness to you for the sound and fair manner in which its claims are being advocated by you, and a sense of confidence that although unaccountable delay is presented in the issue of the new warrant, yet, with THE LANCET in the van, there is a feeling of certainty of results. Your assertion of the principle that it is vain to look for candidates without stronger inducements and advantages in the whole course of an officer's service, comparatively with those of the army, will, it is hoped, not be disregarded in forthcoming arrangements. Last week you proved the different ways in which the senior officers of the “sister” services were recently treated, which still stands a scandal to Admiralty administration, admitted even by those who profited by the changes effected. The late Government certainly left the Department in a ruinous condition; but from the present some hope of respect to vested rights under service of the Crown may be entertained since the Prime Minister has declared his good-will towards even those of the licensed victuallers.

Your forecast of the Good-service Pensions to be given to the Army Medical Department has been realised—so it is said; and something equivalent must be looked for in the sister service, the Navy, where what good things of this kind there are are in the hands of officers whose breasts are not remarkable for medals or crosses, and whose services have never reached, in the majority, the higher responsibilities of the Department. In fact, in this respect Admiralty rules of selection are as paradoxical as they are inscrutable, and it is desirable you should keep a watchful eye on these rewards.

With the thanks of many, I am, Sir, yours truly,

SCRUTATOR.

PARIS.

(From our own Correspondent.)

AT a recent meeting of the Société de Chirurgie M. Verneuil showed a block of wood which he had removed from the rectum of a patient. The subject of M. Verneuil's communication is a woodcutter who has suffered for some years from dysentery, with incontinence of faecal matters. To remedy this he was in the habit of introducing into the bowel a plug of wood wrapped in a linen cloth, of which the ends were allowed to protrude. But on one occasion, having forgotten these appliances, a portion of a branch of a poplar, cut roughly conical with the axe, was made to serve the same purpose. Whilst at work this was suddenly felt to move upwards, and in spite of the patient's endeavour to arrest its progress, it disappeared entirely into the rectum. When consulted M. Verneuil was unable to detect any

foreign body by digital examination, but palpation revealed the existence of a hard lump, as it seemed, in the sigmoid flexure. He accordingly determined to open the abdominal cavity, to draw out the gut, and incise it as in the operation for gastrostomy, intending to put in carbolised sutures, and to return it if healthy, but to make an artificial anus if necessary. When, however, the abdomen was opened, it was ascertained that, instead of being in the sigmoid flexure, the wood had remained fixed in the upper part of the rectum. It was then found that it could be moved downwards, although with great difficulty, and when pressure was made upon it by M. Verneuil from above, M. Lucas-Championnière was able to reach it with the finger through the anus. After some unsuccessful endeavours to pierce and extract it with a gimlet and with forceps, a pince de Museux was disarticulated, and one of the blades used alternately as a lever and a tractor. To render this manœuvre more easy linear rectotomy was practised with the thermo-cautery, and after considerable trouble the block of wood was ultimately extracted. An examination of the rectum then showed that the difficulty of removal had been due to an extreme swelling of the mucous membrane to a hard oedema, which was no doubt caused by the obstacle placed in the way of the return circulation by the foreign body. Thanks to an antiseptic, or, to be more precise, a Listerian dressing, the subsequent progress of the case was most satisfactory.

The disturbances at the Medical Faculty of Montpellier seem to have come to an end for a time. Upon the re-opening of the school after its temporary closure the students determined upon a policy of obstruction, and in spite of the intervention of the civil and military authorities, they have managed to gain their cause. The Dean and the members of the *Conseil de permanence* having resigned, they have allowed lectures to be resumed; but unless the Government gives another example of "opportunism," some further trouble may be anticipated. In order to satisfy the demands of the students, the Ministry will have to appoint the instigator of these manifestations to the chair of natural history, and this after he has been threatened with condign punishment for his conduct in the matter by the Minister of Public Instruction.

MEDICAL NOTES IN PARLIAMENT.

In the House of Commons, on Monday, in reply to Mr. O'Connor Power, Mr. Forster said he was in receipt of constant information as to the fever in county Mayo and the adjoining counties of Ireland. It was not, so far as he could learn, what was generally called "famine fever." It was not the kind of enteric fever that was such a great cause of death in the famine of 1847; it was a typhus fever. He heard different accounts of it; in some few cases it was passing off. So far as he could make out, it was not caused by want of food, but he thought a constant want of change of food might have accelerated the spread of the disease. In most of the cases he had heard of, the persons attacked had certainly not been in great distress, but some of them were. Undoubtedly it was a serious matter. The Government were doing the best in their power to meet it, and he believed they could meet it. They were sending the sick persons into hospitals, and ordering them better and more suitable food than they had heretofore been able to procure.

Sir Trevor Lawrence gave notice that on the second reading of the Vaccination Acts Amendment Bill he would move "That, in the opinion of this House, any measure which encourages and facilitates resistance to a law passed to protect the public from a loathsome and fatal disease, by enabling the contumacious to purchase themselves from under its operation, is dangerous to public health, injurious to public morals, and subversive of the first principles of legislation."

During the discussion of the Navy Estimates in Committee of Supply, on the vote of £47,584 to complete the sum for medical establishments at home and abroad, Mr. Gorst made some observations on the allowance for the medical establishment at the Island of Ascension, but the point of his argument was not clearly indicated, and the repeated references of the hon. member to the subject were greeted with laughter by the House. No reduction was proposed, and the vote was agreed to. On the vote of £56,363 to complete the sum necessary to defray expenses of medicines, medical

stores, &c., Sir A. Lusk objected to the allowance for carrying out the Contagious Diseases Acts, and moved to reduce the vote by £1000, but on being reminded by Mr. Shaw Lefevre that a Select Committee had just been reappointed on the subject, the hon. baronet withdrew the amendment, and the vote was agreed to.

The Medical Charities (Ireland) Bill was withdrawn.

On Tuesday Mr. Thornhill asked the Secretary of State for War why surgeon-majors of household cavalry are compelled to retire at the age of fifty-five without further promotion, whereas in other branches of the Service surgeon-majors at and after the age of fifty-five can attain higher rank, and their compulsory retirement does not take place till the age of sixty. Mr. Childers replied that the hon. member was under a misapprehension. All the surgeon-majors had to retire at fifty-five.

On Thursday Sir Harcourt Johnstone asked the Secretary of State for War why the Select Committee on the Contagious Diseases Acts is not yet appointed, a month having elapsed since the First Lord of the Treasury gave the assurance of its appointment. Mr. Childers said the Select Committee was reappointed some days ago, but there had been a difficulty in filling up two vacant places, which were rendered vacant in consequence of two of the former members not having been returned to this Parliament. Those places had been filled up that day, and he would put the names of the Committee on the paper that evening.

Obituary.

JOHN HARRISON, F.R.C.S.

MR. HARRISON, whose death took place on the 3rd ult. at Chester, at the age of seventy-two, was descended from an old Cheshire family. His father, the late Mr. George Harrison, occupied a leading position in Chester for more than half a century and was long associated as surgeon with the infirmary of the town. He also filled the civic chair for three different years before the passing of the Municipal Act. On the completion of his medical studies, the subject of the present notice qualified as a surgeon and commenced practice at Knutsford, but afterwards removed to Chester and filled the post of surgeon, and subsequently consulting surgeon, to the infirmary. In 1859 he was elected a Fellow of the Royal College of Surgeons. For more than eleven years he had been afflicted with a disease which he well knew would never be wholly shaken off, but his energy in no way slackened. During the last year he had been slowly but visibly failing; his activity, nevertheless, remained undiminished, and his manner lost none of its brightness; he worked on as the cherished friend and welcome adviser of the numerous circle of his patients. The severity of the late winter, however, at length asserted its power even over his strong will. Lightly clad, as was always his wont when driving rapidly even in the coldest weather, on an exceptionally bitter and windy day, he got thoroughly wet in a hailstorm. Notwithstanding a distressing cough he still struggled on, attending to every demand on his services, until increasing weakness obliged him at last to succumb. For some days he dressed himself as usual, but power for work no longer remained. The time for confinement to his room at last arrived, and in about eight weeks, gradually but surely, without physical pain, the sad end came, and the central spirit of a loving circle passed away. But his liberal charity, his open-handed hospitality and generous kindness, will ever be fresh in the memory of those who knew him.

WILLIAM JOY, M.R.C.S., L.S.A.

MR. JOY commenced practice at Dorking, where he resided about two years, when he removed to Northwold, in which village he practised for the long period of fifty-five years. Mr. Joy was a man with a strikingly handsome physique and particularly engaging manners, and by these qualities, combined with a sound knowledge of his profession, he had acquired quite an exceptional influence in the locality in which he spent a long and useful life. So great was his love for his profession that he was never known to take a holiday (except during an attack of typhoid fever thirty-five

years ago), as he was impressed with the idea that there was sufficient "change" in the daily routine of his professional duties. Mr. Joy was, in every sense of the term, a fine old English gentleman, and his death will be regretted not only by his large circle of patients, but by his medical brethren generally. He was in the active exercise of his profession till within a few days of his death, which resulted from an attack of pleuro-pneumonia on the 17th ult., in the eightieth year of his age.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—

The following gentlemen passed the required examination, and received the diploma in dental surgery, at a meeting of the Board of Examiners on the 24th of June:—

Ashby, Richard Desmond, Scarborough.
Bradshaw, Richard Giles, Streatham.
Holland, Joseph, Sloane-street S.W.
Humby, William Robinson, Newgate-street.
Parkinson, George W., M.R.C.S., Sackville-street.
Pedley, Fredrick Newland, Camden-road.
Smith, Alfred, Devonshire-road.

UNIVERSITY OF DURHAM.—The following gentlemen satisfied the Examiners and had their degrees conferred on June 22nd:—

DOCTOR OF MEDICINE.

Day, William White, L.R.C.P., M.R.C.S., L.S.A.
Ferne, Andrew, M.R.C.S., L.S.A.
Fie'den, Samuel, L.R.C.P., M.R.C.S.
Foster, John, F.R.C.S., L.S.A.
Moore, Milner Montgomery, L.R.C.P., M.R.C.S.
Price, Henry Elthington, M.B., L.R.C.P., M.R.C.S.
Steele, Charles, L.R.C.P., M.R.C.S.
Robinson, Arthur Henry, M.B., M.R.C.S.

MASTER IN SURGERY.

Hatton, George Stokes, M.R.C.S., L.S.A.
Lloyd, George Jordan, M.R.C.S., L.S.A.
Roué, William Barrett.
Seager, Herbert West, M.R.C.S.
Wills, Joseph Pearse Budgett.

BACHELOR OF MEDICINE.

Bedford, Walter George Augustus, M.R.C.S.
Calcott, James Thomas, M.R.C.S.
Cheetham, Walter Henry, M.R.C.S.
Coley, Frederic Collins, L.R.C.P., M.R.C.S.
Giles, Bernard Faraday, M.R.C.S., L.S.A.
Hatton, George Stokes, M.R.C.S., L.S.A.
Lloyd, George Jordan, M.R.C.S., L.S.A.
Mantle, Alfred, M.R.C.S., L.S.A.
Mears, William Pope, M.R.C.S., L.S.A.
Porter, William Smith, L.R.C.P., M.R.C.S.
Roué, William Barrett.
Seager, Herbert West, M.R.C.S.
Thornton, James Parsons, L.S.A.
Wills, Joseph Pearse Budgett.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on June 24th:—

Currah, George Ingersoll, Tottenham.
Goude, Herbert, Burton-road, Brixton.
Gould, William Robert, Westland Villa, Southsea.
Hoyle, William Evans, Newcastle-on-Tyne.
Shepherd, Timothy Arundel Jordan, St. Olive's Infirmary, Rotherhithe.
Whitworth, William, St. Agnes, Cornwall.

COLLEGE OF PHYSICIANS IN IRELAND.—At the June examinations the following obtained the licences in Medicine and Midwifery:—

MEDICINE.—Matthew Digan, George Digby, Isabella Margaret Foggo, Jane Russell Grant, Arthur Robert Harper, James Alfred Johnston, Henry Westenra Lentaigne, John Stephen McArdle, Sydney Pedler Morris, James O'Dwyer, Francis Allevyn Owgan, Henry J. C. Tweedy, Alice Vickery, John Warnock, Stewart Woodhouse.
MIDWIFERY.—Matthew Digan, George Digby, Isabella Margaret Foggo, Jane Russell Grant, Arthur Robert Harper, Hugh Harris, James Alfred Johnston, Henry Westenra Lentaigne, John Stephen McArdle, James O'Dwyer, Alice Vickery, John Warnock.

During the present-month the following have been admitted Members of the College:—

Edward Joseph Boulton, Sophia Jex Blake, James Murray, William Walter.

THE will of Dr. Joseph Nash has been proved under £8000.

MR. J. H. HUGHES, Public Vaccinator of the Ombersley district of Droitwich Union, has received (for the third time) the Government award for the efficient state of vaccination in his district.

A COMPANY has been formed in Cirencester to provide improved dwellings for the labouring classes in that town.

A NEW recreation ground for the inhabitants of Whitechapel was opened by the Prince of Wales on the 24th ult.

DR. ROBERT BIRD SELBY, of Port William, has been appointed a justice of the peace for the county of Wigtown.

THE salary of Dr. W. Sedgwick Saunders, medical officer of health for the City of London, has been increased from £700 to £900 a year.

MR. ALFRED GEORGE ROPER, late medical officer of the Workhouse of the Croydon Union, has been awarded a superannuation allowance of £100 per annum.

THE Queen's Hospital in Birmingham, for the first time in its history, is announced to be free from debt. This happy state of things is mainly due to the bazaar in aid of the hospital, recently held at the Town-hall, the profit from which was nearly £6000.

DR. JAMES PRESCOTT JOULE has received the Albert Medal from the Society of Arts "for having established, after most laborious research, the true relation between heat, electricity, and mechanical work, thus affording the engineer a sure guide in the application to science and industrial pursuits."

WOOD-PAVEMENT.—The Corporation of Dublin, at a meeting held this week, resolved that the thoroughfares about to be paved in that city should, opposite hospitals, places of worship, schools, &c., be laid with wood-pavement.

ST. MARY'S HOSPITAL.—The annual festival of this hospital was held at Willis's Rooms on the 30th ult., under the presidency of the Marquis of Huntly. The report read at the meeting set forth that the expenditure during the year had been £12,000, while the certain income was only £7000. Subscriptions to the amount of nearly £900 were announced.

METROPOLITAN FREE HOSPITAL.—The friends of this institution celebrated their annual festival at the Albion Tavern on Wednesday last. Mr. Alderman Cotton presided. It was announced in the course of the evening that the Committee contemplated building a new hospital for the sick and needy at a cost of £20,000. The appeal of the chairman resulted in an addition of £1170 to the funds of the hospital.

ST. THOMAS'S HOSPITAL.—The distribution of prizes took place on June 25th. The following are the names of the recipients:—

Summer Session, 1879.—First-year's student: College prize, £15, and certificate of honour, O. F. N. Treadwell. Second-year's students: College prize, £15, and certificate of honour, L. W. Bickle; college prize, £10, and certificate of honour, W. Wansbrough Jones.

Winter Session, 1879-80.—Entrance science scholarships: Scholarship, £60, and certificate of honour, R. M. Williams; scholarship, £40, and certificate of honour, B. Relton. First-year's students: The Wm. Tite Scholarship, £30, and certificate of honour, C. D. Green; college prize, £20, and certificate of honour, W. B. Tomson; college prize, £10, and certificate of honour, F. F. Caiger. Third-year's students: Second tenure of college scholarship, 40 guineas, college prize, £20, and certificates of honour, W. Wansbrough Jones. Anatomical students: G. F. Cooper, L. W. Bickle, W. T. Crick, certificates of honour. Prosectors: Prizes and certificates of honour, J. E. Dunn and F. H. Furnival; the Solly Medal and prize, £20, C. A. Ballance; the Cheselden Medal, W. A. Duncan; the Mead Medal, C. F. Coxwell. Resident accoucheurs: W. A. Battle, K. Takaki, C. E. Sheppard, C. A. Ballance, certificates of honour. House-surgeons: D. S. Davis, R. J. Williamson, R. P. Smith, C. E. Sheppard, certificates of honour. Assistant house-surgeons: R. J. Williamson, C. A. Ballance, A. Newsholme, J. R. Lunn, certificates of honour. House-physicians: W. W. Groome, R. P. Smith, J. Shaw, A. Newsholme, certificates of honour. Assistant house-physicians: R. P. Smith, D. S. Davis, J. Shaw, A. Newsholme, R. J. Williamson, G. S. Hatton, certificates of honour. The Treasurer's gold emdal, W. A. Duncan.

ARDWICK AND ANCOATS DISPENSARY.—The Committee of Management of this institution have issued an appeal to the public for assistance in utilising more fully the building erected for hospital purposes by means of the bequests of the late Miss Brackenbury. This building affords ample accommodation for out-patients, and hospital room for fifty in-patients. The scanty funds debarred the committee from opening for the most urgent cases more than six beds, since increased to nine. It is now proposed to raise the sum of £5000 to pay off the existing debt and put the hospital on a sound footing.

ATHLETICS.—The members of the United Hospital Athletic Club held a very successful meeting at the Enclosure, Stamford-bridge, on the 30th ult. Throwing the hammer, putting the shot, and foot-races of varying distances were gone through in a style, on the whole, highly creditable to the physical powers of the students who engaged in them. For the second year in succession, the challenge shield fell to St. Thomas's Hospital, by reason of the number of victories scored by their representative, Mr. H. M. Massey.—The first annual meeting of the St. Bartholomew's Hospital Athletic Club was held on the 17th ult. at the same place.

POPLAR HOSPITAL FOR ACCIDENTS.—The twenty-fifth annual festival in aid of the funds of this useful institution was held on the 27th ult. at the Freemasons' Tavern. The report stated that 4900 surgical and 5000 medical cases had been treated in the hospital during the past year. The deaths in the same period numbered 38, but of these 12 died on the day of admission, and 19 within a week. The work done in connexion with this charity, situated as it is among a population peculiarly exposed to accident, should commend it to the sympathies of all large employers of labour at the East-end. Subscriptions and donations to the amount of about £1600 were announced in the course of the evening.

CORK-STREET FEVER HOSPITAL, DUBLIN.—The committee, in their sixty-seventh annual report for the year ending 31st March last, regret that the small-pox wards during the past year have received, with occasional variations, a continuous weekly influx of patients, the cases at one time reaching 70, the daily average being 38. The total number of patients admitted during the year was 1083, as against 2151 in the previous twelve months. In continued fevers there was a considerable decrease. The cases of scarlatina were of a bad kind, and the death-rate reached 27.5 per cent. The total number of deaths was 186, or 17.58 per cent. of the admissions, of which 119 were caused by small-pox.

BEQUESTS ETC. TO MEDICAL CHARITIES.—The Fishmongers' Company have given 100 guineas to Queen Charlotte's Lying-in Hospital. The Home for Incurable Children has received £68 in aid of the building fund, being the proceeds of a private subscription ball at Willis's Rooms on the 14th ult. By the will of Mr. John Russell, of Cleasby, the Harrogate Bath Hospital and the York County Hospital have each become entitled to £500. Mr. Philip Twells bequeathed £2000 each to the Cancer Hospital, Fulham-road, and the City of London Hospital for Diseases of the Chest, and £1000 each to St. Bartholomew's Hospital and the Surgical Aid Society. The National Hospital for the Paralyzed and the Epileptic has received £400 from a "Friend to the Pension Fund" for the foundation of a "Bloomsbury" Pension of £15 per annum. Miss Parker, of Assloss, bequeathed £100 to the Kilmarnock Fever Hospital and Infirmary. The National Hospital for Consumption, &c., at Ventnor has received £90 under the will of Mr. George Scorer.

Medical Appointments.

Intimations for this column must be sent DIRECT to the Office of THE LANCET before 9 o'clock on Thursday Morning, at the latest.

BAYNES, J., jun., F.C.S., F.I.C., F.R.M.S., has been appointed Public Analyst for the Borough of Beverley. £2 2s. per annum and fees.
BEVERHONDT, W. T. H., VON, M.R.C.S.E., L.R.C.P.Ed., has been appointed to the Sixth District of the York Union.
BRANNAGAN, H. C., L.R.C.P.Ed., has been appointed Assistant House-Surgeon to the Liverpool Infirmary for Children.
BYASS, W. C., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer to the Dorchester District of the Wallingford Union.

CAITHNESS, J., M.D., C.M., has been appointed Medical Officer for the Llanrhaidr District of the Ruthin Union, vice E. Pierce, M.D., resigned. Also Medical Officer of Health for the same District.
COTTON, T., M.D., L.R.C.P.L., M.R.C.S.E., has been appointed Medical Officer of the Eastern Division of Upper Holloway.
COWEN, P., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer of the Western Division of Upper Holloway.
DICKINSON, T. V., L.R.C.P.L., M.R.C.S.E., has been appointed House-Physician to St. George's Hospital.
FEHRSON, F. J., M.B., C.M., has been appointed Medical Officer to the Dalston District of the Carlisle Union.
FOX, F., M.R.C.S.E., L.R.C.P.E., L.S.A.L., has been appointed Dental Surgeon to the Royal Hospital for Incurables, Putney, vice S. J. Tracy, M.R.C.S.E., L.R.C.P.E., resigned.
GRIFFITHS, W. H., M.R.C.S.E., L.S.A.L., has been reappointed Medical Officer of Health for the Hinckley Urban Sanitary District.
HAWKINS, F. D. C., M.R.C.S.E., has been appointed House-Surgeon to the Belgrave Hospital for Children, vice Bryden, resigned.
HENSMAN, A., L.R.C.P.Ed., L.F.P.S.G., M.R.C.S.E., has been appointed Aural Surgeon to the Middlesex Hospital.
HEWITSON, W. A., M.R.C.S.E., has been appointed Assistant-Surgeon to the Gateshead Dispensary, vice Dr. Potts, resigned.
HUGHES, Mr. T. W., has been appointed House-Surgeon to the Glasgow Royal Infirmary.
JENKINS, J. R., M.D., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer of Health for the Ruthin District of the Ruthin Union.
JOHNSTON, W., F.C.S., has been appointed Public Analyst for the Borough of King's Lynn. £5 5s. per annum, and 10s. 6d. for each analysis.
JONES, W. D., L.R.C.P.Ed., M.R.C.S.E., has been appointed Medical Officer of Health for the Llanfair District of the Ruthin Union.
MAIN, J. S., M.B., C.M., has been appointed Assistant Medical Officer to the Workhouse of the Chorlton Union.
PRICE, T., M.R.C.S.E., Medical Officer of the Cathedral District, has been appointed Medical Officer to the St. Michael District of the Manchester Union, vice J. Westmorland, M.R.C.S.E., resigned.
STRAHAN, S. A. K., M.D., has been appointed Assistant Medical Officer of the East Riding Asylum, vice H. G. James, L.R.C.P.Ed., deceased.
TINLEY, T., L.R.C.P.Ed., L.F.P.S.G., has been appointed Medical Officer to the Fylingdales District of the Whitley Union.
VEITCH, A., M.B., C.M., has been appointed Assistant House-Surgeon to the Cumberland Infirmary.

Births, Marriages, and Deaths.

BIRTHS.

BRUCE.—On the 23rd ult., at Queen Anne-street, Cavendish-square, the wife of J. Mitchell Bruce, M.D., F.R.C.P., of a daughter.
FERGUSON.—On the 28th ult., at 43, Claremont square, N., the wife of W. E. Laing Fergusson, M.D., of a son (posthumous).
HORNER.—On the 28th ult., at The Gables, Tonbridge, the wife of Arthur Clayton Horner, M.R.C.S.E., of a daughter.
NICHOLSON.—On the 22nd ult., at Frankfurt-am-Main, the wife of G. de Poulton Nicholson, M.D., of a daughter.
WEIR.—On the 23rd ult., at St. Mungho's, Great Malvern, the wife of Archibald Weir, M.D., of a son.

MARRIAGES.

FORRESTER—JUSTICE.—On the 22nd ult., at St. Mary's, Cheltenham, by the Rev. James Badnall, B.A., Vicar of Endon, Staffordshire, James S. Forrester, Surveyor, Army Medical Department, only son of the late William Forrester, Surgeon-Major, Madras Army, to Marie Clarisse, eldest daughter of the late Rev. John Justice, Rector of Ightfield, Whitechurch, Shropshire.
HAMILL—MAUDE.—On the 29th ult., at the Wesleyan Chapel, Mansfield, by the Rev. C. W. L. Christien, assisted by the Rev. T. W. Johnstone, John Wilson Hamill, M.D., of Higher Broughton, Manchester, to Fanny Isabel, eldest daughter of James Maude, of The Woodlands, Mansfield.
HARDWICK—FARMER.—On the 22nd ult., at the Parish Church, Leeds, Maidstone, by the Rev. J. H. Dixon (brother-in-law of the bride), assisted by the Rev. A. P. Morris, Vicar, Frederick S. Hardwick, M.B., C.M., of Aberdeen, youngest son of Henry Hardwick, of Sullington, Sussex, to Emma, fifth daughter of the late William Farmer, of Battle Hall, Leeds, Kent.
NOLAN—SAVILL.—On the 29th ult., at the Church of the Holy Trinity, Paddington, by the Rev. John Stanley, M.A., William Nolan, B.A. M.D. Trin. Coll. Dub., Surgeon-Major, H.M. Bombay Army, son of the late John Nolan, Esq., M.D., of Athboy, co. Meath, Ireland, to Marion Frances, daughter of the late Thos. C. Savill, Esq., of Willow Cottage, Brixton-road, London. No cards.

DEATHS.

HOLROYDE.—On the 19th ult., at Clough House, Sydenham, Elkanah Holroyde, F.R.C.S.E., and J.P., late of the Clough, Bolton-by-Bowland, Yorks., and formerly of Manchester, in his 78th year.
PEARSE.—On the 24th ult., at Markham House, King's-road, Chelsea, Ellen Alice, wife of G. E. Legge Pearse, F.R.C.S., aged 27.
TAUNTON.—On the 24th ult., at her residence, Doughty-street, Guildford-street, Isabella, the widow of John Colley Taunton, M.R.C.S.E., of Hatton-garden, aged 76.

N.B.—A fee of 6s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Lectures

ON SOME

RECENT INVESTIGATIONS

INTO THE

PATHOLOGY OF INFECTIVE AND
CONTAGIOUS DISEASES.*Delivered in connexion with the Brown Institution, at
the University of London, Dec. 1879,*

By W. S. GREENFIELD, M.D. LOND., F.R.C.P.,

PROFESSOR SUPERINTENDENT OF THE BROWN INSTITUTION,
ASSISTANT-PHYSICIAN AND LECTURER ON PATHOLOGICAL
ANATOMY TO ST. THOMAS'S HOSPITAL.

LECTURE III.—PART II.

It will be convenient here to advert to the facts in favour of the view that the anthrax bacillus is the cause of the disease (in the ordinary sense of the word), and not a mere concomitant. These facts have not all an equal value, and are not absolute proof, but so far as they go they are strongly in favour of this view. They may be summarised as follows:—

1. The constant presence during the disease of bacilli in the blood and organs in all classes of animals. Sometimes the number of bacilli is enormous, at others small; but even in these latter cases if the fluids are used for inoculation of certain of the lower animals, the disease is sure to be attended by their development in great number. I am aware that this constant presence of bacilli has been denied by some, especially by Hiller; but I am not aware of any facts in support of Hiller's view, and it is contrary to the almost universal experience of others. Moreover, Hiller's observations refer only to the blood.

2. When blood or any animal fluid containing these bacilli or their spores, and not altered by decomposition, is inoculated, it produces the disease together with the presence of bacilli; whereas, if the fluid inoculated does not contain any bacilli or spores, it is inert. The very few assertions to the contrary do not bear the test of critical examination. My own experiments have convinced me of the accuracy of the statement here made.

3. It has been commonly asserted that, when cultivated generation after generation in indifferent media, these bacilli still retain their power of causing the disease when inoculated in susceptible animals. This I was prepared to affirm until experiment had convinced me that it was not universally true. It may be true of some cultivating media, but is not so in those I have tried. Yet the results of cultivation are such as are scarcely to be explained on the hypothesis of diluted contagium, seeing that the seventh generation may certainly produce the disease.

Another set of arguments are derived from the comparison of the effect of agents which destroy the vitality of the fungus with the causes known to prevent the disease. Any conditions, whether compression or heat, putrefaction or antiseptics, which destroy the vitality of the fungus, destroy equally the power in the fluid of producing the disease. Decomposition has an especial effect, for as it proceeds the rapidity and certainty of the effects are proportionally diminished. If, for example, two animals are inoculated with the same quantity of the same material during hot weather, the one immediately after death, the other after exposure of the material to the air for a few hours, the production of fatal symptoms is in the latter very markedly delayed. Moreover, the persistence of the contagious property for a lengthened period is coincident with, and apparently dependent upon, the formation and persistence of the bacillus spore in a condition suitable for germination.

The arguments against this view have been fully stated by Dr. Timothy Lewis,¹ and as his work not only carries weight from the position of its author, but is likely to have a wide circulation, it is desirable that I should refer in some detail

to his views, and inquire how far they afford any ground against this view. In considering the evidence which has been adduced, showing that the virulence of septicous substance is not dependent on vegetable life, Dr. Lewis says:—"The question which naturally suggests itself is, whether sufficient evidence exists to show that inoculations can be effected with like material in the absence of such living organisms. The reply to this question, so far as anthracoid and cognate diseases are concerned, is distinctly in the affirmative. When Brauell published his paper in Virchow's *Archiv* in 1858, detailing his experiments to prove that splenic fever was an inoculable disease, he further stated the opinion that the organisms found in the blood could not be the carriers of the virus, seeing that blood not containing bacilli had been found to generate the disease. Bouley has arrived at a similar conclusion, and Böllinger, who has repeated Brauell and Bouley's experiments, has also shown that the disease may exist without the presence of bacilli in the blood, that such blood will induce the disease in other animals, and that even under such circumstances organisms may develop in the blood of the inoculated animal, and be detected during life as well as after death."

Now, let me place side by side with this Böllinger's own statement² as to these very experiments. He says: "Brauell produced anthrax in two fowls by inoculation with blood, which did not contain any rod-like bodies, while the blood of the inoculated animal showed them. From this he drew the deduction that these structures were neither the contagious material of the disease nor the necessary carriers of the same. Bouley failed to produce anthrax by inoculating with the blood of infected animals which contained no bacteria." He goes on to say: "It is easy to conceive that bacteria in the blood and organs of diseased animals may be easily overlooked on account of their smallness," and so on. "This I have proved experimentally and with the microscope, showing that in infectious blood of this kind, without bacteria, the germs of the latter are already present in the form of spherical bacteria. Indeed, I succeeded by the inoculation of diseased blood containing bacteria in producing true anthrax, in which the blood of the diseased animals contained no bacteria, although there were bacterial germs which after death developed outside of the body into characteristic cylindrical bacteria." And in further remarks on subsequent experiments by Brauell and others he clearly shows that in speaking of the absence of bacteria he is merely referring to the rod-shaped ones, allowing that the spherical spores or germs are present. I need only quote one more sentence to show how thoroughly Böllinger accepts the view that bacteria are the cause of the disease. "The tenacity of the anthrax poison—bacteria—is exceedingly great. In the dried state bacteria are able to preserve their virulence during months, and even many years."

Bouley also is now one of the most emphatic in the assertion that bacteridia are the cause of anthrax. In a recent paper he says, "Il faut accepter aujourd'hui comme une vérité absolument démontrée que le charbon procède de la bactériémie et de la bactériémie exclusivement, puisque les expériences de laboratoire les plus rigoureuses démontrent que sans elle ou sans spores, les inoculations de matières de provenance d'animaux charbonneuses demeurent toujours stériles, tandis que celles manifestent, au contraire, leur activité, quand les bactériémies leur sont associées. D'où cette conclusion nécessaire, qu'il n'y a pas de charbon possible sans bactériémies et que conséquemment, quand le charbon se manifeste quelque part, c'est que la bactériémie s'y trouve."³

Dr. Lewis also cites against the specificity of anthrax bacillus the fact that bacilli in some respects similar may occur in the blood of healthy rats a short time after death in India, where of course the temperature is especially favourable to their development. He mentions that in the blood of rats, killed by means of chloroform or asphyxiated, he found a few hours after death short rods, which were in some cases joined end to end, and which by cultivation lengthened into longer rods, and spore formation occurred in them. He describes the various phases which he observed, and concludes that these bacilli are identical with those observed in anthrax. I need not weary you with a detailed description of the observations which he adduces with the object of proving this. The facts I do not for a moment dispute; they are easy to observe for oneself; and I have often studied and watched similar changes occurring in decomposing

¹ On the Microscopic Organisms found in the Blood of Man and Animals, and their Relation to Disease. Calcutta. 1879.

² Loc. cit., p. 385.

³ Recueil de Méd. Vétérinaire, Nov. 15, 1879. Paris: Asselin.

Blood. But I think that no one who has studied cultivations of anthrax could mistake the bacilli which he figures for those cultivated from anthrax. Moreover, the whole of the arguments are pervaded by the obvious fallacy that because they are bacilli—that is, members of a genus—they are of the same species because they are found in the same fluid. That they are bacilli few could doubt; that they are anthrax bacilli, is quite another question. Anthrax bacilli do not, like these, grow in decomposing blood; moreover, these bacilli of putrefying blood, or the blood containing them, are almost entirely devoid of toxic properties, so far as my observations go; nor has Dr. Lewis given any evidence to the contrary. I may say the same with regard to the bacilli found in urine.

Whatever value these observations may have, they cannot for a moment outweigh the results of experiments verified by a number of independent observers who have found that material from animals dying of anthrax which contains either rods or spores reproduce the disease with the utmost certainty, whilst that which does not contain either is innocuous. On the other hand, these bacilli not derived from anthrax, however closely allied to, or even apparently identical with, the anthrax bacillus, do not when inoculated produce the disease, and in most cases are entirely innocuous.

And let me add that in order to control the results of observations on the organisms found in the blood and tissues in these diseases I have, from time to time, kept the bodies of animals which have either died a natural death or have been killed in various ways at different temperatures, and watched the organisms which developed in them.

ORIGIN AND SPREAD OF ANTHRAX.

Very naturally a large number of hypotheses have been suggested to account for the origin of the disease, or to explain its spread. Viewing it in the light of the better-known infectious diseases which affect man, we may well doubt whether it is not always carried by unsuspected ways of contagion. We cannot trace the source of every case or follow the spread of an epidemic of measles or scarlet fever; but from what we do know we feel little hesitation in affirming that the contagium has been carried from an antecedent case when we meet with an outbreak of the disease, however isolated or inexplicable that outbreak may be. In like manner, with splenic fever we are bound to exhaust all the known modes of contagion before we can be justified in believing that it is due to local conditions or processes.

Of the many ways in which contagium may be conveyed, few are so ready as that by way of food—for example, corn, hay, &c., which are so widely distributed, and can be followed only with so much difficulty. Some few facts which have come to light support the view that the disease may be thus conveyed. Experiment has shown that the ingestion of infected material may be speedily fatal, and that this is especially so when the food contains any hard or sharp particles which can cause abrasions of the mucous membrane. Now, seeing that the anthrax bacillus can be very readily cultivated in hay infusion or in malt, we see one way in which possibly contagion might be widely distributed. But the direct evidence in favour of this mode of transmission is as yet very inconclusive.

Let me now pass to the other modes of communication of the contagium. One very important question is the duration of the infection in the carcasses of animals which have died of the disease. It is extremely difficult to understand how it comes to pass that at certain periods animals become affected in certain localities, not only without any obvious source of contagion, but often in such isolated spots and under such conditions as seem almost to negative any possibility of direct contagion.⁴ But since it is well known that all parts of the carcasses of animals which have died from the disease are highly contagious, it is natural that the idea should have arisen that by some means the bodies of animals which have been buried in fields may infect the water, or even the pasturage, and then reproduce it. Hence the strictest regulations are in force in most countries as to the disposal of carcasses. In Prussia the carcasses must be buried two metres deep⁵; they may not be buried in swampy places, or near running water or springs, nor in the neighbourhood of dwellings; moreover, the spot

must be paved or covered with stone, in order to prevent vegetation, and to keep cattle from grazing upon it. In other countries the place must be fenced in for three years, and various devices adopted for preventing any possible spread of the contagium.

I have already mentioned certain facts which point to the belief that some forms of anthrax are especially liable to occur in marshy situations, and at certain seasons of the year, when the marsh lands begin to become dried by the increasing power of the sun. All experience in fact seems to point to the great influence possessed by certain localities in favouring the occurrence and persistence of the disease. It is found that in some meadows cases occur year after year, and it has been stated that those places where bodies of anthrax victims are interred cases have arisen again and again. With regard to the influence of locality, in an analogous if not identical disease, the Cape horse fever, we have very strong evidence of its marked tendency to arise amongst animals grazing in long grass on swampy ground, especially in spring and early summer. In face of these and other facts, two hypotheses might present themselves—one, that the disease originates in some miasm produced in these localities, so to speak, *de novo*, or developing in such a way under particular conditions as to give rise to the disease; or that the contagium is regenerated under these conditions of heat and moisture, and thus again becomes noxious. I need hardly remind you that if, as is now generally believed, the contagium consists in the bacillus anthracis, the spores of which can remain long dormant, and under favouring conditions start into life and activity, we should have a state of affairs fully concordant with those observed facts of the occurrence of the disease. For we know that these bacilli would find the conditions essential to vitality in moisture, warmth, and the presence of some vegetable pabulum analogous to our cultivating fluids of the laboratory.

But it may be asked, is the pre-existence of contagium revived under these conditions essential? May it not be that this bacillus can be derived from some other isomorphous bacillus, which acquires specific properties under cultivation in a particular soil or in peculiar conditions. So far as I am aware all the experiments hitherto made with the view of thus producing a contagium by cultivation of other bacilli have failed. The bacillus of hay infusion described by Cohn was naturally looked to as likely to be the organism in question, but several observers have tried, without success, to cultivate it with this object. I do not think, however, that we ought to draw any adverse conclusion from even a very large number of failures in such experiments, for success may be possible, and if it were so a step would have been taken in the solution of the mystery of contagia far exceeding any yet gained.⁶

But to return to the subject of infection from carcasses. Given the fact of existing spores, their persistence in the carcase or in the surrounding soil, and revivification under these favouring conditions would appear highly probable as a fresh source of disease.

Some experiments recently made by Professor Feser⁷ of the Munich Veterinary School have a very important bearing on this question of the duration of infection from the bodies of animals dying of splenic fever. The experiments were made especially with the view of deciding whether burial of the carcase was a sufficient precaution against the spread of the disease, or whether, as has been supposed, infection might spring up from the body after some time has elapsed. It had been suggested by Koch and others that the spores of the bacillus might be dormant and impregnate the earth around the carcase; that, when this was in a marshy or wet ground, they would be especially liable to be spread, and become the source of reinfection. And here arose the question, Whether these spores exist in the bacilli at the time of death, or were only developed afterwards? Koch suggested that, if the carcasses were buried about thirty feet deep in the ground, the temperature would be too low for the development of spores, implying that the bacilli alone existed in the body at the time of death; but, as I have shown,

⁴ Probably some of the cases of this kind which have been reported are cases of quarter-evil, a disease which has been confounded with anthrax, but which I hope to show is different.

⁵ With quicklime one metre.

⁶ Since delivering this lecture I have, I believe, established the converse proposition—viz., that the anthrax bacillus may be grown in cultivating fluids in successive generations, until it acquires an innocuous condition, though maintaining its power of germination and growth, and all its morphological characters. It may, therefore, be fairly suggested as possible that the anthrax bacillus is only a bacillus which has acquired special properties. But this suggestion is at present purely speculative.

⁷ Deutsche Zeitschrift für Thiermedizin.

spores may exist in the body, though not usually in the blood, at the time of death.

In a first series of experiments made in 1875,⁸ Feser found that the bodies of animals which had been buried for any length of time became innocuous. In his subsequent experiments he first of all disinterred the carcasses of animals which had died of anthrax some time before, and inoculated other animals from them.

In a first set of observations he disinterred two carcasses buried nearly a year before, and three others buried from four to nine days respectively, and after a very careful microscopic examination of the different parts, he inoculated other animals from them. In some cases the activity of the poison directly after death had been shown by inoculation of other animals from them, but, notwithstanding this, the experiments all proved absolutely ineffectual. It is noteworthy that Feser found in some of these carcasses some bacilli which precisely resembled in their shape the bacillus anthracis.

The second series of experiments were of even more interest, as they were destined to ascertain how long after death the carcass became innocuous, and what were the parts in which the poison lingered longest.

A number of animals having died of anthrax in the Munich Veterinary School as a result of inoculation experiments which were being carried on, fifteen animals were buried in two rows one over the other, so that two could be taken up at a time, the depth being about one yard and a half. Arrangements were made for ascertaining the temperature of the soil, and the condition as to humidity. The nature of the disease and the infective power of the carcass were in every case proved by direct experiment, and in several cases the animals were inoculated in a series one from another. The record of these cases brings out some striking facts as to the variety of modes in which the poison may be introduced. Thus, in these fifteen animals, in two the disease was communicated by inoculation of spleen, which had been frozen, in one some fluid from the spleen was placed in the conjunctival sac,⁹ causing death in less than three days, and in one the spleen given as food produced a fatal result in fifty-six hours. Five were inoculated with the blood, either fresh or frozen, and these were much less rapidly fatal, in one case five days elapsing before death. In two cases the flesh was given as food, and rapidly caused death, and in one the flesh was used for inoculation. But the most curious result was one obtained by inoculating a sheep with some urine of another sheep which died of the disease. In the urine a large number of bodies, resembling spores of bacillus, were found. The inoculated sheep lived nine days, and then died with tetanic symptoms. The spleen was found to be greatly enlarged, measuring six inches long and one inch thick, soft and dark, and containing many spores and short characteristic anthrax rods, which, when cultivated, grew into long rods, resembling bacillus anthracis. Feser thought them identical.

One other animal was infected by inhalation¹⁰ of spores derived from the carcass of another animal, and in its carcass were found very large quantities of short anthrax bacilli, some containing spores, and also free spores.

The carcasses of these animals were disinterred at periods varying from fourteen days to four months. A very elaborate microscopic examination was made of nearly all the tissues and organs, and inoculations were repeatedly made from them into other animals, but with one exception without the slightest result. The exception was in the case of the sheep buried only fourteen days. In the skin there were found spores which produced "characteristic anthrax organisms" by cultivation, but the inoculation of this material was ineffectual. Some muscle, however, rubbed down with water, was used for inoculating a horse with a fatal result in four days, with well-marked anthrax. In the exceptional instance, however, the temperature had been very low during the time of burial, and this result therefore accords with the general observation that very low temperatures are favourable to the preservation of the contagium.

There can be little doubt that these experiments go far to prove that even when under favourable conditions of warmth and moisture the carcasses of animals dying of the disease do not serve as centres for the propagation of anthrax, but become inert as soon as decomposition sets in.

Another set of observations seem also to show that, as had already been shown by others, vegetables of various kinds grown over the carcasses are perfectly harmless. Nor did inoculation with the soil around the body produce any result. It may therefore be safely assumed that some other mode of origin must be sought.

Notwithstanding the negative results of these experiments, it may yet be an open question whether in certain cases the contagium does not persist in the surrounding soil. The experiments of M. Pasteur just published, though far less extensive than those of Feser, can hardly be entirely set aside.

In these experiments M. Pasteur, with MM. Chamberland¹¹ and Roux, succeeded in reproducing anthrax by means of earth from the soil and around the carcass of an animal which had died of anthrax some months before, and also, as he states, cultivating anthrax bacillus in earth and infecting other earth from that over the carcass.

He first cultivated in 500 grammes of earth free from germs of bacteria, 20 drops of anthrax blood, and after thoroughly mixing the earth, he took 2 grammes of it and added it to 300 grammes of fresh earth; then from this he took 5 grammes and mixed it with 100 grammes of fresh earth, also free from bacteria. From the latter he took five grammes and was able to extract from it "germs of bacteria," of which he proved the virulence by inoculation of guinea-pigs. The time from the commencement of the experiments to the inoculation were from June to September. These earth cultivations, I may point out, only reached what one may call the second generation of earth cultivation.

The second series of experiments were made by burying the carcass of a sheep which had died of splenic fever, and ten months after (in May, 1879) he took earth from the superficial and deep layers of earth from the place of burial, and by inoculation of guinea-pigs with the superficial layer he produced charbon, whilst those from the deep layers caused septicæmia, which was, he says, of peculiar character.

These experiments prove conclusively, according to M. Pasteur, that the soil may be the means of preservation and cultivation of the germs and spores of bacteria, and that from them after some months the disease may be reproduced. The endemic prevalence of anthrax is thus, in his opinion, fully accounted for, the earth being infected by numerous cases. I must confess that I myself believe that, in spite of the elaborate precautions sometimes enforced to prevent the persistence and spread of the disease, there is sufficient evidence that the careless disposal of portions of the carcass—e.g., of parts of the skin and hair—is very common, and that this affords a sufficient explanation of the persistence and virulence of the disease.

One or two other points in relation to this disease remain to be mentioned, one the possibility of inoculating anthrax without causing a fatal result, and the protection conferred by this attack; the other the relation of the disease as it occurs in the lower animals to human disease.

In some experiments made last year by Dr. Sanderson and Mr. Duguid, but not yet published,¹² they found that when anthrax material, which had been transmitted through rodents, especially the guinea-pig, was inoculated in cows, the symptoms produced were analogous to those of anthrax, and very intense, but that in no case was the disease fatal. This was equally the case, whether the material was derived directly from the guinea-pig, or by means of cultivation in aqueous humour or hay infusion.

This observation seemed to me a very important one, for this reason, that if anthrax is, as is supposed by some, an acute specific fever, such inoculation of a modified contagium might be found to confer protection from subsequent attack. And, collaterally, if it did so confer protection, the marked analogy thus established with acute specific fevers would point to the possibility of the contagium of other acute specifics being of bacterial nature.

I have, therefore, repeated the experiment, as yet only with the inoculation through guinea-pigs, for I have not yet had any opportunity of further investigation with original material. The experiment was as follows. A heifer, previously in good health, having been kept under observation for nearly three weeks to ascertain its normal temperature, was inoculated with a small quantity of anthrax virus, which from some cause was ineffectual. The animal was therefore reinoculated with a larger quantity of material, the second cultivation in hay infusion, containing abundant spores, the

⁸ Gerlach's Archiv, Bd. iii., Hefte 5 und 6.

⁹ This I believe to be an unusual result, mere application to the conjunctiva rarely producing the disease.

¹⁰ Gerlach's Archiv, Bd. iii., S. 421-423.

¹¹ Bull. de l'Acad. de Médecine, Dec. 1879.

¹² They have since been published in the Journal of the Royal Agricultural Society, vol. i., 1880.

activity of which was at the same time tested by inoculation on a mouse. The course of the symptoms is best indicated by the chart which I have placed before you. For the first twenty-four hours no symptoms were observed; there was only very slight swelling at the seat of inoculation. On the morning of the second day—i.e., about forty hours after the inoculation—the rectal temperature was found to be 104° , having previously been 100° to 101° (the normal temperature). The animal was drowsy and stupid, and fed badly, but no rigor was observed, nor any very special symptoms. In the evening of the same day the temperature was lower (102.4°), but on the following day it rose to 106.4° F., and continued to vary between 105° and 107° for three days, during which time the animal was seriously ill, and at times appeared hardly likely to survive. On the eighth day, however, the temperature fell to 104° , and on the ninth to 101° , after which the animal speedily recovered, and continued perfectly well.

I was unable to discover any bacilli in the blood, but I do not attach any importance to this fact in proving that they did not exist. Inoculation with this blood, not containing bacilli, did not produce any symptoms in a rabbit.¹³

It remains to be seen whether this modified attack will confer any future protection on the animal.

ANTHRAX IN RELATION TO HUMAN DISEASE.

We know that in districts where anthrax is prevalent amongst cattle cases of malignant carbuncle appear in the human subject from time to time, especially in those engaged in dressing carcasses, or who have to do with the skins of the animals. I must not enter into the forms which this disease assumes in man, which have been very fully described by Böllinger,¹⁴ though I believe that several different diseases are included by him under the name of anthrax.

But I wish to point out the very great probability that some of the anomalous forms of pyæmia in the human subject, such as what is called *angina Ludovici*, for which no cause is discoverable during life or after death, may be due to contagion from this disease. One fact alone may serve as an illustration of the great facilities which exist for such contagion. In a case of anthrax, from which the material for some of my experiments was derived, the carcase had already been dressed for the London market. Some of the blood which had drained from it on to the floor was taken, and a guinea-pig inoculated with a very minute quantity. The animal died in twenty-seven hours, and its blood swarmed with bacilli. It was well known that the animal had died of splenic fever. I need hardly emphasise the urgent need of more thorough sanitary inspection. Moreover, there is some evidence that there exist forms of blood-poisoning in connexion with certain trades in this country which are really derived from anthrax, such as probably the "wool-sorter's disease," of which Dr. Bell of Bradford has just reported a case in which he found anthrax bacilli in the blood.¹⁵ (THE LANCET, Dec. 27th, 1879, p. 579). Similar diseases are known to occur in like occupations on the Continent. But these forms are as yet very little known; the two diseases in which there is a local lesion—viz., malignant pustule and so-called "internal anthrax"—being the best known in relation to human diseases.

I must now pass to the other anthracoid diseases which affect the lower animals.

¹³ Since the delivery of this lecture these experiments have been continued, and some of them have been detailed in the Journal of the Royal Agricultural Society (Part I. 1880). These, together with still further experiments not yet published, show that protection is conferred, which is great in degree and lasts a considerable time; and that this is true whether the poison is directly drawn from the guinea-pig or is cultivated, provided only that symptoms are produced by the first inoculation.

¹⁴ Ziemssen's Encyclopædia, vol. iii.

¹⁵ I may mention that I have been able to prove the identity of this disease with the splenic fever of cattle by recent experiments.

ON THE PATHOGENY OF LEAD PALSY.

By A. DE WATTEVILLE, M.A., B.Sc., M.R.C.S. ENG.,
ASSISTANT PHYSICIAN TO THE HOSPITAL FOR EPILEPSY AND
PARALYSIS, &c.

ONE of the most characteristic symptoms of saturnism, or lead-poisoning, is the paralysis of certain muscles of the forearm giving rise to the condition known as wrist-drop, or dropped hand. This condition is readily recognised by the fact that the patient cannot extend the hand upon the arm nor the first phalanges upon the metacarpal bones. The hand held out in the prone position hangs down helplessly; the only movements possible are a weak flexion and extension of the distal phalanges of the fingers and thumb. At first sight we have the spectacle offered by a paralysis of the musculo-spiral nerve from injury at the point of its emergence from between the fibres of the triceps; and the question naturally arises, To which of the possible causes is the paralysis due? If the patient presents the pathognomonic blue line along the gums—the peculiar aspect of saturnine anæmia; if he complains of colic and constipation, or if he is known to have been much exposed to the deleterious influence of the poison, then we naturally conclude that he suffers from lead palsy. But we must not forget, on the one hand, the possible concomitance of lead symptoms with a simple paralysis of the musculo-spiral from exposure to cold or slight pressure; nor, on the other hand, the possibility of a lead palsy unaccompanied by any of the other symptoms first mentioned. The patient may have been unconsciously poisoned by contaminated water, snuff, and the like, or by adulterated hair-dyes, toilet-powder, and other cosmetics, or even by medicinal use of acetate of lead, as I once observed in a case; and the first warning of the intoxication may be the paretic condition of the forearm. Now, in order to clear up our doubts, we are generally told to have recourse to two tests—that of the electrical reactions of the affected nerve and muscles, and that of the non-implication of the supinator longus. A discussion of the first will be best reserved for another opportunity; my object here is to consider the second, with a view of elucidating a point hitherto somewhat neglected in our text-books; I mean the pathogeny and localisation of lead paralysis. To Duchenne belongs the credit of having stated as a general axiom that in lead paralysis of the usual type the supinators always escape, though all the other muscles supplied by the musculo-spiral nerve are liable to be affected. The supinator longus, as he showed, is mainly a flexor of the forearm; and the method of ascertaining its condition is to tell the patient to flex the arm, whilst the observer resists the motion by holding the limb in a position midway between pronation and supination. Under these conditions the belly of the muscle, if unimpaired, starts prominently forward, and is readily seen and felt as a hard triangular mass filling up the bend of the elbow. We shall see, however, that this non-implication of the supinators among the muscles supplied by the musculo-spiral can no longer be held as a pathognomonic feature of lead paralysis; for it may also be observed in certain cases of circumscribed anterior cervical poliomyelitis—that is, of inflammation or sclerosis of certain portions of the anterior horn of grey matter in the cervical enlargement—and more especially of certain groups of the large multipolar or ganglionic cells therein contained.

It is certainly strange that such a phenomenon, the uniform protection of a muscle amidst the general paralysis and atrophy of all its companions, supplied by the very same nerve, should have been so long recognised without eliciting any attempts at an explanation. Yet this is what has happened; and it is only lately that E. Remak, in a valuable paper has propounded what appears to me to be a most satisfactory hypothesis. Most movements, such as flexion or extension of the several segments of a limb upon one another, although apparently very simple, require the co-operation of several muscles. The centres for these primitive associations are in the anterior grey matter of the cord, which contains the large cells just mentioned. These cells, arranged in groups, more or less independent physiologically and pathologically, are connected with the brain through

COOMBE LYING-IN HOSPITAL, DUBLIN.—The annual meeting of this institution was held recently, and from the report we learn that during the past year 680 patients were under treatment in the hospital, and 1953 attended in their confinements at their own homes. There were also 1754 attendances at the special dispensary for diseases peculiar to women, and 5448 at the general dispensary. Of the 680 intern patients 559 were in the labour wards, and 121 in the wards for diseases of women, the larger number of the latter having to undergo operations of a serious character. Since the enlargement of the hospital an increased expenditure has arisen, and a debt of some £700 has been incurred, which the Board hope shortly to discharge.

the "pyramidal" tracts of the antero-lateral columns of the cord (Flechsig). They give off in their turn the fibres to the anterior or motor roots which unite into the network of the cervical, lumbar, and sacral plexuses. The nerve-trunks issuing from these plexuses contain fibres derived from several of the roots, that is, from several nuclear spinal centres. It is on account of this peculiarity that when the lesion is localised in certain spots of the spinal grey matter, or in particular roots of the plexus, among the various muscles supplied by a single nerve, some are affected, whilst others escape. In the case of lead paralysis, for instance, the supinator longus escapes, because being a flexor of the forearm, its central nucleus must be more intimately connected with that of the other flexors of the forearm (brachialis anticus and biceps) than with that of the extensors of the hand. Now, since the very terms of the problem involve an elective affinity of lead for a special group of organs, I need only point out that the localisation of this group in the spinal cord gives a very satisfactory reason for the phenomenon under consideration. If we look at the independence of the spinal nucleus of the extensors as an anatomical and physiological fact, and to the common distribution of the peripheral nerve to one of the flexors as well as to the extensors as a mere contingent circumstance, the apparent anomaly is at once reduced to the reign of law.

These considerations have a plausibility which cannot be denied. They gain support, moreover, by a sort of *experimentum crucis* which nature herself has supplied for us. In a few rare cases of lead palsy the supinator has been found to be paralysed, but in those cases the other flexors (biceps and brachialis) have been found also affected. I must draw particular attention here to the great importance of a thorough electrical examination of the muscles, as it alone (especially in the earlier stages) will distinctly prove the existence of degenerative changes in muscles, the functions of which apparently are not materially impaired. The faradaic excitability may or may not be diminished; this depends upon the participation of the nerves in the process; but any qualitative departure from the normal galvanomuscular formula proves the existence of some interference in the so-called "trophic" influence of the cord, and generally heralds more serious troubles.

According to the theory, then, the flexors of the forearm and the extensors of the arm are each under the control of centres placed at different levels of the cord, through different roots of the plexus. There is a little experiment which will illustrate and confirm this view. If we stimulate the united fifth and sixth cervical roots at the point where the nervous bundle appears between the scapuli, we find that besides the deltoid and some scapular muscles, the biceps brachialis and supinator enter into contraction, the extensors of the hand and fingers remaining quiescent. Any one can convince himself of this fact by applying a moderate faradaic current, by means of a small pointed electrode, to a point near the posterior edge of the sterno-mastoid, and about a couple of inches above the clavicle. I had the opportunity, some years ago, of seeing a case in which owing to a lesion of the fifth and sixth roots, these very muscles were paralysed, and several such have been lately described. I think we may, in presence of this cumulative evidence, safely assume that the primary lesion in lead paralysis involves, if not the spinal centres themselves, at least the roots or cords above the points where these intermingle in the plexus to form the several nerves of the limb. The latter alternative need not detain us long; for though we may not be able absolutely to disprove it, yet every analogy is opposed to its probability. At any rate the most careful investigations have shown that, even in cases where the nerves were largely implicated in the process of degeneration, the roots themselves were healthy.

Before going any further, I may say a word about the theory of a muscular origin of lead-paralysis, which has from time to time found supporters. Some of their arguments, such as the supposed accumulation of lead in the muscles, and changes in the local circulation, have been demolished by actual demonstration; others clash with the recognised immunity of the supinator longus; others, finally, have been derived from experimental data, totally at variance with the conditions prevailing in clinical observation. This theory need not, then, detain us long.

An objection to the spinal localisation of lead palsy, however, remains to be answered. How is it that there are next to no cases on record where any pathological change has been noted in the cord, even in advanced saturnism? May

I not suggest that the circumscribed, and perhaps but slight, lesion—which is all our theory would imply—has hitherto escaped attention? A thorough systematic examination of the cord is difficult and comparatively rarely carried out. But even should ulterior researches prove negative, is it necessary to assume a gross organic lesion of a nerve-centre to account for peripheral changes? In the case of lead paralysis we have primarily symptoms of diminished trophic influence of the cord, followed by loss of power. Why should not lead act here as it does in the production of hemianæsthesia—act not as a destroyer of tissue, but a modifier of nutrition, or molecular organisation, leading to suspension of function? Other poisons, such as mercury and arsenic, may give rise to nervous symptoms without producing any evident lesions to explain them. Again, in Landry's ascending paralysis, almost every activity of the cord is abolished, and yet it still ranks as a so-called "functional" disease, and it is not unlikely that in "general neuritis" a similar "functional" disturbance of the spinal grey matter is the origin of the peripheral changes. Whatever be the worth of these suggestions, we have with reference to the pathogeny of lead paralysis to accept the greater of two probabilities—to choose (a) between the toxic effect of the metal manifesting itself by interfering through a hitherto unexplained process with the functions of a certain independent spinal centre, and (b) saturnism, setting up a peculiar localised neuritis, strictly limited to a certain number of motor fibres of the same nerve, picking out precisely those originating from that centre. The latter alternative, it will be granted, has some features which make its acceptance far from easy. But I need not dwell on them, and will conclude by saying a few words on the striking resemblance between paralysis due to lead and that due to an organic disease of the anterior horn of grey matter, or poliomyelitis, such as is observed in infantile paralysis and the corresponding disease, acute or chronic, of the adult. Thus I have witnessed a case of wrist-drop, which, to use Professor Erb's own words, "nothing but the impossibility of tracing a history of lead poisoning made me exclude this diagnosis and assume the existence of a circumscribed patch of anterior poliomyelitis." Again, we have just seen that when lead affects the supinator, the other flexors are also affected, usually along with the deltoid and some scapular muscles, the reason for this distribution being the close relation of the nuclear centres of these muscles (supplied from the fifth and sixth roots). This distribution is far from uncommon in cases of poliomyelitis. Quite lately I again had the opportunity of observing it in a case of infantile paralysis, and in one of chronic poliomyelitis in an adult. In the latter, especially, the power of flexing the arm was absolutely lost; the faradaic and galvanic excitability of the muscles involved was almost extinct. The other muscles of the arm and forearm, though beginning to be implicated in the downward progress of the disease, had preserved a very fair amount of power and electrical excitability. In the somewhat rare cases where lead paralysis manifests itself among the leg muscles, its distribution is precisely the same as that which obtains in poliomyelitis. When the peroneal and extensor muscles are affected, the tibialis anticus is usually found healthy. When the latter is involved then the extensors of the leg (rectus and triceps femoris) also give signs of degeneration. The tibialis anticus, in fact, reminds one of the supinator longus by its immunity among the muscles supplied by the peroneal nerve; it probably derives its nervous supply from the fourth lumbar root, and its nucleus is in close anatomical relation with those of the extensors of the leg. Again, the great clinical resemblance between general lead paralysis and acute spinal paralysis is highly suggestive of a pathogenic unity between the two processes; and Vulpian has lately shown that progressive muscular atrophy—a disease, by the way generally considered spinal notwithstanding the somewhat conflicting data of morbid anatomy—may be occasionally traced to the influence of saturnism.

As a rule, progressive muscular atrophy is more erratic in its localisations than chronic poliomyelitis; but here also it has been my good fortune to meet with a considerable parallelism between the idiopathic and the saturnine process. In two typical cases—one of severe lead palsy, the other of progressive muscular atrophy involving the right forearm—there was a striking analogy between the muscles involved. In both the extensors of the wrist and fingers (with immunity of the supinators), the small muscles of the hand, and the long flexors of the fingers were affected. In

the case of progressive atrophy the long flexors were obviously wasted, in that of lead paralysis less so, but the remarkably feeble grasp of the patient made me suspect something beyond the loss of the antagonistic effect of the extensors, and to my surprise I found the flexors flabby and yielding the characteristic reactions of degenerative change. This observation, as far as I am aware, is the first of its kind. The dictum, probably, that in lead palsy the flexors are never affected, has diverted the attention of observers from their electrical condition, the testing of which, it must be added, offers some difficulties. As it is, my observation curiously tallies with a statement of Remak, who observes, that owing to the proximity and physiological connexions of the spinal centres of the interossei and long flexors of the fingers, these muscles are often found involved together, and that when, as happens in certain cases of saturnism, the former are paralysed, the latter, by analogy, might be expected to show signs of atrophy.

The cumulative evidence for a spinal origin of lead paralysis is, I take it, almost irresistible, and then the precise localisation of the disease offers no difficulty. We know from observations of cervical pachymeningitis that the eighth cervical and first dorsal roots supply mainly the flexors of the fingers and small muscles of the hand; the fifth and sixth cervical roots have the distribution mentioned above—viz., the shoulder muscles and flexors of the arm. There remains only the seventh cervical; it is therefore in the anterior group of large cells giving origin to this root that we must look for the primary pathological changes, whatever they be, molar or molecular, of the typical saturnine wrist-drop. Whether our therapeutical resources will benefit by our increased theoretical knowledge of the disease remains to be seen. Hitherto, besides the orthodox administration of iodide of potassium, electrification of the affected muscles has been our sheet-anchor. A more localised, central application of the continuous current in *loco morbi*, combined with peripheral stimulation, might fairly be tried. But on this point I speak with all reserve, knowing how much the credit of electro-therapeutics has been impaired by the premature statements of narrow-minded enthusiasts.

CAUTIONS AND SAFEGUARDS ABOUT THE CLIMATE OF THE ENGADINE.

By JOHN KENT SPENDER, M.D. LOND.

THE precept "go abroad" is much in fashion with doctors, and obedience to it is not less willingly yielded by patients. The medical injunction is reinforced by considerations of novelty, scenery, art, and aesthetics generally; pecuniary economy is quite out of the question now, for time and distance require a long and strong purse, and Continental prices often rival in grandeur those of the most favoured spots in Great Britain and Ireland. To youth and health the charm of foreign travel knows no abatement, nor are we so cynical as to wish it to be otherwise. But when the first bloom of health and youth is gone, and some of the weariness of ripper age begins to be felt, new conditions are submitted to medical judgment, and nothing requires more careful forethought than advice about "change of air." A man who goes to Switzerland ought to take health in his hand, instead of searching for health when he is there. We confuse the respective benefits of mind and of body, and hastily infer that because a jaded mind is refreshed by Alpine wonders, a tired body is to be renovated by constant climbing, long excursions, and exposure to sudden thermometric and hygrometric changes. But if a body be diseased as well as tired, how much less capable is it of undergoing the discipline of the ordinary tourist, who is unhappy when not moving about, and who craves incessantly for new worlds and new skies!

I plead, therefore, that "change of air" is a desideratum not always best gratified by going abroad, and that for several reasons. 1. The fatigue of the journey many of the most popular Continental spas. 2. Excessive atmospheric heat, often alternating with violent thunderstorms

and unexpected chills. 3. The incessant noise and want of homely seclusion at most of the large foreign hotels, to say nothing of the absence of many domestic comforts prized by invalids. 4. Defective sanitation is still the great European blot, sometimes fouling the places which are most lavishly dowered with natural beauty. How serious it is that a person who travels in quest of health may not only fail in his mission, but may bring home a fresh and perhaps fatal disease.¹ The rule ought to be absolute that before a medical man advises a patient to go to a foreign health resort (whether inland or by the sea), he should go there himself first and be satisfied that it possesses the telluric and atmospheric qualities for which he recommends it. Second-hand knowledge on these matters has had very mischievous results; but whenever we are obliged (as must be sometimes the case) to consult the reports of others, the accounts given in local guide-books and the like must not always be trusted without some confirmation from disinterested sources. With these preliminary words I pass to the special subject of this short paper, which is to offer a few cautions about the climate of the Engadine, and to describe the conditions and limitations within which its salutary properties may be enjoyed.

The Engadine (Oeni-Gadina, Upper Valley of the Inn) has been so often described that I need say very little here on its geography. It is situated in the S.E. of Switzerland; it is about fifty-seven miles in length, seldom more than a mile in breadth, and runs from S.W. to N.E. Even at the upper end, the source of the Inn, it is a true valley, inasmuch as it is flanked by lofty mountains; but here it is no less than 5500 feet above the sea-level, and gradually slopes downwards with the course of the Inn to Martinsbruck, which is the boundary between Switzerland and Tyrol, and where the elevation is somewhat more than 3000 feet. From these data the climate can be easily inferred. It is as inclement as that of the north of Sweden or of Finland: the cultivation of corn is almost unknown, and tillage generally is very backward. The mean temperature of Pontresina for the whole year is only 34.7° (Fahr.); that of the three summer months (June, July, and August) is about 50°. The meteorological station is 6001 feet (1829 metres) above the sea. In summer the weather is never sultry, sometimes decidedly cold; the highest temperature ever recorded is 70.77°, but even 70° is rarely approached, and at dawn of day the mercury is sometimes nearly at freezing-point in July and August.² I do not speak of the meteorological curiosities of this region at other times of the year, because they do not practically concern British travellers.

The diminished pressure of the air is an important medical feature in the climate of the Upper Engadine. It is indicated by the physical phenomena of the mean height of the barometer being only 24.10 inches, and by water boiling at 202 degrees: hence the atmospheric pressure is fully one-fifth less than at the seaside. The air is proportionately rarefied, and being so constantly free from vapour, solar light and heat are much intensified. There is so little obstruction to the sun's rays that they beat down with uncommon fierceness on man and beast, and render a protection to the head always necessary in the middle of the day. I have never heard to what point the black-bulb thermometer would rise on exposure to the sun; but this I can testify, that there is a feeling of *stifling heat* in the air on clear days, owing to the heated condition of all terrestrial objects. And the difference of temperature between shade and sunshine is much greater than in the lowlands.

Now I wish to draw special attention to the two sources of danger which lie in ambush for delicate travellers whose main business is to recover health. (a) The first peril is the extreme range of temperature between day and night. Beneath unclouded skies radiation goes on without check or stint. Quite early in the afternoon Silvaplana is thrown into shade by the sun declining behind the mountainous slopes of the Julier; shade deepens into dusk, and dusk into night, and July is metamorphosed into October. A man who takes a stroll between 9 and 10 in the evening without a thick wrap over his shoulders is an adventurer who will probably pay his penalty, however rude his

¹ There is a fashion now in favour of roaming in Brittany, and in the last (June) number of the Magazine of Art there is an illustrated sketch of the archaeological attractions of Morlaix. Not a word of caution is written of the pestiferous qualities of that quaint old town, where there is enough fever and diarrhoea to satisfy the most enterprising pathologist, and as many stench as at St. Malo.

² I take these details from Dr. J. M. Ludwig's excellent handbook to Pontresina and its neighbourhood, fourth edition, 1879.

strength may be. How is the traveller to ventilate his bedroom at night? There is perhaps no fire-place, and if he open the casement but a crack the almost freezing air will enter the chamber, and with an inrush proportionate to the disparity of the external and internal temperature. The alternatives, therefore, are suffocation or chill. (b) The other danger is the great variation in the relative humidity of the air. In the morning and in the evening the humidity amounts now and then to 80 or 90 per cent.; early in the afternoon it may fall to 30, or even 25, per cent., and the atmosphere is said to be so dry during the winter months that meat may be preserved solely by its influence for several weeks at a time.

Now a simple comparison will show the advantage of the climate of the north of Sweden and Norway during the height of summer. If the sun has much less power by reason of its lower altitude, it shines continuously for a few weeks, and there is no night at all. So there are none of the fierce contrasts of more southern regions, where the brilliant sunshine of fifteen or sixteen hours is balanced by the rapid radiation during the hours of darkness. As a matter of poetry, and as favouring sleep, it may be desirable to have more night and less day; as a matter of physiological physics it is far better to have the solar influence distributed more evenly over the twenty-four hours, and for the body to endure less thermometric extremes.

During the nine days which I spent in the Engadine last summer (Aug. 12th to the 21st) the weather was variable. Five days were absolutely cloudless; two were showery; two were very rainy, with much lightning and thunder. The few days (Aug. 19th to the 22nd) which were so bad in England were very fine in most parts of Switzerland. A thunderstorm in the Engadine may come on suddenly; in a few minutes the temperature runs down fast, and the air feels damp and chilly, like Scotland or the south-west of Ireland. Dr. J. M. Ludwig's statistics are by no means favourable to the doctrine that the climate is (on the whole) a rainless one, as the number of days on which there is "more or less rain" from June to August (inclusive) is quite equal to what we have during an average summer at home. September is generally the least humid summer month. But the unexpected changes from fair to foul and foul to fair are very trying to an invalid. He may indeed guard against them by narrowly watching the barometer; but where is the convalescent who will systematically take so much trouble? Both at Pontresina and at St. Moritz there are plenty of "oracles" who can be wise after an event, and whose philosophy consists in telling certain people that they ought not to have come there at all. I do not wish to dwell on my own miseries, and how I was confined to bed for four days at St. Moritz by acute pyrexial lumbago and sciatica; but I feel entitled to warn rheumatic and gouty folk *not* to "try the Engadine."

From a health point of view, the difficulty of Switzerland is in its "ups and downs," the close heat of the valleys and the meteorological treachery of the "passes," where, at a height of only 6000 feet, deep snow in August is not very uncommon (as in 1876). But the point I wish to emphasise is that, however high above the sea a valley may be, *it is still a valley if shut in by mountains*, and therefore cannot have those health-giving properties which belong, for instance, to a Yorkshire moor or to the sea-level itself. An English or Scotch moor may seem to the artistic eye rather dreary, but Jean Ingelow's picturesque line—

"An empty sky, a world of heather"—

conveys the idea of *openness* and freedom from barriers which is truly refreshing. To be on tolerably high ground, with nothing to check a full sweep of the horizon, suggests all the winds of heaven blowing freely about, plenty of ozone, and a positive deliverance from organic poisons and contaminations. But here is the oddity of foreign ways, that the most frequented spas or systems of baths are down in hollow basins or caverns, hedged round by alps or steep fir-clad precipices. A traveller bound for the Engadine will probably stop at Ragatz, and wind his way by the side of the "impetuous Tamina" to the historic baths of Pfäfers, buried in the bottom of a dark gorge, where even the midsummer sun can shine for only a few hours in the middle of the day. The Tarasp Spa, in the Lower Engadine, approached by miles of the loveliest scenery, and a rendezvous of sick people from all parts of Europe, is situated on the level of the Inn itself; the direct solar heat is intense, and the grand enclosing mountains hinder the proper circulation of air. I might

enumerate several instances of a similar kind in Germany. What comparison, then, is there between these grilling places and our own breezy uplands and our glorious splashing seas?

I dispute not Dr. Ludwig's assertion, that the climate of the Engadine has some prime qualities, and that it may be greatly beneficial in some "nervous disorders consequent on severe illness or excessive exertion"; during recovery from some acute diseases; and as an antidote to certain grave constitutional conditions. But let it be remembered that we are dealing with a two-edged weapon, which may wound as well as heal. Exposure to storms, insufficient dress, and too long walks, are the snares which beset the invalid, and are more likely to entrap him here because the whole country is a paragon of beauty, and the air is nectar itself. To the wearied brain-worker who finds rest in the variety of outward objects and in the mere movement of travel, I say, Go to the Engadine and enjoy it to the full. But do not delay, as the valley is quickly losing its pristine innocence; and for noise and gaiety some quarters of it will soon rival Brighton and Scarborough. Nature, too, has not been entirely kind; for in 1878 the woods of the Upper Engadine were visited by a troublesome guest. A moth laid its eggs on the smallest twigs of the conifers; the caterpillars, when they came out, ate off the needles, so that the trees looked red instead of green. And the result of this devastation last summer was, that there had been a loss of thousands of larches and cembra pines.

Bath, June 9th, 1880.

FAT-EMBOLISM IN FRACTURES.

WITH NOTES OF A CASE.

By F. A. SOUTHAM, M.A. OXON., F.R.C.S.,

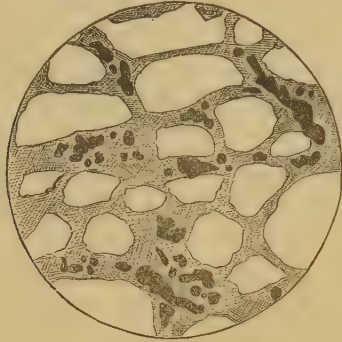
MEDICAL AND SURGICAL REGISTRAR, MANCHESTER ROYAL INFIRMARY.

THE subject of fatty embolism in cases of fracture, though it has attracted considerable attention on the Continent, has not hitherto been much noticed in this country, and I therefore think that the particulars of a case in which this condition was found to be present after death may not be without interest to the readers of THE LANCET.

A man, aged forty years, was admitted into the Manchester Royal Infirmary about 11 A.M. on Feb. 27th, suffering from a severe compound comminuted fracture of the bones of both legs about their lower third, caused by a railway waggon passing over them. Amputation of both legs below the knee was performed antiseptically immediately after admission by Mr. Heath. The patient bore the operation very well, and was kept under the influence of opium afterwards. The evening temperature registered 101.2°. He passed a good night and expressed himself as feeling very comfortable the following morning. Temperature 103°; pulse 132; his general condition appearing altogether very satisfactory considering the severe injuries he had received. About 3 P.M., however, the same afternoon a sudden change was observed; he became very restless and excited, his countenance of a somewhat dusky hue, with increased frequency of the pulse and respiration; no rigors nor marked dyspnoea were observed; later on he became delirious and his condition was quite hopeless. At 9 P.M. the temperature was 105°, the pulse too quick and weak to be counted. There was slight discoloration of the integuments of the stumps discernible above the dressings, and a faint odour was perceptible, showing that putrefactive changes had been set up in spite of the antiseptic measures employed in the operation. At 10 P.M. death took place. (Strange to say, both the patient's arms had been amputated above the elbows about nine years previously for injuries of a similar character.) A post-mortem examination was made by Dr. Bradshaw, pathologist to the hospital, but no morbid changes of any importance were perceptible to the naked eye. As from the nature of the injuries it was thought not improbable that fatty embolism of the lungs might be

present, a portion of those organs was kept for microscopic examination.

Sections of the lung were afterwards made by Dr. Bradshaw, and on staining them with a solution of osmic acid, the presence of fatty matter in the capillaries and minute



Section of lung treated with osmic acid, showing the vessels in the alveolar walls plugged with particles of fatty matter, which is stained black. ($\times 150$.)

arteries was at once detected by him. It presented itself as minute globules and irregular masses of various sizes and shapes completely blocking up the vessels. Unfortunately none of the other organs were kept for microscopic examination.

In this case it is difficult to say whether the fatal result must be attributed to the plugging of the minute vessels of the lungs by particles of fat, or whether it was due to a condition of acute septicæmia which so often suddenly sets in about the middle or end of the second day after the receipt of a severe injury, and which usually causes death in the course of a few hours. The symptoms of this acute form of blood-poisoning are described by Billroth as "collapse with cyanosis" suddenly setting in. "The patients appear as if suddenly poisoned after having perhaps felt quite well during the first twenty-four hours after the operation." In this case death was at first attributed to this latter condition, and the rapid rise of temperature to 105° , along with the state of both stumps, would certainly be strong arguments in favour of it. On the other hand, the fatal result may have been due to the plugging of the vessels of the lungs, for the clinical symptoms of fatty embolism, as hitherto described—viz., collapse, more or less sudden, accompanied by the general signs of shock, though usually coming on shortly after the receipt of the injury, may be delayed for twenty-four hours or even two or three days, the patient in the meantime appearing comparatively well. The taking up of the fat by the open vessels from the medulla of the bone begins immediately after the receipt of the injury, and where an interval of time elapses before the symptoms of pulmonary embolism suddenly appear, may it not be explained on the supposition that the fatty matter, temporarily arrested or stranded in the vessels in the neighbourhood of the wound, is, after a time, when the patient has recovered from the shock of the injury, and when reaction has set in, suddenly carried on with the blood-stream under the influence of the renewed circulation, until it is arrested in the vessels of the lungs?

Fatty embolism of the lungs, though most commonly observed in compound, has also been found in cases of simple fracture. A very interesting case was reported by Dr. Hamilton, of Edinburgh (*Brit. Med. Journal*, October, 1877), where this condition was found in a patient after rupture of a fatty liver, and it is not at all improbable that it is present to a greater or less degree when life is suddenly terminated by severe injuries, and especially in those cases attended by lesions of the osseous system.

In a paper published by Prof. Sanders and Dr. Hamilton, which appeared in the *Edinburgh Medical Journal* last year, particulars are given of a case of diabetic coma, in which, after death, fatty embolism of the lungs and also of the kidneys was observed. In the former organs, "not only were the small vessels plugged with the oily emboli, but in the larger and middle-sized arteries the oil-globules spread themselves out on the wall of the vessels and adhered to it." A peculiar condition of the blood was observed, and this has also been found to exist in other cases of a similar

nature. It presented the characteristic odour of acetone, and, on standing, a milk-white stratum collected on its upper surface, which on microscopic examination was found to consist of "a fine chyle-like emulsion of oil, the globules being minutely divided."

Though numerous cases have been described on the Continent, these are, as far as I am aware, the only two hitherto recorded in this country in which on post-mortem examination fat-embolism of the lungs has been found to exist.

The most recent researches on the subject of fat-embolism are, I believe, those of Wiener (*Arch. für Experim. Path.*, Vol. xi.), who made a number of experiments on different animals (dogs, rabbits, frogs), injecting pure olive oil into the serous cavities, veins, and subcutaneous tissue.

In a first series of experiments, he found that when oil was injected into the pleura or peritoneal cavity, extensive fat-embolism was found in the capillaries of the lungs in the course of a few hours. When the oil was injected into the subcutaneous tissue the pulmonary embolism, which was much more limited, did not appear until the third or fourth day; this he proved was due to the intervention of the lymphatic glands, which retained and probably at the same time partly emulsified it. The conclusion he draws from these results is that the fatty matter can be taken up not only by the veins (as was formerly supposed), but also by the lymphatics, even when they are intact, and that the intervention of lymphatic glands does not, as has been suggested, altogether prevent fat-embolism in the lungs.

In a second series of experiments Wiener found that changes in the lungs, consisting of ecchymoses and pulmonary oedema, due to the presence of fat-emboli, were only present when very extensive fat-embolism existed; hence he infers that as a rule fat-embolism is perfectly harmless and does not give rise to the symptoms of dyspnoea, convulsions, shock, &c., which have been observed in man in cases of fat-embolism occurring after fractures. This view is supported by the fact that many of the animals experimented upon remained perfectly well, and yet when killed fifteen to twenty days after the injection, showed extensive fat-embolism of the lungs.

In a further series of experiments with respect to the ultimate destruction of the fatty emboli, he found that this condition was present in many organs, but especially in the brain and kidneys; few, if any, emboli were found in the liver, as in this organ the fatty matter seems to pass very readily through the walls of the capillaries, becoming deposited in the form of large fat-drops in the hepatic cells. In the kidneys the fat is found in the glomeruli, in the vasa afferentia, and in the tubuli themselves; from these facts, coupled with the appearance of large masses of fat in the urine soon after the injection, Wiener infers that the greater portion of the fat injected is carried with the blood into the kidneys, where it is eliminated in the glomeruli, and passes away with the urine. At the same time no doubt another portion, by becoming emulsified, is taken up by the lymphatics. Finally, he found that in moderately strong dogs all the fat injected appeared to become eliminated in from three to four weeks.

As illustrative of the facts observed by Wiener with respect to the part played by the liver in cases of fat-embolism, I may refer to a case of diabetic coma which was a short time ago in the Manchester Infirmary, under the care of Dr. Dreschfeld, and in which, both before and after death, the blood was found to contain large quantities of fatty matter. On post-mortem examination, Dr. Dreschfeld found no evidence of fat-embolism in the lungs nor in the liver, but in the latter organ he observed extensive and well-marked fatty infiltration of the hepatic cells.

As a complication of simple fractures, fat-embolism must not be confounded with those cases of venous thrombosis starting from the neighbourhood of the injury, and where death sometimes suddenly results from detachment of a portion of the clot and its lodgment in the pulmonary artery or one of its large branches. In THE LANCET of March 1st, 1879, I published particulars of two cases of this fortunately very rare complication of simple fractures of the lower extremity, where, on post-mortem examination, embolism of the pulmonary artery was found, causing sudden death.

The whole question of fatty embolism is still involved in much obscurity, and, from the importance it possesses both in its clinical and its pathological bearings, it is one well worthy of further investigation.

LITHOLAPAXY IN BOMBAY.

By H. BLANC, M.D.,

PROFESSOR OF CLINICAL SURGERY, GRANT MEDICAL COLLEGE,
BOMBAY.

I THINK that the new rapid method of lithotripsy will meet with a large field of usefulness in India. In this country the stones found in adults are frequently too large to be operated upon by the old method, and, moreover, the natives are adverse to submit to repeated operations to rid themselves of a disease which they expect us to remove at once; hence lithotripsy has never been very favourably looked upon by surgeons practising in India. The six cases of litholapaxy here given did remarkably well. I used an ordinary lithotrite, not being able to obtain the more powerful one recommended by Dr. Bigelow, and the fragments were removed by means of Sir H. Thompson's improved evacuator. In my last three cases I made a small incision to the meatus, and this enlargement of the narrowest part of the urethra greatly facilitated, I found, the introduction of the evacuating catheter.

CASE 1.—Poona Ghar, age forty, a Hindoo, was admitted into the clinical wards of the I. I. Hospital on Nov. 2nd, 1879, suffering from stone in the bladder. The disease is of three years' duration. The patient, of temperate habits, is much worn out by pain and sleepless nights. Suffers from lumbar pains. Urine of a pale-yellow colour; sp. gr. 1009, no albumen; no pus. On Nov. 11th lithotripsy was performed. The sitting lasted thirty-five minutes, and a large quantity of débris removed by the evacuator. Moderate reaction followed. On the 15th a second sitting of thirty minutes, and on the 23rd a third sitting of ninety minutes. Before removing the patient from the operation table the bladder was thoroughly examined, and no débris could be found. No reaction and very little pain followed.

On Dec. 6th the report of his case states: "Urine quite clear; micturition quite easy and natural. Discharged perfectly cured."

Weight of fragments 306 grains. Nature of calculus uric acid.

CASE 2.—Ezekiel Mordecai, a Baghdad Jew, aged thirty, was admitted into the clinical wards of the I. I. Hospital on Nov. 16th, 1879, suffering from stone in the bladder, and from internal and external piles. The disease is of ten years' duration. Suffers from lumbar pains. Micturition attended with great pain; urine deep amber colour, sp. gr. 1016; albumen present (due to blood); urine on cooling forms a considerable deposit, which, under the microscope, is found to consist of phosphates, pus, and epithelial cells. On Nov. 25th lithotripsy was performed, the sitting lasting ninety-five minutes, the amount of débris removed weighing 480 grains. Scarcely any reaction followed, but the urine for several days was tinged with blood. On Nov. 29th a second sitting of twenty-five minutes, the débris on this occasion weighed 246 grains. Mild reaction followed, and for several days he complained of pain in the perineum during micturition, and the urine, which was bloody for the first twenty-four hours following, afterwards contained some pus. Under treatment this subacute cystitis readily disappeared, and he was discharged cured on Dec. 31st.

Weight of fragments 726 grains. Nature of calculus uric acid.

CASE 3.—Burgugu Eduljo, aged twenty, a Parsee, was admitted into the surgical clinical wards of the I. I. Hospital on Dec. 4th, 1879, suffering from stone in the bladder. The disease is of two years' duration. General health fair. Urine amber colour, sp. gr. 1020. It contains a large amount of pus and mucus, and the microscope detects oxalate of lime. No lumbar pains, but suffers from frequent desire to pass water. On Dec. 7th lithotripsy was performed, and the stone entirely removed in thirty-two minutes. It was exceedingly hard to break. Moderate reaction followed, and for several days the urine was much tinged with blood. He complained of great pain during micturition, but the symptoms gradually lessened, and he was discharged cured on Dec. 31st.

Weight of stone 180 grains. Nature of calculus oxalate of lime.

CASE 4.—Mypathi Juxmow, aged thirty, a Hindoo, was admitted into the clinical surgical wards of the I. I. Hospital on the 19th March, 1880, suffering from stone in the bladder. The disease is of two years' duration. General health good; urine clear, sp. gr. 1013, no albumen present. The operation of lithotripsy was performed on the 23rd March, the sitting lasting twenty-eight minutes. Almost all the stone was removed, and no fragments would have been left had not the sitting been suspended owing to the patient's becoming violently sick, the cause being bad chloroform. On the 28th March the remaining fragments were crushed and the débris removed in a short sitting of five minutes. No general reaction followed either sitting. After the first sitting the urine was slightly tinged with blood for twenty-four hours. He was discharged cured on the 4th April.

Weight of the fragments 270 grains. Nature of calculus oxalate of lime.

CASE 5.—Jam Alladin bin Mahomed, aged twenty, a Mussulman, was admitted into the clinical wards of the I. I. Hospital on March 20th, 1880. The disease is of two years' duration. The previous history of the case is the following: Two years and a half ago he fell on his pelvis from a certain height, and a long chip of wood about half an inch in thickness penetrated into the rectum and pierced the bladder. The piece of wood was withdrawn by his friends, and for the few following days the urine constantly trickled through the rectum; but the communication between the rectum and bladder soon afterwards closed, and the urine was again expelled by the urethra, mixed with pus and blood. This condition lasted some six months, when the urine gradually cleared. His general health is indifferent; he is pale and anæmic, and he frequently suffers from attacks of malarious fever. The urine is muddy, and contains sand. At times he suffers from much pain, and shortly afterwards he passes pus and blood again for a few days. A small stone was felt with the sound free in the bladder.

On March 28th the crushing operation was performed, the patient being rendered insensible by a mixture of chloroform, ether, and alcohol, nevertheless he took the anæsthetic badly, and one ounce and a half of brandy had to be injected per rectum before the operation was begun. Scarcely had the stone been divided by the lithotrite when the blades were found to be locked. Finding it impossible to open them again, the screw was firmly tightened, and the instrument with great difficulty, but very gently, withdrawn, when a piece of wood an inch in length was found firmly lodged between the blades. The lithotrite was again introduced, and after some calcareous matter had been crushed, another piece of wood was extracted, this time without difficulty. That evening some reaction followed, and the patient complained of much burning pain in the urethra. The next day both temperature and pulse fell to normal, while the urethral pain greatly lessened. For the first twenty-four hours the urine was slightly tinged with blood.

The patient, although progressing favourably, still complained of some pain at the end of micturition. The bladder was therefore carefully examined with a lithotrite, and another small piece of wood seized and removed. Since then the patient is quite well.

Weight of fragments 120 grains; weight of wood 30 grains. Nature of calculus phosphates and uric acid.

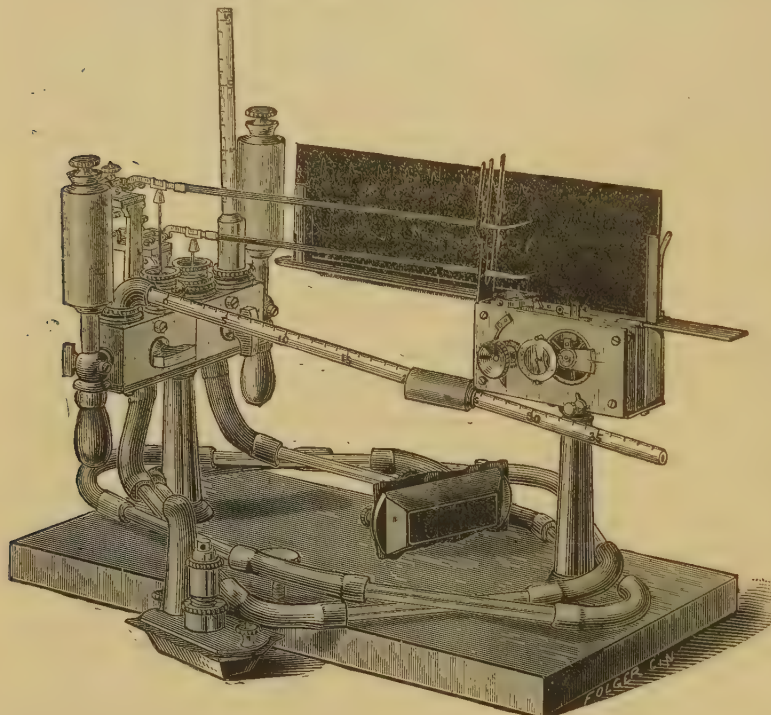
CASE 6.—Nag Rune Ally, age thirty-five, a Hindoo, was admitted into the clinical wards of the I. I. Hospital on April 17th, 1880, suffering from stone in the bladder. Duration of disease six years. General health good. Complaints of frequency of micturition, and of pain in the pubic region when walking and at the end of micturition. Urine high-coloured; sp. gr. 1024, contains no albumen. On the 20th April the operation of lithotripsy was performed, the sitting lasting fifty-five minutes, including the time spent in removing the débris. Slight reaction followed, and the urine was slightly bloody. On the third day after the operation pulse and temperature were normal, and the urine, with the exception of a little mucus, clear and healthy; but as he still complained of some slight pain at the end of micturition, the bladder was injected with four ounces of tepid water, and carefully examined with a small lithotrite, when a last fragment was detected and crushed. He was discharged well on May 3rd.

Weight of stone 430 grains. Nature of calculus uric acid.

THE COMPOUND SPHYGMOGRAPH.

By A. T. KEYT, M.D.

THE cut below represents my improved compound sphygmograph. The mechanism consists essentially of two sphygmographs of transmission and a chronograph combined in one apparatus, and all writing on the same smoked slide, the latter being regularly propelled by clockwork.



The sphygmographs are uniform, and constructed as follows:—

The base for receiving the movements is an oblong receptacle closed below by an elastic membrane, and opening above into a transmission tube. The latter is of convenient length, usually twenty-four inches, made up of alternate sections of glass and flexible tubing, and communicating by its opposite end with the vertical branch of a T passage. The horizontal branches of the T communicate each with a small chamber. Over one chamber is secured a graduated glass tube, over the other a delicate elastic disc; the chambers and passages are filled with *pure water*; and to provide for expulsion of air from the disc-chamber, a small passage connects its upper part with the index-chamber; a stopcock opens and closes this passage. At the junction of the T is placed a 3-way stopcock, which, according to its position, directs the movements to the index-tube or the disc. From the centre of the disc a pin arises, whose point is lodged in a small hollow cone depending from the writing lever, and to which it is attached by a sliding clip. The lever is light, six inches long, and its axis is pivoted to an adjustable plate. The pin-socket is usually placed half an inch from the centre of the axis. The lever's point just lightly touches the recording surface. A reservoir with a depending ampulla and stopcock conveniently regulates the supply of liquid to the apparatus. The entire apparatus, except the bases, which are freely movable in any direction, is firmly secured to suitable supports.

The basal and disc membranes are each adjusted and maintained at a standard tension by means of a proper screw device, and the standard tension for each is determined by a definite and easily applied formula. By these means uniformity in the action of the membranes is secured.

The graduated glass tube serves as a diverticulum for the liquid displaced from the base as the latter passes down upon the organ whose movements are to be observed. At the same time the liquid column displays the movements to the eye, indicating their form, and measuring with precision their amplitude and the pressure at which they are best developed. Thus the index-tube is an interesting and indispensable part of the instrument. (It is placed erect when the instrument is in use, and turned down for convenience when it is not in use.)

The chronograph is essentially a watch provided with a mechanism for marking the divisions of time. It is a complete instrument, very convenient, and its record of seconds and fifths is entirely reliable.

Two sphygmographs are conjoined in one instrument, because the arrangement is quite convenient, and so extends the application that a simple sphygmograph in comparison with this combination appears of very small value.

This compound instrument answers all the purposes of any sphygmograph, and in addition is adapted to a great variety of physiological and clinical uses. It traces in a perfect manner the pulsations of the heart and of the different arteries, of the fontanelles, of tumours, the movements, respiration, muscular contractions, &c. By means of the index-tube it exhibits these movements to the eye; by means of the chronograph it shows their exact time relations; and by means of the double arrangement it traces two movements, as of the heart and an artery, simultaneously, showing their relations to each other, and securing all the advantages of such a record. It is used with great facility, and executes the work with which it is charged with an extreme fidelity.

Cincinnati, Ohio.

CASE OF LABOUR, WITH ALBUMINURIA.¹

By STANLEY HAYNES, M.D.

ON July 24th, 1878, at 10.30 P.M., without having had any previous knowledge of the patient, I was called to attend Mrs. P—, a gardener's wife, a primipara, aged twenty-six. A nurse had arrived just before I was sent for (about half an hour previous to my attendance), and been so alarmed by the condition of the patient that she had immediately given a glass of hot brandy and water and said a doctor must be obtained directly. On my arrival the patient looked as if she had had serious hæmorrhage, but there had not been any. The face had a deadly pallor, the nostrils were contracted, the eyelids half closed and twitching, the breath was cold and breathing slow and superficial, and there was a cold perspiration on the forehead; the pulse was barely perceptible, and slow. The patient was calm and sensible, said she felt very well, and was quite unaware of there being anything unusual. She calculated she had gone between seven and eight months. There had not been any convulsions. Labour had begun about 4 P.M. with ordinary prodromata, and pains had not become regular or frequent until about 7 or 8 o'clock, when the liquor amnii, in apparently small quantity, escaped, and the patient had continued about her household vocations until then. There was no vomiting. The patient had not complained of illness or debility. (Neighbours subsequently stated she had been very pale during her pregnancy.) On examination there was not, and had not been, any hæmorrhage; the external genitals, the thighs, legs, feet, and arms felt cold, like those of a corpse, and the ankles were

¹ Read before the Worcester Medical Society, April 28th, 1880.

cedematous. The abdomen could not be termed warm. The warmest part of the body was the thorax, and that was of low temperature. I had not taken a thermometer. The os uteri was of the size of a shilling, dilatable; the presentation was left occipital anterior, and the pains came on about every ten minutes, were slight, and appeared almost unknown to the patient. Brandy and water was repeated in frequent small doses, with one-drop doses of laudanum, and heat, applied to the feet, calves, thighs, and abdomen, producing warmth where applied, but very little improvement to the circulation or respiration. The pains gradually became more frequent, and the os slowly enlarged. At about 2 A.M., as the general state of the patient continued as described, I sent for my friend, Dr. Thelwall Pike, in consultation. On his arrival at about 3 o'clock he approved of the treatment so far, agreed it would be better to watch and wait carefully unless there should seem reasons for expediting the labour, and regarded the case with anxiety. Soon after he left the pains became stronger, the labour advanced rapidly, the patient remaining cheerful and suffering very little even during strong expulsive efforts, and a recently dead female child was born. After a short interval pains recurred, and the placenta came away with very little, and that pale, hæmorrhage. The patient expressed herself as very comfortable, and soon became warmer, and I left her doing well at about 8 A.M. She made a good and rapid recovery, and seemed surprised I had been anxious about her.

When the lochia had ceased the urine became almost solid on boiling; it did not contain any casts or crystals. There was marked leucocythæmia. Under chalybeates and potassic chlorate she speedily improved, and assumed a natural but sallow appearance, and the albuminuria steadily diminished and ceased. On Sept. 3rd (six weeks after parturition) she was so far recovered she did not wish for further attendance. I advised recourse to the treatment in the event of relapse or of pregnancy.

On March 31st, 1879, eight months after confinement, I was asked to see her again, and found leucocythæmia and albuminuria, and prescribed iron and potash as before. She took this for a month only and recovered. In August she had a living child at full time, after a natural labour, and without the attendance of a medical man. Since then she has continued well.

Malvern.

A Mirror

OF

HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. MARY'S HOSPITAL.

TWO CASES OF ANTISEPTIC SURGERY.

(Under the care of Mr. HAYNES WALTON.)

FOR the following notes we are indebted to Mr. Augustus J. Pepper, F.R.C.S.

CASE 1. *Strangulated Umbilical Hernia; Opening of the Sac; Recovery.*—T. D—, aged sixty-two, who had been a heavy drinker for the greater part of his life, having "taken to gin" when he was thirteen years of age, was admitted on Jan. 17th, 1880. Fifteen years before, a very small navel rupture was discovered, which gradually increased in size. On more than one occasion incarceration occurred, and the gut could only be returned by taxis under chloroform. The last time this happened was a week before final strangulation. At the time of the operation, the hernia, which was as large as a billiard-ball, had been strangulated for four hours and a half; it was very tense, partly resonant and partly dull on percussion. Vomiting had been frequent. Taxis having failed, it was decided to place the patient under chloroform; this was done, but reduction by manipulation could not be effected. Under the strictest antiseptic precautions, Mr. Walton then proceeded to divide the constriction, which was found to be situated in the neck of the sac. The hernial sheath contained about two ounces of

blood-stained serum, and a coil of small intestine, of a deep-red colour from congestion. Three sutures were used to close the wound, but no artificial drainage was employed.

On only one occasion did any elevation of temperature occur—namely, on the third day after the operation, when it rose to 102° F., but quickly subsided on removal of the sutures. The discharge from the wound was quite aseptic throughout the six days the gauze dressings were applied. At the end of this time only a superficial sore remained, and this got well with simple detergent lotions. The aperture leading from the hernial sac into the abdomen seemed to be obliterated by the time the patient was convalescent.

It may be stated that there was also a large double inguinal hernia.

CASE 2. *Blade of penknife in knee-joint; removal; recovery.*—C. H—, aged twelve years, on Dec. 29th, 1879, ran a penknife which he had carried open in his pocket into his thigh just above the knee, but the nature of the injury was only suspected the following day, when it was found that the blade of the knife had been broken off close to the hinge. The wound healed by first intention, but considerable pain and swelling in the knee-joint ensued, and on the eighth day after the accident Mr. Walton saw the case, and detected a foreign body projecting beneath the skin immediately above the left patella.

On Jan. 8th an incision was made under the spray, and the blade was removed. Some little difficulty was experienced as the blade of the knife was wedged beneath the patella, necessitating a free incision into the quadriceps extensor muscle.

The wound healed rapidly without suppuration. For a few days slight exudation into the joint could be detected, but the temperature remained normal throughout, with the exception of a rise of two degrees on one day coincidental with an attack of urticaria (not confined to the limb). The operative incision was closed by a single suture; no drainage-tube was used.

The antiseptic dressings were discontinued on the 20th, and on the 23rd the joint was encased in a plaster-of-Paris bandage. No pain or inconvenience was experienced when the lad was allowed to walk about on the 27th.

The blade of the knife was an inch and a half long.

MANCHESTER ROYAL INFIRMARY.

CASE OF LOCOMOTOR ATAXY WITH ARTHROPATHIES.

(Under the care of Dr. DRESCHFELD).

B. W—, aged fifty, mechanic, married, with no history of either syphilis or alcoholism, had always enjoyed good health till fifteen years ago, when the first symptoms of locomotor ataxy came on. These symptoms consisted in the inability to walk in the dark, and in the presence of lightning-like pains in the legs, in consequence of which he was soon obliged to give up his work. Seven years ago the pains in the right thigh, without losing their lightning-like character, became suddenly much more persistent, and obliged the patient to take to his bed, and to remain in bed for a month, when they left him as suddenly as they came. On trying to get up he found now that his right leg was much shorter than the left, and that there was a projection on the right hip, which occasionally would suddenly disappear with a peculiar noise. Any movement of the thigh or leg would, however, make this projection very soon reappear. Three years ago the left knee began to give way without any exacerbation of pain, or any sudden swelling of the joint, and very gradually assumed its present position, that of extreme backward dislocation. In consequence of these joint affections, walking, which was already difficult before, became only possible with the help of two sticks. The general health of the patient had remained very good throughout, his eyesight had been bad for some years, but he had never suffered from vomiting or any bladder troubles.

On admission patient looked well and healthy; the thighs were considerably wasted, but the rest of the body was not emaciated. The chest and abdominal organs were perfectly healthy. There was no affection of any of the cerebral nerves, except marked white atrophy of both of the discs. The pupils were contracted and reacted to accommodation, but not to light. The upper extremities were perfectly normal. The lower extremities showed the chief symptoms, and here, as regards (1) sensation, there were diminution of

tactile sensibility, analgesia of certain spots, and retardation of sensibility. The sense for temperature and weight was normal; the muscular sense was considerably affected. The patellar tendon reflex was quite absent. Both lower extremities were often the seat of the lightning pains. As regards (2) trophic changes, (a) the muscles of both thighs were flabby and atrophied, but especially the muscles of the left thigh. (b). There was marked dislocation backwards of the left thigh, so that when the patient stood the upper surface of the tibia could distinctly be felt under the skin. There was no atrophy of either of the articulating surfaces, nor any new deposit of bone round the joint, as far as could be made out on manual examination. The head of the right femur was dislocated on to the dorsum of the ilium, and could be felt as a distinct round projection; it was freely movable and could easily be reduced, but very soon slipped out again from the acetabulum on to the dorsum. Owing to this dislocation the left knee was situated four inches lower than the right knee, which difference disappeared as soon as the reduction of the head of the femur was effected. The head of the dislocated femur did not seem to be atrophied, nor were there any bone deposits to be felt about the joint cavity. A mass of bone, however, of more than one inch in length was felt, situated in the sheath of the sartorius muscle, totally unconnected with the joint, but moving freely with the muscles during this contraction. As regards (3) motility, there was considerable diminution of motor power in both legs, but more in the right than in the left; the patient was, however, able to stand and to walk with the help of two sticks; his walk was characteristically ataxic; he was unable to walk with his eyes shut, and with his eyes open his gait was very unsteady, owing to the ataxy and the dislocations.

Remarks.—Though the joint affections in nervous disorder, but especially in locomotor ataxy, are now sufficiently well recognised, yet not many cases of this nature have been recorded in English medical literature, and it is only very recently that Dr. Buzzard has again drawn attention to this subject and brought forward an interesting series of cases (*Medical Times and Gazette* Feb. 14th, 1880). The chief points of interest which are attached to this case are briefly these: 1. The presence of a mass of bone situated in the course of a muscle. Such a condition is noticed in two of Dr. Buzzard's cases, but is not usually found in the arthropathies of ataxic persons (see Talamon, *Revue Mensuelle*, 1878). 2. The gradual development of the dislocation of the knee, whilst in almost all cases reported the joint affections follow an acute effusion into the joint. 3. The absence of any atrophic condition of the articulating surfaces of the bones concerned in the dislocation, at least as far as a careful surface examination could show. 4. The absence of the "crises gastriques" which usually accompany the arthropathies.

WEST NORFOLK AND LYNN HOSPITAL.

COLLOID CANCER OF MAMMA.

(Under the care of Mr. WILSON.)

FOR the notes of this case we are indebted to Dr. Blomfield, house-surgeon.

Mary Ann B—, aged forty-two, married, was admitted on March 16th, 1880, with a tumour in the breast. Her previous history was good; her mother was said to have cancer. The patient gave the following history of the mammary swelling:—About sixteen months before she first began to have pain in the right side of the neck; this was followed by pain in the right breast. She first noticed the swelling in the right breast as a small lump the size of a nut. It increased gradually, and with little pain. She thought she had lost flesh. She was, however, a healthy-looking woman. Examination of the right breast showed a hard, circular, somewhat nodulated, and fairly movable tumour, the size of a chicken's egg. There was no retraction of the nipple. The tumour occupied the posterior part of the right breast to the axillary side of the nipple. There was a suspicion of slight enlargement of a gland in the axilla.

The growth being regarded as malignant, Mr. Wilson removed the entire breasts by the usual operation. The naked eye appearance of the tumour after removal was characteristic. It consisted of a somewhat circular mass of jelly-like semi-transparent material of a greyish hue, surrounded by no very evident capsule, with delicate shreds of connective tissue between jelly-like masses.

Dr. Creighton, of Cambridge, kindly examined the tumour, and reported: "The sections show the most typical colloid condition, roundish spherical masses concentrically laminated; the whole field is made up of such round laminated bodies, and there is hardly a trace of any cellular formation."

The wound did well, healing rapidly, and the slight glandular enlargement in the axilla disappeared.

The patient was discharged cured on May 8th, 1880.

STAMFORD AND RUTLAND INFIRMARY.

LITHOTRITY, WITH RAPID EVACUATION (BIGELOW'S METHOD); TWO SITTINGS; CURE.

(Under the care of DR. NEWMAN.)

IN the early days of any novel procedure it is always well to bring under the notice of the profession cases which may yet throw some light on the value of the special treatment in question.

W. W.—, aged sixty-five, labourer in a maltkiln, was admitted April 20th, 1880. Since August, 1879, he had had every indication of stone in the bladder; blood had passed with the urine, thick matter was at times present, and he had very frequent calls to pass water with even considerable pain. If he sat very still in his chair for some time the pain was not so severe, and the need for micturition became less urgent.

On admission he was a stout, flabby-looking man, and declared that he had very good general health, as a rule, but had of late lost nearly a stone in weight from broken rest and continual pain. The urine showed sp. gr. 1025, normal acidity, cloud of mucus, no blood, no albumen, no sugar; crystalline deposit of uric acid in moderate quantity.

On April 21st Dr. Newman sounded him, and readily struck a calculus, lying rather to the right side. The next day, wishing to measure the calculus, it was caught, and measured with Thompson's scoop lithotrite. It was half-an-inch across; but when an attempt was made to shake the stone from the grip it was found that the blades had taken too firm hold of a soft stone, and the stone had therefore to be crushed before the instrument could be withdrawn. Nine grains of debris were removed in the jaws.

On April 24th ether was given, and profound anaesthesia kept up for twenty minutes. The bladder was partially filled with water, and three introductions of a screw fenestrated lithotrite for the first time, and three of the ordinary scoop lithotrite for twice more, were practised. After each crushing Bigelow's elastic exhauster, attached to a No. 16 slightly-beaked catheter, was employed.

Twenty grains of fragments were removed. The instruments were actually in the bladder for nine minutes and three-quarters. There was frequent micturition and some urethral smarting after the operation. Twenty-four hours after the sitting he was hot and cold for three hours, and temperature (normal before) was found to be 101°. This feverish attack soon, however, passed by, and his local suffering became much less. Thirteen grains of fragments were passed within the next few days.

A week after first dealing with the case, on May 1st, the same crushing and removal of fragments were put in practice. The man was under ether for forty-five minutes, and little over thirty minutes was given to the actual operation. Eighty-three grains of stone removed at the time. Twenty-one grains were subsequently passed with urine—in other words, one hundred and fifty-six grains of lithic acid were collected within twelve days. (A single fragment, weighing twenty-one grains, was removed at the time of second operation through the evacuating catheter.)

The man had no subsequent feverishness and no trouble. The urine was noted to be perfectly clear on the fourth day after the second sitting. No remaining fragment could be detected by very careful sounding, and on May 11th, seventeen days after the commencement of the surgical treatment, the patient went home quite well.

Remarks by Dr. NEWMAN.—Few words of comment are needed. The stone was thought probably to be not very large, and lithotry, on the older lines of working, would most likely have ended in perfect cure, but with much more of time, suffering, and greater risk. The operation proved to be more tedious than difficult, and there was no hitch in the working of the elastic evacuating bulb. I would only add that when, as in this case, there is prostatic enlarge-

ment, it seems very desirable to keep the catheter well home within the cavity of the bladder.

Medical Societies.

EPIDEMIOLOGICAL SOCIETY.

A SPECIAL meeting of the Society was held—President, Sir Joseph Fayrer—on June 15th, to discuss certain papers which had been read during the past session on the “Continued Fevers of India and Tropical Climates.” Three of these papers, one by Deputy-Surgeon Dr. J. Ewart, one by Surgeon-General Dr. C. A. Gordon, C.B., and one by Dr. W. G. Don, were printed and circulated amongst the members, together with others known to be interested in the subject, and they dealt specially with the questions whether the common continued fever of those countries was enteric fever, and if so, whether it was due, as in this country, to a specific poison associated with conditions of excremental filth.

After a few preliminary remarks by the President, the debate was opened by Surgeon-General MURRAY, who expressed an opinion that continued fever in tropical countries differed materially in its signs and type according as those attacked were natives or Europeans.—Sir WILLIAM SMART, K.C.B., referred to the marked mildness of the various forms of continued fever in the islands of Bermuda, and he gave the result of his experience in China, where, he alleged, enteric fever was recognised as a distinct disease in 1859; but as no history of its incidence upon the natives prior to that date could be ascertained, it was inferred that it had been generated amongst the British forces who at that time were exposed to local conditions of excremental poisoning.—Inspector-General LAWSON held, as the result of experience at Mediterranean stations and in Cape Colony, that simple climatorial causes did not lead to enteric fever, unless, indeed, as a predisposing cause in special localities where faecal causes also obtained.—Surgeon-Major WHITE referred especially to Assam, where fever of the enteric type had prevailed until conditions, which up to that date had led to the excremental fouling of water, were abolished, and then the disease subsided.—Dr. BUCHANAN could only profess to look at the subject of Indian fevers by the light of experience gained in the study of continued fevers in England. Referring to the papers specially under discussion, he pointed out that attempts seemed to be made to identify a disease now by means of some anatomical character, now by means of clinical symptoms, or thirdly, by an appeal to considerations of cause. The last means of identifying disease appeared to him questionable. In England we were content to know enteric fever by the total of its symptoms and pathological appearances, and to proceed from that standpoint to the investigation of cause. We had long known the clinical disease, and had not yet become fully acquainted with the circumstances of its production. Given a continued fever with more or less diarrhoea and spleen enlargement, with special characters of temperature curves, with successive crops of rose spots on the skin and with certain anatomical characters in the fatal cases, we have known it as enteric fever. In England, having come to know our disease, and not till then, we have gone on to learn lessons about its association with one and another external condition, and then by degrees we were learning of its causation. But the numerous and valuable results that inquiries about causation had heretofore yielded did not prevent our having, but rather led us to have, ever fresh doubts whether we know all the conditions for the appearance of the disease, and assuredly had taught us that we did not yet know the conditions for its production. Inquiry as to the way in which fever had made its appearance in a household—to say nothing of inquiry, in a stricter sense, as to “cause”—had been found to involve a process of living over again, as it were, the life of each patient before his attack, with differentiation of his life from that of other people. That process was difficult enough of accomplishment under the conditions of English society, but must needs be incomparably more difficult where a fever occurred in indi-

viduals of an alien race having traditions and caste-notions separating them by wide intervals from the people who were endeavouring to investigate the origin and spread of disease among them. The impression that Dr. Buchanan had received from a study of the three papers was that it was perfectly permissible to regard much of the described fever of India as being identical with European “enteric fever.” It was modified, no doubt, by circumstances of Indian life, yet did not appear to differ more from our own enteric fever than one case or one outbreak might differ from another case or another outbreak of this multiform disease when it was witnessed in Europe. It was not from any single one of these three papers that he had formed this opinion, but it was essentially from observation of what the three papers, taken together, appeared to him to agree upon.

Mr. NETTEN RADCLIFFE dealt in detail with many points specially referred to by Surgeon-General Gordon, who, though admitting that, so far as symptoms and pathology were concerned, a disease resembling enteric fever did prevail in India, yet denied that it was etiologically the same, and even threw doubts as to the views held regarding the etiology of the disease in England. Mr. Radcliffe pointed out that Dr. Gordon had implied that the continued fevers of India were but one single form of fever, whereas in his paper he at once proceeded to divide them into as many as twelve groups. Dr. Gordon had further quoted in support of his views as to the unity of “fever” an opinion of a distinguished author, which was penned as far back as 1843, since which date that author had, as was well known, not only changed his views, but had accepted the classification of the continued fevers enumerated by Stewart and Jenner. Dr. Gordon’s use of the term causation was most misleading, points being referred to as causes which in reality were nothing more than conditions, associated with the prevalence of disease. The study of climatology in connexion with disease was of the utmost importance, but the assertion that an infectious fever was of climatic origin, when even the local circumstances under which it existed were not recorded, was damaging to the cause of epidemiology; for, although it was obvious that climate governs every condition of life, health, disease, and death, yet that did not necessarily constitute it a cause of any special disease. Dr. Gordon’s materials were also misleading, and having been obtained as the result of the issue of circulars to a large body of medical officers spread over a vast area, they were almost necessarily untrustworthy. Anyone having experience of the difficulties associated even in this country in investigating causes of epidemics must know how little value is to be attached to data got together in such a manner. But even accepting the facts recorded in the returns issued, they, in some important respects, led to conclusions diametrically opposed to those embodied in Dr. Gordon’s paper. As to the 175 cases on which Dr. Gordon chiefly based his conclusions, that gentleman had submitted that *seven* only were real cases of enteric fever, the others being, as he argued, so-called “climatorial” fever. Of what value it was asked could seven cases, scattered over several years, and distributed in a wide territory, be in determining a question of this kind. But Mr. Radcliffe proposed to accept the diagnosis as given by the recorders, and was not prepared to admit a greater margin of error in diagnosis than would have occurred if a similar number of medical practitioners had been applied to by circular in England. What followed? Why, 25 per cent. of the total cases furnished no evidence whatever either in one way or another with reference to the question of etiology, and, deducting these cases, it was found that the greater proportion of the remainder (53·5 per cent.), according to the recorders, had occurred under conditions of “faecal effluvium from latrines,” or the patients had been exposed to chances of infection or to local conditions which are known to be chiefly associated with enteric fever. He was quite unable to reconcile these data with Dr. Gordon’s statement, that in not a single one of these cases was there any evidence of the existence of such “causes” of enteric fever as govern the prevalence of that disease in Europe.

Dr. W. DICKSON considered that in tropical climates the continued fevers were attended by many more complications than in Europe, and to this was due many of the differences of opinion which were held with regard to them.—The PRESIDENT, quoting from official statistics, drew attention to the fact that enteric fever was recognised as the principal fatal fever in many parts of India; but at the same time he expressed a conviction that there is a form of “fever” in tropical climates which, as regards its cause, is not identical with

the enteric form of this country.—Dr. GORDON, who quoted largely from official and other reports, with reference to the comments which had been made, explained the circumstances under which the inquiry on which his report was founded had been directed, and stated that he had necessarily been kept within the lines laid down by the Army Sanitary Commission. He maintained the opinion that in hot climates a fever resembling enteric fever in its symptoms prevailed, but that it was due to climatic influences and not to filth or other specific causes; he further stated that ulceration of Peyer's patches took place in connexion with a form of fever which was alone due to climatorial causes.—Dr. W. G. DON maintained similar views, asserting that local insanitary conditions occupied, in the production of continued fever, a less important influence than that of climate, and that enteric fever would still prevail in tropical climates if all those conditions were removed.—Dr. EWART, however, argued from his experience that enteric fever as it prevailed in India was not due to climate; he denied that so-called malaria had any influence in producing it, and as the result of lengthened experience he stated that he had never met with that disease except where it was dependent on the same causes as those with which its prevalence in England was associated.—Dr. A. P. STEWART was specially called upon to address the meeting. He had, however, at a previous meeting declared himself entirely opposed to the doctrine enunciated by Dr. Gordon, and had expressed the opinion that views such as those held by Dr. Gordon and Dr. Don reminded him of the state of medical opinion in this country some twenty-five years ago, before the pathology of enteric fever, as well as the difference existing between that disease and the other continued fevers, were understood, and he felt that after perusing the papers he had nothing to add to the statement he had then made.

CAMBRIDGE MEDICAL SOCIETY.

Menorrhagia in old age through emotional disturbance.—Diabetes from same cause.—Therapeutic uses of Hyoscyamine.—Secondary Pelvic Tumour.—Gummata in Brain, Liver, and Testicles.—Bovine Tuberculosis in Man.

At a meeting of the Society on the 4th June, Professor Paget, M.D., F.R.S., President, in the chair,—

The PRESIDENT related two cases in which a discharge of blood from the womb, which the patients spoke of as the menstrual discharge, had been brought on in advanced years through emotional disturbance. The influence of emotion is not often manifested in causing menorrhagia when years have elapsed since menstruation had naturally ceased. In the first case, a married woman aged sixty-five, a sanguineous uterine discharge had been continuing for three weeks before she presented herself; it had been brought on, she said, by the return of her son from abroad. In the absence of any other assignable cause, there could be no doubt that this emotion attending her son's return was really the exciting cause. He was her only surviving child, he was in prosperous circumstances, and his return had been eagerly expected. Fifteen years had elapsed since her last menstruation. The discharge soon ceased under treatment with iron.—The second patient, aged sixty, lost her husband, and soon after her daughter, who died suddenly in childhood. Her mental distress was very great; her mind became disordered; simultaneously menorrhagia came on, and she had also a delusion that there was a baby in the bed. The catamenia had ceased naturally many years before.—As regards the first case, some explanation of the unusual occurrence may be found in the previous history of the patient. Though she had been quite well for years before her son's return, she had formerly been epileptic, and had had an epileptic son. This nervous constitution was probably a predisposing cause. The history of her epilepsy gives us further hints of concurrent causes. The fits began when she was forty-five years old, when her menstruation was beginning to be less regular than it had been. For two years previously she had been subject to attacks of faintness with vertigo. These syncopal or minor

epileptic attacks had come on after the death of her epileptic son in London after a few days' illness with enteric fever. The fits were very severe, and kept recurring for some years. In one of them, in which she fell backwards, striking her head violently against the floor, there was, simultaneously with the fit, a slight "show" of the catamenia, which had previously not appeared for three years. Before the fit she had a painful uneasiness in the right iliac region, and a kind of aura proceeding from this point, and occasioning a feeling of alarm. The same phenomena followed another epileptic fit two years later. The circumstances under which she became epileptic (the death of her son) indicated maternal feelings unusually strong. The time at which she became epileptic (when the catamenia were beginning to be less regular) indicated some connexion between the functions of the organs of generation and the state of nervous system which manifested itself in epilepsy. The like is indicated more definitely by the slight menstrual discharge accompanying one of her fits, and the abnormal sensations in the region of the right ovary on this and another occasion, so that we are not wholly at a loss to account for the unusual occurrence of menstrual flow being excited by emotion in this woman at the age of sixty-five.

The PRESIDENT related also in connexion with the above cases two cases of a disease that much more commonly follows emotional disturbance—viz., diabetes. In the one case the patient was a woman, aged forty-four, the wife of a farmer; the diabetes came on while she was, and had been for some weeks, anxiously nursing her only son in a dangerous illness. The quantity of urine was large, the sp. gr. 1039, and contained a large quantity of sugar. In the other case the patient was a woman whose husband died in good circumstances, leaving her his executrix. Grief for the loss of her husband, combined with the worry of managing his affairs, brought on diabetes, of which she died six months after her husband.

Dr. BACON gave an account of the preparation known as "Hyoscyamine," and of its therapeutic uses. There are two preparations sold under that name, both made in Germany. One is Merk's "Extract of Hyoscyamine," and the other is a crystallised preparation in the form of a whitish powder and of variable strength. His experience has been limited to Merk's extract. It is most conveniently administered dissolved in alcohol, one grain to the drachm. The solution mixes badly with water, a resin forming on the sides of the bottle. The preparation deteriorates by keeping; if it become greenish in colour, it is a sign that its strength is lessened and that its action may not be relied on. It is called by the manufacturer the "extractive amorphous alkaloid" of hyoscyamus, and is very costly. With this preparation he has found the effects much more potent, and more certain and reliable than those of ordinary henbane. Its action is that of a powerful sedative and hypnotic, and it is the only sedative and hypnotic in his experience whose action may be certainly relied on. Doses as large as two or three grains (of Merk's extract) have been administered; he had himself never given more than a grain and a quarter, and his usual prescription was three-quarters or one-half a grain. If three-quarters of a grain be given to a maniacal patient in a state of excitement, he will be reduced in half an hour to absolute helplessness, and will be probably asleep or comatose. The lips become red, the face dusky, and the saliva flows from the mouth; the pulse is quickened and there is dilatation of the pupil, lasting for twenty-four hours; the other symptoms pass off in about twelve hours. Vomiting had occurred in two or three of his cases. The drug is especially valuable in treating the maniacal condition (chronic or acute). It had been used in delirium tremens, and its power of inducing quietude and sleep to a certainty indicated its value in that condition. In some cases the beneficial results flowing indirectly from its use had been so great that he had been able, after a time, to disperse with the drug. Two cases had occurred in his practice which would serve to show where caution was necessary. In the one (a private patient) only half the dose prescribed was given, and the patient, instead of being sent to sleep, was put into a state of excitement and delirium. In the other an accident, fortunately not fatal, followed the administration of the drug. The patient had become profoundly insensible, and had vomited, and part of the vomit (consisting mostly of partly digested bread) appeared to have got into the air-passages, giving rise to corresponding symptoms.—Dr. LATHAM could not join in Dr. Bacon's opinion that henbane in its usual pharmacopoeial form is quite un-

reliable. The potency of the leaves no doubt depended on the time of gathering them, and on the care with which they were dried.—The PRESIDENT referred to the experience of a neighbouring practitioner, who had the henbane grown near him, and the extract made by a trustworthy person, and who always found the drug so obtained to be potent and reliable in its action. He had the other day prescribed henbane in a bad case of epilepsy, which no other drug had benefited, and the result was that the patient had been altogether free from fits for three weeks, and when they recurred they were less frequent than before.

Dr. EASBY showed a large tumour weighing upwards of four pounds, which seemed to have grown from the left ilium, in a woman fifty-two, who had the left breast amputated for cancer two years before.

Dr. BRADBURY gave an account of a case in which gummata were found after death in the brain, liver, and testicles. The patient was a man aged thirty. The first symptoms, eight months before admission, were pain in left arm and shoulder, and loss of power in left arm and hand. Under treatment the symptoms disappeared in a fortnight. Three months after he had pain in the supra- and infra-orbital regions of the right side, and gradually lost sensation over the whole of the right side of the face, the pain meanwhile increasing in severity. A month before he came in, he suddenly began to squint with the right eye, and experienced "flashings" before the eyes, which came on sometimes two or three times a day. About the same time both testicles began to swell, without pain, and continued to increase in size. He observed also loss of taste on the right side of the tongue. On admission, he had most of the above symptoms. The squinting referred to was marked internal strabismus; there was also a degree of ptosis. The tongue deviated a little to the left, and the levator muscles of the angle of the mouth on the right side were in an almost tonic condition of spasm. A few days after admission the conjunctival vessels of the right eye were congested (January 28th), and on February 9th there was a small spot of commencing ulceration on the cornea. The ulceration on the cornea continued to spread for some days, and then began to heal. On March 9th the ulcer was healed, a patch of opacity remaining. Congestion of the conjunctival vessels reappeared after a time; and a few days before his death (on May 24th) the opaque area of the cornea sloughed. Meanwhile the pain in the face, and the spasm of facial muscles, varied in degree from day to day, and there was some left facial paralysis. He began to pass the evacuations in bed, and there ensued marked loss of strength, general tremors of the body, constant twitching of the lower lip, speech almost unintelligible. Before death the left hand was completely paralysed. He was treated with calomel and iodide of potassium. Post-mortem: The tunica vaginalis on both sides was distended with fluid; body of testes considerably enlarged; on section two large nodules of yellowish-brown substance (gummatous) in each testis, and an appearance of parallel whitish streaks (interstitial orchitis). The liver showed extensive depressions and puckering of both surfaces, the acini greatly enlarged in certain places, and gummatous nodules (up to the size of a bean) chiefly in the thin left lobe. Within the cranium, attached to the dura mater and making a depression in the surface of the brain about the centre of the right ascending parietal convolution, was a firm round and flat gummatous body, about the size of a horse-bean. On the surface of the pons Varolii on the right side, involving the roots of the fifth and sixth nerves, and just overlapping the origin of the seventh, was another flattened gummatous mass. Another gumma was found on the upper surface of the cerebellum, in the middle line anteriorly, situated in the membranes, and not involving the substance. On section of the brain, a large mass of semi-transparent gelatinous substance, with an opaque yellow centre, about the size of a walnut, was found in the occipital lobe of the left hemisphere near the surface. The right corpus striatum and optic thalamus were softened, and broke down readily under a stream of water.

Dr. CREIGHTON gave an account of observations, microscopic and other, on eight cases of a peculiar variety of tuberculosis which he believed to be Bovine Tuberculosis communicated to man. (See THE LANCET, June 19th, 1880.)

At a Convocation held at the University of Durham on the 22nd June, Dr. Pyle of Sunderland was elected a member of Senate of the University.

Reviews and Notices of Books.

Army Medical Department Report for the Year 1878.
Vol. XX. Parliamentary Blue-book, pp. 332.

[SECOND NOTICE.]

WE have so recently noticed the health of the Army in India in 1878, in our review of the Report of the Sanitary Commissioner,¹ that it seems unnecessary to enter again upon the details. We would merely refer to an interesting table furnished by the Principal Medical Officer in Bombay, showing the comparative mortality and invaliding of officers, non-commissioned officers, and privates in each of the ten years from 1869 to 1878 inclusive. The average of the whole period is as follows:—

Per 1000 of mean strength.	Officers.	Non-com.	Officers.	Privates.
Deaths	11.35	21.12	14.05	
Invalids	90.35	41.66	40.18	

The most striking features in this comparison are, the high rate of mortality of the non-commissioned officers as compared with the privates, and the proportion invalided of the officers compared with both. It may be a question how much the lower rate of mortality of the officers depends upon this circumstance. Not only was the invaliding of soldiers from India in 1878 above the average, as shown in the Report previously noticed, but the number discharged at Netley was one-third higher than in the preceding ten years. There was a very large increase in the number discharged under the head of "debility," probably the result of malarious diseases.

The extracts from the sanitary reports of stations at home and abroad afford good evidence of the watchful care exercised by the medical officers. They also show the steady, though, we regret to add, too slow progress of improvement in the sanitary conditions of the quarters occupied by the troops. They are, however, of such a nature as to preclude our making any summary of them, and we must content ourselves with referring our readers to the Report itself. We may, nevertheless, notice two circumstances. The first is the appearance at Mauritius in the end of the year of a new disease in the district of Moka, and which subsequently spread to other localities. It has since been diagnosed as "beri-beri." It has been confined entirely to the Indian population, and chiefly to those whose caste prohibits the use of meat. It is stated to have been found amenable to treatment, particularly in cases which came early under observation. The other point we would note is that at Hong-Kong, during the period of rifle practice, as malarious fevers were very prevalent at Kowloon, the men, instead of being quartered there, were taken over and brought back daily in steam launches, and with the most satisfactory results.

The appendix to the volume begins with the report on the progress of hygiene, by Professor De Chaumont, under the usual headings of Legislation; Work of Societies, &c.; Literature; and Special Points of Hygiene. Under the last is given a tabular statement of the results of 68 analyses of drinking water sent to Netley from various stations of troops at home and abroad. Of the 68 waters reported upon, 27 were fit for use, 22 usable or required filtration, and 19 unfit. These results would have been more valuable had the combustion method been employed and the nitrates determined. As it is, we are inclined to doubt the correctness of the judgments pronounced upon some of the waters. The experiments on filtration previously recorded have been continued. A new filtering agent, called "carferral" (carbon, ferrum, alumina), has been tried, with great success so far. It is even placed before spongy iron, which, however, is shown to be very valuable. Further experiments

¹ THE LANCET, May 29th, p. 854.

are, however, necessary, as the lasting power of the filter cannot be said to have been ascertained.

Another interesting but, we think, equally incomplete research upon Disinfectants is contributed by Surgeon-Major J. Lane Notter. The valuation of disinfectants is confessedly a most difficult matter, and the results hitherto obtained are singularly contradictory. The method adopted in the present experiments was simple enough. Beef infusion, swarming with bacteria, was treated with five, ten, and fifteen cubic centimetres of 10 per cent. solutions of fifteen different disinfectants, and the liquid examined with the microscope, immediately or after twenty-four hours. Under these conditions chloride of lime was found most efficacious, and the green terebene powder next. Tests of this kind have, however, only a limited value, as there is no proof that the real, or at any rate the only, work of a disinfectant is to kill bacteria. There are moreover certain apparent discrepancies in the results which puzzle us. Thus Burnett's fluid (chloride of zinc) takes a very respectable place, as it has done in so many previous experiments; whereas the new disinfectant, sporoktin, is represented as worthless. Now, sporoktin is merely an alcoholic solution of chloride of zinc saturated with sulphurous acid; and we fail to see how the presence of sulphurous acid can destroy the efficacy of chloride of zinc. It is curious that sulphurous acid should not have been included in the experiments. Whether it will kill bacteria or not, it will be difficult to convince medical men who know the history of the cattle-plague epidemic that it is useless as a disinfectant.

Dr. De Chaumont gives a very brief notice of an epidemic of enteric fever in the Royal Marine Artillery at Eastney Barracks, Southsea, upon which he and Professor Macdonald, R.N., were called to report. Here is his description of the condition of the barracks:—"We found that the drains were unventilated, that the overflow, waste, and sink pipes passed direct to the drains, and that the closets were untrapped except by means of the antiquated D trap. The sewage passed into the sea, but the tide washed up the sewer at high tide to some distance, blocking back the sewage and favouring the production of sewer gases. The blocks of building most affected were the officers' quarters, or those which would be most directly or immediately affected by this action of the sea water." And this state of things, be it observed, in a barrack first occupied in 1864! Who was responsible for this malconstruction, and how did it happen that Sir A. Armstrong never discovered it, for as a marine barrack it must have been under his department?

In accordance with the custom of preceding years, the late lamented Surgeon-Major Porter drew up his tabular summary of the capital operations performed at Netley during the year 1878, the last in which he held the appointment of Assistant Professor of Surgery. Notes and lithographic illustrations are given of some of the more interesting cases, and the results of treatment in thirty-seven cases of permanent stricture of the urethra, all of them invaded from foreign stations.

We again note with regret the absence of any communication from the professors of Medicine and Pathology. It surely is not too much to expect that they should turn to good account for the profession generally, as well as for the Army Medical Department, the splendid field of observation they occupy at Netley.

South Africa has furnished the subjects for four papers in the appendix. The first is a very interesting medical history of the Galeaka-Gaika War in 1877-8—that with the Kaffirs which preceded the Zulu War—by Surgeon-General Woolfreyes, the principal medical officer at the Cape; the second is a tabular statement, by Surgeon-Major Hickson, of the wounds and injuries received in action during that war; the third, a short, but spirited account of the defence

of Rorke's Drift, by Surgeon-Major Reynolds; and the fourth, a very brief report on the climate and diseases of Natal and Zululand, by Surgeon-Major N. Alcock. The details connected with the health of the troops in the Zulu War will, of course, be given in the next volume. There are two other papers which we shall just mention—"Remarks on Enteric Fever in India," by Surgeon-General Ker Innes, C.B.; and "Cholera, its Natural Laws and Progress," by Surgeon-Major Marston. We noticed these papers so very fully when they first reached this country that it is unnecessary to revert to them.² As we have in the course of these remarks pointed out some of the deficiencies which have struck us in the report, we shall only in conclusion express our regret at the continued absence of the abstracts of diseases, &c., in the different military commands, which in the earlier volumes furnished so much valuable information, and enabled us to check the statements made and opinions given in the reports. It is due to the Medical Department to say that the blame of the shortcoming does not rest with it, but is a result of the miserable ignorance or petty economy of the authorities at Her Majesty's Stationery Office, and at the Treasury.

The following interesting table shows at a glance the sanitary condition of the British Army during the year 1878:—

	Average strength.	Ratio per 1000.			
		1878.		Previous 10 years.	
		Admitted to hospital.	Deaths.	Admitted to hospital.	Deaths.
United Kingdom ..	101,129	812.4	6.5	—	—
Mediterranean:					
Gibraltar ..	4702	671.4	6.6	657.4	6.7
Malta ..	6201	892.9	12.3	810.5	10.6
Cyprus ..	894	4397.1	40.3	—	—
Canada ..	1725	586.7	5.8	625.5	8.7
Bermuda ..	2017	656.9	5.9	676.1	12.2
West Indies ..	1119	1004.4	13.4	895.2	11.0
Cape and St. Helena	5629	926.1	19.7	962.6	10.2
Mauritius ..	416	2569.7	31.2	1740.6	18.2
Ceylon ..	1015	990.1	15.8	1022.3	16.5
China and Straits ..	1843	1104.7	13.0	1239.7	15.0
India:					
Bengal ..	35,347	1599.6	22.2	1444.6	21.6
Madras ..	10,880	1336.1	23.2	1220.2	19.8
Bombay ..	9882	1805.3	21.6	1386.8	16.4
On board ship ..	1314	525.9	3.0	495.3	5.0

Atlas of Histology. By E. KLEIN and E. NOBLE SMITH. Part XI. Smith, Elder, & Co. 1880.

THIS part contains the Urinary Organs, the Male Genital Organs, and the Female Genital Organs. The structural arrangement of the urinary tubules is given with great care, no less than sixteen separate segments being distinguished between the Malpighian capsule and the mouth by which the tubule opens upon the papilla. There are in succession the capsule, its neck; the proximal convoluted tubule; the spiral tubule of Schachowa; the descending limb of Henle's loop; the loop proper; the thick part of the ascending limb; the spiral part of the ascending limb; the narrow ascending limb in the medullary ray; the irregular tubuli; the distal convoluted tube, or Schweigger's intercalated tubule; the curved collecting tubule; the straight collecting tubule of the medullary ray; the collecting tube of the boundary layer; the large collecting tube of the papillary part; and lastly, the duct. Each of these segments is separately described. Dr. Klein remarks, that with the exception of the descending limb of Henle's loop and the loop itself, a delicate membrane exists which lines the inner surface of the epithelium; that is, it lies between the epithelial cells and the lumen. Eleven figures illustrate the structure of the kidney.

In speaking of the testes the authors follow the development of the seminal cells with much detail. They describe

² See THE LANCET, October 4th, 1879, and February 7th, 1880.

the fully developed and ripe spermatozoon as consisting of a homogeneous, well-defined discoid oval head, to which succeeds the middle piece of Schweigger-Seidel, varying in length in different animals. This portion is homogeneous and rod-shaped, and attached to it is the filament or tail, thinner and much longer than the middle piece, and ending in a pointed extremity. In man the filament is continued over the middle piece as a fine, wavy, or spiral thread. There is also a sheath which covers the hind part of the head, and is continued over the middle piece. The head of the ripe spermatozoon is the modified nucleus of the spermatoblast; the filament or tail is derived from the granular body of the original cell. The middle piece of Schweigger-Seidel is an outgrowth of the nucleus of the spermatoblast—that is, of the head of the spermatozoon; and the clear tube of the developing spermatozoon embracing the hind part of the nucleus is the sheath which in the triton is observable on the middle piece of the fully-formed spermatozoon. In considering the development of the Graafian follicles (we hope the authors will excuse us for inserting the additional *a*, which is surely the correct orthography), the account given by Balfour is followed; and here, as elsewhere, the drawings are most excellent and instructive, and are, to a great extent, original.

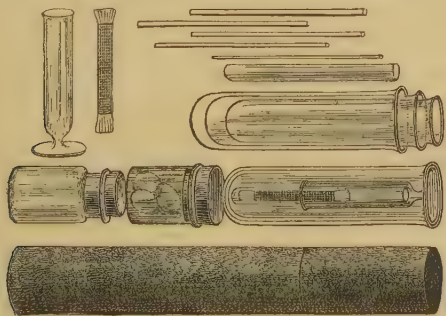
New Inventions.

MEDICAL AND SURGICAL BED-DRESS.

MR. GOOD, of 50, Praed-street, Paddington, has submitted to us a sample of a bed-dress suggested by Mr. H. Cripps-Lawrence. The dress, which can be made of any material, is buttoned up all down the front and back, and also from the neck along each sleeve to the wrist. It is obvious that such a dress can be applied with the greatest ease to patients unable to bear the fatigue or pain of changing the ordinary dress, and it is so arranged that any part of the body can be exposed for examination or treatment without disturbing the whole dress. It will certainly be very useful in many cases of severe illness.

DR. RADCLIFFE CROCKER'S URINE-CASE.

MESSRS. MAYER & MELTZER, of Great Portland-street, have made for Dr. Radcliffe Crocker an extremely compact and useful pocket-case for examination of urine at the bedside. The case is just over six inches in length, and is easily carried in the breast pocket. At the bottom of it are



two small bottles, containing respectively methylated spirit and three of Cooper's copper pills for testing for sugar. Above these are a nest of three test-tubes, between which are the two test-papers, which keep the tubes from shaking. Inside the inner tube is a small glass tube on a foot, containing a wick and three capillary tubes of nitric acid. Spirit is poured into the little glass, one end of the wick dropped in, and a small but sufficient spirit-lamp is constructed. With this case the practitioner can easily and rapidly exa-

mine urine for sugar and albumen. The case requires to be a little stronger than that forwarded to us, or it will not stand continual use. In addition to its extreme simplicity and compactness, this case has the advantage of being cheap.

COPPER TEST-PELLETS FOR SUGAR.

To the Editor of THE LANCET.

SIR,—May I ask you to insert a few words with reference to the copper test-pellets for sugar, which, at my suggestion, have been prepared by Mr. Cooper, of 26, Oxford-street. The object of these pellets was to supply a copper test for the examination of urine of a more convenient and staple nature than the copper solution. When kept under suitable conditions they fulfil all that can be desired. I have received information from some who have procured them that they have become moist, and thereby spoil on keeping. Hitherto they have been sent out in corked bottles rendered air-tight with sealing wax. As long as the bottle has remained unopened they have been all right, but when the sealing wax has been broken the cork has allowed the penetration of moisture, which, being absorbed by the caustic potash contained in the pellet, has led to its becoming moist. All that is wanted to prevent this occurrence is that they should be kept for use in a good stoppered bottle; and Mr. Cooper, in consequence of the representation I have made to him, has liberally undertaken to supply them in future in stoppered, instead of corked bottles. Those who now have them in corked bottles should transfer them as soon as opened to a bottle provided with a well-fitting glass stopper. By this simple measure all objection is at once removed.

I am, Sir, your obedient servant,
Grosvenor-street, July 5th, 1880.

F. W. PAVY.

CHIAN TURPENTINE IN CANCER.

To the Editor of THE LANCET.

SIR,—As I have a patient with scirrhus cancer of the uterus who has taken almost without intermission every four hours the pills of Chian turpentine à la Professor Clay, will you allow me to state the result of the remedy in my hands.

The patient commenced to take the pills on March 29th last, when there were all the usual local signs of advanced cancer, minus a fetid discharge per vaginam. A strong hard mass extending over the whole uterine structure, but more especially infiltrating the posterior wall, and projecting thence almost through the os. Paroxysms of pain coming on so severe that large doses of morphia were necessary to relieve them. The appetite not only gone, but the stomach refused to take almost any food. The cancerous cachexia very evident, and the patient's spirits very much depressed, and floodings much and often. Now, on examination per vaginam there is still a considerable tumour to be felt, but it is comparatively very soft and yielding to the touch, and not by any means so extensive; there is little or no hæmorrhage; pain by no means so severe as formerly, and almost entirely confined to the thigh and leg of the left side. The appetite is excellent, and the cancerous colour of the skin and complexion almost gone. The patient expresses herself as feeling very much better in every way, and is in the habit of attending to household duties and taking out-door exercise as when in her wonted state of health.

The disease in this case was first discovered on Nov. 26th last, when the tumour was situated on the posterior wall of the uterus, and only then of about the size of a walnut. There has hitherto been no disturbance of the functions of rectum or bladder, except a tendency to constipation. The disease made rapid progress until the turpentine pills were taken, and since the first day of her taking them, March 29th, so far from progressing the mischief appears to have stopped.

I may add that the glands of the neck are enlarged, and have been during the last four or five months. When painful, extract of belladonna locally applied has always relieved the pain.—I am, Sir, yours, &c.,

J. E. KENYON, L.R.C.P. Lond., M.R.C.S. Eng.

Formerly House-Surgeon to the Hospital for Women,
Soho-square, London.

Bradford, Yorks, June 26th, 1880.

THE LANCET.

LONDON: SATURDAY, JULY 10, 1880.

THE Judges adhere pertinaciously to a view of the practical question of responsibility for crime which leaves much to be desired. Mr. Justice HAWKINS, in his summing up in the case of JAMES SWEETLAND, follows the lines laid down in a well-known judgment, and asserts (we quote from *The Times* of Tuesday, the 6th inst.) that, "to establish a defence on the ground of insanity, it must be clearly proved that at the time he committed the act the accused was labouring under such a deficiency of reason from disease of the mind as not to know the nature or quality of the act he was committing, or, if he did know what he was doing, that he was not aware that the act was wrong." Further on in the same report we read: "It was impossible to define what insanity was, but as far as the criminal law went, it must be that state of mind which made a person unconscious of what he was doing, and that it was a wrong act he was committing, even though he knew what that act was." Again: "It must be that insanity which prevented a man from knowing the nature of an act, or that it was wrong." Mr. Justice HAWKINS is too sound a lawyer and too wise a judge to have given expression to an opinion at variance with the principles of law as they are still understood by the Bench. There is obviously a strange lack of breadth in the legal view of insanity as a disease; but is it so narrow as to exclude all cases of delusion in which the subject acts under a supposed self-consciousness of evil influence? The man who thinks the devil or some fiend instigates or drives him to the commission of an offence may know what it is he does, and be painfully aware that it is both wrong in itself and contrary to law, but nevertheless do it, and do it insanely in such a way that common sense must excuse, and the law can scarcely condemn, him. It is needless to cite instances of this class; the books are full of them, and even *one* would suffice to upset the postulate assumed by Mr. Justice HAWKINS.

The case of SWEETLAND is, as a whole, one of considerable difficulty. Mr. MONTAGU WILLIAMS did not put the popular argument too strongly when he said that if "insanity" were to be accepted as an excuse for crime committed "in a state of carelessness and recklessness" induced by the habit of drinking, "no person's life would be safe for a moment." It is a most regrettable circumstance that this question of responsibility is left to be raised and disputed as a ground of defence. It would be incomparably better if the plea of insanity were disallowed, and the question of *responsibility* made the subject of special inquiry after the jury had given its verdict, and before the judge pronounced sentence. Irresponsibility should never be allowed to form a question before the jury or the Court *during* a trial. It is solely a question for the Crown, and might well be determined after a prisoner was delivered over to the judge, as the representative of the Sovereign, for punishment. We should then get rid of two evils at one

sweep: 1. The importation of a foreign element into the process of weighing evidence on the question of *fact*, with which alone any lay jury can be competent to deal; and, 2, the cross play of assertion and argument, which discredits truth and science, in the conflicting interests of the opposing parties. Nothing is more undesirable on grounds of public prudence than to leave questions involving great issues to an incompetent tribunal. The balancing of technical evidence cannot possibly be a task to be entrusted to any lay judge or jury. As well set a man ignorant of the law to determine between the merits of two elaborate legal arguments, as expect a layman to decide which of two medical "opinions," the one for and the other against an accused person, is that which ought to be adopted. What would any reasonable man think of the proposal that the Lord Chancellor should be a person ignorant of the law? Yet such a proposal would be precisely in accord with the practice which sets a judge and jury, both ignorant of medical-psychology, to decide between the conflicting testimony given by medical men, called by the Crown and for the accused respectively, in a case like that we are considering. Of course neither judge nor jury can know anything about the matter in dispute, and the only indication to help them is the *status* of the opposed witnesses, which must sometimes prove an untrustworthy guide.

In the case of SWEETLAND there would seem to have been some evidence of hereditary disease, and certain peculiarities in his conduct which *may* have been symptoms of insanity, but there is really nothing in the evidence to shape the judgment of an alienist. The materials for a decision on the question of responsibility are wanting. The fact that shot was deliberately purchased, apparently with a view to the commission of the crime, counts for nothing. The most pronounced lunatics often show the greatest cunning and premeditation in the perpetration of offences. Nor is it important to either side of the case that the accused showed consciousness of what he had done immediately after the crime, and observed reticence subsequently. Those who have had much experience among lunatics will not need to be reminded of the difficulty which often besets the task of making out the formal proof of their insanity. The worst and more dangerous cases are often, if not generally, the most obscure. The diagnosis of insanity is especially a matter of personal skill. Dr. MAUDSLEY took up the only tenable position when in a recent civil case he stated his opinion as an expert, and, relying on his reputation, declined to bandy words with the unskilled cross-examiner who sought to elicit his "reasons," and discover the processes by which he arrived at his conclusions. It would be well if medical witnesses generally were as wise in their bearing. For example, in the case of SWEETLAND we would rather accept Dr. BUCKNILL's opinion on the basis of his skill as a diagnostician than entertain his hypotheses as a psychologist; and that opinion is that the man was mad when he committed the crime of which he has been convicted, and that even now he has the delusion that the deceased watched him for the purpose of doing him an injury.

The only point on which we are sufficiently well informed to adventure an opinion as to this case, and that a very strong one, is that the Crown cannot in common justice proceed to execute the sentence of death without a

proper medical inquiry. Public opinion will not be satisfied with the carrying out of the sentence until the question of *responsibility* has been determined. We cannot suppose the judge or Home Secretary will be inclined to leave the matter in the present state of incertitude. It is, therefore, only necessary to urge the expediency of prompt action. Respect for the administration and for the law is weakened when there is unnecessary delay in these cases. An inquiry *must* be instituted. It is a clumsy and costly expedient, but absolutely indispensable under the circumstances. Nothing can be gained, and something may be lost, by delay. A writer on the subject of "Impulse and Responsibility" has said: "The justification of a plea of insanity must, I think, take the form of a demonstration that the impulse alleged to have been morbid exhibits the characteristics of disease, or that it occurred in the course of a paroxysm of the malady." This pretty well covers the area and marks the limits within which the search for evidence should now be prosecuted. Every day the inquiry is delayed, the diagnosis, from the medico-legal standpoint, becomes increasingly difficult, and new sources of error are incorporated with the case; for example, the mental effects of remorse, hope, and despair, with the ever-impending, though disguised, dread of steadily approaching death. It is not politic in the interests of pure justice, with which society is chiefly concerned, to delay an examination of this character until influences which may either crush or *recover* the mind have established their sway. It seems to be forgotten that a man who was mad when he committed a crime, and, therefore, ought to be absolved, may be cured by the mental effects of his trial and condemnation!

THE annual report of St. George's Hospital and of ATKINSON MORLEY'S Convalescent Hospital, gives some very interesting data concerning the use of stimulants other than beer in St. George's and other hospitals, and include a singularly suggestive report of the "previous habits" of some of the patients, in respect of stimulants, the careful work of Dr. ISAMBARD OWEN, the Medical Registrar of the hospital for 1877-8. The London hospitals have generally acted on the view that beer was a necessary part of ordinary diet. Until 1879 that was the practice at St. George's. In that year we are glad to say, with the concurrence of the medical staff, a rule was made that malt liquor was not to be furnished except by order of the medical attendant. Ever since this rule the quantity consumed has not been much diminished. It is very desirable that the members of the medical staff should fully realise the importance of this question. In other institutions the reduction of the quantity of stimulants or their entire withdrawal would seem to have done nothing but good, and it is probable that careful experiments in this direction might be the saving of many a hospital patient morally and physically.

A committee was lately formed at St. George's to ascertain the comparative use of alcohol in twelve large London hospitals. About a fourth of the patients it is found in all the hospitals are under daily treatment with stimulants other than malt liquor, which would seem to be a matter almost of course. The proportion of those receiving wine and stimulants is almost the same at St. George's. The variation in

the quantity of wine and spirit per patient in the different hospitals is not satisfactory, and implies a want of principle or uniformity. Thus, in twelve London hospitals the quantity of wine annually consumed varied from 6.145 ounces to 45.248 ounces per patient; spirits from 7.098 ounces to 32.980 ounces per patient; the equivalent of alcohol in wine and spirits varied from 4.537 ounces to 21.117 ounces. The annual average of the equivalent of alcohol consumed per patient is less than in St. George's in seven hospitals, and in four it is higher. We now come to the record of "previous habits," from which it would appear that there is too much homœopathy in the use of much of the alcohol in hospitals to be consistent with sound medical practice.

"Certain patients are reported to have been accustomed, previous to admission, to a daily consumption of three or four pints of beer and two glasses of whisky (age fifty-three); four or five pints of beer, with frequent excesses (age fifty-nine); ten pints of beer and ten glasses of whisky (age twenty-three); hard drinker, chiefly of rum (age thirty); indulged in great excesses, often drinking two bottles of brandy a day (age forty-three); eight pints of beer daily (age forty-two); four pints of beer, with excesses (age thirty-eight); eight pints of beer daily (age forty-two); five pints of beer, with excesses (age thirty-eight); three glasses of whisky (age thirty-four); one pint of beer and six glasses of whisky, with excesses (age forty-five); eight pints of beer, with two pints of gin or whisky (age forty-three); one or two pints of beer, with ten glasses of spirits (age thirty-six); up to ten or twelve pints of beer, and four glasses of whisky (age twenty-two); twelve pints of beer and five glasses of gin, with excesses (age forty-one); from eight to ten pints of beer, and sometimes a pint of gin (age thirty-nine); from sixteen to twenty pints of beer and one glass of spirits (age fifty-four); described himself as a hard drinker of wines and spirits (age twenty-two); twelve pints of beer and eight glasses of spirits (age thirty-eight); ten or twelve pints of beer, and from a half to one pint of gin (age fifty-five); one pint of beer, with three-quarters of a pint of gin daily, with frequent excesses (age forty-five); one to two pints of beer and one pint of sherry (age fifty-three); one bottle of claret (age thirty-nine); one gallon of beer frequently (age thirty-three); beer very freely (age thirty-four); four pints of beer and much spirits (age thirty-nine); from three to four pints of beer, and from one to twelve glasses of rum (age fifty-four); seven pints of beer and seven glasses of spirits (age forty-one); drunk three times a week (age thirty-six); a confirmed drunkard (age thirty-three); immense quantities of whisky (age forty-five); twelve to fourteen pints of beer, and a variable amount of rum (age thirty-one); ten pints of beer and a pint and a half of rum (age forty-five); the largest consumer of beer—*never exceeded* twenty-six pints a day (age thirty-five); the largest consumer of spirits—took twenty to thirty glasses of gin daily (age thirty). Some of these patients are said to be 'gouty.' Only one total abstainer can be discovered."

The record is a striking one in its revelations. Not the least interesting part of it is the ages of the patients. The absence of high ages is noticeable. When we are asking the public to support the hospitals, as we very seriously do, it is only right to urge that hospitals shall make it clear to such patients as come to them suffering from one or other of the various forms of alcoholism that their diseases are largely self-induced. Patients who would resent a hint of that kind from any other quarter will often take it from a physician.

It is a matter, too, for serious consideration whether the large amount of money spent by hospitals on beer and

other stimulants, besides conveying wrong teaching to patients, might not be spent to more advantage in procuring other forms of food. The public, if asked to be less stinted in its gifts to hospitals, and indeed to give generously, has a fair right to ask that hospital money shall be administered wisely.

WE did rightly in not expressing too confident an opinion on the probable length of the session of the Council. Judging from the proportions of the first day's programme and the resurrection of the subject of preliminary education, it is quite possible that the Council may sit for a week, though to common and outside observers there never has been a season in which it would have seemed more proper for the Council either to forego its meeting or to resolutely confine itself to formal business and a two days' session. Nothing could be more quiet or unexciting than the opening of the address of the President, the only mischievous portion of it being that in which he informs his colleagues that for one session at least they may sit in peace without fear of distraction at the hands of either Government or medical reformers. Dr. STORRAR at least seems to have taken this seriously, and to have set himself to find out a subject admitting of endless debate and of a certain amount of harmless agreement amongst the members of the Council. Whenever the Council has nothing very definite to do, the subject of the Preliminary Examination of medical students is sure to turn up. Do all the bodies insist on a certificate of having passed such an examination prior to the commencement of medical education? What subjects should be included? Who should conduct the examination? Should medical examining bodies examine also in Arts, or should the examination in Arts be left entirely to the national educational bodies? Should Greek be included? Should it be compulsory or optional? How shall the Council define what it requires of students in the way of knowledge of elementary mechanics, of solids and fluids, meaning thereby mechanics, hydrostatics, pneumatics, and hydraulics? These are questions which the Council has debated since its creation. The historical sketch by Dr. STORRAR of the vicissitudes of such questions in the Council sounded more like the adverse evidence before the Select Committee of Parliament than the opening of a grave and practical discussion. There was something really ridiculous in the way he showed how the subject was constantly turning up, and never advancing to a satisfactory settlement, and we must confess there was something almost audacious, if such a quality could attach to so modest a man as Dr. STORRAR, in gravely taking up an afternoon in such retrospect, and starting the Council on a discussion which can have no other effect than to illustrate for the twentieth time its impotence and inefficiency. We are not differing from Dr. STORRAR in his lament over the unsatisfactory arrangements for testing the preliminary education of those wishing to become medical students. On the contrary, we largely agree with him, and we think that in his speech he threw light on this subject. His allusion to the action of the College of Surgeons, for example—which, while ostensibly committing its Preliminary Examinations to the College of Preceptors, retains the right of saying how many marks, or rather how few marks, shall be regarded as sufficient, and

showing a disposition to be contented with a very modest number; this was a very serious matter. He was very effective too, in showing how much rivalry and jealousy there is among the bodies in Scotland in the matter of the Preliminary Examinations, and how even the Edinburgh University, under certain circumstances, accepts the examination in preliminary subjects of other bodies, such as the Edinburgh College of Physicians and Surgeons. But after allowing all this we cannot but admire the coolness, and even boldness, shown by Dr. STORRAR in initiating another discussion on Preliminary Examinations, seeing that he has been doing identically the same thing, with so little result, for exactly twenty-one years. Two full days have been occupied at the time of our writing over the mere proposal to refer the subject of Preliminary Examinations to a Committee, at a cost of £200 a day. Independent of this perennial proposal, there are several motions on the programme dealing with various questions of detail in regard to preliminary examinations, mostly by new members. It is not intelligible how members of the Medical Council, under existing circumstances, so vividly described by Mr. SIMON, can deliberately repeat fruitless discussions which have been the staple of the Council's work since its creation. If the main recommendations of the Council for the last twenty-one years, in favour of independent preliminary examinations, have been disregarded, is it to be thought that it can speak with any influence just now? It cannot do so, and the Council shows a sad want of dignity and self-respect in spending so much time and money over a subject on which it has already expended so much time. Dr. ANDREW WOOD even distinctly intimated the intention of the body he represents to defy and disobey the Council. Under these circumstances, and considering the fact that the Council is accused before Parliament of inefficiency, it will act with most credit to itself in despatching formal business only and separating. To continue deliberations which are so sure to be useless, which are so costly, and which are the mere repetition of discussions that have recurred at intervals of two or three years for twenty-one years, is to favour the advocates of medical reform with an argument for which they cannot be sufficiently grateful.

Annotations.

"Ne quid nimis."

INTERNATIONAL MEDICAL CONGRESS.

ALTHOUGH little or nothing has been noised abroad of the prospective arrangements for the meeting of the International Medical Congress in London in August, 1881, some preparatory steps have been taken. A subscription has been opened, and after an application made to some of the leading members of the profession, a goodly sum of money has been promised, sufficient to ensure that the Committee will not be hampered for lack of funds. Burlington House has been secured for the meetings of the Congress; and it is confidently anticipated that its reception will be in every way worthy of the profession in this country. The Executive Committee has nominated Sir W. Gull, Mr. Erichsen, and Dr. Matthews Duncan, as Presidents of the Medical, Surgical, and Obstetric Sections. These appointments will doubtless be a good deal canvassed, and, as must always be

the case where a selection has to be made from many worthy of the position and its honour, opinion will be somewhat divided as to the wisdom of the choice. While confessing that perhaps the selection is not in every case the best possible, we are confident that each section will have a president not only worthy of his position, but adding lustre to his chair. They are men of whom British physicians and surgeons may be proud; and we feel that it is needless for us to claim for them that support and sympathy from their fellows, which will be as essential to the success of the Congress as it will be spontaneous.

THE DANGER OF ESMARCH'S ELASTIC BANDAGE.

THE use of Esmarch's elastic bandage is one of the most serviceable of the modern improvements in operative surgery; by its means not only is loss of blood prevented, but many operations can now be conducted with a deliberation, and therefore a precision and skill, that was formerly unattainable. When Dr. Reid conceived the idea of utilising this bandage in the treatment of external aneurism, and showed by a very successful case that his idea was eminently practical, the field of usefulness of the elastic bandage was immensely widened. Nearly thirty cases of aneurism in which this treatment has been used have already been recorded, two-thirds of which have been successful; doubtless there have been many other unrecorded cases. Hitherto no ill results have been recorded, if we exclude Mr. Bryant's case, in which gangrene of the foot followed, but possibly was not caused by the use of the bandage. Dr. Robert F. Weir of New York, however, has had the misfortune to lose a patient while undergoing this treatment. The man was a negro, aged thirty-two, with a large popliteal aneurism completely filling the ham. The elastic bandage and tubing were applied in the usual manner, and after two hours and a half the tubing was removed and replaced by a Signoroni's tourniquet, this and the bandage being removed after another hour and fifty minutes. Two days later, as the aneurism was not consolidated, the treatment was repeated, the tubing being left on two hours and fifty minutes, the bandage alone four hours longer, and a Signoroni's tourniquet at the groin a further half hour. The next day the pulse at the wrist was found to be nearly absent and very weak and irregular in the femorals, although there were no other signs of shock, and in spite of careful stimulating treatment, he sank and died twenty-seven hours after the discontinuance of the compression. At the autopsy the aneurism and the artery beyond it were found filled with soft recent coagulum; the heart especially on the right side was found on microscopic examination to be "distinctly fatty." The risk of overstraining a weak heart has been noted and often commented on by surgeons as a drawback in the use of the elastic bandage, but we believe we are correct in stating that this is the only recorded instance in which this danger has been experienced. Dr. Weir rightly observes that it was a pity the bandage was retained on so long; for although it might not completely arrest the circulation, it yet allowed only a small quantity of blood to circulate in the limb. But this case suggests two other precautions which no doubt have been often taken, though not expressly noted. One is not to continue the bandage above the aneurism and interfere with the general blood pressure more than is actually necessary; if the bandage be put on up to the aneurism, and then the tubing be applied tightly round the limb immediately above the tumour, the desired condition of the aneurism and adjacent artery, full of stagnant blood, will be obtained; and the application of the bandage up the thigh for a popliteal aneurism is of no advantage, and only occasions additional risk from the greater stress it throws upon the heart. Then, again,

the surgeon should carefully watch the pulse while carrying out this treatment, and at the first sign of heart distress or failure relax his pressure. The bandage is so constantly employed that it is only too easy to forget that in some cases it may be a source of danger. Some may be inclined to think that such a risk lessens the value of the bandage, but we think that it is derogatory to the intelligence of the profession to think so. The most perfect instrument requires intelligent using, and excellence in a remedy for therapeutic application can never compensate for a lack of knowledge as to its applicability. The history of surgery shows only too plainly that what ever has been and still is the great need, is not additions to our mechanical power or skill so much as the knowledge to enable us to use wisely the means already at our disposal. The best surgeons can do most with simplest means.

TEACHING AND EXAMINATIONS IN THE UNIVERSITY OF EDINBURGH.

A CORRESPONDENT, by way of showing the necessity for a one portal system, even as regards universities, points out that the appointment of assessors has not altered the case. He gives an instance, which he says was the common talk of students, in which an assessor in the University of Edinburgh, examining in the practice of physic, put a very proper and straightforward question—which was objected to by the examining Professor on the ground that that subject had not been discussed by him in the course of lectures which the student had attended. The Professor in question, the able lecturer on the Practice of Physic, does not, we believe, as a matter of fact, include the whole range of subjects in one year's course. He takes two years to complete what he has to say on the great theme. We can well understand that Dr. Grainger Stewart's conception of what a university course of lectures on the practice of medicine is such that it cannot be carried out in less than two years. But it seems to us a serious thing that a student might attend one of these courses—all, be it remembered, that is required either by the University of Edinburgh or the General Medical Council—and not hear from his teacher any account of a disease so important, say, as pneumonia. We cannot doubt that an assessor would feel in no way bound to confine himself to subjects treated of in the actual course of lectures attended by the candidate, and that there is an actual error on the part of our correspondent in thinking so. But we think it right to give so much publicity to his notion for the double purpose of pointing out how much even a well-ordered university like that of Edinburgh has to gain from the establishment of a one portal system, which would bring extraneous tests to its work, and of suggesting that one course of lectures should at least cover all that is vital and important in the practice of physic.

SUPPOSED POISONING BY DISEASED HAM.

THE Sheffield papers report the occurrence of a number of cases of supposed poisoning from eating diseased ham, in which upwards of a score of persons have suffered from more or less acute symptoms, and four or five have died. The outbreak is traced to some ham used at a refreshment department at Welbeck, the seat of the Duke of Portland, on the occasion of a sale there. The evidence is, however, of a very contradictory nature. According to some there have been cases amongst persons who had not been at Welbeck, nor partaken of any of the refreshments supplied there. But the majority of the cases are alleged to be traceable to this source, in some cases portions of the ham having been taken away, and when used by others producing severe symptoms. The symptoms—severe colic, diarrhoea, and vomiting—suggested to one medical man the view that it was an outbreak of English cholera. Others have ascribed the disease

to trichinosis, a view not supported by examination of the meat, nor, we think, by the published accounts of the symptoms. It would seem far more probable that the form of poisoning was that which has been much more frequently observed in Germany, arising from some peculiar mode of partial decomposition of the meat; the nature of the poison, the so-called Wurstgift or sausage poison, being as yet unknown. But in the absence of further and more accurate details, we must suspend judgment. The occurrence certainly deserves thorough investigation, and we learn that the Local Government Board has directed Dr. Ballard to visit the locality and make inquiry concerning these cases.

THE PRELIMINARY SCIENTIFIC EXAMINATION.

THE Senate of the University of London, on the receipt of the recommendation from Convocation that the Preliminary Scientific and First M.B. Examinations should be held twice annually, appointed a Sub-Committee to consider the question. This Sub-Committee has grappled with the question of the Preliminary Scientific Examination, which, it recommends, shall be held twice a year. At the same time, it is found necessary to do away with the Honours Examination as it exists at present, and the Committee therefore recommend that honours shall be awarded "upon the aggregate of the marks obtained at the Pass Examination in like manner as at the Matriculation Examination."

The holding of the Preliminary Scientific Examination twice annually will prove a great boon to students, and will encourage a certain number to pursue their career in the University, instead of throwing it up in despair at the first failure, as is now too often the case. The alteration in the Honours Examination will not, probably, have any material effect upon the quality of the work done, although science teachers may urge that the abolition of special honours will take away from students a valuable spur to the pursuit of any special branches of science for which they may have evinced a peculiar aptitude.

It is not necessary to point out that the doubling of the Preliminary Scientific Examination without at the same time doubling the First M.B. Examination, is not of much use in shortening the Medical Curriculum of university students, for it is evident (as was pointed out in the Report of Convocation) that candidates who might pass the Preliminary Scientific Examination in the winter would still be unable to pass the First M.B. Examination until eighteen months afterwards. However, the Senate will doubtless see their way in time to carrying out the suggestion of Convocation in its entirety. The holding of the examinations more frequently will have the effect of popularising the University among the rank and file of the profession, for a reference to the "pass and pluck" list of the College of Surgeons will show that the percentage of failures in Lincoln's-inn-fields is fully as great as in Burlington-gardens, and that the main obstacle at the University is the loss of an entire year, which failure at either of the examinations has hitherto entailed.

Thus the total failures at the First M.B. Examination during the fourteen years 1863-76 amounted to 32.7 per cent.; and the failures at the Second M.B. Examination during the fourteen years 1865-78 amounted to 18 per cent.; or, in other words, out of every 100 men who presented themselves for the First M.B. 68 passed, and of these 68 12 failed to pass the Second M.B., leaving 56 per cent. who presumably took this degree without failure at either examination. At the College of Surgeons, 32 per cent. fail at the Primary Examination, and nearly 40 per cent. fail at the Pass-examination; or, in other words, out of every 100 men who present themselves for the Primary, 68 pass, and of these 68, 27 fail at the Final, leaving only 41 per cent. who take their diploma without failure of any kind. Judging

then by the mere percentage of failures, the professional examinations of the College of Surgeons would appear to be more severe than those at the University of London. This fact shows how fallacious may be inferences drawn from percentage calculations.

WOOLSORTER'S DISEASE AT BRADFORD.

SOME interesting facts have recently been brought to light with regard to the woolsorter's disease at Bradford, which are strongly confirmatory of the previous evidence that this disease is identical with anthrax or splenic fever of the lower animals. Some weeks ago, during the time when several deaths occurred in the neighbourhood of Bradford, one or two cases occurred at Harden Mills, one at least being fatal. A week or two later a cow, which was grazing in a field adjoining the factory, died rather suddenly, and it was at the time suggested that it was a case of splenic fever, but the result of the examination was doubtful. Since that time two sheep, grazing in the same field, have also died rather suddenly, and last week another cow was taken ill and died in four hours. A post-mortem examination made by Dr. Bell of Bradford, Dr. Roberts of Keighley, and Mr. Collins, veterinary surgeon, of Bradford, showed that the animal had died of splenic fever, and portions of the viscera having been forwarded to Dr. Greenfield, at the Brown Institution, he has confirmed this diagnosis. It appears that the soap water used for washing the wool in the factory is conducted direct into the fields, and there distributed by means of trenches cut in the soil. The cows drink the water readily. There seems to be little doubt that the disease is really derived from this source, and this is not only very important as evidence of the infectious character of the wool, but is conclusive proof that the washing is not conducted at a sufficiently high temperature to act as a disinfectant. We learn that two other cows have since died in the same field, with similar symptoms and post-mortem appearances. One or two more cases of the disease have occurred in woolsorters, in one case of malignant pustule the local serum proved to be infectious on inoculation, but the man recovered. There seems every reason to believe that more stringent legislation will be the only means of checking the disease, the recent outcry having been apparently ineffectual in enforcing preventive measures.

DEATHS IN PRISON.

WHEN the dietaries under the New Prison Act of 1877 came into operation, in May, 1878, we pointed out that the dietaries for short-term prisoners were much too severe, and whilst finding no fault with the theoretical construction of the dietaries for prisoners undergoing sentences of more than two months, we stated our opinion that the effect of the new scale on the health of the prisoners should be carefully watched. The experiment has been made; and, apparently, in the case of the Coldbath Fields Prison its effect on the health of the prisoners has not been carefully watched, for the result has been an unparalleled mortality among the short-termed prisoners. Soon after the introduction of the new dietaries a great scandal was occasioned by the death of the prisoner Nolan under circumstances which drew forth a severe censure on the prison officials from the coroner's jury who inquired into the case. So strongly was the public feeling roused on this occasion that Government felt it their duty to institute an inquiry as to the circumstances of the death, and the President of the Royal College of Physicians, Dr. Bristowe, and Dr. Guy were appointed to draw up a report. As, however, we pointed out at the time, the report of these gentlemen was very far from satisfactory. They acquitted the officials of all blame in the matter from the *ex parte* statement of these gentlemen. They reported that the cells were well ventilated and sufficiently warmed,

though from their report we do not gather that they tested this point themselves. Nor do they appear to have watched the effect of the dietaries on other prisoners undergoing sentence during the period of their inquiry. We commented severely on the shortcomings of the report at the time of its issue; and if anything were wanted to give point to that criticism, the continued excessive mortality among the prisoners of the Cold Bath Fields Prison has supplied it. The blame, however, cannot altogether be placed on the committee, although they performed their duties in a somewhat perfunctory manner, but on those who were responsible for its construction. An old Prison official, whose inclination and ideas would be controlled by past associations, and two physicians engaged in purely consulting practice, were certainly not proper persons to entrust such inquiry to. The committee ought, as we pointed out at the time, to have consisted of those persons specially skilled in such inquiries. Should another inquiry take place, which we believe likely to be the case, we should advise that the committee should be selected from those members of the profession who have devoted themselves to questions of hygiene, from professed physiologists, and from those who have paid considerable attention to the question of diet and the construction of dietaries. The inquiry ought to be extended over several months, and each prisoner admitted should be carefully examined on entry, his past history recorded, and daily observations made as to the physiological and pathological effect that low diet, seclusion, and hard labour had on prisoners drawn from various grades of society. Such a report would not only be a valuable contribution to medical literature, but would satisfy the public mind that the whole question of the hygienic and dietetic management of our prisons had received the attention of those best qualified to give advice in the matter.

THE THERMIC EFFECTS OF CEREBRAL LESIONS.

THE depression of temperature which follows acute cerebral lesions in man, occurs also in other animals under the same conditions. M. Couty, experimenting upon monkeys at Rio, has found that, after gentle anaesthesia, the exposure of the sides of the brain, followed by stimulation of the fronto-parietal zone, suffices to cause a considerable depression of the temperature of the body. The fall is at first slow, then more rapid, and attains its maximum in from two to five hours. It may afterwards fall and even give place to a rise, but in most of the experiments the animal died during the period of depression. At the moment of death, which was due commonly to arrest of the respiratory and cardiac movements, instead of 37.9° to 39° C., the ordinary temperature of the animal, the rectal temperature was from 34° to 29°, and in two cases 26° to 25.4°. Thus the depression may occur as a result of slight injuries to the brain even in an animal comparatively high in the scale, and a very low temperature, thus produced, is not absolutely incompatible with life. The effect, so marked in monkeys, is scarcely to be observed in dogs, which commonly survive the initial disturbances, even if the lesion is considerable. When, however, death occurs during the initial period it is always preceded by the depression of temperature. At the commencement of the fall all the functions of the animal appear to be unaffected—the creature is merely weak and apathetic. The circulation is then altered; the pulse ceases to be perceptible, and any spontaneous movement seems impossible. It still moves, however, if excited to do so, and can walk and defend itself. Later, this susceptibility disappears, often rapidly, and external stimulation only causes irregular reflex movements. Strong faradisation of the sciatic nerve is necessary to cause movements of all four limbs, and ultimately even this fails. Then the respiratory and cardiac movements stop. During

these phenomena the changes in the cortical excitability were carefully studied. It was found to be scarcely, or not at all, lessened during several degrees of depression of temperature, even when the animals were comatose and without spontaneous movements, and the excitability continued in characteristic form, although lessened in degree, even when the pulse could not be felt and the temperature of the brain was only 34° to 30°C. Still later, however, the excitability became limited to a small number of points, and much stronger currents caused only movements which were less numerous and complicated. Only when the reflex action of the spinal cord disappears entirely does faradisation cease to affect the cortex. In one case, however, even two minutes after the respiratory movements ceased, there was still an excitable point on the brain. This correspondence in the excitability of the brain with that of the cord, and the persistence of the former after other cerebral functions are lost, are remarkable facts.

PROSECUTION UNDER THE APOTHECARIES ACT.

THE *North Cheshire Herald* gives full particulars of the prosecution of Mr. William Lewis Smith of Hyde, formerly with Mr. Bécroft, for practising as an apothecary without any evidence of qualification of a medical or even a pharmaceutical character. Mr. Scott, of the Common Law Bar, London, instructed by Mr. Pridham of Bedford-row, London, and Mr. J. H. Brooks of Hyde, were for the plaintiffs. Mr. Smith would seem to have been a Sunday school teacher and an ardent worker in a mission-room in the town, and even a charitable and kindly man. But there was ample evidence of his attending many cases, and even grave ones, not a few of which terminated fatally. In these he gave a sort of certificate of death. He charged, too—formerly “for attendance and medicine,” but latterly his bills were made out “for time and trouble at your request, and for medicine supplied.” The judge directed that if the jury thought that in these cases defendant inquired into the symptoms, felt the pulse, examined the tongue, and prescribed medicines, their verdict must be for the plaintiffs. After a short consultation, they came to a verdict of £20 for the plaintiffs. The verdict is a most proper one, and so good a man as Mr. Smith should see that he was acting a false part in Hyde in undertaking grave medical duties without any medical qualification.

THE ST. PETERSBURG INSTITUTE OF ANATOMY.

WITH the termination of the session 1879-80, the Institute of Anatomy attached to the University of St. Petersburg has completed the twenty-fifth year of its existence. The institute was established in 1855, and placed under the special direction of Professor Gruber. Since its foundation 6265 second-course students have studied practical anatomy there, and, exceptionally, several third-course students. Moreover, 202 private individuals have attended the institute, also numerous aspirants to military surgeoncies, candidates for the diploma of doctor of medicine, and officers of health, making a grand total of 10,251.

The number of bodies placed at the command of the institute during the twenty-five years amounted to 20,338, of which 13,985 were subjected to dissection, and the remainder were distributed to other chairs of the Academy, also for the use of the students in the more advanced classes of medicine for instruction in practical surgery.

Professor Gruber and his disciples have published within the period under consideration 422 works (*brochures*) on anatomy (391 having been written by the professor himself), and the museum belonging to the institute, and founded by Professor Gruber, contains 6000 specimens of different skeletons.

KOLPO-CYSTOTOMY BY GALVANO-CAUTERY.

UNDER this long and obscuring name an operation for the relief of chronic cystitis is rather widely practised in America. At present the conservative spirit of British surgery has been too strong to allow of its general adoption in this country, although there are cases in which it is both justifiable and very successful. The object aimed at is to allow the urine to escape from the bladder into the vagina at once on its escaping from the ureters, and thus give the inflamed viscus entire rest while the irritating secretion from its own walls can in like manner flow away at once. It is obvious that an operation attended with such disagreeable and distressing results as the constant flow of urine and muco-pus through the vagina should not be lightly undertaken, and we hope Dr. Byrne of Brooklyn is not expressing the general opinion of American surgeons and gynaecologists when he states, or rather implies, that the operation is required in all cases of well-marked chronic cystitis. Dr. Byrne states that he has "never seen permanent, and seldom even temporary, relief follow the use of acid, alkaline, anodyne, or other vesical injections in the treatment of well-marked chronic cystitis." Unless "well-marked cases of chronic cystitis" differ a good deal on the two sides of the Atlantic, we cannot help thinking that the reputation of a sound and justifiable surgical proceeding is being endangered by too frequent and indiscriminate performance. The operation is performed with scissors by Dr. Emmet, and Dr. Bozeman excises a large circular piece "the size of a silver dollar"; but Dr. Byrne has recently described in the "Gynaecological Transactions" a method of operating with the galvanic cautery, which seems to be an improvement on either method, for, without much destruction of tissue, he secures a wound not very liable to cicatrise. He uses an ingenious "vesico-vaginal guide forceps," one blade of which, deeply grooved on its under surface, is passed into the bladder through the urethra, and is pressed into a fenestrum in the flat vaginal blade. The heated platinum knife is then made to cut its way through into the groove of the vesical blade. The wound left is about an inch in length, and contracts to one-half in four or six weeks.

THE GRANT COLLEGE MEDICAL SOCIETY.

THE Grant College Medical Society, Bombay, has been holding a series of extraordinary meetings for the purpose of considering the regulation of the medical profession in that city and island. At a meeting held on the 23rd March, resolutions were passed to the effect that the Government be moved to pass a Medical Registration Act for Bombay similar to that in force in England, and that a committee be formed to examine the English Act and to see how far the assimilation may be carried. At a subsequent meeting the report of the committee was brought up, and the following recommendations of the committee, with certain modifications, were adopted:—

"1. That the Government be asked to introduce an Act into Bombay similar in its working to that in force in England, entitled 'An Act to regulate the Qualifications of Practitioners in Medicine and Surgery.'

"2. That the committee is respectfully of opinion that the following provisions, with certain modifications of that Act, are applicable to the medical profession in Bombay, and are calculated to advance its welfare and secure its position—viz., those contained in Clauses 1, 10, 14, 15, 26, 27, 29, 30, 31, 32, 34, 35, 36, 37, 39, 40, and 45, which provide for the formation of a register of qualified practitioners, and define the privileges of those so registered.

"3. That the committee is respectfully of opinion that a clause somewhat similar in its action to that of 17 should be included in the Act, which would provide for the registration of certain medical practitioners in Bombay of long standing, who, though not holding diplomas, may be considered qualified to practise medicine and surgery."

At the meeting in which these recommendations were adopted, Clause 3 of the Medical Act was added to the clauses mentioned in the second recommendation. A resolution was also adopted, on the motion of Dr. Blanc, seconded by Mr. Succaram, that the President of the Society (Mr. J. C. Lisboa), Dr. Cook, as the Principal of the College, and the secretary (Dr. C. F. Khorg), should address the Government on the subject, and request the favour of an interview with His Excellency the Governor, in order to lay the matter before him.

THE RUSSIAN RED-CROSS SOCIETY.

AT a meeting of the Committee of the Russian Red-Cross Society, held in St. Petersburg on the 17th ult., His Imperial Highness the Grand Duke Serge Alexandrovitch in the chair, a report of the proceedings of the Society for the year 1879 was read and adopted. From this report it would appear that the activity of the Society had been considerably extended. In addition to the assistance given to the wounded and to the widows of soldiers killed in the late war, it had been possible to afford help to the victims in several public calamities, as, for example, from the great fires at Orenburg and from the prevalence of diphtheria in many districts. It was proposed during that meeting to convert the Marie Asylum, established temporarily for the children of officers killed in the late war, or who had died of wounds received in its course, into a permanent institution, and to this end 22,500 roubles had been subscribed.

EXPLOSIONS OF GAS.

THE explosion near Tottenham-court-road should direct attention to the peculiar properties of the body formed by the admixture of gas with atmospheric air in certain not very well-defined proportions. A series of experiments made some years ago with Davy lamps brought to light certain strange features in the behaviour of an atmosphere into which common coal gas was gradually introduced. In the case of this deplorable accident the gas was found to have entered mains which already contained air, and the process being somewhat slowly conducted, it seems probable that the properties of the mixture were such as to render it highly explosive throughout a considerable length of pipe at the time when the light was accidentally or carelessly applied to a branch pipe. The inquiry which will be prosecuted should take the form of a scientific attempt to discover, as precisely as may be practicable, the conditions of the admixture, and it should be carried far enough to ascertain if there is not some better mode of introducing coal gas to closed vessels of large size than that which is commonly adopted. In the case of a small pipe or vessel it may suffice to allow the explosive mixture to escape in due course by the ordinary outlets until the contents of the pipes or chambers are wholly gas; but in the case of large and particularly long services special precautions are necessary, and we doubt whether the means commonly taken are sufficient and effective.

ASTROLOGICAL PATHOLOGY.

IT appears that the planets Jupiter, Saturn, Uranus, and Neptune will be in perihelion simultaneously in the fall of the year. This, we are told, has not happened before for more than 1800 years. Moreover, the "star of Bethlehem" will again make its appearance in the eastern horizon in the month of August. These celestial events will mark the completion of one great cycle of 1800 years and the beginning of another; and we are warned that the first decennium of this coming cycle will be ushered in by disastrous outbreaks of pestilence—a veritable saturnalia of death. We are to anticipate, it seems, a recurrence of the terrible pestilences which concurred with the earlier

years of the Christian era, and of which the recent irruptions of plague are alleged to be the forerunners. The astrological forecaster is an Irishman, and it is gratifying to learn that Ireland will probably suffer less from the evils presaged by this portentous conjunction of planets than other lands. Indeed, he anticipates that, knowing this, strangers will flock for safety to Ireland, and by the encouragement thus given to the commerce of the island help to raise her out of the unfortunate slough of distress in which she now finds herself.

THE MEDICAL COUNCIL AND THE PRESENT SUSPENSE IN MEDICAL LEGISLATION.

WE are very glad to see that so important a member of the Council as Mr. Simon has given notice of a motion to urge the Council to make representations to the new Government of the unsatisfactory state in which the subject of medical legislation was left at the dissolution of Parliament. The duty of the Council is most clear. All medical bodies, including itself, are hindered and semi-paralysed by thoughts of change. Everybody feels that more or less change is inevitable, and that it ought not to be delayed longer than next session. The Council will get far more credit by an earnest representation of this kind than by wasting days over the history of discussions on preliminary examinations.

POISONING BY TINCTURE OF ARNICA.

WE hear from Italy of another fatal case of poisoning by tincture of arnica. A man, apparently in perfect health, drank a quantity of tincture of arnica estimated at from two ounces to two ounces and a half. He immediately complained of a sensation of burning at the stomach. Bicarbonate of soda was given, and afterwards some aromatic tincture. By these his sufferings were relieved for some hours, but the pain subsequently returned, and he died thirty-six hours after having taken the poison. This case suggested some experiments as to the irritating character of arnica. An ounce of tincture of arnica was evaporated and yielded an extract, a little of which spread over the skin caused a papular eruption. A larger quantity produced vesication, just as does cantharides. The residue found in the stomach of the poisoned man, evaporated, and then applied to the skin, produced effects exactly the same as those caused by the evaporated tincture.

THE EFFECT ON THE HEART OF PRECEDING INHIBITION.

DR. BROWN-SÉQUARD has made a large number of experiments, upon rabbits and young cats, on the effect of inhibition on the action of the heart. After the introduction of a tube into the trachea he insufflated the lungs in two rabbits at the same time. He opened the thorax, divided the pericardium, and ascertained the frequency and force of the heart's action. In one of the animals, that in which the heart was beating with least force, he galvanised the right vagus or both vagus nerves. Usually, after a variable time, the heart stopped. (Faradisation of the vagus does not, in the rabbit, always arrest the heart.) When it recommenced to beat, he divided the two great arterial trunks which spring from it, in both animals, and then observed the action of the two hearts. That which had been inhibited always contracted much more frequently than that which had not. In five rabbits, for instance, in which there had been no inhibition, 1869 contractions were subsequently observed; and in five others which had been inhibited, the number of contractions was 3240. Moreover, the contractions were much stronger in the hearts which had been inhibited than in the others. In one of the latter, during half the time of the observation, the contractions were confined to the right ventricle. In seven or eight minutes the hearts ceased to beat,

but in two cases the contractions continued longer in the hearts which had been inhibited, than in those which had not. In three others the cessation in the two conditions was simultaneous. In the cats the same difference was observed. The contractions, after inhibition, were 292, as compared with 141 without inhibition. Should this effect be ascribed to the better nourishment of the heart during the period of nutrition? Dr. Brown-Séguard believes not, but promises another communication on the subject.

FRACTURE OF THE NASAL BONES.

A FEW weeks ago we drew attention in these columns to a paper by Dr. Lewis D. Mason, published in the annals of the Anatomical and Surgical Society of Brooklyn, in which he described a new plan of treating cases of fracture of the nasal bones with depression. We then expressed surprise that Dr. Mason had published this paper before he had had an opportunity of trying his method in actual practice. In a later number of the same journal we find the record of a case of compound comminuted fracture of the nasal bones in a boy aged fourteen, which was placed under the care of Dr. Mason. There was considerable flattening of the arch of the nose with lateral displacement, which was corrected as far as possible by manipulation, and an ordinary surgical needle ground to a drill point was then passed through the lines of fracture, and the fragments supported upon it; a piece of thin rubber was stretched over the nasal arch and needle, and the ends of the latter protected by small pieces of cork. The needle was withdrawn on the eleventh day; its presence caused no pain or discomfort. The result, as shown in photographs and described in the paper, is excellent, the contour of the nose being thoroughly restored.

ST. THOMAS'S HOSPITAL.

AN appeal has been made from St. Thomas's Hospital to the Lambeth Vestry for a reduction of the assessment, on the ground of the unsatisfactory state of the hospital's funds and of the charitable work it performs, tending to reduce the poor-rates. The appeal was referred to the churchwardens and overseers, but in the discussion upon it the proposed reception of paying patients into the hospital, with a view of making a profit from them, was referred to in connexion with the appeal, and as adverse to it.

HOSPITAL SUNDAY FUND.

WE have especial pleasure in announcing that, up to the time of going to press with the present issue of THE LANCET, the Hospital Sunday Fund amounts to £29,500, being nearly £5000 more than the sum subscribed at the corresponding period last year.

THE Committee appointed by the Medical Society of London to investigate the question of poisoning by arsenical compounds contained in wall-papers, paints, articles of dress, &c., presented their report towards the close of last session; but they intend still to pursue their inquiries, and have issued circulars to members of the profession, inviting records of cases in which poisoning from these sources has been proved. Mr. Malcolm Morris is secretary to the committee.

A STRIKING instance of the advantages of a Medical Coroner occurred lately in North Wales. Some workmen, digging in an orchard near Abergele, came on some ware containing several bones that proved to be human bones. Great alarm and evil surmises gathered round the discovery, and the good name of the Principality seemed imperilled till Dr. Pierce, the coroner for Denbigh, investigated the facts, and put a few witnesses through an informal examination,

which showed that the bones had been handled and used as by an anatomical student, and that, "within the memory of man," a medical student had lived there.

THE GENERAL COUNCIL OF MEDICAL EDUCATION & REGISTRATION.

Session 1880.

Wednesday, July 7th.

THE General Medical Council met, in its thirtieth session, on Wednesday last, under the presidency of Dr. Acland.

Dr. Thomas Banks was introduced by Dr. Haughton as a representative of the Queen's University of Ireland, in the room of the late Sir D. Corrigan.

THE PRESIDENT, in opening the session, referred to communications which had been received from the licensing bodies in reference to education, and the reports of the branch councils upon them. He then said:—"Upon these documents, which have already been unofficially circulated for the convenience of the Council, several notices of motion have been framed. More than one of these notices directly open up the question, on which so much discussion has been raised of late years, of what are the subjects which should be included in preliminary examinations, and, therefore, what should be taught in the schools—as, for instance, physics, geology, zoology, and other subjects. And the further and really more important question is asked, How they are taught, and what is the standard of examination? The Executive Committee reports concerning seventy-two Examining Boards which the Council recognises as giving certificates of proficiency in general education, that they satisfy 'the requirements of the Council with great uniformity.' They conform, that is to say, with respect to the subjects of examination, but how far they are uniform in respect to the answers which may be expected the committee have at present no means of judging. It will be observed that members of the Council are of opinion that notwithstanding the great progress which is known to have been made in the means of educating students, and partly in consequence of it, the extent and quality of the general education given to them needs reconsideration. It will be proposed, therefore, by Dr. Storrar, that the whole subject be referred to a committee. Meanwhile it may be well to observe at once, in favour of this course, that since the time when the Council first laid down the general arrangements which it would recommend in respect both of general education and examination, not only has the subject of general education, as conducted in the higher schools, been reported upon by three Royal Commissions—viz., by Lord Clarendon's in 1864, Lord Taunton's in 1868, and the Duke of Devonshire's in 1874—but that, without doubt, great improvements have taken place in secondary schools and in the school books which are used in them. But still questions of great difficulty remained unanswered; for instance, it is still a matter of debate in the old universities whether Greek shall be a compulsory subject for the Bachelor of Arts degree, and whether those who have degrees in natural science shall have had the same general education as other graduates. And it must be admitted that scientific men are by no means agreed on these points. When this Council has reconsidered its own requirements the schools will, without doubt, know how to meet them. Meanwhile motions will be brought before you, both by Professor Haughton and Dr. Leet, to the effect that Greek be made compulsory on all medical students, so that the amount and character of linguistic studies and examinations, as well as the extent of scientific subjects, proposed for students prior to their professional studies, is again raised. And I must not fail to mention that, whereas on July 17th, 1879, the Council passed, in regard to the subject of elementary mechanics, the following resolution:—"That the subject of "Elementary

Mechanics of Solids and Fluids—meaning thereby Mechanics, Hydrostatics, Pneumatics, and Hydraulics"—be no longer recommended by the Council as an optional subject of preliminary education, but be recommended as one of the subjects 'without a knowledge of which no candidate should be allowed to obtain a qualification entitling him to be registered,' it being understood that the examination in this branch of knowledge may be passed either as preliminary or as first professional, and that it be referred to the Executive Committee to amend to this effect Sub-section 6 of Section 4, and Sub-section 1 of Section 23, of the edition for 1879 of the Council's standing recommendations. The Executive Committee, after discussions thereon at three successive meetings, came, on March 18th, 1880, to the following conclusion:—"That the Executive Committee, having fully considered this resolution in all its bearings, finds that there are such difficulties connected with carrying it into effect, that it deems it right to refer it back to the General Council for reconsideration. The subject of professional studies and examinations will again be specifically brought before the Council. Memorials were laid before you last year suggesting that certain special modes of study should be made compulsory in respect of ophthalmology and gynaecology. You directed that the memorials should be forwarded to all the licensing bodies for their observations. The report from the several bodies will be laid before you, with a report thereon from a Committee specially appointed by the Council, consisting of Dr. Humphry, Dr. Andrew Wood, Dr. Aquilla Smith, Mr. Simon, and Mr. Teale. A further communication of a similar kind on the subject of mental diseases, forwarded on August 4th, 1879, from the Medico-Psychological Association, will be laid before you. The question will thus be re-opened whether it is possible with advantage to the solid acquirements of the student to add more details to those already required in the four years of professional study—or whether more years are, as in some other countries, to be demanded. It remains only as my privilege to add, that which the Council will be pleased to hear, that no discussions on Parliamentary Bills need this year distract them from their appointed and congenial work of superintending the Studies and Examinations that bear on the Profession of Medicine, and of conferring with the great institutions of the nation that undertake the duty of conducting them. Last year there were three Bills before Parliament dealing with these and other subjects. The Government had thought it well to refer these Bills to a Committee of the House of Commons for report, as a means of affording to those who desire to support any particular views on them to express their opinions. The Committee were unable to report either last year, or this year before the dissolution of Parliament. No Bills of this kind are at present in either House, and the Committee is accordingly not reappointed. On the 27th of May the Vice-President of the Privy Council, in reply to a question put to him, stated that during the coming recess the whole question would be considered by the Government. Meanwhile the Council are steadily pursuing the work which Parliament assigned to them, and on which they have been so long engaged. This increases every year in interest and importance. It increases in interest with the rapid advance of purely scientific biological knowledge, and its relations to the prevention and the treatment of disease. It increases in importance, because this very progress—this mass of daily advancing knowledge—makes us all feel the accumulated force of the pregnant words of our old Greek master, Πείρα σφαλερὴ κρίσις χαλεπή. They only who take a superficial view of the present condition of the science and of the practice of medicine think it a light task to say what portions of each are necessary for our younger students—how they should be taught, and how tested. Probably there is no medical institution that is not ready to say that in these days it has learnt much—perhaps not one will aver, it has not something yet to learn. We, too, whether sent hither by a University or Corporation or by the Crown, feel each year the benefit and necessity of that interchange of thought and that united action for the common work of our Profession and of the Nation for which the Council was called into existence."

The Business Committee was then appointed, consisting of Dr. A. Wood (chairman), Dr. A. Smith, Dr. Leet, Dr. Haldane, and Dr. Pyle. The Finance Committee was also appointed, consisting of Dr. Quain (chairman), Dr. Pitman, Dr. A. Smith, and Dr. Scott-Orr.

A communication from the Medico-Psychological Association, recommending that mental diseases be made the sub-

ject of examination for all degrees and licences to practise medicine, was read.

Dr. QUAIN said that the Council could not insist upon the introduction of mental diseases as a subject of examination. He moved that the letter be entered upon the minutes and communicated to the licensing bodies.

Mr. TURNER seconded the motion.

Sir W. GULL and other members suggested that the communication of the letter of the Medico-Psychological Association would amount to a sanction of the proposal, which, it was urged, the Council was not prepared to give.

Dr. HAUGHTON said the subject had several times been brought before the University of Dublin, but the proposal had never been adopted.

Dr. WOOD objected to overloading the medical curriculum with the subject of mental diseases—a subject which ought to be studied after the licence or degree was granted. He moved, as an amendment, that the letter be received and acknowledged, and that the Association be informed that the Council deemed it inexpedient to ask the licensing bodies to make mental diseases the subject of a separate examination.

Dr. BANKS said that the Queen's University in Ireland had had the subject before it, and had come to the conclusion that it could not be introduced into the curriculum without extending the period, which it was not prepared to do.

Sir W. GULL seconded Dr. Wood's amendment.

Dr. HUMPHRY said that mental diseases already formed the subject of medical teaching in the medical schools.

Mr. TURNER supported Dr. Quain's motion, and said he thought it was due to the Association to give the licensing bodies the information which it desired to communicate to them.

After some further discussion, the amendment was adopted by a large majority, and was also carried as a substantive motion.

A statement was received from the Army Medical Department showing the degrees, diplomas, and licences of the candidates for commissions in the medical department of the army who on the 8th of December and on the 9th of February last presented themselves for examination.

Dr. HUMPHRY called attention to the small number of rejections at the examinations, contrasting the result with that which, he said, was formerly a matter of opprobrium, and when the rejections were extremely numerous. He thought that the Council might take some credit for the change that had been brought about. At all events, it had taken place during the existence of the Council.

Sir J. PAGET also alluded to the great improvement that had taken place in the results of the examinations of the different examining boards. Nothing, he said, could be more lamentable than the results obtained some years ago by the examinations of the Army Board.

A table was presented, showing results of professional examinations for degrees, diplomas, and licences granted in 1879 by the bodies named in Schedule (A) of the Medical Act. The table, with certain alterations, was ordered to be entered on the minutes.

Certain tabular returns were received from examining bodies showing how far their regulations and practice in regard to the seventy-two examinations at present recognised by the Council are such as to satisfy its requirements in regard to preliminary education.

A letter was read from the Royal College of Surgeons in Ireland communicating a resolution adopted by that body to the effect: "That the regulations of the General Medical Council respecting the passing by students of 'the preliminary examination' prior to attendance on lectures be adopted by the Council of this College, and that exceptions to this rule be referred to the Branch Council for Ireland."

Dr. WOOD, who characterised the communication as a very satisfactory one, moved that it be entered on the minutes, which was agreed to.

Mr. SIMON called attention to a passage in the communication from the College of Surgeons in Ireland expressing their "regret that the General Medical Council does not take similar strict action with regard to such other medical authorities as are not acting in accordance with the recommendations of the General Medical Council," and asked for an explanation.

Mr. MACNAMARA said it was understood that there were other bodies that had allowed students to commence their medical education before passing a preliminary examina-

tion; and the Council had never taken action with regard to those bodies as it had done with reference to the College of Surgeons in Ireland. He did not desire to name the bodies, but the representatives present would know whether their particular bodies had complied with the requirements of the Council.

Dr. STORRAR called attention to the reports of the Branch Councils on the answers from the medical licensing bodies in regard to the preliminary education of medical students; and moved: "That the recommendations of the General Council for preliminary education and examination be referred to a committee, to consider and report as soon as possible whether any, and if any, what changes may with advantage be made in them." He said that at the last meeting of the Council the subject of education was crowded out by other subjects. A great change had taken place since then, the Government of the country had passed into other hands, and it was not certain whether the present Government contemplated medical legislation at present or in future. What were the Council to do under the circumstances? Ought they to sit still with folded hands, and cease to persevere in the course they had pursued for more than twenty-one years? His belief was that they ought not to fail in their duty, even if the instrument they possessed should prove ineffectual. They ought to persevere until the instrument broke, and Government would be compelled to see that they must help them out of their difficulty. He proposed to confine his remarks to preliminary examination, and to call attention to a resolution passed by the English Branch Council: "That it is desirable that the examinations in general education be left to the universities and such other bodies engaged in general education and examination as may from time to time be approved by this Council, and that it be delegated to the Executive Committee to communicate with the licensing bodies on the subject." Dr. Storrar then gave an historical sketch of the various steps taken by the Council in regard to preliminary education, and the resolutions passed on the subject. He referred especially to a resolution passed in 1857 to the effect that no one should be allowed to enter the medical profession who did not possess an education in Arts equal to that of the national educational bodies (the universities), and to subsequent resolutions recommending the appointment of examiners in Arts in connexion with the licensing bodies, which he considered inconsistent with the position at first taken up by the Council. He complained that no effort had been made to restrict preliminary examination to the national bodies, and stated that in 1879 the number of medical students passed in preliminary education by the national bodies was 252, and the number passed by the licensing bodies or under the control of those bodies was 699. He regretted the position taken by the College of Surgeons of England, whose Arts examinations were conducted by the College of Preceptors. The College of Physicians had given up Arts examinations for fifteen years. The Apothecaries' Societies declined to change its system. In Scotland, out of 517 students on the register, 27 only passed the Arts examinations of the national educational bodies; and 490 passed either the special medical examinations at the universities or the special Arts examinations of the corporations, many of which were rivals to each other. In the examinations of the Colleges of Physicians and Surgeons in Edinburgh, the student who succeeded in certain subjects and failed in others could have the former recorded in his favour, and come up again for the latter—a piecemeal system of examination, which, he said, would be utterly repudiated in England. Dr. STORRAR then alluded to and criticised the arrangements of the Faculty of Physicians and Surgeons of Glasgow; and afterwards passed to the consideration of the examination in the Queen's University in Ireland, as to which he said it appeared that that body still permitted students to enter upon their medical studies without passing an examination in Arts. He asked whether the result originally contemplated by the Council had been obtained. His own impression was that they began in an age of gold and were at present in an age of lead. The preliminary examinations were not creditable to the profession. If he were asked whether good had been done by the Council and by the qualifying bodies since 1859, he admitted that good had been done. He knew from very distinguished professors that the young men who came to the study of medicine were in a far higher condition of preparation than students were formerly in, and were therefore more likely to become efficient practitioners. From the report of the

College of Physicians and Surgeons it appeared that those who passed the best professional examinations were those who had been best prepared by preliminary education, and those who passed the worst were those who had not the use of their own language. But while acknowledging that much good had been done, he contended that all the good had not been done that ought to have been done, and if something was not done by legislation to remedy the evil of competition between the licensing bodies they would fall into discredit, and the whole question of licensing for the Register would pass from their hands altogether. He wished to place the matter as strongly as possible before the Council. His desire was to have all the preliminary examinations conducted by the national educational bodies; to put an end to all remanet examinations; and to raise the question whether it was not possible to interpose between the existing preliminary and professional examinations an examination in science so as to clear the ground for a purely educational study.

Sir W. GULL, in seconding the motion, said he agreed with Dr. Storrar as to the necessity of training the minds of the students, but it was first necessary to make sure that they had any mind at all. They all felt that if the profession was to advance there ought to be better material to begin with. There should be such an examination as would at once cut off 33 per cent. of the candidates. The question had been raised whether, under such circumstances, they would be able to get a sufficient number of able and intellectual men to enter the profession, so as to supply the public with the requisite number of practitioners. He felt assured that they would. A stricter examination would of itself lead to better men presenting themselves, and they would thus gain in the end. He thought that up to sixteen or seventeen, students should be engaged in general education; that the next two years should be occupied with ancillary or preliminary studies prior to medicine; and that then the purely medical studies should be taken up. The universities would be doing a great public service if they would undertake a good deal more of the general and preliminary education, and leave the hospitals to teach the technical part of the profession. The Council were not now perhaps prepared to go the whole way that was required, but they ought to be prepared at least to show the way, and point out to parents and families the proper kind of preparation for the medical profession.

Mr. MACNAMARA maintained that the subject ought to be discussed by the Council, and not referred to a Committee. There had been many references to a Committee in past years, and no good result had followed. The Council might at once go into the whole question, and definitely settle it. He complained that the Council had recognised preliminary examinations of which it could know nothing but by hearsay. Such examinations should, he contended, be visited, and authentic information obtained with reference to them. He desired to contradict a statement by Dr. Storrar to the effect that the Royal College of Surgeons of Ireland gave qualifications to students who had not passed a preliminary examination.

Dr. STORRAR asked if an examination in Arts was passed before the commencement of medical study.

Mr. MACNAMARA said it was passed before the diploma was given.

Dr. STORRAR replied that that was a very different thing.

Dr. HAUGHTON thought that before referring the question to a Committee the Council ought to lay down certain broad principles as affecting the subject of preliminary examination. He amused the Council by reading a letter which he had received from a student in England, who desired to get a certificate from the Medical School of Trinity College, and after inquiring as to the mode of preparation, naively added, "I would rather pay you for a certificate if you will be so kind as to send me one." He contended that such requests would not be made unless there were some bodies in existence that sold their certificate.

Mr. TEALE deprecated the appointment of a Committee for any other purpose than that of formulating the various propositions relating to the subject in order that they might be conveniently brought before the Council at its present meeting.

The debate was then adjourned on the motion of Dr. Banks.

A communication was received from the Privy Council Office transmitting a despatch from Her Majesty's Agent

and Consul General in Egypt, enclosing an extract from the *Moniteur Egyptien* prescribing the regulations under which medical men may exercise their professions in Egypt.

A communication was received from the King and Queen's College of Physicians in Ireland, presenting a return of the candidates for the licences of the College who showed marked deficiency in the subjects of the preliminary examination in 1878 and 1879.

Dr. A. SMITH said this was the only reply received in answer to the request of the Council.

The Council then adjourned.

Thursday, July 8th.

The Council met again to-day, under the presidency of Dr. Acland. The sitting was mainly devoted to the adjourned discussion on Dr. Storrar's motion with reference to preliminary education. Several representatives of Corporations spoke at length in vindication of those bodies from the charges brought against them; and Mr. Teale brought forward an amendment for the appointment of a committee to formulate the various proposals submitted by different members in regard to preliminary examination, with a view to their being discussed by the Council during the present session. Dr. Storrar expressed his concurrence with this proposal, and it was almost unanimously adopted.

After some formal business the Council adjourned.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Chester Rural Sanitary District (population 7515).—Dr. Kenyon reports for 1879 a birth-rate of 28.75 per 1000 population (excluding deaths in the County Lunatic Asylum), and a death-rate of 18.6, as compared with 16.8 in 1878. The most noteworthy event of the year was the occurrence of a severe outbreak of enteric fever in the Lunatic Asylum, due, it would seem, to the imperfect drainage arrangements of the building. Dr. Kenyon takes occasion to urge upon householders the importance of giving attention to these matters, and observes that "in a scattered rural district there is much greater difficulty than in urban districts both in discovering and in dealing with sanitary defects, whilst there is often even a greater necessity for efficient action. In regard to the dwellings of the poor very much had been done; but in regard to the best classes of houses, there is in many cases really a far more serious class of sanitary defects, and they are more difficult to discover. Had that thorough examination and process of remedy in the matter of ventilation of drains, disconnexion of waste-pipes, &c., which has been going on systematically for some years in the town, been equally advanced in the rural districts, as the latest result of a most exhaustive inquiry has shown, the direct cause of the worst portion of the outbreak at the Asylum would have been non-existent. This part of the outbreak stood out distinctively from the rest in these special features, which are recognised as those of an outbreak due to polluted water. An overflow-pipe from a cistern used for drinking purposes led into infected drains. Every person in the house except one, who had had the fever previously, took the fever in a very severe form."

Guildford (population 10,000).—Dr. John Morton reports for 1879 a birth-rate of 32 per 1000 population and a death-rate of 19.7, and the latter rate he regards as satisfactory when the severity and length of the winter are considered, the generally low temperature throughout the year, and the great depression in trade, which told upon the working classes. The "satisfactoriness" here spoken of by Dr. Morton must, however, be considered as relative to the present sanitary condition of the town and the principles (or rather want of principles) of the sanitary administration that obtains there. It is quite obvious that Guildford might become a much healthier town than it is if the Sanitary Authority and the ratepayers were willing. Guildford does not appear to have any system of sewerage, but gets rid of its liquid refuse by pouring it into cesspools specially designed

so that their contents shall soak into the subsoil beneath the site of the town. Its arrangements for house-drainage are apparently contrived to secure a fouled atmosphere in addition to the fouled subsoil; and not content with the fouling of the earth beneath the surface, the scavenging arrangements are made so as to perpetuate fouling of the earth upon the surface. Building appears to be on the increase in Guildford, but the Sanitary Authority seem so confident in the healthy position in which the town stands as to hold themselves exonerated from taking any serious systematic measures for maintaining it in a wholesome state.

SCARLET FEVER AT BRIGHOUSE.

Brighouse, in the West Riding of Yorkshire, has been suffering from a sharp outbreak of scarlet fever, and the medical officer of health, Dr. Britton, has presented to the Local Board a special report on the occurrence. The outbreak itself was sufficiently commonplace in its development, extension, fatality, and, unhappily, uncontrollability; but it has given occasion to Dr. Britton to express certain heretical notions on sundry current opinions, which deserve mention. In view of the incidents of this outbreak (and doubtless of previous outbreaks) he observes, "A system of compulsory notification of infectious disease is, in my opinion, a pretty theory, but impossible to be carried out in practice. If it could be done it would be invaluable, but I cannot see how it can." In the outbreak to which the report refers the local medical men rendered willing assistance to the medical officer of health, but then not 10 per cent. of the cases were seen by medical men. Dr. Britton clearly thinks that to require notice from the head of a family, or other persons, of a case of infectious sickness, when this has not been seen and diagnosed by a medical man, is a requirement not worth the paper it is written on. Dr. Britton did not think it advisable for the Local Board to establish a disinfecting apparatus, doubting the utility of this agency. Families there wash their clothes, and would not, according to Dr. Britton, allow them to be disinfected (meaning, doubtless, by heat). But the articles sent to a disinfecting stove are rarely those which can be disinfected by washing (beds, curtains, &c.), and even in Brighouse, we apprehend, beds are not washed. One thing only is to be depended upon in scarlet fever, according to Dr. Britton, for limiting the disease—namely, removal to hospital. But until the law makes it imperative upon local authorities to provide hospital accommodation he sees little hope of their doing so generally. Moreover, he holds it utterly impossible in the Brighouse district to persuade people to send their children to hospital. So that, between the imperfections of the law and the objections of the people, scarlet fever must be looked upon as a necessary occasional incident of Brighouse life (or death, as the case may be). Happily, Dr. Britton's Brighouse experience is not universal.

THE GOVERNMENT AND FEVER IN IRELAND.

Whatever criticism may have to say in regard to Government measures for dealing with Irish social and political problems, and criticism itself will admit that they are problems of extremest difficulty, one act of the Government will meet with universal approval. We have authority for saying that they have sent down a physician of acknowledged ability to examine and report upon cases of fever and other disease in the distressed districts. The physician so appointed is Christopher John Nixon, A.B., M.B. Dublin, physician to the Mater Misericordiae Hospital, and to the Lord Lieutenant. He is well acquainted with fever, and was, we believe, a pupil of Dr. Lyons, now member for Dublin. We received, and we report, this information with great satisfaction. There has been the greatest vagueness in the information gathered up to this time, either as to its extent, or the nature of the cases—typhus or relapsing fever, and whether there is anything really exceptional in the amount or nature of disease in the districts. Mr. Forster has shown his usual good judgment in sending down a capable and independent witness, whose report will be a most material basis for a right estimate of the situation.

THE VACCINATION ACTS AMENDMENT BILL.

The Royal College of Physicians proposes to unite with the College of Surgeons, the Royal Society, and other learned Societies, in protesting against the Vaccination Acts Amendment Bill, introduced by the Government into the

House of Commons.—A deputation from the Metropolitan Vestries and Boards of Guardians had an interview with the President of the Local Government Board on the 5th inst., to take objection to the Bill. The deputation were far from happy in their reasoning against the Bill, their argument being very markedly two-edged. Mr. Dodson replied in substance that in respect to the merits and desirability of vaccination he was in full accord with the deputation, but as to the infliction of multiple penalties the question was one of expediency. The effect of the Bill before the House will be that parents will be liable first of all to a penalty of 20s., under Clause 29, for not taking the child to be vaccinated; there the penalty is inflicted in the first instance. There would also be two penalties and costs, which would not by any means be easy. There would be no inducement to negligent people to disobey the law, and it would compel obstinate people to obey the law; but it would put a stop to those cases of excessive penalties which, he thought, rather tend to disparage the law and encourage resistance to it.—The Manchester Board of Guardians and the Birmingham Town Council have determined to petition Parliament against the Bill.

OVERCROWDING IN WORKHOUSES.

At a recent meeting of the Preston Guardians the fact was disclosed that the old habits of workhouse sanitary mismanagement still linger among us. A letter was read from the Local Government Board, founded upon a report of one of their assistant inspectors, Mr. Stevens, and which stated that that gentleman, visiting recently the Fulwood Workhouse of the Preston Union, had found the following state of things: In the Boys' Itch ward there were sixteen patients in ten beds, and in the Female Itch ward there were eleven beds occupied by twenty-three children with itch and three adults who were not suffering from itch. In the Lying-in ward there were ten beds, occupied by ten women and eight children. The Local Government Board have thought it right "to bring under the special notice of the guardians the crowded state of the wards above referred to, and to request that the matter may receive the attention of the guardians." Such is the courteous phrase in which the Local Government Board deals with a scandalous breach of decency, if not of duty, on the part of a Board of Guardians!

VACCINATION PROSECUTIONS IN MANCHESTER.

At the meeting of the Manchester Board of Guardians on the 1st inst. the Clerk read a return, called for at a previous meeting of the Board, showing the number of persons prosecuted by the Board under the Vaccination Acts 1867 and 1871, for neglecting to have their children vaccinated since the passing of the latter Act. The number of persons summoned was sixteen, of whom six were fined 1s. and costs; one was fined 5s. and costs; one 10s. and costs; and one 20s. and costs. Six cases were withdrawn or dismissed on payment of the costs, and one summons was not served. Twelve children were vaccinated before the summonses were returnable, and one was vaccinated immediately after the infliction of the penalty. One child died shortly after the summons was returnable; one was certified as insusceptible to vaccination; and one was vaccinated two months after the summons. In no case had any person been summoned more than once.

A Parliamentary Paper has been published containing returns relating to the financial position of the Metropolitan Board of Works. An estimate of the expenditure of the Board for the year ending the 31st December, 1880, contains the following items:—Main-Drainage, Thames Embankment, and Works within the Borrowing Powers of the Loans Act, 1869, £140,000; Commons and Open Spaces, £10,000; Artisans' Dwellings, £350,000; Street Improvements under Special Acts, £600,000. The loans to other Metropolitan Bodies, for purposes which doubtless include many sanitary matters, are estimated at £750,000.

The Bristol Board of Guardians has been exercised with the question of the use of stimulants in their workhouse, and have adopted the following recommendation of a committee to report on the subject:—"That all beer and other stimulants ordered for the paupers who act as nurses, or are employed in any unpleasant work, be supplied to them with their meals, and that the paupers be not permitted to take any part of their allowances out of the dining-room; also that the stimulants ordered for the sick paupers be administered

by a paid responsible officer, unless directions to the contrary be given by the medical officer, and that once a quarter at least the medical officer do specially reconsider every case in which stimulants may be in course of administration." One of the members of the Board suggesting that teetotalism underlays the resolution, added that vegetarianism would next have to be considered, and probably the doing away with clothing in the workhouse, after the fashion of an American sect.

The report of the Public Works Loans Board for 1878-79 shows the following items directly relating to sanitary matters:—Sanitary loans recommended by the Local Government Board under Section 243 of the Public Health Act, 1875, £1,637,819; loans under the Artisans' and Labourers' Dwellings Improvement Act (England), £111,546; ditto (Scotland), £115,000; loans to Local Boards and other authorities under the Public Health Act, but not under recommendations of the Local Government Board, £36,379; loans under the Labouring Classes Dwelling Houses Act, 1866, £53,000.

The joint committee of the Mid-Warwick Combination of Sanitary Authorities is to be moved by one of the authorities at their meeting in August, to reduce the salary of their excellent medical officer of health from £800 to £500, apparently on the ground that the sanitary organisation of the district having now been got into good working order by the present incumbent of the post, a cheaper official may serve to keep it going!

Mr. Alexander Brown moved in the House of Commons for a return, in tabular form, of all the local inspections made by the medical inspectors of the Local Government Board from the formation of that Department to the 31st March, 1880. The return is to include a summary of the latest information the Local Government Board may have as to the sanitary state of the places visited.

It would appear that owing to the operation of certain later Poor Law Acts sundry workhouses in Essex are likely to fall into disuse. One—that of Witham—is already deserted, and a conference of members of the different Boards of Guardians in the county was recently held at Chelmsford for the purpose of determining what should be done with the disused buildings.

At the meeting of the Bristol Board of Guardians on the 2nd inst. a motion to appoint a resident medical officer for the workhouse, which was negatived on division by 26 to 2, gave occasion for a very pleasing and general expression of respect and regard by the guardians for Dr. Grace, who has held the appointment of workhouse medical officer for eighteen years.

The Metropolis Water Examiner (Col. Bolton, R.E.) reports of the water-supply from the Thames for the month of May, that at the intakes of all the Companies it was in a worse condition during the latter part of that month than in April. He adds, however, that the filtration of the water supplied by all the metropolitan water companies was generally sufficient.

Terms having been come to between the Liverpool Corporation and the local authorities of St. Helens and Widnes on the Liverpool Water Bill, the Select Committee of the House of Commons on the Bill terminated its labours on the 1st inst., and the chairman (Mr. Sclater Booth) ordered that the Bill should be reported to the House.

The Medical Officer of Health for the City of London, Dr. Sedgwick Saunders, reports the seizure of sixty-three tons of meat in the Metropolitan Meat Market which had become putrid during its conveyance from America to England. The meat was condemned, and at 6d. per pound it represented a loss of £3328.

VITAL STATISTICS.

HEALTH OF LARGE ENGLISH TOWNS.

The rate of mortality in our large English towns still continues exceptionally low. In twenty of the largest English towns, estimated to contain in the middle of this year seven and a half millions of persons, or nearly one-third of the entire population of England and Wales, 5239 births and 2722 deaths were registered last week. The births were 54 above, whereas the deaths were as many as 553 below, the average weekly numbers during 1879. The deaths were

within 6 of those returned in the preceding week, and were equal to an annual rate of 18.9 per 1000, against rates declining from 22.7 to 18.9 in the eleven preceding weeks. During the thirteen weeks of the current quarter the death-rate in these towns has averaged only 20.4 per 1000, against 23.3, 22.7, and 22.2 in the corresponding periods of the three years 1877-78-79. The lowest death-rates in the twenty towns last week were 12.4 in Portsmouth, 13.5 in Bradford, 14.4 in Wolverhampton, 15.3 in Nottingham and Plymouth, and 15.7 in Leeds. The rates in the other towns ranged upwards to 21.3 in Salford, 22.9 in Leicester, 23.7 in Sunderland, 24.9 in Norwich, 25.6 in Liverpool, and 29.8 in Oldham. The comparatively high rates in these last-mentioned towns, excepting Leicester, were due to excessive zymotic fatality.

The deaths referred to the seven principal zymotic diseases in the twenty towns, which had been 406, 419, and 432 in the three preceding weeks, further rose last week to 476; these included 134 from diarrhoea, 102 from whooping-cough, 98 from scarlet fever, and 73 from measles. The annual death-rate from these seven diseases averaged 3.3 per 1000 in the twenty towns; it was but 0.7 and 1.2 in Wolverhampton and Portsmouth, whereas it ranged upwards to 7.3 in Salford, and 9.7 in Norwich. Scarlet fever showed the largest proportional fatality in Salford, Norwich, Sheffield, and Bristol; measles in Sunderland, Leicester, and Salford; and whooping-cough in Liverpool. Small-pox caused 14 more deaths in London and its outer ring of suburban districts, but not one in any of the nineteen other large towns. The number of small-pox patients in the Metropolitan Asylum Hospitals, which in the two preceding weeks had been 229 and 237, declined to 216 on Saturday last; 38 new cases of small-pox were admitted to these hospitals during last week, against 50 and 47 in the two previous weeks. The number of patients in the Highgate Small-pox Hospital was 10, against 9 and 11 in the two preceding weeks.

The deaths referred to diseases of the respiratory organs in London, which had been 198 and 176 in the two preceding weeks, were 177 last week, and were within one of the corrected weekly average; 90 deaths were referred to bronchitis and 64 to pneumonia. The annual death-rate from diseases of this class did not exceed 2.5 in London, whereas the rate from the same diseases was equal to 5.0 in Liverpool, and 3.9 in Salford.

HEALTH OF LARGE SCOTCH TOWNS.

In eight of the largest Scotch towns, having an estimated population of rather more than a million and a quarter persons, the annual death-rate last week averaged 20.9 per 1000, against 20.6 and 20.5 in the two preceding weeks; this rate exceeded by 2.0, or 11 per cent., the average rate in the twenty large English towns. The rates last week in the eight Scotch towns ranged from 14.4 and 16.1 in Greenock and Aberdeen, to 25.3 in Perth, and 36.1 in Paisley. The 99 deaths referred to the seven principal zymotic diseases in the eight towns showed an increase of 4 on those returned in the previous week, and included 25 from diarrhoea, 24 from whooping-cough, 21 from measles, and 16 from fever. The annual death-rate from these seven diseases averaged 4.0 per 1000 in the eight towns, against 3.3 in the twenty English towns. This zymotic rate, which was 0.0 in Greenock, and 2.5 in Edinburgh and in Aberdeen, ranged upwards to 6.2 in Leith and 9.7 in Perth. The 24 deaths from whooping-cough showed an increase on the declining numbers of recent weeks; 12 occurred in Glasgow, 5 in Dundee, and 4 in Edinburgh. The fatal cases of measles, which had been 28, 24, and 18 in the three preceding weeks, rose again last week to 21, of which 13 occurred in Glasgow, 3 in Edinburgh, and 3 in Aberdeen. The 16 deaths from fever showed a further increase upon those returned in the three preceding weeks; 11 occurred in Glasgow, 2 in Leith, and 2 in Perth. The fatality of fever in the eight Scotch towns was again greater than in the twenty English towns, and was proportionately heaviest in Perth. Of the 7 deaths from scarlet fever in the eight towns 4 were recorded in Glasgow and 2 in Leith. The deaths in these eight Scotch towns from acute diseases of the respiratory organs (bronchitis, pneumonia, and pleurisy), which had been 116, 88, and 79 in the three preceding weeks, increased last week to 91, and were equal to an annual rate of 3.7 per 1000. The rate from the same diseases in London did not exceed 2.5 per 1000. The recent excessive mortality in the Scotch towns has been most

probably due to the high death-rate from lung diseases and from zymotic diseases.

THE HEALTH OF DUBLIN.

The annual rate of mortality in the city of Dublin, which had been 42·5, 39·3, and 32·7 in the three preceding weeks, increased last week to 33·7, a lower rate, with the exception of that recorded for the week ending 26th June, than has prevailed in any week since the beginning of April. The annual rate of mortality in Dublin during the thirteen weeks of the current quarter, without any correction for defective registration, has averaged no less than 36·6. In London, during the same period, the death-rate has averaged but 19·4 per 1000. The 203 deaths in Dublin last week included 53, or 26 per cent., which were referred to the seven principal zymotic diseases, against 53 and 48 in the two preceding weeks; 19 resulted from scarlet fever, 14 from small-pox, 8 from measles, 5 from whooping-cough, and 5 from fever. The annual death-rate from these seven diseases was equal to 8·8 per 1000 in Dublin, against 3·2 in London, and 2·5 in Edinburgh. The fatal cases of small-pox, which had increased in the three preceding weeks from 13 to 19, again fell last week to 14.

HEALTH OF IRISH TOWN DISTRICTS.

The average annual death-rate per 1000, represented by the deaths registered last week in the sixteen principal town districts, was 29·3, that for Clonmel, 4·5, being the lowest; while the highest took place in Dundalk and Londonderry, being 51·2 and 58·9 respectively. The deaths from the seven principal zymotic diseases were equal to an annual rate of 5·5 per 1000.

HEALTH MATTERS GENERALLY AT HOME AND ABROAD.

COMPULSORY VACCINATION IN FRANCE.

Dr. Prosper de Pietra Santa has addressed a letter to the Members of the Chamber of Deputies on the proposal of Dr. H. Liouville for making vaccination and revaccination compulsory in France, and the scheme of legislation he has formulated on this subject. The learned editor of the *Journal d'Hygiène* heads his letter with the significant motto, "The Cart before the Horse," and he proceeds to show that Dr. Liouville's proposition is not opportune because of the present defective state of sanitary administration in France, the defective organisation of the vaccination service, and the difficulty of procuring trustworthy vaccine lymph. The letter is of interest, not only on account of the particular subject to which it is devoted, but also on account of the insight it gives into the existing state of sanitary organisation in France. Until this organisation is remodelled, and placed upon a different basis to that upon which it now exists; and until definite provision can be made for the expenses which must be incurred for instituting a system of compulsory vaccination, Dr. De Pietra Santa holds the proposition for establishing such a system premature and futile. We here can scarcely conceive of a system of general compulsory vaccination in France, which would not be carried out by the intervention of medical men. One of the most curious parts of Dr. De Pietra Santa's arguments relates to the number of medical men in France with reference to this question. It would seem that (including *officiers de santé*) there is but one medical man in France to every 2600 inhabitants, and that there are no less than 26,697 communes, out of a total of 36,056, in which there is not a medical man resident! Without money and without the materials for a staff, it certainly seems strange, as Dr. De Pietra Santa observes, that a project of compulsory vaccination should be brought forward. There is much to be done, he observes, before France can be placed in a condition for giving due effect to a law of compulsory vaccination, before in fact—reversing the present state of things—the horse can be put before the cart. If Dr. De Pietra Santa had been more familiar than he appears to be with the history of compulsory vaccination in England, he would probably have seen reason to forego a theoretically complete sanitary organisation as a necessary starting-point for compulsory vaccination. He does not appear to be aware that compulsory vaccination here began, as Dr. Liouville proposes it should begin in France, "la charrue avant les bœufs."

THE EPIDEMIC OF FEVER IN MAYO.

In Swinford Workhouse Hospital there were last week upwards of forty cases of fever, the majority of which, however, had been admitted from districts adjacent to the town of Swinford. Two additional deaths have taken place; and it is stated that such is the dread of the disease that the chairman of Quarter Sessions has adjourned the sitting of his court for three months. Strange to relate, some of the schools in the infected districts are not closed, which, combined with the attendances at wakes and funerals, and the general insanitary surroundings of the lower classes, tend to increase the spread of the disease. It appears upon reliable authority that the disease is typhus fever of a rather mild type, although a few cases of a malignant nature have occurred. The disease usually prevails in the districts at present affected at a similar period of the year; consequently, its origin cannot be solely attributed to the want of proper nutriment, but those whose system is depressed by privation and distress, as is well known, are more liable to be attacked than others. The sanitary shortcomings of the poorer classes would scarcely be credited. Collections of waste manure and dirt surround the miserable hovels they exist in, and in the inside of these cabins, which usually consist of one to two rooms, used as day and sleeping apartments, dirt and squalor prevail. Under conditions such as these disease like the present outbreak of fever easily obtains a footing; and the only wonder is that it has not exhibited alarming proportions.

"RUSSIAN TYPHUS" IN LEEDS.

The rivalry between the two great and neighbouring manufacturing towns of Bradford and Leeds is a well-known local phenomenon, but it would appear to have now assumed a strange form. Bradford has the unenviable notoriety of having within it a formidable disease, imported, as it would seem probable, by wool brought from the eastern-most districts of Asia Minor. Not to be outdone, Leeds, it is currently reported, has an outbreak of typhus attributed to infection conveyed in flax imported from Russia, in the same fashion, as one correspondent ingeniously puts it, as the infection of plague was formerly imported into this country in wool! The comparison is an unlucky one, and we shall venture to hope that the reported transmission of infection rests on no better foundation in the one case than the other.

At the recent meeting of the Birmingham and Midland Association of Medical Officers of Health (Dr. Fenton, President), Dr. Strange, of Worcester, read a paper on infantile mortality in that city. The result of special investigations he had made on this subject led him to conclude that the greatest proportion of infantile mortality was in the artisan class. The great bulk of the deaths were inexplicable on the grounds of situation, soil, or epidemic; and condition of life and means of living was no certain test. The great cause was neglect, from the ignorance or poverty of parents. A larger number of deaths arose from the faulty mode of feeding children than all the rest of the causes combined, and many from the improper exposure to cold of the extremities of children, either from the poverty or vanity of parents. In the case of artisans' children the neglect must be involuntary, from ignorance, but in the case of illegitimate children put out to nurse he thought criminal viciousness sometimes came in.

The Earl of Shaftesbury, K.G., presiding at the recent annual meeting of the Society for Improving the Condition of the Labouring Classes, mentioned, among other illustrations of the sanitary value of the Society's labours, the following fact. Speaking of the once notorious Tyndall's-buildings, he stated that in one year, before the Society purchased them, twenty-two cases of fever had been removed to hospital from a horrible *cul-de-sac* there. Since the Society had acquired the property, twenty years ago, and altered it, there had not been a single case of fever in the buildings composing it.

The twenty-first report of the Board of Superintendence of the Dublin Hospitals, recently issued as a Parliamentary paper, refers to the year ending the 31st March, 1879. The patients under treatment during the year numbered 13,480, of whom 11,607 left the wards cured or were dismissed for other causes, and 1025 died—a mortality of 8·31 per cent. of the cases treated to a termination. The average number of

beds occupied daily throughout the year was 86·75, and the average time spent in hospital by each patient twenty-one days. Of small-pox patients admitted to the hospitals receiving this form of disease, the number was 2123, of whom 479 died, a mortality of 22·56 per cent. The report has some important observations on the defective provision in the hospitals for the reception of cases suffering from the violent delirium of drink, and the defective police arrangements for dealing with persons picked up in a comatose condition.

The population of the Zurich canton, wearied, it would appear, by the seemingly endless discussions of the learned and the press on the subject of vaccination, have determined to submit the question of the maintenance or suppression of the operation to popular vote.

Small-pox is reported to be prevalent at Christiania, and tourists are warned against visiting this part of Norway until further and more definite information is received as to the disease.

We understand that another company has been formed for the purpose of utilising London sewage in fertilising farms and market-gardens in Essex.

The reported prevalence of small-pox at Amsterdam has, we understand, been contradicted officially.

THE SERVICES.

THE INDIAN MEDICAL SERVICE.

WE have received numerous communications from India on the subject of the recent reorganisation of the Medical Service. The complaints made with regard to it appear to be that an injustice has been done to the Department by the abolition of the appointment of surgeon-general in the military branch and the suppression of two deputy surgeons-general, and by the adoption of the principle of selection for the administrative appointments instead of promotion by seniority. The first of these grievances has been discussed at some length in the *Englishman*, which seems to be the organ of those adverse to the measure. But, by its own showing, the change has benefited instead of having injured the Department. It concludes a long article by this statement: "It therefore seems that the officers of the Bengal Medical Service are now eligible for promotion to six military deputy surgeon-generalships, four civil surgeon-generalships, and three sanitary commissionerships in all; whereas in 1879 they were entitled to one surgeon-generalship, one sanitary commissionership, eleven deputy surgeon-generalships, thirteen in all." So that the grievance really amounts to this, that in Bengal the Department has lost five deputy surgeons-general by three of them having been promoted to surgeons-general and two made sanitary commissioners—an appointment corresponding in rank and pay with that of deputy surgeon-general! This is a loss of which, we imagine, few departments would be disposed to complain.

The argument—if it can be so called—brought forward in favour of giving the Indian Medical Department a share of the appointments of the military surgeons-general is very peculiar. The *Englishman* states that the Indian service attracts the best students, and that while at the examinations in February last 42 candidates competed for 35 places in the A.M.D., there were 52 for 23 places in the I.M.D. It is difficult to understand how this could be deemed a reason for adding to the attractions of the Indian service at the expense of the Army Medical Department. We should have thought it told in exactly the opposite way, and that additional lucrative appointments were required for the latter. We should be sorry to see any attempt made to level down the Indian service, but we cannot approve the persistent attempts to have it improved at the expense of the British. If there be any real ground for complaint in the fact of all the military surgeon-generalships being reserved for the latter, this should be remedied, but, as we have repeatedly said, such a change can only be made by granting to the Army Medical Department compensation in the form of a share of the civil administrative appointments corresponding to the number of military ones which would thus be taken from them.

With regard to the other ground of complaint,—the adoption of the system of selection for administrative appoint-

ments, instead of promotion to them by seniority,—we can only repeat that in the interests of the public service some such change was requisite to prevent important posts being too often filled by men who might fairly be classed as below mediocrity. The system has been introduced into the Army Medical Department, and we may add, into very many of the other branches of the public service, and although undoubtedly it inflicts a hardship upon individuals, yet the results, as regards the public interests, are such as not only fully to justify, but imperatively to call for its adoption. That it may be liable to abuse must be admitted, but in the present day the force of public opinion and the powerful aid of a free Press will, we cannot doubt, prove an effectual check upon it.

CAN IT BE TRUE?

Our contemporary, the *United Service Gazette*, states that "H.M.S. *Newcastle*, our only training-ship for young seamen, is in so unsatisfactory a state that a very heavy sick list appears to be the normal condition. We hear, however, that her captain has hit upon an expedient for reducing the sick list, to which we might be permitted to draw the attention of the Admiralty, and also that of the Royal College of Surgeons and the medical schools of the country. Sending for the fleet-surgeon, the captain informed that officer, 'I'll take means to reduce it [the sick list]; you and the senior surgeon shall take turns of duty till it is of a reasonable size.' This is a most original and ingenious method of rendering popular a service which, at the present time, cannot get anything like an adequate number of candidates for admission, and of improving the health of a ship's crew. We would recommend the Lords of the Admiralty to institute an inquiry by competent officers—certainly not naval captains—as to the cause of this great amount of sickness, and the most probable means of reducing it. The latter undoubtedly cannot be to confine the medical officers on board till it is reduced. We should not be the least surprised if a careful investigation were to show that the sickness depended on preventable causes quite within the reach, if not actually arising from some crotchet of the captain, who, if the above be true, has not shown himself to be a man of sound judgment and discretion. We cannot believe that Lord Northbrook would sanction such an extraordinary proceeding, and we trust it may be at once brought to his notice."

Correspondence.

"Audi alteram partem."

POISONOUS LEMONADE.

To the Editor of THE LANCET.

SIR,—May I beg to draw your attention in your capacity of guardian of the public health to a wholesale system of poisoning now being practised by certain vendors of cheap lemonade, mostly barrow or peripatetic vendors, but occasionally by owners of ice and lemonade shops. During this summer it has become the practice amongst certain persons of the above-mentioned class to expose lemonade for sale in large glass inverted-bell-shaped vessels, successive portions of lemonade being abstracted by syphonage. The general idea is so good that it would be a pity for its application to be checked through the operation of any unreasonable outcry; but if the syphons now used be not summarily abolished, most serious consequences will follow. Citric acid, as I need not explain to professional readers of THE LANCET, is the acid principle of lemons; equally unnecessary would it be to explain the rapidity of its action on certain metals, especially lead and copper, giving rise in either case to a dangerous poison. Now, the lemonade syphons I have mostly seen are made of ordinary lead gas-pipe, and commonly furnished with an ordinary brass tap. The dangerous result of using a syphon of such kind need not be enlarged upon. The glass reservoir would be invariably found to contain citrate of lead, and a glass of lemonade, passed through the brass tap, would hold citrates of copper and zinc, all dangerously poisonous.

It is not to be expected that private persons, occupied with their own affairs, are to take upon themselves the

gratuitous trouble of redressing public evils; but recently on a Sunday a street case of wholesale poisoning by lemonade syphonage, of such glaring prominence, came before my notice, that I cannot, without a guilty cynicism, forbear to intervene. Outside an Italian ice and lemonade shop I, whilst some twenty paces distant, was struck by the grass-green tint of the lemonade contained in a glass reservoir. Walking up close to it, I was horrified to see a copper syphon tube steeping in the reservoir; and this is not all. The constructor had evidently reflected on the hydraulic conditions of syphonage. He had adapted a spring stopper to the free mouth of the copper syphon in such a way that finger-pressure would at once cause the syphon to flow. The practical result of this arrangement, as will be seen, is that each successive glass of lemonade drawn not only holds the percentage of copper contained in the reservoir bulk of lemonade (dangerously strong already), but an additional portion of higher concentration, locked up in the syphon before it is caused to act. The lemonade was extensively patronised. Standing aside at a distance, I saw more than a dozen customers, each one booked, as I think you will admit, for an inevitable colicky pain at the least—in some cases for actual colic, which probably might be hereafter attributed to the eating of fruit, to atmospheric agencies—in short, to one of many causes not the right one.

Having put you in possession of the facts, it may be deemed worth while to throw down the copper held by a glass of this lemonade, and publish its amount. Either sulphuretted hydrogen or hydrosulphate of ammonia would of course effect precipitation at once, previous neutralisation being in the case of acid copper solutions unnecessary.

I am, Sir, yours faithfully,

June 28th, 1880.

J. SCOFFERN, M.B. Lond.

BLISTER TREATMENT OF ACUTE RHEUMATISM.

To the Editor of THE LANCET.

SIR,—I was pleased to observe in the last number of your journal the remarks made by Mr. Ilott of Bromley, Kent, respecting the value of the blister treatment of acute rheumatism. This plan I had extensively worked out at the London Hospital, and published the results obtained in the reports for 1864.

Treatment is unfortunately very much the subject of fashion, and tried and approved modes of practice are often laid aside and forgotten in the search for novelties. I am glad to find that the notice of the profession is again drawn to a safe and sound plan of treatment which rapidly relieves the pain and fever, and when carried out *boldly and decisively* shields the heart from inflammatory action and permanent structural change.

I am, Sir, yours faithfully,

HERBERT DAVIES, M.D.,

Consulting Physician to the London Hospital.

Finsbury-square, July 3rd, 1880.

ON THE EXCISION OF OBSTRUCTION AT THE NECK OF THE BLADDER.

To the Editor of THE LANCET.

SIR,—Mr. Browne commenced by objecting to Mercier's operation on the broad principle that such operations as "excision of obstruction at the neck of the bladder" were "useless" and "injurious." Finding, however, from the evidence I brought forward that the removal of prostatic obstruction was practised by some surgeons and recommended by others, he shifted his position, objecting now to the operation on the ground of the particular means employed to effect the object, "by passing instruments down the urethra." The principle of the desirability of removing prostatic obstruction, in certain exceptional cases, may now be regarded as established, and whether a surgeon prefer to effect the object by cystotomy, or by perineal puncture and ligature, or by excision per urethram, is altogether a secondary question to be decided by each operator as he may think best. For Mr. Browne to object to an operation because it had in many instances to be repeated, is about as reasonable as if a surgeon were to object to lithotripsy on the

ground that Sir H. Thompson had in so many of his cases been obliged to repeat it. Before commencing my lectures I applied to M. Mercier for recent information regarding his operation. Unfortunately he was absent from Paris and very ill, but promised that he would give it on his return. Within the past few days I have received a letter from M. Reliquet, stating that he had recently performed Mercier's operation in two instances and that the results were "heureux." So much for the operation which Mr. Browne says was abandoned because it was useless and injurious.

On the one side we have positive evidence of the value of the operation afforded; firstly, by a series of cases published by Mercier, *with the names and addresses of the patients*; secondly, by the report of the Académie de Médecine; thirdly, by that of the Académie des Sciences; and, fourthly, by Reliquet's practice. What have we on the other side? The allegations of Mr. Browne, who has failed to produce any facts to support them.

I remain, Sir, your obedient servant,

Portman-square, July 5th, 1880.

W. F. TEEVAN.

THE DISPUTE AT GUY'S HOSPITAL.

To the Editor of THE LANCET.

SIR,—I beg to forward a copy of a letter sent by the students to Mr. Brudenell Carter, and to ask you to kindly insert it in the next number of THE LANCET.

I am, Sir, yours obediently,

W. HALE WHITE, M.B. Lond.

House Physician.

The Reading Room, Guy's Hospital, June 6th, 1880.

To R. BRUDENELL CARTER, Esq.

SIR,—We, the undersigned students of Guy's Hospital beg leave to offer you our thanks for your letter to THE LANCET of the 25th ult. We desire to assure you that our demonstration against the Treasurer was undertaken with the greatest reluctance, and only under the conscientious conviction that our justification was in this case perfect. We feel deeply grateful for the sympathy shown towards the staff of our hospital, engaged as they are in a difficult and delicate controversy, to preserve intact the tradition of a school which numbers in its roll the names of Bright, Addison, and Astley Cooper, and to keep their patients from the grasp of a nursing system which in its vaunting self-sufficiency shrinks not from endangering their safety, and utterly destroys the old home comforts of the ward.

We have the honour to be, Sir, your obedient servants,

A. ERNEST MAYLARD, M.B., B.S. Lond.,

Senior House Surgeon,

G. H. RUSSELL, M.B. Lond.,

Senior House Physician,

R. WATTS WHITE, M.R.C.S.,

House Surgeon,

W. HALE WHITE, M.B. Lond.,

House Physician,

J. H. MORSE, M.R.C.S.,

Junior House Surgeon,

J. A. J. HOWELL, L.R.C.P., M.R.C.S.,

Junior House Physician,

T. S. CROOK, M.R.C.S.,

Senior Obstetric Resident,

H. H. STURGE, M.R.C.S.,

Junior Obstetric Resident.

June 29th, 1880.

To the Editor of THE LANCET.

SIR,—In answer to Mr. Larkin's appeal, I would suggest a committee of old Guyites, to demand from the Governors the immediate resignation of both Matron and Treasurer, to restore order; and that the nursing arrangements be placed under the supervision of the Medical Superintendent. If this is refused, try the question in our law courts—"That the nursing arrangements being prejudicial to the care and comfort of the sick in the hospital, are not the Governors acting contrary to the Trust Deed of the founder in allowing such a thing to exist?"

The present state of things has gone too far, and it is the duty of all Guy's men to rally round the staff. A mass meeting would be useless; it must be done by a committee in London, who should act for those in the country.

I am, Sir, yours truly,

C. F. HARDING, M.D.,

Whittlesea, July 5th, 1880. Formerly Birkett & Bryant's Dresser.

"TREATMENT OF HÆMORRHOIDS BY 'CRUSHING.'"

To the Editor of THE LANCET.

SIR,—Mr. George Pollock, in his observations upon the Treatment of Hæmorrhoids by "Crushing," speaks of the pain occasioned by the clamp and cautery operation as "sufficiently severe to occasion much subsequent suffering, and often for some days."

During the last six years I have had the opportunity of watching a very large number of cases operated upon by Mr. Henry Smith for hæmorrhoids, with the clamp and cautery, both in hospital and private practice, and I think it right to state that my estimate of the amount of pain attendant upon this method does not accord with that of Mr. Pollock. I may say at once that the pain is never severe, and that usually it does not last two hours, after which time patients speak of their condition as one of discomfort rather than of suffering.

If I compare the crushing with the clamp and cautery operation on another point—that of hæmorrhage—I find that the latter has an absolute advantage; for Mr. Pollock admits the inefficiency of the crushing process, and recommends the application of ligatures as a supplementary step, whereas the clamp and cautery operation may be said to be free from the complication of hæmorrhage.

Further, I beg to submit the probability that the presence of ligatures in a wound, the tissues of which abound in large veins, exposes a patient to increased risks.

I am, Sir, yours obediently,

A. BOYCE BARROW, F.R.C.S., M.B.,
Pathological Registrar, King's Coll. Hosp.

Welbeck-street, Cavendish-square.

"TYPHOID FEVER."

To the Editor of THE LANCET.

SIR,—I have read with much interest the communications in the issues of THE LANCET of December 13th, 1879, and January 3rd last, from Sir J. Fayrer, regarding the existence of a fever in tropical and sub-tropical climates similar in its pathology to typhoid fever, but not due to the same cause.

We live in latitude 28° 43' S.; and as far as my short experience of six years in this part of Western Australia goes, it has convinced me that many cases of the so-called typhoid fever here are not due to typhoid origin.

Amongst my cases of this fever I have had cases brought in from many miles in the bush, and these have been young, healthy subjects, who have been exploring for new squatting country, or else travelling in the bush for other reasons, and the cause has been assigned by them to be due either to sleeping on damp ground, or in damp huts. But in all these cases the symptoms have been exactly similar to typhoid fever, with the exception that I have never found the rash.

In conclusion, I would beg to ask some of your readers, What is the difference between typhoid fever and Colonial fever? I have been told by an experienced Colonial practitioner they are "one and the same disease." If this be so, why should we give typhoid fever another name? But if not, let it be thoroughly understood that Colonial fever is due to another cause.—I am, Sir, yours obediently,

CHAS. BOLTON ELLIOTT,

Champion Bay, Western Australia,
March 23rd, 1880.

District Medical Officer.

"THE LANCET" COMMISSION ON WORKHOUSE INFIRMARIES.

To the Editor of THE LANCET.

SIR,—In the introductory article upon your Commission on Workhouse Infirmarys you refer to some of the causes which render the sick *poor sick paupers*. Might I refer shortly to another cause which frequently comes under my notice?

The sick poor person or his friend applies to the relieving officer for an order of admission to the workhouse infirmary. The officer tells the applicant that the district medical officer, who must recommend the order, has gone for the day (he only sitting in the relief office one hour a day), and

that, therefore, the only thing he (the relieving officer) can do is to give an order for the workhouse, from which he *may* be sent to the infirmary.

This state of matters pauperises the poor sick man at once; because the moment he passes the workhouse gates with his order he becomes a pauper, and because, secondly, he is so often so acutely ill that it is quite out of the question to think of sending him off to the infirmary, putting him to the fatigue of another journey, and he has consequently to remain in the workhouse. On the other hand, should he be sent to the infirmary from the workhouse under the above-mentioned circumstances he is most commonly sent back after he is "cured" or "relieved," or voluntarily returns whence he came—the workhouse. This happens over and over again, and I am convinced from a few years' experience that if many of the cases had not been sent into the workhouse in the first instance, where from unfortunate associations in the house they lose all spirit and even thought of independence, they would not, as many of them do, become chronic paupers.

In my opinion, the remedy for this worse than unsatisfactory state of matters is to be found, to a great extent, in some reform in the system of out-door medical relief; either in appointing the district medical officer or officers to attend at the relief offices oftener than one hour a day, or in appointing one or more medical officers to every union or combination of unions, whose entire time shall be devoted to the requirements of the out-door sick poor.

I enclose my card, and remain yours faithfully,

A MEDICAL OFFICER OF A METROPOLITAN

May 22nd, 1880.

WORKHOUSE.

PARIS.

(From our own Correspondent.)

A FEW days since Dr. Liouville, the framer of the proposed law to make vaccination and re-vaccination compulsory amongst all classes, was heard by the Parliamentary Commission appointed to study the question, and although his project is now stringent (see THE LANCET, April 3rd) it was very favourably received. The last *Bulletin Hebdomadaire de Statistique Démographique* shows that legislative interference in this matter will not be ill-timed. The average mortality of Paris for the corresponding weeks of the last three years was 23·1 per thousand, whereas the week ending July 1st, 1880, gave a death-rate of 25·69. This represents a total of 981, and of these nearly a twentieth (48) were due to small-pox, which has thus been six times more fatal than in the three preceding years, when it only caused $\frac{1}{12}$ of the whole mortality, or 7 deaths in a total of 884. These figures prove the prevalence of the epidemic, and others may be given to show that it exhibits an unusual degree of severity at the Laennec Hospital, where there are special wards for the reception of variolous cases—the mortality amongst the patients admitted is very high. It has been increasing progressively from 10·27 per cent., or one death in 9·63 cases, in 1876, and at the present time it stands at 19·41 per cent., or, in other words, one death in 5·15 cases. Dr. Bertillon, the Director of the Statistical Department of the town, attributes the persistence of the present epidemic to the neglect of re-vaccination; and he points out the immunity which this practice has conferred upon the military. From the 1st of January of the present year the deaths from typhoid and variola amongst the civil population of Paris have been 1043 and 1519 respectively, but the proportion in the army has been very different, 206 soldiers having died of the former, whilst only 3 have succumbed to the latter.

Apropos of small-pox, an interesting communication was made to the Academy of Medicine by M. Léon Labbé on behalf of Dr. Vidal, of Grasse. An infant, whose mother had never suffered from this disease, was born covered with variolous pustules, which appeared to be seven or eight days old. It died in a few hours, and M. Vidal was able to obtain a portion of its skin, which he sent to the Academy. It is still more worthy of note that the father was affected with semi-confluent small-pox in the beginning of December, and that conception took place either at the end of November or the beginning of January of the following year.

Paris, July 7th, 1880.

ROYAL COLLEGE OF SURGEONS.

At a quarterly meeting of the Council, held on Thursday, Mr. John Eric Erichsen, F.R.S., was elected President, *vice* Mr. Luther Holden; and Mr. Erasmus Wilson, F.R.S., and Mr. Spencer Wells, were elected Vice-Presidents. The following re-elections were made:—Drs. Bristowe and Dickinson, Examiners in Medicine; Mr. J. Hutchinson, Professor of Surgery and Pathology; Mr. W. H. Flower, F.R.S., and Mr. W. K. Parker, F.R.S., Professors of Comparative Anatomy and Physiology; and Mr. B. T. Lowne, having resigned the Lectureship of Anatomy and Physiology, was succeeded by Mr. Gerald Yeo. Messrs. Coleman and A. Winterbottom were elected members of the Board of Examiners in Dental Surgery.

The President's Annual Report on the affairs of the College was presented. The President and Vice-Presidents were deputed to join with the President of the Royal College of Physicians and the President of the Royal Society to protest against the Vaccination Acts Amendment Bill, and to seek an interview with the Premier and the President of the Local Government Board. The report of the Erasmus Wilson Fund Committee was received and adopted. A letter on the grievances occasioned by the alterations in the Indian Medical Service was referred to the President and Vice-Presidents, to take such steps thereon as might be deemed desirable.

MEDICAL NOTES IN PARLIAMENT.

In the House of Commons, on Saturday, July 3rd, Mr. Mappin inquired whether the attention of the Home Office had been called to the alleged wholesale poisoning at Welbeck, Notts, where several deaths had occurred and sixty persons were reported to be ill; and whether a Government official would be sent to inquire into the matter, as the deputy coroner had expressed an opinion at the adjourned inquest very much in opposition to the medical evidence.—The Under-Secretary (Mr. Peel) replied that the local medical officer of health had been in communication with the Local Government Board, who would send down a gentleman to make inquiries if they thought it necessary. He understood that the inquest was still open, and a medical examination was being made on the intestines of the unfortunate victims of this lamentable occurrence. He would be able to give further information on the subject when he had seen the President of the Local Government Board.

In Committee on the Irish Relief Bill, Mr. Parnell spoke of the fever which has broken out in the county of Mayo as spotted-typhus, and attributed it to six weeks' subsistence on Indian meal. He said the people generally were getting weaker and weaker, and bold measures of relief were necessary to prevent famine. Mr. Forster, in reply, took a hopeful view, but admitted that if the harvest proved a failure very exceptional measures of relief would be needed, and for that contingency the Government were prepared. During the progress of the clauses, the Chief Secretary made three important concessions: (1) Postponement of the repayments under the Seeds Act; (2) acceptance of the principle of grants to boards of guardians in aid of out-door relief; and (3) increase of the grant for fishery piers. Notwithstanding some plaintive complaints from hungry members at seven o'clock, who wanted an adjournment for two hours, the sitting proceeded uninterruptedly from twelve at noon to half-past at midnight, and Mr. Forster, who stuck to his task with sturdy determination, assured Mr. Biggar that he would go to church with a clearer conscience now the Bill was through.

On Monday the second reading of the Government Bill for the abolition of cumulative penalties for non-vaccination was further deferred for a week. A petition against the measure was received from the Royal College of Surgeons in Edinburgh. A question was put by Mr. A. M. Sullivan in reference to the grievances complained of by Mr. F. G. C. Shaw, senior veterinary surgeon of the Madras army, to which the Marquis of Hartington replied that the case was dealt with by his predecessor at the India office, Lord Cranbrook, and he had not yet had an opportunity of reading the correspondence. Until he had done so, of course he could

hold out no hope of a reversal of the decision of Lord Cranbrook.

On Tuesday Mr. P. A. Taylor interrogated the Government as to the instructions given for the use of plank beds in prisons. Mr. A. Peel replied in detail, showing that plank beds were recommended by a Select Committee in 1863 for prisoners under short sentences or in the earlier stages of a long confinement; that these recommendations were embodied in the Prisons Act of 1865; that the rule was relaxed in 1868 in favour of women, old men, and children, to the extent of allowing them a pillow and mattress; and that the almost universal use of the plank bed since 1865 justified the opinion that it answered its purpose. The following are the words of the rule now in force:—"That a convicted criminal prisoner shall during the whole of his sentence, when it does not exceed one month, and during one month of his sentence when it exceeds one month, be required to sleep on a plank bed. The prisoner shall be allowed by his industry to earn a gradual remission of this requirement after one month, but after he has earned such remission he shall be liable to forfeit the same on account of idleness, inattention to instructions, or misconduct."

Mr. Joseph Cowen gave notice that on Monday he would ask whether the Government intend to take steps towards the better enforcement of the Canal Boats Act, 1877, so far as it relates to the overcrowding in the cabins and the education of the canal boat children; and also whether the Government intend to bring temporary abodes, such as gipsy tents, vans, shows, and like places under the influence of the sanitary officers, and the children under the power of the Education Acts.

Mr. Alexander Brown gave notice that he would move for a return showing, in a tabular form, in order of years, all the local visitations which have been made by medical inspectors under the direction of the Local Government Board, from the date of the establishment of the Board to the 31st day of March, 1880, with regard to prevalences of disease in particular places, and to questions therewith connected, of defects in sanitary administration, and stating in successive columns in regard to each visitation, as follows:—1. Names and population of the places or sanitary districts inspected. 2. Date of the visitation (or, when several visitations have been made, of the first of them) and name of the inspector. 3. On what ground of complaint, or otherwise, the visitation was ordered. 4. Précis of facts reported by the inspector with regard to the prevalence of disease, and to the existing defects of sanitary administration. 5. Re-inspections (if any) which have since been made in the same areas with reference to the defects of sanitary administration, with the date of each re-inspection and name of inspector. 6. Précis of the latest information had by the Local Government Board as to the sanitary state of the places, and when given, and how authenticated.

On Wednesday, during a discussion on the Sea Fisheries (Ireland) Bill, Mr. Blake, formerly an inspector of fisheries, in an argument for the extension of the system of loans, stated that the fishing industry of Ireland was greatly reduced by the famine of 1847, because eating fish with Indian meal had the effect of giving the people dysentery.—Mr. Finnigan gave notice that he would question the Government concerning a letter from the Bishop of Achroyn to the Archbishop of Cashel, reporting an outbreak of famine fever, and as to the sending of adequate medical relief to the fever districts.—The nomination of the Select Committee on the Contagious Diseases Acts was on the notice paper for Wednesday, but as Mr. Puleston had put down a notice of opposition, and the matter was not reached until just before the end of the sitting, it was necessarily deferred. The following are the names of the gentlemen who will be proposed by Mr. Childers as members of the Committee:—Mr. Cavendish Bentinck, Mr. Stansfeld, Colonel Alexander, Sir Harcourt Johnstone, Viscount Crichton, Mr. Burt, Mr. O'Shaughnessy, Mr. Osborne Morgan, Mr. Brassey, Mr. Cobbold, and five members to be added by the Committee of Selection. Mr. Cavendish Bentinck has given notice that he will move to omit the name of Mr. Brassey, and to substitute that of Mr. Puleston.

On Thursday Mr. A. Brown moved for a return of local visitations by medical officers under the direction of the Local Government Board. No opposition was offered, and the return was ordered. Mr. Forster, replying to questions by Mr. Finnigan and Mr. O'Connor Power, said the Irish Government had sent two medical inspectors from Dublin

Drs. Woodhouse and Nicholson, to the fever districts, and he was expecting soon to receive reports from them. The Government had sent positive orders to the boards of guardians and to the inspectors to see that no money was spared in giving medical assistance, fresh food or change of food, and everything necessary to prevent the spreading of the fever. He was rather more encouraged by an account he had received, and which he would lay upon the table, but he could as yet make no positive statement to the House.

Medical News.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—The following gentleman was admitted a Fellow of the College on July 2nd :—

Thomson, John Roberts, M.D. Edin., Bournemouth.

On the same day the following gentleman was admitted a Member of the College :—

Sarell, Richard, M.D. Edin., Pera, Constantinople.

On Monday and Tuesday last the following gentlemen passed the first part of their Professional Examination for the licence of the College :—

George F. Edwards, Joseph R. Locke, Henry Aked Pearson, Henry J. Prangle, Thomas Wakley, Jun.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen passed the Primary Examination in Anatomy and Physiology at a meeting of the Board of Examiners on Monday, Tuesday, and Wednesday last :—

George W. Ridley, Samuel Brookfield, and Robert Hardie, Newcastle-on-Tyne College of Medicine; Jacob R. L. Dixon, Alfred Thomas, and James F. H. Owen, Liverpool; George D. Mackintosh, Laurence J. Ruck, William Harding, and Roger Kirkpatrick, Edinburgh; Lewis Powell and Thomas Cardwell, Guy's Hospital; Arthur H. N. Lewers, University College; James Robertson, Charing-cross Hospital; J. Gutierrez-Ponce, Paris and New York; David R. Paul, Bengal and Edinburgh; James T. Carter, Halifax and Edinburgh; Harman Risger and Henry H. Parsloe, Bristol; David W. Whitfield, Dublin; Robert B. Carruthers, John T. Smith, John A. Laycock, Edward Kershaw, Alfred B. Liptrot, and W. H. Horrocks, Owens College, Manchester; T. G. Hesk, Sheffield; A. Cowley, G. Hassell, J. R. Stuart, and A. Milne, Aberdeen; F. W. Hewitt, H. Deighton, J. Y. Bostock, Cambridge; A. E. Foster, Leeds; A. H. Hart and W. Dudley, Birmingham; D. P. Edwards, St. Bartholomew's Hospital; R. W. Statham, St. Thomas's Hospital.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on June 1st :—

Carnall, Edward, Fowey, Cornwall.
Sellers, William, Radcliffe, Manchester.
Scarth, Isaac, Longsight, Manchester.

UNIVERSITY OF DUBLIN.—The following degrees were conferred last week :—

BACHELOR IN SURGERY.—Charles Adams, John Tate Creery, John Loftus Cuppaigide, Charles H. Dixon, Archibald Alex. Hamilton, John Seymour Kane, William Henry Line, Thomas Robt. Lingard, Thomas John Rashleigh Lucas, Edward Erskine Moore, Alexander Baillie M'Kee, Robert James Polden, Chas. Saunderson Purdon.

LICENTATE IN SURGERY.—Brazier Creagh, George Washington.

BACHELOR IN MEDICINE.—Charles Adams, Richard John Baker, John Patrick Barry, Henry Ludovic Clare, John Tate Creery, John Loftus Cuppaigide, Wm. Spear Gordon, Archibald Alex. Hamilton, Fitzgerald Isdell, William Henry Line, Thomas Robert Lingard, Alexander Baillie M'Kee, Robert James Polden, Chas. Saunderson Purdon.

DOCTOR IN MEDICINE.—Travers Barton, Ludovic Jones, John Seymour Kane, Gilbert Lynch, Charles Grove Young.

QUEEN'S UNIVERSITY IN IRELAND.—At a meeting of the University on the 21st ult., the following degrees and diplomas were conferred by the Vice-Chancellor :—

DOCTOR IN MEDICINE.—John Howard Battye, George J. Coates, John J. Dinnis, Arthur Hickman, Edward Horan, Daniel Lehan, William J. Matthews, William T. Mullally, Patrick Mullane, James Mullin, John F. L. Mullin, M. W. O'Keefe, Samuel Townsend.

MASTER IN SURGERY.—George J. Coates, John J. Dinnis, Charles Hall, John Hosford, Charles Frederick Knight, John Martin, Patrick Mullane, M. W. O'Keefe, William Smyth, William Stokes, Samuel Townsend, John Wilson, Ralph Worrall.

DIPLOMA IN MIDWIFERY.—George J. Coates, Patrick Mullane, William Stokes, M. W. O'Keefe.

DR. C. H. ROBINSON has been elected a Member of the College of Physicians in Ireland.

MEDICAL MAGISTRATES.—John Turner, F.R.C.S. Eng., has been appointed a Justice of the Peace for the borough of Wycombe.—Samuel Musgrave, F.R.C.S. Edin., factory surgeon and medical officer to the Lisburn Union Hospital, has been appointed to the Commission of the Peace for the Counties of Antrim and Down.

STATISTICAL SOCIETY OF IRELAND.—Dr. Mapother has been selected by this Society as its president, an office formerly held, amongst others, by Archbishop Whately, Judge Longfield, and Lord O'Hagan.

"A LIBERAL GIFT."—Under this heading the *Times* of the 6th inst. had the following suggestive notification :—"A roll of bank-notes, value £500, was dropped into the offertory bag at St. Mary's Church, Chelmsford, on Sunday afternoon, for the benefit of the Chelmsford Infirmary."

The execution of James Sweetland is fixed for the 26th inst., at Newgate. The convict, on receiving an intimation to this effect, was very much distressed, and expressed a wish to see his wife and child and other relatives. Meanwhile a memorial is being prepared by Mr. Ricketts, his solicitor, praying her Majesty to commute the sentence.

MEDICAL SCHOOL OF ROYAL COLLEGE OF SURGEONS IN IRELAND.—On last Monday the prizes obtained during the past Session were awarded as follows :—First year : Austin Cooper, first; Mayer Dutch, second. Second year : M. T. Yarr, first; T. W. Elsner, second. Third year : Humphrey Broomfield, first; Richard Callan, second. Mr. Broomfield, who was first in the third year's course, won the Gold Medal and £15.

THE LATE SURGEON-MAJOR SHEPPERD, A.M.D.—A handsome memorial brass, supported on a slab of black marble, has just been erected in the chapel of the Royal Victoria Hospital at Netley, to the memory of the late Surgeon-Major Shepperd, of the Army Medical Department. The brass bears the following inscription :—"In memory of Peter Shepperd, M.B. University of Aberdeen, Surgeon-Major Her Majesty's Army, born at Leochel Cushnie, Aberdeenshire, 25th August, 1841, who sacrificed his own life at the battle of Isandhlwane, Zululand, 22nd January, 1879, in the endeavour to save the life of a wounded comrade. Erected by his brother officers and friends."

THE GLOBE says : "A Memorial, signed by upwards of eight hundred persons, among whom are the Master of the Rolls, Sir Henry Thompson, Dr. Risdon Bennett (President of the Royal College of Physicians), Mr. Darwin, Professor Huxley, Dr. W. B. Carpenter, the Presidents of the Congregational and Baptist Unions, and the Dissenting Deputies, and the Professors of most of the Nonconformist Colleges, has been presented to Mr. Gladstone, asking for the support of the Government to the motion of Mr. Roundell in favour of the complete abolition of the clerical Headships and Fellowships at Oxford and Cambridge, and on the amendment of Mr. Bryce, for throwing open the Professorships of Hebrew and Ecclesiastical History."

BEQUESTS ETC. TO MEDICAL CHARITIES.—The Mercers' Company have given one hundred guineas to University College Hospital. Mr. E. Hill has given fifty guineas to the Sussex County Hospital, Brighton. H.R.H. the Duke of Edinburgh has given £20 to the Charing-cross Hospital.

Medical Appointments.

Intimations for this column must be sent DIRECT to the Office of THE LANCET before 9 o'clock on Thursday Morning, at the latest.

BENNETT, W. H., F.R.C.S.E., has been appointed Assistant-Surgeon to St. George's Hospital, vice G. C. Stirling, resigned.

BROWN, Mr. J. M., of the University of Edinburgh, has been appointed Demonstrator of Anatomy in the Owens College, Manchester, vice Mr. H. S. Branfoot, resigned.

BRYAN, C. F., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer to the Workhouse of the Leicester Union.

BURTON, J. E., M.R.C.S.E., L.R.C.P.L., L.F.P.S.G., & L.M., has been appointed an Honorary Medical Officer to the Liverpool Ladies' Charity and Lying-in Hospital, vice Dr. J. H. Wilson, appointed Honorary Consulting Medical Officer.

DICKINSON, Mr. T. V., has been appointed House-Physician to St. George's Hospital, vice Mr. H. T. Griffiths.

FISHER, Mr. F. C., has been appointed House-Surgeon to St. George's Hospital, vice Mr. E. A. Hunt.

GLAISTER, J., M.B., C.M., has been appointed a Resident Medical Officer to the Leeds Public Dispensary, vice Todd, resigned.

HOLLAND, J. C., L.K.Q.C.P.L., has been appointed Medical Officer to the Dungarvan Workhouse, vice Hunt, resigned.

HOLMES, D., M.B., L.R.C.S.E., has been appointed Medical Officer to the Aston Branch of the General Dispensary, Birmingham, vice F. C. P. Howes, resigned.

HOYLE, W. E., M.R.C.S.E., has been appointed House-Surgeon to the Whitehaven and West Cumberland Infirmary and Fever Hospital.

INNES, H. D., M.R.C.S.E., has been appointed Junior House-Surgeon to the Huddersfield Infirmary.

KENNY, M. A., L.R.C.P. Ed., has been appointed Medical Officer to the Selby District and Workhouse of the Selby Union, vice Gray.

LEACH, J. C., M.R.C.S.E., B.Sc., S.Sc.C.Camb., has been reappointed Medical Officer of Health to the Sturminster Rural Sanitary Authority for three years.

LEWIS, C. J., M.R.C.S.E., L.R.C.P.L., has been appointed Resident Surgeon at the General Dispensary, Birmingham, vice J. H. Palmer, resigned.

MILLER, H., L.R.C.P. Ed., M.R.C.S.E., has been appointed Medical Officer to the Hartland District of the Bideford Union.

MONTEITH, J. M., M.B., C.M., has been appointed Medical Officer to the Fourth District of the Bellingham Union.

RYERSON, G. S., M.D., has been appointed Ophthalmic and Aural Surgeon to the General Hospital, Toronto, Canada.

SHAPLEY, F., M.R.C.S.E., L.S.A.L., has been appointed Assistant Medical Officer to the Worsfold House Hospital for the Insane, Exeter.

SUNDERLAND, W., L.R.C.P. Ed., M.R.C.S.E., has been appointed Medical Officer to the First District of the Saffron Walden Union.

TAYLOR, F., M.R.C.S.E., L.S.A.L., has been appointed House-Surgeon to the Teignmouth, Dawlish, and Newton Infirmary, vice G. Coutts, M.B., resigned.

WALFORD, E., M.R.C.S.E., has been appointed Medical Officer of Health for the Urban Sanitary District of Ramsgate, at a salary of £150 per annum, vice J. W. Barry, resigned.

WESTMORLAND, Mr. J., has been appointed Certifying Surgeon for Factories for the Collyhurst, Harpuey, and Blackley Districts, Manchester, vice J. B. Pinder, resigned.

Births, Marriages, and Deaths.

BIRTHS.

BROMLEY.—On the 27th ult., at Castle Hedingham, Essex, the wife of John Bourne Bromley, M.R.C.S.E., of a daughter.

CORBAN.—On the 1st inst., at Sunnyside House, Gibraltar, the wife of Surgeon-Major Laurence Corban, M.D., of a son.

DAVIES.—On the 26th ult., at High-street, Newport, Mon., the wife of George A. Davies, L.R.C.P.L., of a son.

EVANS.—On the 5th inst., at Sutton Coldfield, the wife of Alfred H. Evans, M.R.C.S.E., of a daughter.

FERGUSON.—On the 28th ult., at Claremont-square, N., the wife of W. E. L. Fergusson, M.D., of a son (posthumous).

FRODSHAM.—On the 3rd inst., at Denham House, Upper Streatham, the wife of John Mill Frodsam, M.D., of a son.

HENSMAN.—On the 26th ult., at Park-street, Taunton, the wife of William Hensman, Brigade-Surgeon, A.M.D., of a son.

HORNER.—On the 28th ult., at The Gables, Tonbridge, the wife of Arthur Clayton Horner, M.R.C.S.E., of a daughter.

SMITH.—On the 27th ult., at Howard Lodge, Hurstpoint, Sussex, the wife of G. J. Malcolm Smith, M.B., of a daughter.

WELCH.—On the 2nd inst., at Victoria-park-road, the wife of Samuel Welch, M.R.C.S.E., of a son.

MARRIAGES.

HERAPATH—LANE.—On the 24th ult., at St. Mary's, Tyndall's-park, Clifton, by the Rev. W. F. Bryant, M.A., assisted by the Rev. J. Kerry, Chas. Kynaston Herapath, Surgeon, of 11, Brunswick-square, Bristol, only son of the late W. B. Herapath, M.D., F.R.S., to Emily Kate, only daughter of Frederick Lane, Esq., of Lawrenny, Leigh-road, Clifton.

LAWRENCE—HERVEY.—On the 1st inst., at St. Mary's, Hadlow, by the Rev. P. Howard Monypenny, Vicar, Henry Major Lawrence, Esq., L.R.C.P., L.R.C.S., to Emily Alice Hervey, daughter of the late Mathew Hervey, Esq., of Charnwood, Victoria.

ROUGHTON—ROBINSON.—On the 1st inst., at the Parish Church, Streatham, by the Rev. T. T. Griffith, Rector of Teale, assisted by the Rev. W. C. Roughton, Vicar of Great Harrowden, Northamptonshire, and the Rev. J. R. Nicholl, Rector of Streatham, James Wooley Roughton, M.R.C.S.E., L.R.C.P., of Streatham-common, third son of James John Roughton, Esq., of Kettering, to Frances Mary, eldest daughter of Augustus A. Robinson, Esq., of Greta House, Streatham.

DEATHS.

BENNETT.—On the 2nd inst., at Hornsey, Middlesex, Charles Frederick Bennett, M.D., late of Lymm, Cheshire, aged 55.

DOVE.—On the 5th inst., at Stowmarket, Suffolk, Harry Dove, M.R.C.S.E. & L.S.A.L., only son of the late Dr. Dove, of Norwich, aged 30.

ELLIOTT.—On the 30th ult., at Bury Grange, Gosport, John Elliott, Deputy Inspector-General of Hospitals and Fleets, late of Corbo, Clogher, co. Tyrone.

PALSGRAVE.—On the 2nd inst., at Kilburn, John Henry Palsgrave, Retired Surgeon, Bengal Army, aged 78.

SMITH.—On the 2nd inst., at 5, Newton-terrace, Glasgow, Mary Baird, wife of A. Wood Smith, M.D., of the Glasgow Royal Infirmary School of Medicine.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8 a.m. by Steward's Instruments.)

THE LANCET OFFICE, July 8th, 1880.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radiation in Vacuo.	Max. Temp. Shade.	Min. Temp.	Rain fall.	Remarks at 8.30 A.M.
July 2	29.85	S.W.	62	56	104	70	50	0.50	Cloudy
" 3	29.71	S.W.	63	57	105	69	55	0.20	Cloudy
" 4	29.74	S.W.	62	59	93	66	54	0.17	Raining
" 5	30.20	N.W.	60	53	111	74	49	..	Fine
" 6	30.05	W.	62	57	93	72	58	..	Overcast
" 7	29.75	S.W.	59	57	74	66	55	..	Overcast
" 8	29.62	W.	62	55	112	71	52	0.06	Cloudy

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Local papers containing reports or news-paragraphs should be marked.

We cannot prescribe, or recommend practitioners.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET to be addressed "To the Publisher."

A COUNTY COURT JUDGE ON MEDICAL CERTIFICATES.

At the Lewes County Court, according to the *East Sussex News*, the Judge, A. Martineau, Esq., thought fit to deliver himself as follows on the value of medical certificates of inability to be present on the part of important witnesses:—"I am sorry to say doctors are most unscrupulous in granting medical certificates. Therefore I place little dependence on these certificates. Anybody seems to be able to get one when one is desirable for convenience sake." This is a most unusual and unwarrantable remark. Proceeding from a Judge in his chair of judgment, and made in the absence of the medical man who had certified it, was, besides being unjust, mean and ungenerous. We shall not insult the medical profession by replying to it. We can afford to rest in the respect of the public, and may refer the Judge for public opinion on his estimate of medical men and their certificates to the excellent article in the *East Sussex News* of June 18th on his libellous words.

Verb. Sat. Sap.—Our correspondent is thanked for his letter; but as the subject has so recently been fully discussed, we think it would be advisable to wait until the operation of the G.O. is more apparent before again taking it up.

Mr. John C. Stanley.—It is not "Cayenne turpentine," but Chian turpentine.

THE DUBLIN DEATH-RATE.

To the Editor of THE LANCET.

SIR,—I notice in your columns that the death-rate in Dublin still continues to be very high—some 40 per 1000 inhabitants per annum. I have also noticed that a great deal of blame has been cast upon the public officials and the medical authorities of Dublin for this sad state of matters.

It seems to me to be very unfair to saddle either of these bodies with a mortality which, as I read it, they have but little to do with. My impression is that the real cause of the overcrowding, fever, and unhealthy condition of Dublin at this moment resides in the extreme poverty—nay, destitution—of some parts of Ireland. Those who, like myself, chanced to see Ireland in 1848 will understand how powerless all hygienic remedies are when poverty is widespread.

I read in a journal the other day that the cost of the food of an in-door pauper in one of the Irish unions was but 2d. a day. When we hear of such misery *within*, what must be the misery *without* the workhouses? I have offered these few words in order to show that there is but little use of scolding medical men or town councils in Ireland at this moment. The question lies deeper than that; but it is soluble.

I am, Sir, your obedient servant,
CHARLES R. DRYSDALE, M.D., &c.

Woburn-place, June 29th, 1880.

A Surgeon-Major, I.M.D.—We do not agree with our correspondent on the question of promotion by selection to the administrative ranks. We believe it to be essential to efficiency. The other point in his letter we have discussed elsewhere. We regret that we cannot find space for his communication.

Mr. Dolan's paper has been submitted to our commissioners.

New-comer.—There is no absolute rule. Custom varies. On the whole, in the country the rule seems to be for the new-comer to call on his medical neighbours. If the patient of another medical man, actually under the medical attendance at the time, seeks the advice of "New-comer," our correspondent should decline to take the case, except on the understanding that intimation is made to the former adviser. It is scarcely his duty in fresh cases of illness to go into the antecedents of his patients, always provided that he encourages patients to continue faithful and respectful to their existing professional connexions in the absence of good reasons to the contrary.

Mr. J. G. Braden is thanked for his communication, on which he will see our comment to-day. The best punishment for so unjust a Judge is to publish his words, and to leave him and them to public censure. Such Judges will not hurt the medical profession.

W. M. N.—Hay and Son, Little Queen-street, Lincoln's-inn-fields; F. Kidston, Duke-street, Union-street, Bishopsgate.

REGISTRATION OF DISEASES IN HOSPITALS.

To the Editor of THE LANCET.

SIR,—I trust that Mr. Howlett's letter on the subject of the Registration of Disease in Hospitals will receive the attention it deserves from those to whom it is addressed—the medical and surgical registrars of London; and that, amongst other good results, it may lead to the fuller recognition of much laborious service which is at present somewhat undervalued.

When it is considered how ample is the material with which these officers have to deal, their position of absolute impartiality and special opportunities of observation, it would almost seem as though it rested with them personally to fulfil one of the main ends for which hospitals exist. The value of the registrars' work is, indeed, so fully recognised, that it would be easy to mention by name those hospitals in London which are distinguished for the completeness and extent of their "post-mortem and case books," as well as those that show but poorly in this respect with records so variously and irregularly kept as to be practically useless.

The systems of registration and nomenclature at present in vogue, although various enough to be confusing, are not so different, as I believe, as to make it impossible to arrive at a common agreement. Such a committee as Mr. Howlett suggests, besides accomplishing this, would give a new vitality and impulse to a department of hospital work which at present is hardly appreciated. But, besides this, an annual conference of medical and surgical registrars would assist in directing and limiting a labour that is often spoken of as being too wide and miscellaneous. Some common method and motive of work might be resolved upon prospectively from year to year; the observation, I mean, during that period, of some particular subject of clinical interest in especial. Is it too much to say that the authority of records so collected, where there is no hypothesis to uphold and no personal element to satisfy, would be greater than that of any individual collector, however candid and honest?

As a specimen of what may be done in this way, I may refer (with the satisfaction as well as the shame of one who occupied the same post less worthily years ago) to the medical report of Dr. Owen published in the last volume of the St. George's Hospital Reports. Contrast with this the tabular statement which some hospitals append to the annual report to their subscribers, and which, while it is expensive to print and troublesome to construct, hardly fulfils its poor purpose of making a show before the public.

I sincerely hope that the physicians and surgeons engaged in this important work in London will respond to Mr. Howlett's appeal, waiting for no patronage and admitting no interference.

Your obedient servant,

Wimpole-street, July, 1880.

OCTAVIUS STURGES.

In the Annual Report of the Stockwell Orphanage, the medical officer states that "consumption has never been introduced into the Jewish community." The statement is not borne out by many well-ascertained facts. There is no immunity from phthisis among the Jewish nation. We are not aware of any writings on the subject.

Dr. Whiteside Hime.—Although we are by no means disposed to exaggerate the importance of the Bill, we think that every effort made in the direction our correspondent suggests would be advisable.

W. A.—The practice was probably sold subject to our correspondent's undertaking, so that it would be a breach of good faith.

ADMINISTRATION OF NITROUS OXIDE GAS.

To the Editor of THE LANCET.

SIR,—With regard to the "new instrument for the better administration of nitrous oxide gas," as recommended by Mr. Donald Napier in your impression of June 26th, may I submit that I have for a very long time used the two cylinders in a form that may be more convenient to some of your readers. The cylinders are in tripod stands that close to the bottles when not in use, the tube connecting them being a Y-shaped india-rubber tube. The advantages to myself are: portability; disconnection; the being able to use a twenty-five gallon cylinder in place of a fifty; Clover's foot-key (much better to regulate than the hand-key); takes up less room; is light to carry, besides being firmer and lower to foot-key.

Brook-street, June 30th, 1880.

Yours very truly,

TOM BRID.

EXAMINATIONS AT THE ROYAL COLLEGE OF SURGEONS.

At the Primary Examination for the diploma of Membership of the above College, which is now going on, there are nearly 200 candidates, to whom the following questions on Anatomy were submitted at the written examination on the 2nd instant, when they were required to answer only four out of the six questions:—

1. Describe the first dorsal vertebra and its articulations.
2. Describe the external oblique muscle of the abdomen and its aponeurosis. Give their attachments and relations.
3. Describe the male urethra.
4. Give the dissection necessary to expose the deep plantar arch, describing the parts seen in succession.
5. Give the course, relations, and distribution of the ulnar nerve below the elbow.
6. Name the arteries distributed to the brain. Give the course and anastomoses of each.

The following were the questions on Physiology:—

1. What are the proximate constituents of wheat flour; what changes do these constituents undergo in the conversion of flour into bread, and how is their digestibility affected by these changes?
2. Describe the action of the heart, and give the evidence that the blood circulates through the vessels.
3. How is the nervous system concerned in tranquil respiration? What are the phenomena presented by the nervous and vascular systems in death by asphyxia?
4. What varieties of cartilage are found in the adult, and in what situations? Describe the structure and uses of each variety.
5. Explain what is meant by the following terms:—Cell, tissue, organ, organism, organic and inorganic matter, proteid, peptone, ferment, carbo-hydrate, hydrocarbon. Give examples of each.
6. Give the structure of the epithelium and papillæ of the tongue. By what nerves is the tongue innervated, and what are their functions?

H. G. S.—Niemeyer's Medicine, Bryant's Surgery, Ringer's Therapeutics, Meadows' Midwifery, Guy's Medical Jurisprudence, and Wilson's Hygiene may be recommended.

Perplexed.—No.

"EXTRACTING TEETH AND PUTTING THEM BACK INTO THE JAW."

To the Editor of THE LANCET.

SIR,—I have been following the discussion, originated by you, on the extraction and replacement of teeth with much interested anticipation; but I must say that up to the present time the thing which has appeared to me the most remarkable has been the small amount of light thrown upon the subject by our dental brethren. It is needless to say that such a question can only be settled by the production of facts; but if settled in the affirmative, as I believe it will, one or two other inquiries of a like nature would suggest themselves as also worthy of solution. For instance, can the teeth pulled out of one person be replaced successfully by those pulled out of another? Also, can they be replaced by those of any other animal? I regret that I can supply you with no facts of my own; but many years ago I was consulted by a sailor of large and varied nautical experience, and he told me that on one of his voyages the men were attacked by scurvy, which was so severe that it caused all the teeth of one man to become loose, and, said he, "Would you believe it, Sir, he pulled a lot of his teeth out, scraped them, and put them back again, and they grew as firm and useful as ever." I should judge him to have been a veracious person.

Subsequently I questioned closely another old salt, and he declared most positively that he had known the same thing done in scurvy, and that it was by no means uncommon.

My assistant, Mr. George Billing, assures me that when he was with Dr. Segar, of Southport, he four times saw the doctor resort to this proceeding, and he remembers only one instance in which it was not successful.

I am fully aware that these somewhat apocryphal instances by no means come up to the standard of modern scientific evidence; but perhaps they may act as a stimulus to those who are in possession of better facts to forward them to you.

Yours obediently,

Blackpool, June 28th, 1880.

WM. HARDMAN.

To the Editor of THE LANCET.

SIR,—The following case may be of interest to those of your readers who are watching the correspondence appearing in your valuable journal on the above subject:—

On the 10th of June, 1875, I was called to E. P.—, a lad about fifteen years of age, who, half an hour before I saw him, had been kicked by a horse. Besides a severe cut over the left upper lip, extending to the cheek, I found the left upper canine tooth had been broken off, and the first bicuspid on the same side knocked entirely out of its socket. The latter tooth was found, and, after wiping, I put it back into its place, fixing it to the second bicuspid with a bit of silver suture wire. A fortnight later I removed the wire, and found the tooth quite firm. About a year after the accident I saw the boy for the last time; the tooth was as firm as ever. A day or two since I wrote to the boy's mother, and I have this morning received her reply, in which she states the tooth "has answered as well as if it had never been knocked out."

I am, Sir, yours truly,

Bridgwater, June 16th, 1880.

J. BAIN SINCOCK.

Fellow Med. Chir. Soc.—It has not often happened. In 1815, Mr. Henry Cline, President of the College of Surgeons, was at the same time President of the Medico-Chirurgical Society, and Sir James Paget did the double duty in 1875; and now Mr. Erichsen, F.R.S., who so worthily fills the chair at the Society, has just been elected President of the College.

F. M. T.—Write to the Secretary of the Local Government Board (Ireland).

STIMULANTS AT THE BRISTOL WORKHOUSE.

A CORRESPONDENT writes as follows:—

"The remarks of Lord Carnarvon in the House of Lords on the use of stimulants in workhouses—and which, like too many remarks in Parliament, were very indistinctly heard in the reporters' gallery—have called forth an investigation by the guardians of the Bristol Workhouse. Of seven workhouses brought into comparison, the Bristol Workhouse is one of the cheapest from which returns have been received. The cost per head is lowest in Bristol, being 3s. 3d. against 4s. 9d. at Nottingham. As to the cost of milk and the percentage of sick, Bristol was half way down in the same list, and second as to quantity of wines, spirits, and beer consumed. The Committee, whose report was unanimously adopted by the Board, recommended 'That all beer and other stimulants ordered for the paupers who act as nurses, or are employed in any unpleasant work, be supplied to them with their meals, and that the paupers be not permitted to take any part of their allowances out of the dining-room; also that the stimulants ordered for the sick paupers be administered by a paid responsible officer, unless directions to the contrary be given by the medical officer, and that once a quarter at least the medical officer do specially reconsider every case in which stimulants may be in course of administration.' The vindication of the Board is pretty complete. There is one element, however, in all these rivalries in economy in workhouses that should never be lost sight of—viz., the health and longevity of the paupers upon whom the experiments are made. It is possible to reduce even to mere water the diet; but if this is accompanied with diminished strength and lowered vitality, it is little creditable. There is much to be said for only the most careful administration of beer and stimulants to paupers under the responsibility of the medical man; but what is saved in this way should be spent in the general improvement of the pauper's diet, which is certainly not excessive."

HOT-AIR BATHS.

To the Editor of THE LANCET.

SIR,—In your impression of June 5th you refer to the subject of ventilating Turkish baths and the difficulty of obtaining pure air, more particularly, I apprehend, in the hot-air chambers. Now, I venture to state that it is quite practicable to ventilate Turkish baths so effectually that not only shall the impurity of the air be inappreciable in the slightest degree, but that the air shall be rendered absolutely pure.

Having given considerable attention to the subject of hot-air baths, and as architect of one of the best-appointed, and I may say one of the most favoured Turkish baths in the metropolis, I beg to be allowed to describe the system of ventilation adopted, more particularly in order that the public may know that there are Turkish baths in London which may be visited without the slightest possible chance of any danger such as you have referred to.

In all cases purified air should be taken into the bath as well as the impure air extracted therefrom. In the case of the Turkish baths at Camden-town, the air is brought to the stove and hot-air chambers from an external vertical shaft by means of a channel communicating with the heating stove, up which it rises and passes in a highly heated state through a grating in the floor above, to the "laconicum," or No. 3 hot room. It then distributes itself, after filling the "laconicum," to the adjoining chambers through the door openings, and by means of other channels it passes underneath the stove into the spaces under the marble benches, and enters the hot-air rooms through sliding gratings at a temperature of 100°. The impurities in the air which fall towards the floor are carried off by means of flues underneath the floor-tiles, all concentrating to a common upright shaft in an adjoining compartment to the smoke-shaft, and which is necessarily highly heated, and the exhausted air passes out through an extractor at the top of the smoke-shaft. Whatever may be left is carried off through specially constructed gas suspenders, together with the gas combustion, into channels in the floor above; these again concentrate, and are attached to another heated upright shaft. Besides the flues mentioned, there is a stained glass ceiling light at a height of twelve feet, openable, and through an outer light it communicates direct with the external air; but it has never yet been found necessary to open this light for the purpose of ventilation. Although a bather on an average of twice weekly since these baths were opened in 1873, I have never yet heard a complaint of impurity of the air; in fact, the air in consequence is seldom less than 140°, 180°, and 230° respectively, something above the customary temperature, yet without the slightest discomfort; indeed I have thoroughly enjoyed a quarter of an hour in the "laconicum" at 250°.

An ill-ventilated bath is self-detecting. It generally produces *ennui*; hence the frequent complaint of this feeling by bathers, even though there may be no unpleasant smell, but I have visited baths where the latter has been intolerable to an educated nose. I therefore consider your admonitions in this respect most salutary, although habitual bathers will soon find out and relinquish baths where their safety is not regarded. Your observations, too, with reference to the attendance is

warranted; for one regrets to have to confess that in establishments where this would be least likely to be expected, and where, doubtless, the proprietors pride themselves on the appellation of the Turkish baths, this is noticeable in a marked manner. The apathy and indifference to the comfort of bathers, with not half a shampoo, and so little water, and one's freedom and wants curtailed to the last degree, leave a lasting impression; but the faculty will, doubtless, take care to send their patients where they know proper attention will be paid both to their patients and to their instructions, and where the bath can be enjoyed with some freedom from restraint.

I would add, it is most desirable—imperative even, so far as healthiness is concerned—that Turkish baths should not be "adapted buildings" from some private house or shop, but should be built for the purpose, and constructed with proper materials, such as concrete and tiled floors, concrete and plastered ceilings, and brick walls. Timber floors and partitions in old buildings often emit unpleasant smells, especially when heated, and it is impossible to keep the rooms sweet. Any felting or curtains in the hot rooms should be frequently renewed, and all the chambers kept scrupulously clean. Bathers are most sensitive in these respects.

Yours obediently,

London, June 15th, 1880.

H. H. BRIDGMAN, A.R.I.B.A.

To the Editor of THE LANCET.

SIR,—In a short article with the above heading in your issue of June 5th, the writer says: "If the air of a Turkish bath is laden with germs of disease thrown off from the lungs of a fever or a consumptive patient, there are no currents to carry the particles away. It is a physical certainty that others breathing in the bath must inhale them. This is an evident source of peril, and suggests the wisdom of taking measures to insure the frequent changing of an atmosphere which may be thus easily polluted." When the Turkish bath was first introduced into this country, the hot rooms were heated mostly with smoke flues traversing under the floor, and there was no ventilation, certainly no constant change of air. There may be a few baths still so heated; but at the present time there is no difficulty in steadily maintaining the necessary high temperature in the hot-rooms, with a constant change of air equal to thirty cubic feet per minute for each bather, which is more than is insisted upon in the best hospital. Having been interested in the Turkish bath for many years, I have all along been impressed with the importance of thorough ventilation in the hot-rooms, and to that end have made numerous experiments, which have eventually resulted in the production of the convoluted stove, which, owing to its large radiating surface and small grate space, produces an immense volume of moderately warmed air, without the possibility of over-heating; and the air being drawn directly from the outside, the supply of fresh air is constant. Most of the baths in this country are heated by the apparatus named, and ventilated in the manner indicated. In towns or crowded places the air may be filtered in various ways before entering the heating chamber surrounding the apparatus. I may state briefly that by this mode of heating the superficial area of the outlets for vitiated air may be the same, within a fraction, as the flue by which the fresh warm air enters, and there being no valves used, an uninterrupted change of atmosphere is insured.

I am, Sir, yours &c.,

Manchester, June 16th, 1880.

JOSEPH CONSTANTINE.

SOCIÉTÉ FRANÇAISE D'HYGIÈNE.

"LE CONCOURS. — Hygiène et Éducation physique de la seconde enfance. La salle d'asile modèle, est prorogé au 1er janvier 1881 et modifié de la façon suivante: — Ire question: Hygiène de la seconde enfance jusqu'à l'âge scolaire, c'est-à-dire de 2 à 6 ans, embrassant tout ce qui concerne l'hygiène proprement dite, y compris le développement normal des organes des sens, mais sans toucher à la pédagogie infantile. 2e question: Hygiène et pédagogie des salles d'asile modèles. La partie hygiénique se rapportera exclusivement au milieu spécial de la salle d'asile. La partie pédagogique aura exclusivement pour objet le développement harmonique du corps et de l'intelligence. Dispositions et formalités générales: Les deux questions précédentes constituent deux concours bien distincts, et récompensés chacun par une médaille d'or, une médaille d'argent et trois médailles de bronze. Les mémoires écrits en Français, Anglais, Italien ou Allemand devront être adressés, sous la forme académique, au siège de la Société française d'hygiène, rue du Dragon, numéro 30, avant le 1er janvier 1881. Les auteurs qui se seront fait connaître, soit directement, soit indirectement, seront exclus du Concours. L'étendue des mémoires ne devra pas dépasser 30 pages d'impression in-12. Les mémoires couronnés appartiendront à la Société qui pourra les imprimer, en totalité ou en partie; elle s'engage toutefois à inscrire le nom des Lauréats en tête de l'opuscule qui sera répandu autant que possible."

UNQUALIFIED MEDICAL OFFICERS TO PUBLIC INSTITUTIONS.

To the Editor of THE LANCET.

SIR,—I notice in the reply to "J. D.," in your issue of the 26th ult., that you state the following: "Every public hospital is bound to employ qualified officers for its medical service." Would you or any of your readers kindly inform me of what material the ligature is composed, as I am ignorant of any stronger tie than that of professional opinion? I regret to say that it is a practice by no means uncommon to appoint unqualified men as house-surgeons to provincial hospitals, to the detriment of the officers themselves, their hospitals and patients, and the medical profession at large.

I am, Sir, faithfully yours,

Mare-street, Hackney, July, 1880.

SAMUEL WILSON.

"BONE-SETTING."

To the Editor of THE LANCET.

SIR,—In your impression of May 8th Dr. Monckton calls the attention of the profession to the treatment of stiff joints. The following cases, which have recently occurred in my own practice, I deem worthy of bringing under your notice:—

A patient aged fifty had a subglenoid dislocation of the humerus. I reduced it easily, bandaged the arm to the side, and enjoined rest. Three weeks after the lesion occurred he was unable to abduct his arm in the slightest degree, and, as I naturally felt very anxious about the case, I took him to London, and had the advice of a surgeon of eminence, who at once pronounced the case to be one of "muscular adhesion," placed my patient under gas, and forcibly put the joint through its various motions, assuring both myself and my patient that free motion of the shoulder-joint would immediately ensue. It has not done so, however; and now, after six weeks' interval, the latter is unable to raise his arm, or even to write; he has a hard lump between the long and short heads of the biceps, and also between the insertion of that muscle and the brachialis anticus.

A school-boy fell with his arm elevated, and several boys fell upon him, causing dislocation (downwards and backwards) of the humerus. There was great displacement of the parts, but I effected reduction easily and satisfactorily. I afterwards put the arm in a sling, and told the boy to raise the limb right up every other hour during the day. He did so, and in a week's time the use of his arm had returned almost as well as ever, and there was comparative absence of pain.

A woman aged thirty, whose sister and two brothers all suffer from flexed knee-joints, the result of arthritic disease, sent for me complaining of severe pains in the knee-joints. On examination, I found her suffering from synovitis with slight effusion. In three days both her knees were flexed, in spite of every effort made to the contrary, and she was unable to extend them. The deformity of the other members of her family already mentioned being prominently under my notice, I determined that at all risks she should not suffer as they had done. I therefore placed her well under chloroform, and forcibly extended both legs, bandaged them together, and fixed a five-pound weight working upon two pulleys upon them, which made direct traction in the long axis of her body, at the same time treating the synovitis *secundum artem*. In a fortnight she could walk without pain or any other synovitic symptom.

I am led to believe that the first case I write of was not one of a muscular but of a neurotic nature; that the second case was treated contrary to the treatment usually taught at our medical schools; and that the plan adopted in the third case is similar to that for which "bone-setters," and until recently "bone-setters" alone, gain such credit.

I remain, Sir, yours truly,

Poole, June, 1880.

E. P. PHILPOTS, M.D.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Sturges; Mr. S. Gamgee, Birmingham; Mr. J. B. Cooke; Mr. H. C. Laurence; Dr. D. Powell, London; Dr. Allen Duke; Mrs. Baines; Dr. H. Davies, London; Dr. Ogle; Messrs. Sheehy and Son, London; Mr. Reckitt, Newark; Surgeon-Major Hamilton; Surgeon-General Irving, Edinburgh; Mr. F. Treves, London; Dr. Gouley, New York; Mr. Pearce, Manchester; Mr. Cartwright, Manchester; Mr. Garrard, Herefordshire; Mr. Stanley, London; Mr. Hardwicke, Sheffield; Mr. Rouse, New Zealand; Mr. Howell, London; Dr. White, London; Mr. Crowley, Sheffield; Mr. Gairdner, Crief; Dr. Mapother, Dublin; Mr. Rachius, Boston, U.S.A.; Messrs. Bossert and Scholl, London; Mr. W. Smith, Redditch; Mr. Bennett, London; Mr. Levison, Haverstock-hill; Mrs. Turner, Dover; Messrs. Richardson, Leicester; Mr. Westmorland; Mr. Bourns, Brompton; Dr. Chalmeley; Dr. Burrall, New York; Mr. Burbidge, Coventry; Dr. Laverick, Hinderwell; Mr. E. N. Smith; Dr. Harding, Whittlesea; Dr. Murray, Putney; Miss C. Holloway; Mr. Wilson, London; Dr. Robertson, Bayswater; Mr. Burton, Liverpool; Mr. Nicholson, Manchester; Mr. Walley, Bradford; Mr. Lownds, Surrey; Lady Buchanan; Surgeon-Major Sutherland; A Sufferer; A Constant Reader; Pregunta; F. M. T.; L. S.; Experimentum fit; W. A.; &c. &c.

LETTERS, each with enclosure, are also acknowledged from—Dr. Simps, London; Mr. Shrivell, Hadlow; Miss Carty, London; Mr. Knapp, Bristol; Rev. W. C. Arnold, Woking; Mr. Hammersley, Catford; Mr. Nicholson, Dublin; Mr. Norris, South Petherton; Mr. Nesbitt, Monaghan; Dr. Jones, Harlech; Mr. Davidson, Carlisle; Mr. Walker, Middlesborough; Mr. Jennings, Coleford; Surgeon-Major Roche, Agra; Mr. Harding, Westgate-on-Sea; Dr. Sutherland, Castletown; Dr. Smith, Glasgow; Messrs. Leader and Sons, Sheffield; Messrs. Evans and Wells, St. Neots; Mr. Robinson, Chesham; Mr. Hughes, Woolwich; Dr. Pearson, Cape Colony; Dr. Adamson, Fence Houses; Mr. Glaisyer, Brighton; Mr. Milne, Ladywell; Mr. Thomas, Newcastle; Mr. H. Wardell, Windsor; Messrs. Sharpe and Co., Birmingham; Mr. H. H. Bigg; C. H. B., Ledbury; C. V., Walsall; I.R.C.S.; R. W.; Medicus, Kempston; J. J., Glasgow; Alpha, Rotherham; Riece, Pendlebury; Beta, Pinchbeck; R. H., Nottingham; M. R. D.; A., Basingstoke; X.; D. Finsbury; G. J., Hartlepool; Æsculapius; W. O. B.; M. S.; W. H., Bradford; R. A. C.; W. S. G., Manchester; A. B.; K.; V., Kensington; M.D., Manchester; R.; M. W.; Delta, Huddersfield; A. B., Lifton; L. N.; H. N. O., Horsforth; Jacobus, Edinburgh; T.; &c.

Indian Daily News, Liverpool Daily Post, Manchester Guardian, Bristol Mercury, Herald and Weekly Free Press, Chelmsford Chronicle, Surrey Advertiser, North Cheshire Herald, Worcestershire Chronicle, Observer, Cambridge Chronicle, Wigan Observer, &c. &c., have been received.

Medical Diary for the ensuing Week.

Monday, July 12.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS. — Operations, 10½ A.M. each day, and at the same hour.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL. — Operations, 1½ P.M. each day, and at the same hour.

METROPOLITAN FREE HOSPITAL. — Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL. — Operations, 2 P.M.

ST. MARK'S HOSPITAL. — Operations, 2 P.M.; on Tuesday, 9 A.M.

Tuesday, July 13.

GUY'S HOSPITAL. — Operations, 1½ P.M., and on Friday at the same hour.

WESTMINSTER HOSPITAL. — Operations, 2 P.M.

WEST LONDON HOSPITAL. — Operations, 3 P.M.

Wednesday, July 14.

NATIONAL ORTHOPÆDIC HOSPITAL. — Operations, 10 A.M.

MIDDLESEX HOSPITAL. — Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL. — Operations, 1½ P.M., and on Saturday at the same hour.

ST. THOMAS'S HOSPITAL. — Operations, 1½ P.M., and on Saturday at the same hour.

ST. MARY'S HOSPITAL. — Operations, 1½ P.M.

KING'S COLLEGE HOSPITAL. — Operations, 2 P.M., and on Saturday at 1 P.M.

LONDON HOSPITAL. — Operations, 2 P.M., and on Thursday and Saturday at the same hour.

GREAT NORTHERN HOSPITAL. — Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL. — Operations, 2 P.M., and on Saturday at the same hour.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN. — Operations, 2½ P.M.

Thursday, July 15.

ST. GEORGE'S HOSPITAL. — Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL. — 1½ P.M. Surgical Consultations.

CHARING-CROSS HOSPITAL. — Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL. — Operations, 2 P.M., and on Friday at the same hour.

HOSPITAL FOR WOMEN, SOHO-SQUARE. — Operations, 2 P.M.

Friday, July 16.

ST. GEORGE'S HOSPITAL. — Ophthalmic Operations, 1½ P.M.

ST. THOMAS'S HOSPITAL. — Ophthalmic Operations, 2 P.M.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL. — Operations, 2 P.M.

Saturday, July 17.

ROYAL FREE HOSPITAL. — Operations, 2 P.M.

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Lectures ON THE

PHYSICAL EXAMINATION OF THE MOUTH AND THROAT.

*Delivered to the Junior Class of Clinical Medicine,
University College,*

By G. V. POORE, M.D., F.R.C.P.,

PROFESSOR OF MEDICAL JURISPRUDENCE, UNIVERSITY COLLEGE; LATE
ASSISTANT PROFESSOR OF CLINICAL MEDICINE; ASSISTANT
PHYSICIAN, AND PHYSICIAN IN CHARGE OF THE
THROAT DEPARTMENT OF THE HOSPITAL, ETC.

LECTURE IV.

THE LARYNX AND THE USE OF THE LARYNGOSCOPE.

GENTLEMEN,—We have now discussed all those objective phenomena of the mouth and fauces which are appreciable to our unaided senses. It is always my custom to advise you to trust as much as possible to your unaided senses, and always to make a point of learning as much as possible about a patient without having recourse to those various "scopes" which students are very prone to regard not merely as valuable accessory aids to our senses, but as absolutely indispensable for the acquisition of any knowledge at all.

You will find that it is quite possible to learn a great deal about the larynx without looking at it at all, and that alterations in voice, respiration, and swallowing, combined with palpation, may teach us a great deal. For convenience sake, however, we will depart from our rule of considering all simple means of investigation before the instrumental means, and proceed at once to speak of the laryngoscope.

The laryngoscope, an instrument for obtaining a view of the larynx, is a modern invention. Mirrors for illuminating the throat had been used in an unmethodical manner for many years, when Signor Garcia, a singing master, presented a paper to the Royal Society in 1854, on the Physiology of the Vocal Cords, based upon an examination of his own vocal apparatus by means of a laryngoscope. In 1857, Türk of Vienna, and Czermak of Pesth—especially the latter,—succeeded in bringing the laryngoscope to the general notice of the profession.

I shall not detain you many minutes with directions for using the instruments; that is a practical matter, and a very little practice will make you a proficient in the art. To use the laryngoscope aright is a far easier thing to learn than to use the stethoscope or ophthalmoscope. The laryngoscope consists of a mirror worn by the observer, by means of which a strong light is reflected to the back of the pharynx, and there again reflected downwards to the larynx by means of a second and a smaller mirror, upon which an image of the larynx becomes visible. A few words may be added in amplification of this.

1. As to the source of light. The best of all is the sun; and whenever you can get the chance of doing so, place your patient in a chair, with his back to a window, and reflect the rays of the sun directly into his throat. Failing the sun, an Argand gas-burner, or, better still, a mineral-oil lamp, with either a flat or a circular flame (I prefer the latter), form excellent sources of light for this purpose; and as the one or the other exists in every house, you should accustom yourselves to use them. An ordinary gas-flame, or even a candle, will answer the purpose. No lenses or condensers are necessary, and you may have observed that I never use either the one or the other. I strongly advise you not to get in the habit of using cumbrous and expensive apparatus, which you may not be able to obtain when most needed, and which really hinder that training of the senses, after which we should all strive. Some persons prefer a direct illumination of the pharynx, but you will find it generally most convenient to place your source of light a little behind and to one side of the patient, and then to reflect the light into the throat, exactly as a schoolboy uses a bit of looking-glass for the purpose of throwing a light into someone's face.

2. The reflector may be mounted on an india-rubber band or a spectacle frame, and it must be perforated in the centre,
No. 2968.

and be movable in all directions upon a ball-and-socket joint. The reflector is best worn over one eye, the operator using the central perforation for the purposes of vision.

3. The laryngeal mirrors vary in size from a sixpence to a florin, and are mounted on slender handles. The handle and the mirror should form an angle of about 120°, and the handle should be sufficiently pliable to admit of this angle being varied at the pleasure of the observer.

A few words as to the method of using the instrument. Let the patient sit facing you, with the knees together, on an ordinary chair, and with the illuminating lamp upon a table, or otherwise suitably supported, just behind and to one side of him, the flame being about on a level with his ear. Sit immediately opposite the patient, and ask him to sit quite upright, with the head a little thrown back. Tell him to open the mouth, and then adjust the reflector, so that the light is thrown upon the pharyngeal wall, the uvula, and the arches of the palate. Ask him to protrude the tongue fully, and then *gently* and neatly wrapping the end of it in a smooth fold of a soft small napkin, take the tip *gently* between the thumb and forefinger of the left hand, and retain the tongue in its protruded position with the least possible amount of pressure, and absolutely without anything like forcible traction. If the second finger of the left hand be passed beneath the patient's chin, any unintentional wandering of the hand is prevented.

Be sure and use all gentleness in these manipulations. Anything like force leads to struggling on the part of the patient's tongue and to spasms of the pharynx, and is fatal to your object. Next, take a laryngeal mirror of suitable size and hold it lightly, like a pen, in the right hand. Many students hold the mirror too tightly, and with the end of the handle touching the palm of the hand. Held in this position it is impossible to alter the direction of the mirror without moving the entire hand and wrist. If it be held like a pen, the mirror can be moved freely in all directions simply by the movement of the tips of the thumb and first two fingers.

The mirror must be warmed before being introduced into the mouth to prevent the condensation of moisture upon its surface. This end may be attained also by smearing the surface of the mirror with glycerine and water, but heating is a better plan, as, being cleaner and simpler, and likely to lessen instead of increase the risk of any carriage of infecting particles from one patient to another. In passing the mirror to the back of the mouth follow the natural curves of the mouth, and pass the mirror over the dorsum of the tongue without touching it. If skilfully passed the mirror should touch nothing until the edge of the soft palate is reached, when the uvula should be gently pushed upwards upon the back of the mirror. Then if the patient be asked to take a deep breath a complete image of the larynx is obtained.

In a favourable case there is really no difficulty whatever in doing what I have described. You will find, however, many patients who are very intolerant of any manipulation of the mouth or throat, and the mere *idea* of the examination is enough to make them double up their tongues, contract the pharynx, retch, and even vomit. In such cases you must be doubly careful not to touch the mouth, and particularly to avoid irritating the posterior pharyngeal wall. It is a good plan to keep such patients occupied and to make them inspire and expire deeply and frequently during the whole period of examination, and to utter sounds, such as "Ah" or "Eh." When asked to "take a deep breath" many of the irritable patients do nothing of the kind, but merely contract the pharynx and hold the breath. It is often necessary to teach them what is wanted to be done. The irritability of the throat may be lessened by sucking ice. The bromide of potassium administered for a few days in doses of ten or fifteen grains will diminish the irritability in a very remarkable manner. Great irritability of the throat is natural to some people, but in the great majority it is indicative of gastric hyperæmia, and is especially observable in people who indulge in alcoholic stimulants. In such cases the combination of Epsom salts with the bromide is very useful.

But now let us suppose that the laryngeal mirror is successfully placed *in situ*. What do you see reflected in the mirror?

At the top of the mirror is seen the epiglottis; at the bottom are seen the two prominences caused by the tips of the arytenoid cartilages, or rather by the cartilages of Santorini which surmount them. Between the edges of the epiglottis and the cartilages of Santorini are two folds of mucous mem-

brane called the aryteno-epiglottic folds, and during deep inspiration a fold of mucous membrane is observed stretching between the arytenoid cartilages and forming the posterior wall of the larynx. The parts I have named form a frame, as it were, and in it are seen the pearly white vocal cords, stretching like an inverted Λ from the epiglottis (apparently), where is the apex of the triangle, to the arytenoid cartilages, where is the base. Between the vocal cords and below them may be seen a transverse striation caused by the rings on the anterior wall of the trachea, and in very favourable cases a glimpse may be caught of the division of the trachea into right and left bronchus. Between the aryteno-epiglottic fold and the vocal cord on either side is seen the red mucous surface of the ventricular band or false vocal cord.

These appearances differ at different times. During deep inspiration the arytenoid cartilages are separated by a third of an inch or more, the inter-arytenoid membrane is well seen, and the triangle formed by the separated vocal cords is very evident. During phonation, however, when the patient is made to say "Ah," the arytenoid cartilages and the vocal cords are brought close together, and the rima glottidis is almost completely shut.

It may be well to mention that healthy larynges differ considerably in appearance, and the shape of the epiglottis is as varied as is the shape of the ear or nose in different individuals. It may be well to mention also that in a certain very small percentage of cases the epiglottis is so pendulous as completely to obscure the larynx.

I must remind you that the image which you see in the laryngeal mirror is a reflected one; and just as in an ordinary looking-glass the right hand of the spectator becomes the apparent left of the image, so the parts of the image of the larynx which are to the observer's right hand are in reality those which are on the left side of the patient's larynx. Remember also that the upper part of the image, the epiglottis and the apex of the triangle formed by the vocal cords—the parts which seem furthest off—are those which form the anterior wall of the larynx, while the bottom part of the image is formed by the posterior laryngeal wall. It is very important to remember this when you come to make applications to the larynx.

I may mention that the laryngeal mirror is useful as enabling one to get a good view not only of the larynx, but of the base of the tongue—the papillæ circumvallatæ and the parts beyond, and the glosso-epiglottic fossa. It enables us also better to explore the pharynx and the arches of the teeth.

The diseased appearances of the larynx are in kind similar to those which are seen in the pharynx.

Hyperemia is very easily produced by any irritant. In the rapidity with which hyperemia may be brought about the larynx resembles the conjunctiva, and a particle of food or dust will cause a general distension of the vessels, and a swelling of the mucous membrane almost instantaneously. If the irritant be a powerful one, such as boiling water, the hyperemia may cause oedema, and the swelling may be so great as to produce suffocation and death in a very short time.

Hyperemia is not only brought about by direct irritation of solid particles, but by over-use of the larynx in talking or incessant coughing, exposure to cold, and atmospheres laden with solid particles either in workshops or in London fogs, by the too frequent use of strong drinks, and by gastric irritation however induced. It is seen also in certain constitutional states, such as syphilis, gout, and consumption. The hyperemia may affect any part. When it affects the vocal cords they lose their pearly-white shining appearance, and look very often as if a very thin layer of treacle were smeared over them, or possibly tiny vessels may be actually visible upon their white surface.

Anæmia of the larynx is present as a part of general anæmia. Occasionally the anæmia of the larynx is greater than that of other parts, and I have seen cases where the pallor of the larynx has been very great, while no very obvious signs of anæmia existed elsewhere. Such anæmia of the larynx is generally accompanied by some impairment of function, and is said to be a precursor of laryngeal phthisis. I can call to mind four cases, at least, in which the anæmia of the larynx was a very marked feature. One was in a girl, who had signs of locomotor ataxia combined with paralysis of the palate; another was in a medical student with a sluggish follicular ulceration of the larynx, and in whose family there was a well-marked tendency to phthisis;

a third was in a boy who had been seized with aphonia during convalescence from measles, and a fourth was in another boy, who was recovering from an attack of whooping-cough.

In *inflammation of the larynx* there are the usual objective signs of inflammation—viz., redness and swelling. In acute laryngitis the swelling may be enormous. The epiglottis may be two or three times its natural size, and the aryteno-epiglottic folds may be distended to such an extent as to obscure the false cords and the glottic chink. The parts may be dry on the surface, and of a fiery redness, or, as is more often the case, they are bathed in mucus. In such a condition the patient is in imminent danger of his life, and presents all the symptoms of one who is in fear of immediate suffocation. Between these extreme appearances of inflammation and a mere thickening and slight discoloration of the cords there is, of course, every degree of redness and of swelling. Acute laryngitis is liable to occur from exposure to cold, or from direct injury to the part. In children it is known as catarrhal croup, and in adults it is liable to come on after the acute specifics, or during an attack of erysipelas. If there be any disease of the kidneys, the oedema in these cases is apt to be alarmingly great.

As a result of acute laryngitis abscesses may form in the submucous tissue, and then, when the general redness and swelling is subsiding, a smooth globular elastic swelling is left at one spot. A great cause of laryngeal abscess is necrosis of the laryngeal cartilages which is liable to occur as a result of laryngitis, and especially after typhus and other exhausting fevers, and in tubercular and syphilitic disease. The arytenoid cartilages are most often affected, and then we find a globular elastic swelling at the posterior part of one or other of the aryteno-epiglottic folds. Next to the arytenoids the cricoid is most prone to suffer, and the resulting abscess may either form a projection into the larynx beneath the vocal cords, or it may project backwards into the œsophagus, and in doing so interfere with swallowing and with the function of the muscles which cover the posterior surface of the cricoid. The thyroid is occasionally, but not often, the seat of necrosis and resulting abscess.

Chronic laryngitis presents symptoms the same in kind as are seen in acute laryngitis, but usually more localised; and we find that the epiglottis, the aryteno-epiglottic folds, the false cords, or the true cords themselves, are mainly affected.

We may find that the only sign of laryngitis is a very slight thickening and redness of the vocal cords just at the point where the elastic cord joins the processus vocalis of the arytenoid cartilage, and this is a point to which the practical man will specially direct his attention. During phonation, when the arytenoid cartilages rotate inwards, the tips of the processus vocales impinge against each other, and this constantly-recurring shock is enough to determine the inflammatory action to this spot.

There are three great constitutional causes which determine the chronicity of a laryngitis or laryngeal catarrh. These are syphilis, phthisis, and alcoholism. Two of these causes are often combined, and occasionally all three. Now it is important to consider whether, from the appearance of the larynx alone, one can tell which of these causes is present. There may be simple diffused redness of the larynx, and then it is quite impossible to say to what cause it is due, and your opinion will be formed entirely by the concomitant symptoms.

Syphilis will cause swelling of the mucous membrane, accompanied by mucous patches and superficial ulceration exactly similar to the appearances which I have described as occurring in the pharynx, and seeing these the practised eye will recognise their cause at once. Gummatæ may grow in the mucous membrane here, and that uniform syphilitic infiltration which we have noticed as occurring in the tongue and pharynx may also take place in the larynx, causing great swelling of the epiglottis, false cords, and the aryteno-epiglottic folds, and occasionally swelling also of the parts beneath the true cords. As a general rule, it may be said that in the syphilitic conditions the mucous membrane is not of a very deep tint, and the parts look harder. I am in the habit of saying that, when the appearance of the swollen mucous membrane reminds me of a "white-heart" cherry, I suspect syphilis, but when I am reminded of a ripe strawberry I suspect some other cause (often phthisis) for the catarrhal condition. The infiltration of syphilis may produce complete occlusion of the glottis. Sloughing and contraction of the parts may occur, and so much distortion as to render them scarcely recognisable.

The epiglottis may be completely destroyed, or may appear notched and crumpled, and unequally thickened.

With regard to "laryngeal phthisis," as it has been called, Von Ziemssen says, "Neither the catarrh nor the ulceration of phthisical subjects presents any characteristic signs by which it could be recognised as such." This is perfectly true, and my experience enables me to endorse this assertion. It may be said, however, that in laryngeal catarrh of phthisical origin the mucous membrane looks red and soft, like an over-ripe strawberry, and often the glandules of the part, being swollen, increase the resemblance to the texture of the strawberry. There are especially two parts which are very liable to be attacked in phthisis—viz., the epiglottis and the posterior parts of the aryteno-epiglottic folds. When we see the epiglottis fiery red, puffy and granular, and bathed in mucus; and when we see the so-called pyriform swelling over the arytenoid cartilages, with the big ends of the pear-shaped masses touching behind and the thin ends stretching towards the sides of the epiglottis; when these pear-shaped masses look red and granular, and when we see mucus welling up between them, we have very strong grounds for suspecting phthisis as a cause of the condition. Many of you, however, may have seen a patient whose condition was to the eye most suggestive of phthisis, but whose recovery was only brought about by active mercurialisation, and the occurrence of such cases should make one careful not to jump to conclusions.

Alcoholic laryngitis has nothing very characteristic about it, although I fancy that the epiglottis is the part most generally attacked.

In all cases of chronic laryngeal catarrh your conclusions as to the cause must be largely drawn from the concomitant symptoms: The laryngeal appearances may or may not be highly suggestive; but an alcoholic smell in the breath, combined with a bloated countenance; or the characteristic anæmic condition seen in syphilis combined with pharyngeal syphilis; or emaciation, rapid breathing, a hectic flush, and a flattened chest, will generally serve to confirm or correct the opinion which an inspection of the larynx has led you to take.

Ulceration of the larynx is commonly present in two conditions—viz., syphilis and phthisis. In both it may be very extensive, and may occur at any part—on the epiglottis, the false or true cords, the aryteno-epiglottic folds, or the inter-arytenoid space. The ulceration is very similar in both conditions. In phthisis the seat of the ulceration is very apt to be the tip of the processus vocalis, or the part of the laryngeal wall between the arytenoid cartilages, or the surface of the swollen and reddened mucous membrane covering the arytenoid cartilages. In laryngeal phthisis the swollen and ulcerated condition of the posterior part of the aryteno-epiglottic folds often occasions very great difficulty in swallowing.

Adventitious Growths.—In croup and diphtheria a false membrane grows upon the laryngeal mucous membrane similar to that which is seen on the pharyngeal. "Thrush" may affect this part, and we may find patches of oidium albicans. Occasionally cancer, usually of the epithelial type, attacks the larynx, and when it does so it is almost always by spreading from the œsophagus. The appearances are the same as those caused by epithelioma elsewhere—thickening and infiltration of the part, with ulceration and a foul unhealthy surface. Here there is no attempt, as in syphilis, to cicatrization and repair, and the act of destruction is continuous. In the late stages diagnosis is easy, but in the early stages it is difficult. The concomitant symptoms and the microscopic appearance of expectorated matter are great aids in forming a diagnosis.

New growths of a simple character in the larynx, forming tumours upon the laryngeal mucous membrane, are not uncommon. In all cases of prolonged laryngeal catarrh the mucous membrane is apt to become thickened and nodular, and may project into the laryngeal cavity. Such mucous projections, although they may prove tempting objects of attack to aspirants for fame, are in no sense new growths, and do not often call for any surgical interference. We have recently seen in the Throat Department a good example of a simple laryngeal tumour—viz., a globular round-celled sarcoma, as big as a hazel-nut, growing by a broad base from the anterior part of the left ventricular band or false cord. The most common among these formations are papillomata, or warts and fibromata or polypi. These tumours seem to have their origin in hyperæmia of the mucous membrane, however brought about. Occasion-

ally there is a syphilitic history. They may grow from any part of the laryngeal mucous membrane, true or false cords, the aryteno-epiglottic folds, or the inter-arytenoid space, and the laryngoscope enables us to see their exact position and their naked eye appearance, whether warty or polypoid. The diagnosis of these conditions is impossible without the aid of the laryngoscope.

PART OF A Clinical Lecture ON THE

RADICAL CURE OF VARICOCELE BY THE GALVANIC ÉCRASEUR.

Delivered at the Westminster Hospital on July 3rd, 1880,

By A. PEARCE GOULD, M.S., F.R.C.S.,

ASSISTANT-SURGEON TO THE HOSPITAL, AND LECTURER ON ANATOMY
TO THE MEDICAL SCHOOL.

GENTLEMEN,—Although there are very many cases of varicocele in which no treatment, or only palliative measures, are required, you will meet with others in which it will be your duty to undertake the permanent or radical cure of the varix. These cases are as follow:—1. Where the testicle is atrophying. 2. Where the varicocele is double, especially if an examination of the semen shows an absence of spermatozoa, or the patient, being married, is sterile. 3. Where the opposite testicle is lost or useless from tumour, orchitis, epididymitis, or injury. 4. Where the varix is large and increasing, in spite of palliative treatment. 5. Where the varix causes much pain, or interferes with proper exercise and necessary work. 6. Where it is the occasion of marked mental depression. 7. Where the varicocele prevents acceptance for either of the Government services.

There are many plans for securing the radical cure of varicocele, including castration, excision of the veins, the actual cautery, forcipressure, and ligature. The ligature is the method most commonly adopted, and has been variously modified by Ricord, Vidal, Erichsen, Wood, and H. Lee. (These methods of treatment were then described.)

Of the efficacy of these treatments there can be no doubt, but unfortunately they have two drawbacks—the pain attending them, and a certain amount of danger. For a long time surgeons avoided as far as possible any interference with veins, and although veins are now ligatured almost as freely as arteries, there is no doubt that diffuse thrombosis, embolism, and septic poisoning are more liable to follow injuries of veins than of arteries. This being so, it is plainly the surgeon's duty to avoid in every possible way any irritation or disturbance of an injured vein, and it is because this principle is not sufficiently carried out that the usual modes of treating varicocele have been attended with serious and even disastrous results. The daily twist of Vidal's pin, and constant traction of Wood's spring, are not only painful, but opposed to the great principle that demands perfect rest to all inflamed and injured tissues, and veins in particular, while, in Lee's operation, the presence of two harelip-pins transfixing the scrotum is apt to set up œdema and inflammation, and their removal is not without risk of embolism. That these are no imaginary fears is evident from the published results of these and analogous treatments. Gant says that the results of the operations are "variable," and include diffuse inflammation and sloughing of the scrotum, suppurations of the testicle, phlebitis, pyæmia, and death; Erichsen records two deaths from the twisted suture; Gross had one death after ligature; Sir E. Home had one nearly fatal case; Escallier mentions two fatal cases of phlebitis, and Curling speaks of three cases of serious results, two of which were fatal. Some years ago the censor of one of the chief London hospitals died from pyæmia after Lee's operation. This list by no means includes all the accidents of these treatments—it makes no mention of the pain suffered, or of the inflammatory œdema and suppurations of the scrotum.

It was with the hope of avoiding these complications that I was led, now more than two years ago, to try the plan of subcutaneous division of the veins by means of a platinum wire heated to a red heat by electricity. The procedure is, as you have seen, very simple. First, feel for the vas deferens, and grasp the veins in front of it, and nip in the scrotum with the left thumb and forefinger; transfix the scrotum at this spot between the duct and the veins with a narrow bistoury, and pass a needle armed with a platinum wire in the track of the knife; then return the needle through the same apertures, but this time in front of the veins between them and the skin. Of course, if the vas happen to be in front of the veins, as was the case in that of W. C—, shown to-day, you modify the procedure a little. In this way you have the veins in a loop of the wire. It is better to make a puncture with a knife rather than merely to transfix with the needle, for the veins are looped up cleaner, there is not the same liability to include a portion of the skin in the noose as in the latter plan. Then attach the ends of the wire to the *écraseur*, and connect with the battery, using sufficient cells to cause a faint hissing noise; one cell of Grove's battery, or at most two, is sufficient. This step must be done deliberately; I have taken as long as five or six minutes over it. To protect the skin from burning, let some cold water trickle over it while the wire is burning its way through the veins. The after-treatment consists in perfect rest in bed for a few days, with the scrotum supported on a broad strip of strapping fixed across the front of the thighs. I have three times operated without anaesthesia, but the pain may be severe, and I prefer to have the patient under the influence of ether. After recovery from the anaesthesia there is an entire absence of pain, and this perfect freedom from spontaneous pain continues uninterrupted throughout the convalescence. A few hours after the operation the knobby feel of the varix is replaced by a soft even swelling, which lessens and hardens, and at the end of forty-eight hours is usually to be felt as a hard lump, about the size of a big marble. This is tender on pressure. By the end of a week it has lost its tenderness, and has shrunk to three-quarters its original size. The veins below can still be felt full, but not compressible, the blood in them has by that time coagulated, and they become smaller and firmer, until ultimately a small pea-like induration in front of the vas is all that is left, and even this may disappear, and no trace of the varix or operation be left, as in W. S—.

I have employed this method eight times, each time the varix has been cured, the symptoms complained of relieved, and no mischief to the testicle has followed. These eight cases have shown me that there are three things to be carefully avoided. The first is hurry in the section of the veins; twice a few drops of blood have followed the escape of the wire, but only so little as to require nothing more than lint or cotton-wool to be placed over the wound; in neither instance was there any hæmatocele. The second is to operate well above the tunica vaginalis; in one of my cases acute hydrocele was lighted up, it quickly subsided under belladonna fomentations. The third is burning of the skin, leading to a small slough; although there is nothing of serious moment in this slough, it is of course best to avoid it, and if the skin is incised and kept cold and the loop of wire not brought too small it can generally be saved.

I can recommend you to practise this operation, first, because of its entire painlessness after the few moments of its actual performance, and, secondly, because it fulfils the physiological indications better than any other I know of. My cases at present are too few to prove by statistics that it is less dangerous to life than those operations I have mentioned, but they are sufficient to show that the operation is simple, effectual, and introduces no new danger, while it is obviously free from the sources of irritation common to other methods.

The section of the veins is completed at once; there is no foreign body liable to set up inflammation left in contact with the healing veins, which are allowed to remain at perfect rest, while their seared ends are becoming permanently closed. As you are aware, the closure of an open vessel by the hot wire or iron is usually considered a particularly safe plan. There is also no interference with the skin of the scrotum, as in Lee's operation; no compression of the scrotal vessels, no oedema.

The only other method that I should at all recommend to you is the use of the catgut ligature applied to the veins subcutaneously. I have had no experience in it, but it has been done with success. I think the heated wire is

preferable, because the catgut ligature is rather uncertain in its action; it may soften very rapidly and then fail to occlude the vessels, or it may not soften at all and cut its way through the veins like an ordinary hempen or silk thread, or remain and subsequently light up inflammation. These accidents are only occasional, but we should none the less be on our guard against them, and give the preference to a plan of treatment which is free from them. In none of my eight cases has any slough separated from the veins; the eschar formed has been absorbed by the living tissues. I show you to-day four cases at varying periods after the operation illustrating their progress.

1. W. J—, aged seventeen, a large left varicocele, which he had noticed for "several years," left testicle smaller than right, complained of dragging pains in scrotum and up to left loin. Operation June 21st, 1879; left hospital June 28th. A firm induration the size of a marble felt; not tender; veins below plugged.

2. F. L—, aged twenty-four, single, injured left testicle five years ago; first noticed varicocele three years ago, after an attack of clap, since then the pain and swelling had steadily increased in spite of wearing a suspender. No constipation; external piles for two years. Operation May 28th; left hospital June 8th. The induration is very hard, the size of a horse bean; veins below are firm and shrinking.

3. W. C—, aged thirty, single, very large left varicocele, noticed suddenly in June, 1879, while bathing. Pain in scrotum and groin had increased of late; testicle smaller than right. Operation May 1st; left hospital May 7th; delayed on account of a slough of skin. Induration now small; veins below cannot be felt; testicle has regained its former size and is a little larger than right.

4. W. S—, twenty-one, a small varicocele noticed some years; scrotum not lax; considerable pain; frequent seminal emissions and mental depression. Operation Sept. 29th; left hospital Oct. 9th. No trace of dilated veins or of the seat of the operation to be felt. All symptoms relieved.

SOME STATISTICS OF FATAL CHOREA.

By OCTAVIUS STURGES, M.D.,

PHYSICIAN TO THE WESTMINSTER HOSPITAL; ASSISTANT PHYSICIAN TO THE HOSPITAL FOR SICK CHILDREN.

THE pathology of chorea needs to be discussed upon a wider basis than that which is offered by morbid anatomy. Nevertheless, no survey of the disorder can be complete which fails to take into account evidence of this sort. The review of a sufficient number of examples of fatal chorea, apart from any direct discovery of morbid change, cannot fail to be of service in exhibiting the age and sex and temperament most liable to succumb to such attacks. We are thus assisted in separating from one another a highly dangerous form of convulsion, and that far commoner motor disorder which, whether violent or not, has little or nothing of danger about it, and probably recovers best without active medical interference.

Yet, with this obvious service to be got from the study of fatal chorea, the event of death is so rare that no single observer from his own experience can do more than contribute a very small share of the material necessary for the purpose of drawing any general conclusions. Thus, Dr. Hughes, in so large a hospital as Guy's, was able to collect from all the records by various hands which had been preserved during more than thirty years, only eleven fatal cases. Dr. Dickinson, from a similar record at St. George's, extending over thirty-three years, collected sixteen such cases, while the large field of observation offered by the Hospital for Sick Children during fifteen years furnishes but six. These examples, it must be understood, include those dying with chorea as well as those dying of it. Although it is not always easy to distinguish between these two classes, it is certain, as will presently appear, that the cases of death attributable directly to chorea fall very far short of the numbers just given. It must be added that many of the earlier records are very defective, that there is no uniform plan of tabulation, and that with different observers different points of interest have received mention.

On the whole it may be said that if all the recorded accounts of fatal chorea in this country which are fairly complete and readily accessible were put together the total number would not be large, and that in a considerable proportion of these the immediate cause of death and the choreic disorder would be found in very remote and uncertain connexion.

Such being the facts of the case, I have thought it of interest to bring together eighty cases of death in connexion with chorea, or at least with convulsions resembling and called chorea. They are made up as follows:—(a) Three cases (quoted by Dr. Bright), *Med. Clin. Trans.*, 1839; (b) eleven cases (Dr. Hughes), *Guy's Hospital Reports*, 1846 (first series); (c) seven cases (from same source), 1855 (second series); (d) thirty-four cases (Dr. Tuckwell), *Bartholomew's Hospital Reports*, vol. v.; (e) twenty-two cases (Dr. Dickinson), *Med. Clin. Trans.*, vol. lix.; (f) three cases (Dr. Peacock), *St. Thomas's Hospital Reports*, vol. viii.

With these references and the frequent mention I shall have to make of each of these eminent authors no one can quote against me on their behalf the line that Virgil wrote on the palace gate. The present object is to bring together under one point of view a body of evidence derived from many sources without admixture of extraneous matter. Of the conclusions to be drawn from such evidence the reader will judge for himself.

The points I propose to examine concern the age and sex and common exciting cause of fatal chorea, together with its most obvious morbid associations. It will be seen immediately that only a proportion of the eighty cases are given in such detail as to be dealt with in all these respects. Thus Dr. Tuckwell's account is no more than a short summary occupying one paragraph of his paper just quoted. Dr. Hughes's first series is described by himself as "very meagre and imperfect;" Dr. Bright's three cases, although so often quoted, are not altogether in point; in one there was trismus and tetanic spasm, and in a second paroxysmal attacks described as hysteric. In the several enumerations now to be made, therefore, while eighty will be the extreme number dealt with, smaller numbers will have to serve in regard to particular points where the information is defective. With such deduction the cases available in all respects will not exceed thirty, but thirty in the circumstances of this disorder is a large number, it is the gleanings of a very wide field, the sum of fatality out of many thousand examples of chorea extending over a long period of years.

Taking in the first instance the gross number eighty as representing so many individuals dying in connexion with chorea, the most striking point of all to those who are in the habit of regarding chorea as a child's affection is the large proportion of adults and the small proportion of children. Of the eighty, forty-eight are over thirteen years of age, and the ages of two are not stated. Excluding Dr. Tuckwell's numbers, where further particulars are not given, we have in forty-six fatal cases twenty-seven who are over thirteen and nineteen who are under that age. Of the twenty-seven over thirteen, as many as twenty-three may be said to have died of chorea. Of the nineteen children, ten at the utmost died of it, the youngest of these being a girl of seven (No. 19 in Dr. Dickinson's table, *loc. cit.*). Or, again, excluding Dr. Hughes's first (and defective) series, we should have, out of a total of thirty-five, twenty fatal cases over the age of thirteen, of whom sixteen died apparently of chorea; and fifteen under thirteen, of whom only seven died apparently of chorea. We thus establish the fact, making large allowance for error (which from the nature of the material cannot be wholly excluded), that the mortality of children directly from chorea is exceedingly small, and that seven is the youngest age at which it is known as a fatal disease in a very extensive review. We find also, as we should expect in view of the comparative commonness of chorea in children, that the proportion dying *with* chorea but not *of* it is greater with them than with adults.

But next in regard to *sex*. In forty-six fatal cases (again excluding Dr. Tuckwell's) thirty-four are females and twelve males. Of the thirty-four females eight only were children, the youngest (mentioned above) seven years old, and one described only as "a child." As many as twenty-six were young women, eleven of whom, there is good evidence to show, died of chorea. Of the twelve males nine were adults and only three young boys. These latter are made up as follows: One is in Dr. Hughes's first series (No. 6), one is in Dr. Dickinson's table (No. 14), and died of heart affection "without return of chorea," and one is a case of the late Dr. Fuller's (No. 9 in the same table) that died under my own

observation as then Medical Registrar at St. George's Hospital, after five months of almost persistent convulsion. These three boys were each eleven years old. It does not appear upon the evidence before us that chorea is ever fatal to males at an earlier age than this, nor have we more than one out of the three whose death is immediately attributable to this disorder.

The puberty age, then, is the age of fatal chorea. If we take forty-six as representing the total number of persons dying in this connexion, thirty-five would be at or a little above the age of puberty, and twenty-five of these young women.¹ We are thus led to associate fatal chorea with the disturbing incidents of a critical period of life. And the more so inasmuch as in those instances where exciting causes are actually discovered and recorded (but a small proportion, it must be remembered, of the whole number), there is frequent mention of some special excitement of those parts and organs which in the plan of nature are properly over-active at this particular time. Thus Dr. Hughes, in his second series of cases, finds the genital organs unusually excited in three of the four cases examined, while in Dr. Dickinson's table out of nine dying directly of chorea, and with causes assigned, there are three in whom these causes are distinctly sexual.

And not only does fatal chorea attach peculiarly to the emotional sex and the emotional time of life, there are but few instances of it out of the few fully detailed cases which constitute our entire material in this matter where mental excitement does not concur with the bodily over-movement. Such mental disturbance embraces all varieties, from the hysterical to the maniacal. Here again, therefore, a distinction appears between the fatal chorea of adolescence and the non-fatal chorea of childhood. The latter, even in its greatest violence, is commonly quite apart from emotion. The disorder acquires this mental admixture at the same time that it reaches what may be called its dangerous age. It will be perhaps better in this place to cite instances rather than to quote figures. The condition to which I am alluding is manifested by particular incidents. Thus in a case related by Dr. Hughes (first series, *loc. cit.*, p. 390) a man of twenty-five, with violent and ultimately fatal chorea, was "sensibly hurt and shed tears when the bystanders observed that he could restrain the movements if he pleased." In a second case, by the same author (second series, p. 250), that of a girl of eighteen, the symptoms "which were at first slight were suddenly aggravated by fright caused by a patient in the same ward, and she became almost maniacal." In a third instance (from the same series, p. 251), a girl of sixteen, where "there was unusual excitement of the generative organs," the symptoms at first "partook of the character of hysterics, the patient appeared strange in her movements, and fancied that others were laughing at her." In a fourth, a boy of sixteen, "supposed to be addicted to secret vice, his early movements excited the derision of his comrades. Their conduct depressed him much, and he went suddenly into a fit, after which violent and universal chorea supervened." In all three of Dr. Peacock's fatal cases mental excitement is a prominent feature. In one of the very few cases that are recorded of chorea fatal as early as ten (Dr. Dickinson, *loc. cit.*, p. 2), it is related of the child (and some will probably regard the relation as trivial) that a little friend of hers had lately died of chorea, she had watched and imitated the movements, and when she recognised them in her own person made sure that she should meet the same fate. If it be remembered from how small a number of examples these instances are taken, even these few quotations will be allowed to have weight in showing the common habit of fatal chorea. I think it may be said, indeed, not only of fatal chorea but of chorea that at any part of its course threatens to be fatal (a comparatively large number) that amongst the symptoms that give alarm nervous exaltation (so to speak) is generally one.

But while the emotional origin of chorea is thus apparent, as well as the direct influence of mental causes in determining its fatal issue, it is not to be doubted that fatal chorea arises in some instances in immediate connexion with acute rheumatism. The evidence upon this point now before us is to the following effect:—Out of thirty-two fatal cases dying *with* chorea, and reported with sufficient fulness to be available (*viz.*, seven of Dr. Hughes', second series, twenty-two of Dr. Dickinson's, and three reported by Dr.

¹ There is but one elderly person on the list, a woman aged fifty-four, who had had chorea for four years. (Dr. Dickinson, *loc. cit.*, No. 15.)

Peacock), seven had a rheumatic origin. Selecting out of the thirty-two eighteen who died directly of chorea (viz., five of Dr. Hughes', ten of Dr. Dickinson's, and all three of Dr. Peacock's), we get three—a male and two females, *all adults*—where the fatal disorder was of rheumatic origin. These numbers corroborate what I have before maintained in this journal—viz., that acute rheumatism, although having but a small share in chorea, is nevertheless veritably associated with it, and especially with its fatal form at the puberty age.

Coming now to the morbid associations of chorea in so far as they are revealed post-mortem, the evidence before us fully bears out the belief expressed by the late Dr. Kirkes in 1863, "that further experience would still more positively demonstrate that an affection of the left valves of the heart with the presence of granular vegetations upon them is an almost invariable attendant upon chorea, under whatever circumstances the chorea may be developed." The singular accuracy of this description, the need of "almost," and the justice of applying the observation to chorea of whatever origin, and not limiting it (as some would do even now) to rheumatic chorea, or even to chorea fatal as such, will be seen in what is now to be said. Out of all the cases in which the condition in question is especially mentioned I can find but five where the heart valves and pericardium are reported healthy, one of these being an elderly woman. Wherever the heart is affected the mitral valve is affected; the aortic valves are implicated often, the pericardium sometimes. This heart affection occurs equally in those that die in connexion with chorea, and in those that die directly of it. Thus, of Dr. Dickinson's twenty-two there are, as I reckon, twelve dying *with*, but not *of*, chorea; of these ten have mitral valve vegetations, and two have not. Of the ten dying *of* chorea seven have vegetations, and three have not. In Dr. Peacock's three cases, all dying *of* chorea, two have vegetations, and one has not. The valve deposit, which for shortness I thus name, may be either old or new, and variously connected with the mitral valves on their auricular side. The condition would seem to be an accident of the disease it accompanies, having but little apparent connexion with its fatal result. It so happens that of the five cases just mentioned as being the only examples of chorea occurring with perfectly healthy heart, all save one, the old woman, are typical instances of deaths in and by chorea. Three were girls at about the puberty age (Nos. 1, 5, and 8 in Dr. Dickinson's table), and one is a girl of Dr. Peacock's, aged twelve (St. Thomas's Reports, vol. viii., p. 29).

With the exception of this observation in regard to the heart and pericardium, there is little to be gathered in the material now before us as to the morbid anatomy of fatal chorea. I need not now refer to Dr. Dickinson's investigations as to the minute nervous changes in seven of the cases here mentioned, nor to those of Dr. Tuckwell upon embolic plugging, in the paper above quoted. Speaking generally, it must be said that the state of the brain and cord is not described in sufficient detail to be instructive. In a large proportion the brain, in a few the cord, is described as "congested." In the case of the boy to whom I have alluded as the single example of the kind in my own experience or in these tables, it was observed that "the grey matter of the cord was altered and yellow in patches," but there was no minute examination.

How far the foregoing particulars may serve to fortify or disturb pathological doctrines I do not now inquire. Their practical teaching is obvious. We are justified upon this evidence in looking upon severe chorea at the puberty age, especially in connexion with sexual excitement or with acute rheumatism, as a dangerous disorder apt to terminate fatally. It is true that we do not number many fatal cases, but it is also true that we do not meet with many, whether fatal or otherwise. The condition of such patients is the more precarious when, as is commonly the case, there is emotional as well as motor disorder. Such nervous exaltation, which is commonly altogether absent in the more familiar chorea of childhood, is with these both the sign and the source of danger. They are in a state of extreme sensitiveness, and lay hold of trivial circumstances to aggravate their disquiet. The smallest incident, the conduct of bystanders, undeserved reproach or ridicule, or even the sight of a patient affected like themselves, will often have its immediate prejudicial influence in a degree which those who have little experience of this kind of convulsion (whose actual title to the name of chorea, as Dr. Bright's cases

show, is often far from obvious) will find it difficult to believe. The question arises whether in these circumstances we address our treatment sufficiently to this mental state.

But the facts before us have this further teaching. If we exclude puberty, chorea of whatever violence is hardly dangerous to life. If we exclude both puberty and the female sex, chorea of whatever violence is not dangerous at all. Now violent chorea is by no means uncommon with boys. Thousands of examples of it must be comprehended within the period we are now reviewing. And yet in all that time, and from so many fields of observations, we get but one boy, aged eleven, dying of chronic chorea after five months, and probably with sclerosis of the cord. Chorea therefore, we may say, extremely rarely fatal in little girls, is, practically speaking, never fatal in little boys. If we add to this, what will not be denied, that permanent disablement from chorea is very uncommon, and that there is no treatment that even pretends to avert such after-effects, we get a strong argument in favour of leaving childish chorea alone. This conclusion will be further strengthened by a perusal of the valuable papers published in THE LANCET of Nov. 18th, 1876, by Drs. Tuckwell and Gray, upon "The Expectant Treatment of Chorea."

The conclusions to be derived from the foregoing review may be expressed as follows:—

1. Chorea, regarded as a disease of itself fatal, belongs almost exclusively to puberty, and especially to female puberty; its immediate exciting cause having distinct reference, in many instances, to conditions of unusual sexual excitement.

2. Besides the operation of sexual causes mental disturbance has to be reckoned; not fright only, but worry, anxiety, and despondency also, while the force and influence of such impressions is to be seen in the course as well as in the origin of fatal chorea.

3. Acute rheumatism appears as a cause of fatal chorea in but a small proportion of cases; yet the association, infrequent as it is, is distinct and unquestionable.

4. Chorea in its fatal, no less than in its non-fatal forms, shows strong preference for the female sex at all ages. Children, however, very rarely die of it, and boys, practically speaking, never.

5. Mental excitement, in varying degree (although not amongst the symptoms of ordinary chorea), is met with in so large a proportion of its fatal examples that we are justified in regarding this concurrence as of bad augury.

6. "Vegetations," new or old, on the auricular surface of the mitral valves, with or without similar deposit on the aortic valves, and sometimes with pericarditis, are met with in the great majority of cases dying of, or with, or shortly after, chorea. This condition, however, does not, as a rule, contribute directly to the fatal issue; it is found equally amongst those that die *with* and those that die *of* chorea. In some of the most marked and typical cases of fatal chorea the valves of the heart have been found absolutely healthy.

7. There is no other morbid condition, except that which concerns the heart, occurring with sufficient frequency or uniformity to be regarded as characteristic of fatal chorea.

Wimpole-street.

OBSERVATIONS IN URINARY PATHOLOGY AND THERAPEUTICS.

By C. H. RALFE, M.D. CANTAB., F.R.C.P. LOND.,
ASSISTANT PHYSICIAN TO THE LONDON HOSPITAL, SENIOR PHYSICIAN
TO THE SEAMEN'S HOSPITAL, LATE TEACHER OF PHYSIOLOGICAL
CHEMISTRY IN THE MEDICAL SCHOOL OF ST. GEORGE'S HOSPITAL.

II. A FORM OF DYSPEPSIA USUALLY ASSOCIATED WITH AN ALKALINE CONDITION OF THE URINE.

WHEN human urine becomes alkaline it is due to one or other of the following conditions: 1. To excess of the alkaline carbonates of potash and soda; a condition that frequently occurs normally after the ingestion in large quantities of vegetables and fruits. 2. Excessive elimination of the phosphates of the alkaline and earthy bases under conditions that have not been yet thoroughly studied, but which are not unfrequently found preceding or even accompanying saccharine diabetes; or sometimes, as has recently

been suggested,¹ forming a distinct disease. 3. By the formation of ammonia in the urine from decomposition of urea. Now the reaction of healthy human urine collected throughout the twenty-four hours is acid, but if separate samples of the urine passed during this period be taken, considerable variations in the character of the reaction will be observed. The constancy with which these variations occur under different diurnal physiological conditions was first studied by Dr. Bence Jones. That physician pointed out that the acid reaction of the urine increases and diminishes inversely with the secretion of the gastric juice. He found by examining the urine at short intervals during the day that an increase of acidity was observed in the urines passed before meals, and that a decline in the acidity occurred shortly after food had been taken, and acid was consequently withdrawn from the system; its maximum decline being attained in about three hours, when the acidity begins to rise. In some instances not merely was there depression of the acidity, but the urine became neutral and even alkaline. These observations of Dr. Bence Jones have been repeatedly confirmed by subsequent investigators; and the ebb and flow in the intensity of acid reaction of the urine, to which the term *alkaline tide* has been aptly applied, is a recognised physiological fact, though explanations different from that offered by Dr. Bence Jones have been advanced to account for the phenomenon. Dr. Roberts,² for instance, is disposed to attribute the occurrence of the alkaline tide after meals to a different cause—namely, to the entrance of the newly digested food into the blood. For if, as he says, the normal alkalescence of the blood is due to the preponderance of alkaline bases in all our ordinary articles of food, a meal is *pro tanto* a dose of alkali, which must, for a time, add to the alkalescence of the system, and consequently of the urine. Dr. Bence Jones's view receives considerable support from clinical and physiological experience. Since in those cases attended with frequent vomiting of intensely acid fluid it has often been noticed that the urine passed immediately after the ejection of the fluid becomes alkaline; the same effect is produced in dogs experimentally when pounded glass or other indigestible substance is introduced into the stomach to provoke the secretion of the gastric juice, which is withdrawn as soon as secreted by washing out the stomach with water by means of a stomach-pump, showing in both instances that the alkalinity of the urine was caused by the withdrawal of acid from the stomach, and not by the addition of alkali to the blood. That the ingestion of food, especially vegetable food, contributes, in a slight degree, in the production of the alkaline tide is very probable, but that it is mainly concerned in the phenomenon is out of the question, otherwise the alkalinity of the urine would be in direct proportion to the quantity of food ingested, which is certainly not the case. Indeed, the acidity of the urine can be depressed, and even rendered highly alkaline, otherwise than by the withdrawal of acid from the stomach, or by the ingestion of food. And it is this circumstance, hitherto unexplained, that has rendered many physiologists unwilling to accept Dr. Bence Jones's as a complete solution of the phenomenon. Dr. Hermann Weber,³ some years ago, observed that whilst breakfast decidedly had an influence in lowering the acidity, yet when he went without that meal the acidity was still lessened, though not to so great a degree. This observation of Dr. Weber I have repeatedly been able to confirm, the mere act of rising always producing a decided depression in the acidity of the urine. The use of the cold douche, or sweating in the vapour bath, both have the same effect, quite independently of food or the activity of the stomach.

There is another channel, however, by which acid is withdrawn from the blood besides the gastric secretion, and that is by the lungs. In the explanations hitherto advanced to account for the phenomenon of the alkaline tide in the urine this fact has not received attention. Dr. Edward Smith, in his researches "On the Elimination of Carbonic Acid" showed conclusively that the exhalation of carbonic acid by the lungs is increased by food and diminished by fasting, and that the amount exhaled during sleep is considerably less than is set free in the waking state. It therefore happens

that the time when most carbonic acid is being exhaled corresponds with the time when observers have noticed a decided diminution in the acidity of the urine, whilst the circumstances that diminish the exhalation of carbonic acid—namely, sleep and fasting, are attended by a rise in the acidity of the urinary secretion.

In health, therefore, it is probable that the exhalation of carbonic acid, in conjunction with the withdrawal from the blood of acid for the gastric secretion, and the direct ingestion of alkaline bases, aid in producing the alkaline tide in the urine. In disease, however, circumstances may modify or reverse the action of one or other of the conditions, so that although the variations of the acidity of the urine are frequent and often intensely marked, no connexion either between increased secretion of the gastric juice, the ingestion of food, or the exhalation of carbonic acid by the lungs can often be made out. Thus, for instance, in many pulmonary affections, in convalescence from many acute diseases, such as typhus, enteric fever, scarlet fever, pneumonia, &c., and in certain forms of dyspepsia, the urine remains persistently alkaline for many days together. The reason of this is not difficult of explanation, for in these diseases there is diminished supply of food and metamorphosis of tissue going on in the body, so that the salts which are concerned in maintaining the acidity of the urine are not separated to the same extent as in health. On the other hand, although from the feebleness with which the respiratory act is performed one would suppose that from less carbonic acid being exhaled by the lungs, the urine would maintain its acidity; yet it is not improbable that there being but rarely a temporary increase in its exhalation, in these cases, from the usual physiological stimulus of food and activity, the kidneys aid the lungs in getting rid of carbonic acid by separating it in its stable form (i.e., in combination with alkaline bases in the form of carbonates of potash or soda). Whatever may be said against the hypothesis, it is a fact that these urines nearly invariably effervesce on the addition of dilute acid, thus indicating the presence of carbonates in the urine. Urine alkaline from the presence of fixed alkali has been generally attributed by writers on urinary pathology chiefly to excessive elimination of the alkaline phosphates, and slightly to those of the earthy; and no author, with the exception of Prout, has mentioned that the urine may be pathologically alkaline from the presence of the carbonates of potash and soda. Prout observes:—"There are several distinct forms of disease connected with derangements of the soluble alkalis in the urine independently of the phosphates." And he further observes in these cases, that "the earthy phosphates are rarely entirely absent, but their quantity seems to be below the standard quantity of health, while the quantity of soda, potash, and ammonia appears to be in excess, or, strictly speaking, the carbonates of these alkalis appear to be in excess, hence such urine generally effervesces strongly on the addition of an acid." Prout, however, did not distinguish in his observations between the alkalescence caused by the carbonates of soda and potash and that produced by volatile alkali, carbonate of ammonia. Of twelve cases which have come under my observation, in no instance was the alkalescence due to carbonate of ammonia. In four cases the carbonates of potash and soda were associated with considerable excess of the earthy phosphates—cases resembling in many respects those described by Dr. Tessier of Lyons as not unfrequently preceding or accompanying saccharine diabetes, or sometimes running a distinct course, and to which I hope to refer on some future occasion. Of the remaining eight cases the alkalescence of the urine was due entirely to the presence of the alkaline carbonates, the alkaline and earthy phosphates being either normal or diminished in quantity, and no trace of either carbonate or free ammonia being discoverable.

(To be continued.)

⁴ Nature and Treatment of Stomach and Renal Diseases. By William Prout, M.D. Fifth Edition, p. 289. London: Churchill, 1878.

¹ Du Diabète Phosphatique. Par Dr. J. L. Tessier, de Lyons. Baillière et fils. Paris, 1877. Also two cases by Author. Path. Soc. Trans., vol. xlix. 1878.

² A Contribution to Urology. Memoirs of the Manchester Lit. and Phil. Soc. 1859.

³ Professor Parkes, on the Composition of the Urine in Health and Disease, pp. 55. Churchill. 1860.

DEATH FROM HYDROPHOBIA.—An inquest was held last week at the Mater Misericordiarum Hospital, Dublin, on the body of a man named Reid, who died on the 5th inst. in the Hospital from hydrophobia. Deceased was bitten on the nose in March last by a strange dog, but the matter was forgotten until a few days before his death, when the usual symptoms of the disease presented themselves.

BRIEF NOTES OF A VOYAGE TO BRAZIL.

By THOMAS B. PEACOCK, M.D., F.R.C.P.,

HONORARY CONSULTING PHYSICIAN TO ST. THOMAS'S HOSPITAL, AND
CONSULTING PHYSICIAN TO THE HOSPITAL FOR DISEASES OF
THE CHEST, VICTORIA PARK.*(Concluded from p. 4.)*

FROM the shortness of my stay in Rio, and from the extreme heat of the weather, I was not able to see so much of the public institutions as I could have wished to do. I visited, however, the general hospital, "the Santa Casa da Misericórdia," and the Leper Hospital, Imperial Hospital dos Lazaros. The former institution embraces the character of an infirmary as well as of a hospital proper. The first of its rules states that it is "instituted for the reception of all sick poor in the city of Rio, without distinction as to nation, condition, or religion." The hospital is situated close to the bay at the Praia de Santa Luzia. It was originally a Jesuit convent, but the old buildings have been entirely removed and replaced by the present hospital. The erection was commenced in 1840 and completed at the end of June, 1877. It consists of buildings arranged in a quadrangular form, the included space being crossed from end to end and from side to side by other buildings, so as to leave intervening spaces laid out as gardens, and which are rich in the profusion of tropical vegetation. In the centre of the front, on the ground floor, there is a large hall, from which the administrative offices open on each side, while at the back there are corridors leading to the lower wards, and a staircase which communicates with a fine room occupying the whole centre of the building on the first floor, and called from the statue which it contains the Emperor's room. On the same floor there are other apartments, employed for the meetings of the managers, and ornamented with full-sized portraits of various benefactors of the charity.

The wards for the reception of the patients occupy the outside of the building, and the wings which cross from end to end of the central space. The wards are long and lofty, and have large windows on the outside, and folding doors opening into wide corridors on the other side. They contain from thirty to forty beds each, two beds being placed in the piers between each pair of windows or of folding doors. The corridors have windows on the side opposite to the folding doors, and corresponding with them, so that the greatest facility is afforded for the perfusion of air through all parts. The superficial space is less than would be here thought necessary, but the cubic space is large from the great height of the wards. In the climate of Rio, where doors and windows can be constantly kept open, the space is probably very ample. The sides of the wards for from four to six feet from the floor are lined by blue and white tiles—"azuleos," and the floors are formed of dark-coloured ornamental woods, inlaid and polished. The building is two stories high, and the medical cases are placed on the ground floor, the surgical on the first floor.

From the reports published by the administrators, it appears that since October, 1871, the *personnel* of the hospital has consisted of a medical director, a vice-director, four resident physicians and three house-surgeons, of whom one is an ophthalmic surgeon, together with twelve visiting physicians and three surgeons, who are members of the Medical Faculty of the University. There are also special medical officers for the private rooms, and for the children and aged persons, with resident clinical clerks and dressers, who are students of the Medical Faculty. The wards are under the charge of French Sisters of Charity, of the order of St. Vincent de Paul; but the cleaning is done by hired servants, and there are two male attendants in each male ward. I found an English lady among the sisters, and understood that she had been several years in the order. I spoke to many of the English and American patients whom I found in the wards, and received the most satisfactory testimony to the kindness and attention which they received from everyone connected with the establishment. I was also assured that their religious views were in no degree interfered with.

Under the same management with the Misericórdia Hospital there is a Foundling Hospital, an orphanage and a

lunatic asylum, the Hospício de Pedro II. There is also the Hospício de Nossa Senhora da Sauda, which is apparently used as a casualty hospital to receive special cases in times when epidemics are prevailing. In 1875 and 1876 it received a large number of cases of yellow fever and small-pox. When also yellow fever is unusually prevalent local infirmaries are provided under the administration of the Misericórdia Hospital, at the expense of the Imperial Government, in different parts of the city of Rio.

The Misericórdia Hospital is maintained partly by funds which have descended to it from the convent to which it has succeeded, partly by donations and bequests, and partly by a monopoly which it possesses of the right to conduct the funerals of all persons dying in Rio, and also by lotteries. There are also private rooms in the hospital into which persons are admitted on payment. Every part of the hospital was scrupulously neat and clean, and altogether it may be pronounced to be admirably constructed and most excellently managed; and it is an institution of which any country might well be proud. Elaborate reports are published by the Brazilian Government of all matters connected with the financial condition and medical management of the hospital, and they are very liberally distributed to visitors. It appears that in 1877 and 1878 the number of patients in the hospital at the commencement of the official year, in July, was 1048. There were admitted during the year 14,043, making a total of 15,091; of this number 2232 died, giving a rate of mortality of 14 per cent. In the official year 1878-79 the number of patients treated was 13,870; and of these there were cured 9556, relieved 1892, not relieved 190, and died 2322—showing a rate of mortality of 16 per cent.

The report of the Misericórdia Hospital for 1873-7 is accompanied by reports of the Hospices and Infirmarys for the treatment of the cases of yellow fever. The infirmaries were five in number, and during the period of about four months in which in 1876 yellow fever prevailed they received a total of 1634 patients, of whom 620 died, giving a mortality of 38 per cent.; but it is stated that many of the patients were moribund at the time of their admission. The mortality varied considerably in the different hospitals, ranging from 32 per cent. in Santa Anna and Santa Rita to 48 per cent. in the Visitação. The cases in the Hospício de Nossa Senhora da Sauda had a mortality of 43 per cent. The reports—especially that of Santa Rita—contain some interesting details as to the mortality of the epidemic under different circumstances, such as the ages of the patients, the periods during which they had resided in Brazil, and the duration of the attack at the time at which they came under treatment. Between the ages of seven and fifteen the rate of mortality was 34.1 per cent.; between sixteen and twenty-five it was 21.6; between twenty-six and forty 45.2 per cent.; between 41 and sixty 47 per cent. In persons who had been resident in Rio for periods of one year or less the rate was 42.9 per cent. In those who had been in the city for various periods exceeding one year the rate was only 16.1 per cent. In persons admitted into the hospital after being ill for only one day or a shorter time the rate of mortality was 27.7 per cent. In those who had been ill from two to four days it was 37.3 per cent.; and in those ill for periods exceeding four days it was 42.1 per cent.

The Hospício de Nossa Senhora da Sauda received also during the year 1875-76 329 cases of small-pox, and of these 133 proved fatal, or 40 per cent., while forty-five cases of varioloid all recovered.

I also visited the Leper Hospital—the Imperial Hospital dos Lazaros. This is also partly an old building, a suppressed convent, and partly of recent erection. It is situated in the district of San Christavoa, on a slightly elevated knoll, close to the bay, of which the terrace in front of the hospital commands a beautiful view. It consists of a narrow centre, from which a long wing projects at each end. The wards are placed on the outside of the building, and a corridor runs on the inner side. In the old part of the building the wards only contain two beds; in the new part they are intended for a larger number—one ward contained ten or twelve beds, and afforded ample space. The new part of the building was in part built with funds obtained from the sale of decorations and titles. The hospital is supported by endowments, legacies, and donations. It is adapted for the reception of 100 patients, but at the time of my visit contained only forty. I examined the cases which I found in the hospital, but from having to conduct my inquiries through a gentleman who kindly accompanied me I was not able to make a satisfactory investigation. The cases were

described in the hospital case-book, which was shown to me, as cases of morphea, or elephantiasis of the Greeks, or the tubercular form of leprosy, and the subjects of the disease were white persons of Brazilian or Portuguese extraction, native negroes, and mulattos. There was also a case of the anæsthetic form in a native negro. The subjects of the disease were chiefly males, and the ages varied. Patients of whose cases I took notes were sixteen, eighteen, thirty, thirty-five, and thirty-six years of age. Taken as a whole, the cases were less marked and advanced than those which I saw at the Lisbon Leper Hospital in 1870.¹

I endeavoured to ascertain the generally-received opinion as to the probable causation of the disease, and was informed that it was generally ascribed to eating pork too exclusively, and in reference to the influence of a fish diet I was assured that the disease is very common in districts of Brazil where fish is not eaten—where, indeed, it is scarcely procurable.

In the return voyage we followed very much the same course as that adopted in the voyage out. We called in at Bahia and Pernambuco, sailed immediately on the west side of Fernando Noronha, so as to have a good view of that curious island, which, in the outward voyage, we had passed at night. We crossed the Line in 31° 15' W. long., coaled at St. Vincent, and then sailed to the westward of the Canary Islands, instead of through the group, as we had done in going out, passing close in on the west side of Ferro and Palma, and having distant views of Gomera and Teneriffe, the peak of the latter rising abruptly as a cone out of the sea, and being very distinctly seen at the distance of 90 to 100 miles.

In the outward voyage we left Southampton in the afternoon of the 9th of February, arrived at Lisbon on the 14th, crossed the Line in longitude 31° 43' W. on the 24th, arrived at Pernambuco on the 26th and at Bahia on the 28th, and anchored in the harbour of Rio on the 1st of March. On the return voyage we left Rio on the 10th of March, called in at Bahia and Pernambuco on the 13th and 15th, crossed the Line on the 17th in longitude 31° 15' W., arrived at St. Vincent on the 22nd, at Lisbon on the 28th, and moored to the extension pier at Southampton on the afternoon of the 31st, thus occupying in the whole voyage fifty-one days.

In going out we felt it warm at the Canary Islands, hot at St. Vincent, and very hot from thence to Rio. In returning it was cool at St. Vincent, and decidedly cold at the Canary Islands, and thence to Southampton.

I performed the voyage in the *Tagus*, one of the finest vessels of the fleet of the Royal Mail Steam Packet Company, and I should do injustice to my own feelings if I did not express my satisfaction with the arrangements of every kind on board the vessel, and my acknowledgment of the kind attention which I received from Captain Arthur Gillies and all his officers.

In summing up the results of my voyage I may say that though many years ago I had been in southern latitudes, and have seen some very beautiful tropical scenery, I have never seen anything to equal the luxuriance of the Brazilian vegetation. I was repeatedly told that the period of my visit was the time of fruit, not of flowers, but to me the country seemed everywhere covered with flowers. Around Rio the hedges were yellow with the blossom of the alameda. At Tijuca the forest was purple with the flowers of the quaresma, or flower of Lent, a species of melastoma, and a large tree with bunches of bright yellow flowers, called by the natives cozeira, was also very abundant on the mountain side. The bread-fruit trees and the mangos are also very beautiful, and it is almost worth a voyage to Rio to see the avenues of royal or imperial palms, the *Oreodoxa oleracea*, in the Botanic Gardens.

One of the most interesting features of a sea voyage, and especially of a voyage in southern latitudes, is the opportunity which it affords for the observation of the heavenly bodies. The sky being generally clear, and the stars shining with a brilliancy of which in this climate we have very little conception. In this respect, however, my late voyage was, in some degree, disappointing. I was anxious to observe the disappearance of the Pole star beneath the northern horizon, and the first appearance of the cross in the southern hemisphere; but while in the northern tropic, however clear the sky might be during the day, it uniformly became obscured towards the evening, and at night was generally covered with clouds, so that after reaching the Cape Verde Islands till we were south of the Line and well into the south-east

trade wind, towards the coast of Brazil, there was scarcely a clear evening. This might possibly be owing to the very slight north-easterly trade wind which we encountered, causing the equatorial cloud belt to be extended to the north beyond its ordinary limits.

Voyagers to the south for the first time are generally very anxious to see the constellation of the Southern Cross, and usually find it to fall very much below what their imagination had pictured it. This feeling is well expressed by Madame Agassiz in her account of her husband's expedition to Brazil²: "We saw the Southern Cross for the first time. With the visible image I lost a far more wonderful constellation, which had lived in my imagination; it has vanished with its golden glory. . . . In its place stands the veritable constellation with its four little points of light." I had myself frequently seen the constellation before, and had a tolerably clear recollection of its peculiarities, yet I felt very anxious to see it again, and partook very decidedly of the disappointment which, when seen, it generally leaves. As a constellation it is certainly very inferior to some of the groups of stars in the northern hemisphere, and especially it does not compare favourably with Orion, which being an equinoctial constellation, was visible during the whole voyage, and shone in the tropics with a brilliancy which I do not recollect to have ever seen equalled. Though, however, the Southern Cross is not imposing as a separate constellation, the portion of the heavens which it occupies is very beautiful, being very thickly studded with stars which though small, are very distinct and brilliant, much more so than those which constitute the milky way. The Megalanic clouds are very curious, as is also the patch of sky near the Cross, to which, from its apparent blackness, sailors have given the name of the "Coal-sack." This darkness is due to the entire absence of stars visible to the naked eye in a space surrounded by sky thickly studded with them.

Altogether the voyage was very pleasurable, and the time which I spent at Rio passed very agreeably, and was only too short, thanks to the kindness of friends with whom I passed it; and I returned home refreshed and invigorated, both in mind and body.

OBSERVATIONS ON THE BLOOD IN ANÆMIA.

By JOSEPH W. HUNT, M.D. LOND.,

PHYSICIAN TO THE WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.

FOR the past few years, and especially since Dr. Gowers introduced to the notice of the profession his modification of Hayem's hæmacytometer,³ numerous observers in this country have been studying the condition of the blood, under varying circumstances both in health and disease. In a previous number of THE LANCET (May 10th, 1879) I published the results obtained from repeated examinations of the blood in ten cases of anæmia, occurring in unmarried girls. Several hundred observations which I have made since the publication of that paper have served to confirm the results and conclusions there set forth, while their value has been enhanced and their interest increased through the fact that the use of Dr. Gowers' hæmoglobinometer has, in many of the cases, enabled the amount of hæmoglobin to be estimated as well as the corpuscular richness of the blood.

As this instrument is probably unknown to many, a brief description of it may not be unadvisable.⁴ The colour of the blood, diluted with distilled water, is taken as an index of the amount of hæmoglobin. The standard consists of a dilution of a hundred times, or twenty cubic millimetres of normal blood in two cubic centimetres of water. (Owing to the instability of the standard dilution of blood, glycerine jelly tinted to correspond with a mixture of carmine and picocarmine of ammonia is used in its place.) The same volume of the blood to be tested is diluted till its tint is the

² Boston, 1879, p. 29.

³ Practitioner, July, 1878.

⁴ Clinical Society's Transactions, vol. xii., pp. 64-67.

¹ See THE LANCET, 1870.

same as the standard, and the degree of dilution necessary for this indicates the relation the hæmoglobin bears to that of normal blood taken as 100. Thus, if a dilution of 50 times gives the same tint as that of normal blood diluted 100 times, the amount of hæmoglobin is just 50 per cent. of the normal. The two solutions are best compared by means of transmitted light and not by reflected, as unfortunately was done in most of the cases presently to be referred to, and therefore in comparing my results obtained by the hæmoglobinometer with those which may be afterwards published by others, it must be borne in mind that they are from 5 to 10 per cent. higher than those obtained directly by transmitted light.

And here I would say that though at first I was struck by what I considered to be the inefficiency of the hæmacytometer and the hæmoglobinometer, and regarded them merely as scientific toys, a more extended use has fully persuaded me of their great value. Each requires a certain amount of practice before the results obtained be thoroughly trustworthy, but that practice once acquired, and it is soon and easily done, I believe the results to be perfectly reliable, and to be of use, not only from a pathological standpoint, but also from a clinical aspect, both with regard to prognosis and treatment.

In examining the quality of the blood we must remember that, besides its richness in corpuscles and in hæmoglobin, a third factor must be regarded—namely, the amount of serum which dilutes the hæmoglobin and the corpuscles. In many diseases, doubtless, these latter are reduced out of all proportion to the serum, but in other diseases, and especially, as far as I have seen, the acute specifics, such as scarlet and typhoid fevers, all these constituents of the blood appear to suffer in about equal proportions. This observation is confirmed by others made by Drs. Buchanan Baxter and Willcocks lately published.⁵

Thus by the hæmacytometer and hæmoglobinometer we are unable to compute the amount of corpuscles and hæmoglobin in the blood, but only the proportion which these bear to the serum.

Greater experience has fully convinced me of what I hinted at in my former paper, that our estimate of the number of white corpuscles is considerably above the mark. The maximum number has been stated as '3 per hæmic unit, represented by two squares of Dr. Gowers' hæmacytometer—that is, 1500 corpuscles in the cubic millimetre of blood, but I believe that they very seldom exceed '2 per hæmic unit, and more frequently than not fall even below this. The average corpuscular richness of the blood in anæmia, as shown by observations in thirteen cases, all of which were at the commencement of treatment below 75 per cent., is about 63 percent.—a computation strikingly in accordance with my previously published results, where the average of ten cases was 62 per cent. As before pointed out by Dr. Gowers, myself, and others, the corpuscular richness of the blood is seldom accurately represented by the appearance either of the skin or mucous membranes. Not unfrequently have I examined the blood of young girls attending my outpatient room expecting to find a marked diminution in the number of the corpuscles, and, to my surprise, found it normal, or nearly so. Similarly, when at the commencement of treatment, the corpuscles may be considerably below the average, they regain the normal long before the symptoms have disappeared, and the patient has been restored to health. But though in such cases the corpuscles may be but little affected, the hæmoglobin is very far from being so. In nearly all cases the corpuscles became normal in from two to three weeks, while it takes three or four times that period for the hæmoglobin to reach anything like the usual percentage. For example, out of ten cases which I have charted with great care—observations being made weekly, and each case being so much improved that the patient no longer cared to attend,—in only one did the proportion of hæmoglobin exceed 90 per cent., in this case reaching 100 per cent.; while the average attained at the end of the treatment was only 70 per cent. The length of treatment varied from three to ten weeks, the average being six weeks. These facts are in the most striking contradistinction to observations made by Hayem. According to him, in anæmia treated by iron the hæmoglobin increases out of all proportion to the corpuscles—so much so that the richness in hæmoglobin may exceed the richness in corpuscles. Notwithstanding my very numerous experiments, I cannot recall

to my mind, and certainly I have no notes of, any case in which the richness in hæmoglobin at any period of the treatment ever equalled the corpuscular richness—indeed only once has it come within 10 per cent. of it. In regard to this point, Drs. Baxter and Willcocks⁶ similarly are in opposition to Hayem, and record results very similar in many respects to mine.

The amount of hæmoglobin at the commencement of treatment, as noted in fifteen patients, averaged 44 per cent., eight of these being 40 per cent. or below. Though, as remarked above, the corpuscles become normal in number long before the hæmoglobin, yet under judicious treatment the latter steadily increases in amount—about the same rate *proportionately* as the corpuscles. Thus, out of fourteen cases in which both the amount of corpuscles and the hæmoglobin were noted at the first visit, the former averaged 79 per cent. and the latter 44, a proportion of very nearly 9:5. After a week's treatment the percentage of ten of these was noted as 86 of corpuscles and 51 of hæmoglobin, a proportion of 8½:5; and after a second week the corpuscles had risen to 95 and the hæmoglobin to 55—that is, 8½:5.

In occupation these patients were mostly general servants, barmaids, pupil teachers, shop-girls, dressmakers, and such-like; and in age they varied from fifteen to twenty-five years old. In most of them there were hæmic murmurs heard at the base and in the carotids and jugulars; and in some apical murmurs, probably due to a temporary dilatation of the left ventricle, rendering the closure of the mitral valve imperfect; while increased tension in the pulmonary circulation was in many cases indicated by an intensified second sound heard at the pulmonary cartilage. As far as I have seen, hæmic murmurs have been not seldom absent when the corpuscular richness and the amount of hæmoglobin have been much below the normal. This requires further observation, and would be difficult of explanation unless under the supposition that there is a large excess of serum present, which, while it serves to dilute considerably the corpuscles and the hæmoglobin, helps also to maintain the quantity of the blood unaltered, and causes therefore no difference in the relationship between the quantity of fluid and the containing bloodvessels, which would be essential, according to many, for the production of hæmic murmurs.

I have watched with much interest the relation which the corpuscular richness of the blood bears to the catamenial periods. To do this exactly, of course, is difficult when patients are seen only once a week, as in most of my cases; but it appears to me that the catamenia generally diminish the number of corpuscles. This diminution is most marked if the blood be examined shortly before the onset of a menstrual period, though it is also found if the blood be examined soon after. This observation has been so frequently made that it cannot be a mere coincidence. Thus, out of twenty-two instances in which the blood was examined within three or four days either preceding or subsequent to the catamenia, in only three was there a continuous rise in the number of the corpuscles, while in four the previous rise was arrested, and in the remaining fifteen there was a distinct diminution either just before or after the onset of the catamenia. The amount of hæmoglobin appears to be less affected by the catamenia, and I have similarly noticed that it is less affected by other disturbing conditions which cause a decrease in the number of corpuscles. In other words, while the rise in hæmoglobin is not so rapid as the rise in corpuscles, it is more steady, and not so much affected by adventitious circumstances.

The treatment of the various cases differed considerably. In most, in addition to hygienic treatment, iron in some form or other was tried. The old and well-known compound mixture of iron, or Griffiths' mixture, gave as good results as any. The tincture of perchloride of iron was very valuable, and especially so when given in fairly large doses—fifteen to twenty minims. When given in smaller doses, as five minims, it did not effect nearly so much improvement in the blood condition. As a matter of experiment, arsenic (Fowler's solution) was tried in a number of cases by itself; though it occasionally effected a considerable rise in the number of corpuscles, this rise was very unsteady and liable to great fluctuations and relapses. Arseniate of iron, given in doses varying from one-sixteenth to one-third of a grain, frequently much improved the general condition, but did not effect any marked or steady change in the blood

⁵ THE LANCET, March 13th, 1880.

⁶ THE LANCET, March 20th, 1880.

condition—a fact easily accounted for by the small amount of iron present in the preparation.

In conclusion, I shall shortly relate the history of one patient. She was about twenty-one years old, engaged as a general servant, and had suffered from a want of good food and clothing. She came to my out-patient room complaining of headache, giddiness, palpitation, amenorrhœa, and the other usual symptoms of chlorosis. She was admitted as an in-patient on January 16th, when the hæmacytometer showed the percentage of corpuscles to be only 45. As a matter of experiment, she was ordered no medicine beyond a little camphor-water, but was put on good nourishing though plain diet. This was continued for a fortnight, during which time, though the general condition much improved, the corpuscles only rose 10 per cent. (to 56 per cent.) She was then ordered Fowler's solution of arsenic (five minims three times a day), with the same diet, for a week, during which time the number of corpuscles fluctuated considerably, rising at first to 64, but afterwards sinking again to 57 and finally to 52 per cent. She was, lastly, ordered iron on Feb. 3rd; from which time the corpuscles speedily and steadily rose in number, rising in three weeks nearly 60 per cent.; in other words, reaching 110 per cent. on Feb. 24th. As the catamenia had been absent for a long time, she was now ordered the liquid extract of ergot, and the iron omitted. During this period the corpuscles sank to 96 per cent., but, on the iron being resumed, rose again in three days to 102 per cent. At this point the catamenia recurred, and the corpuscles again sank to 96 per cent. immediately afterwards. This case is not chosen as being an especially favourable one; indeed, it is only typical of many others; and is chosen because it is the only one in a patient in whom frequent observations were made over a length of time. Subjoined are all the observations made.

Jan. 16th,	corpuscles	45 per cent.	
18th,	"	48	"
20th,	"	48	"
23rd,	"	54	"
25th,	"	52	"
27th,	"	56	"
29th,	"	64	"
31st,	"	57	"
Feb. 3rd,	"	52	"
5th,	"	55	"
7th,	"	57	"
10th,	"	66	"
12th,	"	72	"
14th,	"	80	"
19th,	"	94	"
24th,	"	110	"
26th,	"	110	"
28th,	"	96	"
Mar. 5th,	"	96	"
9th,	"	102	"
11th,	"	96	"

Wolverhampton.

A FEW PRACTICAL REMARKS ON THE

TREATMENT OF TROPICAL DYSENTERY.

By J. H. COURTENAY, L.R.C.P. (LOND.), L.K.Q.C.P.I.
GOVERNMENT MEDICAL OFFICER, LUCEA, JAMAICA.

To those who have read the published writings of many eminent East Indian medical practitioners, it must be a matter of some surprise that the brilliant results they have obtained from the ipecacuanha treatment of dysentery should not have caused a universal belief in its efficacy, but that this remedy has not been had recourse to in the West Indies, unless in a few exceptional instances, I could give abundant proof.

Some practitioners whom I consulted when I first had to deal with this disease recommended acetate of lead and opium; others advocated calomel and opium; others, small doses of ipecacuanha and opium. Within the past three years I have had to treat upwards of 200 cases of dysentery, and I can safely assert that until I absolutely adopted the ipecacuanha treatment my results were anything but satisfactory, and since then some of the most apparently hopeless cases have made a rapid recovery.

The chief difficulty that young practitioners experience is

their inability to follow one definite line of treatment, so many varieties of administering ipecacuanha are advocated by the different writers on the subject. If I may, without presumption, attempt to simplify this variety of treatment, I think the best means to accomplish this end will be to make a brief statement of the course that experience and a careful study of the writings of others have led me to pursue.

As a preliminary measure, if the dysenteric phenomena have not displayed themselves in too marked a degree, I order half an ounce of castor oil with ten or fifteen minims of tincture of opium; the patient to be kept quiet and abstain from all solid and irritating food. This failing to check the disease, absolute rest in the recumbent position must be enjoined, twenty to twenty-five minims of the sedative solution of opium administered, and in twenty minutes afterwards thirty grains of powdered ipecacuanha in an ounce of water or syrup of orange-peel. The patient must then be kept perfectly quiet and abstain from all food, fluid or solid, for two or three hours. If the ipecacuanha is vomited immediately after it has been administered allow an interval of about half an hour to elapse, and then repeat the full dose again. In the further treatment of the case ten-grain doses of ipecacuanha should be given every six hours until convalescence is established; and when it is, to guard against a relapse, it is a wise precaution to give five or ten grains at bed-time for a few nights. In addition to this treatment a two-ounce starch enema containing twenty to twenty-five drops of sedative solution of opium, given at bed-time, has an admirable effect in controlling tenesmus and inducing sleep. With regard to nourishment I have never found, in adopting this line of treatment, that the nauseating effect of ipecacuanha produced any alarming intolerance of food; of course, food of the lightest nature, such as beef-tea, chicken-tea, arrowroot, milk, and the like, should only be administered. I think the use of stimulants should be dispensed with unless there is extreme exhaustion, and even then they should be given sparingly and extremely diluted.

And now it will be asked, Does the ipecacuanha treatment never fail, and is it an absolute specific for dysenteric disease? I can unhesitatingly answer, as far as my experience enables me to do so, that in the great majority of cases it most certainly does not fail, and that its effects are often magical; but I have met a few cases where no precautions or varieties as to administering small or large doses of the drug seemed to be able to avert the absolute intolerance of it. Under these circumstances I administered a bismuth and soda mixture containing five drops of sedative solution of opium in each dose. I also gave a powder containing mercury with chalk and compound ipecacuanha powder every four hours, and an opiate enema at night. Several writers on the subject say that when this intolerance is present hepatic complications are to be dreaded, but happily in the cases I have alluded to no such difficulties had to be encountered, and they quickly yielded to treatment; but I consider that when a patient suffering from dysentery is unable to take ipecacuanha his chances of recovery are seriously lessened by such inability. My utmost expectations will be fully realised if this very imperfect outline of the treatment of tropical dysentery enables some new-comers to grapple with a disease that admits of no parleying with, and if the re-opening of the subject is sufficient at least to arouse the attention of those who feel a great difficulty in yielding up preconceived ideas.

THOMSON'S AMETROMETER.

By R. BRUDENELL CARTER, F.R.C.S.,
OPHTHALMIC SURGEON, ST. GEORGE'S HOSPITAL.

I AM desirous to call attention of the profession in this country to a very ingenious instrument, which Dr. Thomson of Philadelphia, its inventor, has named the ametrometer. It is intended to measure the refraction of the eye without the aid of lenses; and it appears likely not only to accomplish this object, but also to effect a great saving of time for those who are habitually engaged in such investigations.

The ametrometer consists of a graduated bar, about a foot long, pivoted near one extremity, and carrying two

very small gas jets, one of which is stationary near the pivot, while the other slides freely to and fro along the bar. The patient is placed five metres from the instrument, and the lighted gas jets are separated, the bar being in a horizontal position. To an emmetropic eye, or to an ametropic eye fully corrected, the two flames will appear clearly and sharply defined; but, to an unaided ametropic eye, each flame will appear surrounded by a luminous band or halo, produced by the dispersion circle on the retina. The width of this band will be the measure of the ametropia, the amount of which may therefore be read off upon the graduated bar by bringing the flames so near together that the margins of the two luminous bands come into contact. The patient is then directed to move a slip of coloured glass slowly over the pupil, from the temporal side inwards. If the case be one of hypermetropia, the temporal side of the halo will remain white, while the nasal side is coloured by the glass; and, if it be myopia, the reverse of these conditions will obtain. In astigmatism, the luminous bands will be elliptical instead of circular; and, by turning the bar upon its pivot, the two ellipses may be brought into such a relative position that their major axes, if touching, would be in a continuous line. The bar then coincides with the meridian of greatest ametropia, which may be measured by bringing the bands into contact in the ordinary way. The instrument is furnished with a graduated arc, upon which the angular position of the bar may be read off, and it may then be turned to a position at right angles with the former, and the refraction of the opposite meridian measured in turn. With a patient of ordinary intelligence, the examination may be completed with great rapidity. It is hardly necessary to say that the eye examined must be fully under the influence of atropine or of duboisin, and that the other eye must be covered.

The graduation of the bar is such that the refraction may be read off in inches upon one side of it, and in dioptres upon the other. For the latter, each division measures two and a half centimetres, and is again subdivided into two.

In testing upon myself unknown degrees of ametropia and astigmatism, artificially produced by lenses, I have found the indications of the instrument perfectly accurate, but I have not yet had sufficient opportunities of observing how far it is to be trusted in the actual ametropia of patients. In certain eyes, probably from irregularities of refraction in their lenses, the diffusion halo is extended in some directions by prolonged rays, and some care will be required in causing patients to discriminate between these rays and the boundary of the diffusion halo itself. On this and on some other points of interest I shall hope to be able to make observations worthy of future publication; and my present object is to enlist the aid of others in the work. The ametrometer either is, or shortly will be, obtainable from Mr. Hawksley.

Wimpole-street, W.

A Mirror
OF

HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—*MORBAGNI De Sed. et Caus. Morb.*, lib. iv. Proœmium

UNIVERSITY COLLEGE HOSPITAL.

CASE OF CANCER OF THE UTERUS TREATED BY CHIANTURPENTINE.

(Under the care of Dr. GRAILY HEWITT.)

For the following notes we are indebted to Mr. J. E. Hine, obstetric assistant.

Mrs. O—, aged forty-eight, married, two children, no miscarriages, was admitted April 28th. The catamenia had ceased three years and a half before. There was no family history of cancer. She first noticed a vaginal discharge one year before admission. The discharge became offensive, and increased in quantity during the last three months. Bleeding was first observed in February, and continued in varying amount. There had been constant pain in the back and right iliac region for a similar period.

On admission, the cervix uteri was very close to the

vaginal outlet, and presented a broad surface the size of a wine-glass, rough and excavated, with a very sharp hard edge. The cervix was welded firmly to the adjacent structures all around.

The emulsion of Chian turpentine, containing eight grains in each dose, was given three times a day. The patient took this regularly till June 10th, when, owing to vomiting, it was changed for the pill of Chian turpentine, five grains three times a day. Syrup of the iodide of iron was given at the same time. She had an opium pill at night to relieve pain. Vaginal injections of warm water and iodine were used.

On June 21st the edge of the os uteri was thinner than when previously examined, the result of the destruction of a portion of the thickness of the os. There was evidence of ulcerative action, but in other respects the condition remained much the same.

Whilst the patient was in the hospital she progressively lost weight. On May 7th she weighed 7st. 4lb.; on June 17th 6st. 11lb.

The discharge had been very abundant, clots frequently being passed. The pain had increased in severity. She suffered latterly from vomiting, rejecting nearly everything she took. Accordingly, nutrient enemata were given.

Note.—Though there is no evidence that the disease has extended either locally or generally, the patient is at present decidedly worse than she was a month ago.

LINCOLN COUNTY HOSPITAL.

CASE OF CANCER OF THE RECTUM; COLOTOMY; RECOVERY.—CASES ILLUSTRATING USE OF PLASTER-OF-PARIS BANDAGE IN HIP DISEASE.

FOR the following notes we are indebted to Mr. W. J. Cant, house-surgeon.

Cancer of rectum and vagina; colotomy.—S. W.—, a cachectic-looking woman, was admitted (under the care of Mr. Sympton) August 10th, 1879, complaining of difficulty in passing her motions, severe pain in the rectum and vagina, and frequent bleedings. She said that twenty-two years before she had a fistula, which frequently gathered and discharged, and had never thoroughly healed. She stated that she was losing flesh and appetite, and was very much troubled with constipation. In the beginning of the year 1879 she took a dose of castor oil. The bowels not having been moved for about one month, the oil acted freely; but she noticed that some of her motion was passed per vaginam. On examination a dense nodulated and ulcerated mass was found filling up the rectum and vagina, discharging a fetid sero-sanguineous fluid. The motions were passed with difficulty through a fistula connecting the vagina with the rectum. The pain became more and more severe, the sanguineous discharge more profuse, and the bowels more difficult to relieve.

On October 2nd, 1879, colotomy was performed. An oblique incision, four inches long, was made in the left lumbar region, the tissues were carefully divided, and the colon exposed, two silk sutures were passed through the integuments and the gut, which was divided between them and secured to the edges of the wound by the four silk sutures, after which eight metallic sutures were introduced, and the gut accurately adapted to the edges of the external wound. The wound was dressed with carbolic oil and tenax. Fæces passed through the opening every day without much pain; firm and well-formed motions were passed.

Four days after the operation the wire sutures were removed. The wound was then healing rapidly, and there was only a slight amount of inflammation around, and a little pain at the umbilicus. Ten days after the operation all sutures were removed, and zinc ointment was applied around the edges of the wound, which looked healthy. Her appetite gradually improved, the patient gained flesh and felt much stronger, and the pain and hæmorrhage had greatly diminished. About three weeks after the operation she was allowed to get up and move about, a convex waterproof pad being applied over the artificial anus, from which she had no pain.

She was made an out-patient Nov. 1st, when she was well enough to resume her ordinary occupation, in which she was still engaged on April 18th, 1880. The appetite re-

maintained good, and her strength was only slightly diminished, although the cancer was gradually increasing in size, and the pain was frequently felt, for which she takes twenty drops of solution of hydrochlorate of morphia occasionally.

Plaster-of-Paris bandage for hip disease.—The application of plaster-of-Paris splint in hip disease seems to afford an effectual and inexpensive method of treating this disease, maintaining complete rest for the joint, with extension, and giving the patient at the same time the benefit of moving about. It would seem to be equally useful in acute and chronic cases, giving great relief with usually rapid improvement in general health. It may be used in those cases where abscesses have formed around the hip-joint, whether discharging or not; in the former case an opening must be made in the splint. The mode of application differs very little from that employed by Dr. Sayre in spinal disease. A flannel bandage is wound firmly round the limb extending from a little below the knee to about one inch above the anterior superior spine of the ilium, the muslin bandages having had plaster rubbed into them are moistened and then applied. Plaster-of-Paris made about the consistence of cream with water should be smeared on during the bandaging to give extra firmness on drying. It is an advantage to have the patient suspended during the application. Both hip- and knee-joints are immovably fixed. An iron patten is fastened to the sole of the boot belonging to the foot of the healthy side, so as to raise it two or three inches from the ground, thereby allowing the leg on the diseased side to hang extended, motionless, from the body, when the patient gets about by means of crutches.

R. S.—was admitted with all the symptoms of acute hip disease. She had frequent elevation of temperature (100°) with exacerbations of pain and night startings. She remained in hospital for seven months, being kept in bed during the whole time with only slight improvement. The plaster-of-Paris bandage was applied and she was made an out-patient, being able to move about easily without any pain. In one month she was able to leave off the splint and walk without crutches, the movement of the joint being free. Her health was very much improved and was free from pain.

S. W.—was admitted with hip disease, having excessive pain on the slightest attempt at movement. The patient was kept in bed for six months and counter-irritation was applied round the hip without any marked improvement. The plaster splint was put on and she was able to move about without pain. The general health rapidly improved. The bandage was kept on for some time, as pain was complained of when the heel was conussed.

H. D.—had disease of right hip with a large abscess on the buttock. The patient was very emaciated and complained of great pain. The plaster splint was put on and the patient was made an out-patient a few weeks afterwards. He came to the hospital six weeks afterwards very much improved in health and was free from pain; he could move about easily with the crutches. The bandage was removed to see the condition of the abscess, which was found to have slightly enlarged. About six ounces of pus were taken away by means of the aspirator, and the bandage was again applied.

Reviews and Notices of Books.

The Hysterical Element in Orthopaedic Surgery. By NEWTON M. SHAFFER, M.D., Surgeon in charge of the New York Orthopaedic Dispensary and Hospital, Orthopaedic Surgeon to St. Luke's Hospital, N.Y. G. P. Putnam's Sons. 1880.

THE fact that severe diseases and distortions of the spine and joints may be very exactly simulated by the obscure condition usually known as hysteria, has been recognised by surgeons in only comparatively recent times. Brodie and Skey both mention it and describe cases, but Paget in this country and Esmarch in Germany have done more than any others to draw attention to a fact of very great importance and only too generally overlooked. The simulation of local organic disease may be and often is, so exact that only the most careful and, usually, repeated observation can establish the diagnosis, and probably most surgeons of experience are able to recall cases that they have mistaken before they

were sufficiently alive to the occurrence of this "neuro-mimesis." Dr. Shaffer's essay was originally read before the New York Neurological Society, but is well worthy of publication in its present form. Several cases of hysterical disease of the knee, hip, spine—simulating both angular and lateral curvature—and club-foot are described, and the points relied upon for diagnosis discussed. We can only briefly note those affirmed to be of most general application. While the age and sex have some weight it is well to remember that the male sex is not free from neuro-mimesis, nor is it infrequent before puberty, and it may be developed in patients who have no knowledge whatever of the symptoms of the disease feigned. Pain and muscular rigidity usually come on together, and the expressions of the former are often exaggerated and voluntary, while in the local disease rigidity precedes pain, and the pain shows itself in a peculiar expression of countenance and by involuntary signs, and often during sleep. Hysterical rigidity varies from time to time, can be overcome by continuous traction, or by drawing off the attention by sleep, opium, or chloral; the rigidity of joint disease is constant, cannot be overcome by traction, sleep, or narcotics, but only by complete anaesthesia. The muscles of the limb merely waste from disuse, and show no diminution of reaction to the faradaic current in hysteria, while in true joint disease there is exaggerated wasting and great loss of electrical reaction. In the simulated disease there is no alteration in local temperature nor swelling, unless from superficial hyperaemia and oedema, as from counter-irritants, and spots of hyperaesthesia both near the joint and at a distance are frequently observed. In hysterical disease of the spine there is no limitation of the natural movements if a careful examination is made, and the deformity often results from relaxation rather than spasm of muscles, and the scoliosis is unattended with rotation of the vertebrae. Hysterical talipes is peculiar in having flexion of the toes commonly superadded. Dr. Shaffer's illustrative cases are well and honestly reported, and although the author does not attempt to clear up the mystery in which these conditions are shrouded, he certainly marks out the way in which surgeons may best avoid confusing the so-called real and feigned joint diseases.

Elements of Modern Chemistry. By ADOLPHE WURTZ, Member of the Institute, Honorary Dean, and Professor of Chemistry of the Faculty of Medicine, Paris; Member of the Academy of Medicine, &c. Translated and edited with the sanction of the Author, from the fourth French Edition. By WM. H. GREENE, M.D. With 132 Illustrations. London: W. Swan Sonnenschein & Allen. 1880.

M. WURTZ's excellent little manual is already known in its original language to many English readers, the high and well-earned reputation of its author drawing instant attention in England to all his works. But Dr. Greene, who is evidently an accomplished chemist as well as a good translator, has done well to give us an English edition, adding thereby one more good elementary text-book to several which we already possess.

M. Wurtz is an experienced teacher, and has succeeded very well in giving enough and not too much matter to beginners, a task by no means easy. He has, moreover, judiciously blended the theoretical and the practical; and as the exposition is always clear, it is not wonderful that the book has been popular and useful. Nevertheless we cannot say that it is perfect, or even that it is better than some English text-books. The arrangement adopted in the organic portion is not happy, the nomenclature is in some cases inferior to that now adopted in England, and some important modern discoveries and theories are either omitted or too slightly noticed, especially if they do not belong to France.

THE LANCET.

LONDON: SATURDAY, JULY 17, 1880.

THE present meeting of the General Medical Council is by far the most discreditable meeting in its history. Before the meeting there was nothing to lead even judges to think that the Council could find excuse for sitting more than three days. The Executive Council had met less than a month before, and there seemed little in its references to the Council to occupy the latter body more than a few hours; but when the first programme of business appeared on the day of the Council's assembling, it was evident that the members had no intention of a short sitting. The programme literally bristled with questions which, when once opened, admit of indefinite discussion. These questions had reference chiefly to preliminary education. The first thing that the Council did was to spend two days in debating whether to put the subject into the hands of a committee merely to prepare it for discussion. Twenty-four of the leading members of the profession in the United Kingdom spent two days of their precious time, and £400 of the Council's funds, in making up their minds to have the subject put into shape for them on the third day. Of course in this discussion speakers aired all their views on the whole range of subjects, actual and desirable, included in preliminary examinations. At the end of the second day the Council arrived at the great conclusion to have a Special Committee to arrange for further high debate. This began on Friday and continues to the time of our writing. Every conceivable question was raised, from the claims of Greek to those of Dutch, and most of the questions were raised three times over, and the speakers had so many opportunities of repeating themselves. Sir WILLIAM GULL said very truthfully: "We fight our battles three times over, and never come to any result," and added plaintively: "We shall go on so *for ever*—yes, for ever, till time shall be no more!" Dr. ANDREW WOOD was more fortunate than Sir WILLIAM. He was struck with the humorous aspect of the situation, as Sir WILLIAM was the grave one, and even this redoubtable champion of the Council was constrained to say, when Dutch appeared on the scene, "This is really becoming ludicrous—where are the examiners to come from—are we to send over to Holland for one?" The ludicrousness and the gravity of the situation are not realised by merely studying the course of this debate. We have to consider that the Greek Question was the subject of an exhaustive debate in 1866, and that the subject of Mechanics was the subject of exhaustive debate and definite ruling only last year. Mr. SIMON and Dr. FERGUS in 1879 carried the resolution that the subject of Elementary Mechanics of Solids and Fluids—meaning thereby Mechanics, Hydrostatics, Pneumatics, and Hydraulics—be made compulsory. This year the Council resolves that there shall be an examination in the Elementary Mechanics of Solids and Fluids, and Mr. TURNER and Dr. ANDREW WOOD move—and carry their resolution—"That the examination

in the Elementary Mechanics of Solids and Fluids shall comprise the elements of Statics, Dynamics, and Hydrostatics. Hydraulics are left out in the cold, though what they have done since 1879 to merit such treatment is known only to the members of the Medical Council. But so the time is spent of twenty-four gentlemen than whom individually it would be difficult to find twenty-four more eminent or more estimable within the bounds of the profession, and so the money of the profession is wasted and squandered.

We must not be misunderstood. We do not mean to deny that the speeches have been good and the discussion interesting. Some of the speeches have been exceedingly able. Nothing could be better or more effective than Professor TURNER's account of the Examination in Arts in the University of Edinburgh; than Sir JAMES PAGET's discourse on the question of making Greek compulsory—we do not speak of the view or the argument, but of the speech as a speech; than Dr. HAUGHTON's strong Irish denunciation of all shams in the examinations; than Dr. ROLLESTON's repeated defences of the practical subjects as distinguished from those which an urgent age can dispense with, or than Mr. SIMON's vindication of Mechanics. But the Medical Council does not meet to hold fine discussions and to repeat its own conclusions. It professes to be an instrument for doing certain work, and it is constantly showing itself to be a most ineffective and costly instrument. As a debating club it would win a prize. As a medical authority it is condemned even by its own best members, and by the universal consent of the profession to which it owes all its importance. The question forces itself, Who is to blame for all this? Just when it is of supreme importance that the Council should behave itself with dignity and discretion it makes a most signal exhibition of the worst faults that were ever attributed to it by its most conscientious critics. Who is to blame? Answers vary. Some say the PRESIDENT; that he labours under a defect of force and power of leading and advising. We cannot but admit that the PRESIDENT lays himself open too constantly to such criticism. But he is by no means solely to blame for the discredit that has accrued to the Council by the meeting now concluding. There are other members of the Council who, by their personal character, their long connexion with the Council, and the recognised value of their time, would have been justified in appealing very seriously to the Council on the first day of its meeting. But they sat silent. Mr. SIMON made on Thursday, July 8th, an appeal, but it was an imperfect one. He should have proposed a motion expressive of the objections to the course the Council deliberately entered on. But he contented himself with a few words of earnest protest. He came in for severe castigation at the hands of Dr. ANDREW WOOD, and was not supported by members of the Council, from whom better things might have been expected.

WE learn from one of our Northern contemporaries that Mr. J. T. HIBBERT, M.P., the Parliamentary Secretary of the Local Government Board, replying to a question regarding the accuracy of certain statistics submitted to a public meeting of anti-vaccinators at Oldham, has written a letter of which the following is given as the text:—"It is scarcely fair to

say that 'in 1875 there perished in England 26,000 infants who would have lived had vaccination been as little in vogue as in 1874.' In the first place the increase of 26,000 deaths after allowing for increase of population, is caused principally by two diseases—viz., diarrhoea and bronchitis, the former having risen from 5143 deaths in 1874 to 15,477 in 1875, and the latter from 2506 deaths to 14,506, which together show an increase of 22,334 deaths. It cannot be said that either of these two diseases is largely influenced by vaccination. The deaths of infants under one year from small-pox have fallen from 1074 in 1874 to 142 in 1875, and while I admit that in 1871 and 1872 the deaths were 3161 and 2656, the average annual percentage of deaths from small-pox of infants under one year was largely diminished. On the other hand, the return shows an increase of deaths from syphilis of infants under one year from 255 in 1874 to 1554 in 1875, in my opinion one of the most unsatisfactory features in connexion with vaccination, and one which leads me to support the proposed modification of the Vaccination Law now before the House of Commons."

By what process of reasoning Mr. HIBBERT connects the reputed increase of deaths among young infants from syphilis with vaccination we shall not pretend to say, and do not care to conjecture. By far the most important consideration arising out of this letter (if we are to accept the text as accurate) is that the Parliamentary Secretary of the Local Government Board accepts without qualification one of the most pernicious and least justifiable assumptions of the anti-vaccinators. Further, he avers that so far as he is concerned with the Vaccination Acts Amendment Bill before the House of Commons, of which he is a promoter, he supports it because he regards the alleged increase of infantile syphilis as connected with the practice of vaccination! What relation between the provisions of the Bill and this question can exist is not easy to understand, unless it be conceived that Mr. HIBBERT sees in it the beginning of the end of compulsory vaccination. Be this as it may, we have the spectacle of the President of the Local Government Board justifying the Bill on the ground of political expediency, and the Parliamentary Secretary of the Board intimating, as it would seem, that he supports it on "anti-vaccination" grounds. This intimation must tend to cast doubts upon the real motives underlying the Bill, and will no doubt receive attention in its further progress.

Our own position in regard to the measure is well defined, and should be intelligible. We are concerned to [maintain the compulsory principle in full efficiency. If it were politically possible to enforce vaccination on the law-breakers, by having their children vaccinated under magisterial supervision, we would advocate that plan of procedure. To borrow an idea from the anti-vaccinators, the policeman should take the child from the mother and hold it while the beneficent operation, which in its principle and practice embodies the genius of *preventive* medicine, is performed. This policy is, however, in the present state of public opinion, impracticable. It remains, therefore, to look at the question from the practical standpoint, and viewing the matter thus, we feel that it will be an advantage to get rid of the grievance of multiple fines. Obviously nothing is gained to the cause of vaccination by the infliction of fines. The circumstance that the parent is

mulcted for the offence of refusing to have his child vaccinated does not protect it from the small-pox, or, in obstinate cases, procure compliance with the law. The law-breaker who will not obey the statute after two fines have been inflicted is not likely to do so afterwards. The first fine may be assumed to act as a warning to the negligent; the second has probably as much influence as it is possible to bring to bear on the obstinate. After this second infliction, unless the community is wise enough to enforce vaccination by direct means, it is simply creating a claim to martyrdom to pile up penalties. The law is, in fact, placed in the ludicrous position of having to tease its antagonist without being able to compel his obedience. A man who happens to have money at his command, either his own property or a fund placed at his disposal by some Society, may earn considerable distinction in the eyes of the unthinking crowd by his payments of fines, and if he chooses to put up with a few days' imprisonment as a first-class misdemeanant, he may become famous. This child's-play is the cause of infinite harm to the interests of public health. It tends to disguise the real position of affairs; and so falsifies appearances, that instead of seeking solely the good of the people, the law seems to be striving, vainly, to enforce a practice against which those who oppose it revolt. We further object to this misrepresentation because we are convinced that the parents who refuse to have their children vaccinated are few, and do *not* represent even a small class of society. There are always turbulent spirits in a large community, and at times when there is a lack of burning questions on which to "agitate" such persons will fall back on social questions. The *Anti-Contagious Diseases Acts*, the *Anti-Vivisection*, and the *Anti-Vaccination*, movements are the only opportunities for public excitement which just now offer themselves. If the grievance-mongers lose their "cry" by the passing of this Bill, we shall be glad, and the maintenance of the Compulsory Vaccination Acts will be assured. This is the view we take of the matter, and to the policy suggested by such a view we adhere.

It is not more difficult to cross Niagara upon a tightrope than to steer a course along that narrow channel which separates free-will from necessity, health from disease, insanity from criminality. For some days a man lay under sentence of death, concerning whom it had been proved that he suffered from what was probably a delusion arising from insanity; a wretched woman is committed for trial on a charge of murdering her maid-servant, and concerning whom it is admitted that she laboured under a similar delusion—viz., that she was watched by persons who intended to do her evil; a medical officer has been committed for trial on a charge of manslaughter, because, it is alleged, that he imposed insufficient restraint upon a man who committed a homicidal act (the man who committed the act being at the same time committed on a charge of *wilful* murder!); and a lady has been committed for an offence against the lunacy laws for receiving lunatics into an unlicensed house, and without orders or certificates.

The best comment we can make upon the custom which is prevalent, of allowing common juries to judge between criminality and insanity, is to call attention to the dilemma into which coroner and jury have fallen in the matter of the

Polish Jew who killed an inmate of the City of London Union Infirmary. The facts of the case are well known to our readers. A Polish Jew named SALEWSKAL, suffering from some form of delirium, was admitted to the infirmary, and was placed in the imbecile ward. Dr. BANCORBE, the medical officer, asked another of the inmates named HARRIS, who knew the Polish language, to go to the ward and converse with him, and at the same time he warned the attendant in the ward to "keep his eye" upon the Pole. During the absence of the attendant SALEWSKAL fractured HARRIS's skull with a chair and killed him. The result of the inquiry before the coroner is this, either that the jury recognise SALEWSKAL as a sane man and commit him for wilful murder (for it is obvious that no delirious patient can have any will), and at the same time commit the medical officer because he did not impose *unlawful* restraint upon a person capable of exercising both will and judgment; or that the jury recognise SALEWSKAL as a lunatic who ought to have been more carefully restrained, in which case the charge of manslaughter (against the medical officer) might possibly stand, but the charge of murder (against SALEWSKAL) most certainly could not be sustained. Supposing the latter view to be the more correct of the two, and supposing SALEWSKAL'S condition to be curable, what effect will the anxieties of his trial have upon his mental condition?

On the whole this is the prettiest sample of "crowners' quest law" which we have encountered for many a long day, and by their verdict the jury have done a terribly cruel thing either to a poor invalid who merits all our deepest sympathy or to a professional gentleman whose only fault has been that he did not break the law.

The offence for which Mrs. RUTLEY stands committed is for disregarding the 90th section of the Act of 8th and 9th VICT., chap. 100, by which it is enacted that no person (except a committee) may for profit take charge of a single lunatic without an order and certificates. Mrs. RUTLEY is also charged with receiving more than one lunatic into an unlicensed house. If these charges be proved against her, the offence is clear. The prosecution will have to show: 1st, that the persons were insane, and, 2nd, that restraint was imposed. If restraint has been imposed upon persons who are not insane, Mrs. RUTLEY has laid herself open to an action at law by the aggrieved parties.

In the case of the unhappy man SWEETLAND, the point which the jury were called upon to decide was whether the crime had its origin in drunkenness or insanity. The distinction between the two is not always easy, for it is well known and universally admitted that suspicion of others is a very common symptom in delirium tremens. The prisoner was a wild, dissipated character, and had been "on the drink" for three days prior to the murder, and had consumed very nearly a pint of raw gin just before he committed the act. Had he committed suicide instead of murder, a verdict of temporary insanity would have been returned to a certainty; and had he made his will on any of the three days preceding the act, that will would have been set aside to an absolute certainty. Unfortunately he committed the very act which in the case of SALEWSKAL afforded the most unanswerable proof of *insanity*, and a jury have consequently handed him over to the executioner. Supposing we admit that SWEETLAND was drunk and not mad, we have in the case of

MAINWARING a precedent for altering the punishment to one of penal servitude for life; and should he, as a prisoner, afford undoubted evidence of insanity, he could then be removed to an asylum, and be liberated on a ticket of leave should his recovery be fully established. As it is, the sentence imposed upon him seems to have been respited without deciding the question of insanity, in which we are principally interested.

Annotations.

"Ne quid nimis."

THE GROCERS' LICENCE QUESTION.

THE EARL OF ONSLOW did good service on Friday last in the House of Lords by again calling attention to the great question of Grocers' licences. In the course of his remarks his lordship said:—

"Grocers' spirit licences had been largely on the increase. Those licences could be refused only on two statutable grounds—either that the person or the house was not entitled to such a licence. The grocer paid for his licence £28 11s. 2d. a year; while the licensed victualler, with a house valued at £100 a year, now paid £16 10s., and under the change proposed by the Chancellor of the Exchequer would in future pay £30. The number of grocers' licences was likely to increase in consequence of the change. There was an objection to those licences being granted by magistrates because of the invidious position in which these functionaries must be placed if they had two applicants of equal respectability from the same street; but he should like to see power given to the magistrates to say the number of those grocers' licences which were to be granted and to put them up to public tender. In that way the number of grocers selling spirits would be kept down. It was a convenience to many persons to be able to buy spirits in the shops of their grocers, but it had been stated in evidence to the Select Committee that much mischief was caused by the facility for the purchase of spirits which the shops of those licensed grocers afforded to women, and that some of the grocers consented to enter as 'goods' the spirits had by women. Indeed, one gentleman told the Committee that this was so common in Scotland that whenever he found the entry 'goods' in a grocer's account he at once understood it to mean spirits."

The Bishop of Carlisle asked, "Why should not the entering of spirits as 'goods' be treated as a fraud, and why should not the selling of spirits to boys or girls under the age of sixteen be made penal?"

The Earl of Kimberley, on the part of the Government policy of letting this practical question drift, intimated that,

"In his opinion, and in that of the majority of the committee, the evidence given before them completely failed to prove that any appreciable increase of drunkenness could be ascribed to those particular licences. They were licences which were possibly liable to attack on various grounds, but no direct evidence had yet been produced of an immediate connexion between them and the prevalence of drunkenness. He had not found the assertions with regard to alleged increase of drunkenness among women supported by the evidence; and as to grocers' licences, they were only 2000 or 3000 out of a total of 100,000 licences for the sale of intoxicating drinks. He merely made these remarks to show the noble lord that he had not lost his interest in the subject. He did not express any opinions on the subject; he wished to be quite unfettered with regard to any Bill which the Government might think it proper to bring in."

Such a statement of official opinion leaves the question in something worse than a quagmire. The Select Committee began by excluding evidence—in the only practicable shape,—then drew an unwarrantable inference from the supposed absence of evidence! The Government has confounded the whole business by accepting a Report based on proceedings thus faulty.

SANITARY REGULATIONS OF THE AUSTRIAN NAVY.

THE Minister of Marine of the Austro-Hungarian Empire has recently issued a circular to all the seaport and maritime authorities. Several cases of small-pox had occurred on board some merchant ships, and this has incited the Government to formulate more stringent and precise regulations in respect to this disease. The circular in question is written in the Italian and the Illyrian languages, and these are its principal passages:—1. Any sailor or passenger, whether showing evident symptoms of small-pox or only suffering from an eruption of a doubtful character, shall not be allowed to land. 2. Sailors, subjects of the Austro-Hungarian Empire, must be provided with a certificate proving that they have been vaccinated during the previous ten years. 3. If during the journey a case of small-pox should occur, the patient must be at once isolated, placed on special diet, and the use of wines or spirits absolutely forbidden. 4. The excreta, &c., of the patient must be disinfected with sulphate of iron, and then thrown into the sea. 5. The patient, when convalescent, shall not be allowed to associate with the other persons on board till the period of desquamation is terminated. 6. The cabin occupied by the patient must be disinfected according to the system to be subsequently described. 7. When there are several cases of small-pox the entire ship must be disinfected.

With regard to the method of disinfection, many experiments have been made both in Germany and Austria, which have resulted in the recommendation of the following well-known system: Sulphur to the extent of twelve grammes per cubic metre of space to be disinfected is to be burnt in an earthenware basin, placed in the centre of some sand, to prevent all risk of fire. All the linen clothes, &c., are to be hung across the cabin, which is to be hermetically closed for three hours, and then exposed to the strongest possible draught for twelve hours. Then the walls, floor, ceiling, &c., are to be washed with a solution of one kilogramme of lime, or one-half a kilogramme of chloride of zinc per hundred litres of water.

NURSING AND NURSING.

The Council of the Nightingale Fund have issued, along with their report for 1879, reprints of two articles from the *Edinburgh Medical Journal*, one entitled "Nurses and Doctors," written by the Lady Superintendent of Nurses in the Edinburgh Royal Infirmary: the other, on the Nursing in the Edinburgh Infirmary, by Dr. Joseph Bell. We welcome this protest (for such it is) from the Executive of this Fund against that hysterical sentimentalism which is being introduced into the practice of nursing in certain hospitals and institutions, and which is a mischievous caricature of the system of nursing represented by the Nightingale Fund. There is considerable risk of nursing in hospitals being seriously prejudiced by the fussy energy of women, weak and kindly, who have latterly taken to nursing as a sentimental service or mission rather than as a serious duty, but who lack any real knowledge of those domestic arts which form no inconsiderable part of a nurse's calling, and do not possess the aptitude for learning, without which a good nurse is an impossibility. Ladies of this sort are prepared to do anything—except the painful, wearisome details of nursing, and having almost everything to learn, and none of the habits or temper of mind which makes the nurse's duty sit comparatively light upon the person who undertakes it; they hold themselves, after the study of a few books and a superficial acquaintance with the brighter side of hospital life, capable of instructing all. The paper, written by the female Superintendent of the Edinburgh Infirmary, indicates the distinction between nursing as a serious

duty for cultivated women, and nursing as the sentimental, not to say hysterical, outcome of unacknowledged, but not the less real, idleness. The old system of nursing was bad in some of its details, but, as she says, it had its redeeming qualities, and not the least important of these, still insufficiently apprehended, was the fuller apprehension of the wants of the patients and the greater approximation between the feelings of patient and nurse. We question whether, if the matter were carefully looked to, the evils of the old system, such as they were, are not outdone by many of the evils of the "new system," so-called. Who familiar with the class of nurses in question has not been made conscious that the patient has been made to serve the self-beatification of the nurse, and not the occasion for the development and manifestation of the most lovable of the characteristics of womanhood? What hospital surgeon or physician has not, moreover, had anxiety and trouble from the growing tendency among these nurses to profess to be outraged in feeling (heaven save the mark!) by the ordinary and necessary incidents of surgical and medical practice in ward life? The publication, by the Nightingale Fund, of the papers which have been referred to, will serve to make evident to the public, when the question of "a new system of nursing" is under discussion, that a distinction has to be made between one new system and another, and happily a standard of the new system which should be followed is to be found in the wards of St. Thomas's Hospital, and in the work of the Nightingale Fund.

THE VIRGINIAN PRUNE.

Few drugs have a wider repute in the United States, and have failed more completely to gain a position in the practical therapeutics of this country, than the Virginian prune bark. In spite of the recommendations of Dr. Clifford Allbutt and others, it is still almost unknown to the bulk of practitioners. An instructive and fairly complete account of the history and uses of the drug, by Dr. Van der Espi, has recently been published in the Belgian *Journal de Médecine*, and some of the facts there mentioned may be interesting to our readers. The tree grows in all the States of the Union, but it attains the largest size in the southwestern States. Everywhere in the northern States it is reputed one of the most useful of indigenous remedies. According to Proctor, the bark yields a volatile oil, of pale-yellow colour, which has the odour of bitter almonds, and contains hydrocyanic acid in such quantity that two drops will kill a cat in five minutes. The prussic acid does not exist as such in the bark, being formed, as in bitter almonds, by the action of emulsion on amygdaline. It contains also tannic and gallic acid, starch, resin, salts of lime, potash and iron, a fatty matter, woody fibre, and a red colouring matter. These facts have been confirmed by the author of this memoir, and he has further proved that the amygdaline exists in the Virginian prune bark in a crystallisable form. Its quantity is, however, very variable; it is different in each kind of bark; that of the root contains more than that of the trunk, and the latter more than that of the young branches; it varies also with the age of the tree, with the time of year at which it is collected, with the age of the bark, and with the mode in which it is preserved. The contact of moisture causes the emulsion to act upon the amygdaline, and the bark is therefore best preserved in zinc cases, hermetically closed. The red colouring matter he finds to be analogous to the soluble red substance found by Pelletier and Caventou in the chinchona bark.

A gramme of the powdered bark has a taste which is at first astringent and afterwards bitter, and resembles that of prussic acid. It causes a sensation of warmth at the

epigastrium, and appears to have a tonic (or stimulant) action, increasing the general sense of energy. Diminished sensibility, retardation of the pulse, and lowered temperature follow, due, no doubt, to the prussic acid which is formed. Strong doses, taken several times a day, were found to reduce the pulse from 65 to 50. When the dose exceeds three grammes, it causes a sensation of fulness at the stomach, nausea, and diarrhoea. Larger doses cause dangerous symptoms, due to the hydrocyanic acid, which appears to combine with the hæmoglobin of the blood.

The value of this substance in medicine appears to depend chiefly upon the constituent tannin and prussic acid, and it is said to be useful in debility of the digestive organs, general debility, accompanied by local or general irritation, in the convalescence from local inflammations, in acute febrile diseases, and in painful affections of the stomach. It has been recommended in intermittent fever. Tannin has been held in high repute in the treatment of ague (Chancere, Pezzoni), and so also has prussic acid in the form of bitter almonds. The prune bark is much used in America in the treatment of phthisis; it is said to have a marked effect on the pyrexia, on the cough, on the expectoration, and on the night sweating. It has been used by Van der Espi with success in whooping-cough. Hydrocyanic acid is an old remedy in the affection. In this country the bark has been used chiefly in heart disease, and it is said to be of very marked value as a cardiac sedative, most useful in the cases in which digitalis is not well borne. In bronchitis the sedative effect of the prussic acid on the cough, and of the tannin upon the expectoration, is said to be valuable. It has been recommended as an external application to ulcers and as an application to the eye in catarrhal ophthalmia. In the latter Van der Espi asserts that it is much more useful than simple tannin. These are the chief alleged uses of the drug, but the list does not by any means exhaust the class of diseases in which it has been recommended, and which comprehends a large proportion of known maladies. The bark is administered as a powder, in an infusion, a syrup, or a tincture. By evaporating the tincture, an extract is obtained which the Americans call prunin or cerasin, the dose of which is from two to ten grains. Possibly the reason why it has been so little employed in this country is the deterioration of the bark before it reaches us.

SEAMEN'S HOSPITAL SOCIETY.

THE Seamen's Hospital as a charitable institution is unique of its kind. Seamen of all nations not only receive relief from it when sick or otherwise distressed, but are retained within its walls till sufficiently strong to resume the duties of their calling. From the last annual report we are pleased to learn that the finances of the institution are in a flourishing condition. Not only have the subscriptions increased, but the reserve funds now amount to over £120,000. With this fund it is proposed at some future date to build a permanent hospital, the present building being only lent by the Government. With so large a sum in hand, it is to be hoped the Committee will see their way speedily to commence operations, for the building they now occupy is certainly not suited to the requirements of a general hospital. Besides, it is out of the way of the sick sailor. Formerly, when the old *Dreadnought* lay in the river, ships as they passed up to dock dropped their sick as they passed. Since the removal of the institution ashore this is seldom done, and the ship goes on to port and the sick sailor has to be transported back to Greenwich. Practically when once in port it is easier for the sailor to go to the London, Guy's, St. Bartholomew's, and the German hospitals than make a long journey across the river back to Greenwich. There is very little doubt that of late an increasing number of sick sailors, especially those suffering from acute diseases, have found their way to

the wards of the hospitals we have named. At present the Seamen's Hospital is on the wrong side of the river, and should the Committee determine to build they should endeavour to secure a site in the very midst of the docks. The establishment of an out-patient department at the docks will in no way meet the case, as this arrangement will not get over the difficulty of the transportation of acute cases across the river back to Greenwich. The Committee hold a noble sum of money in trust for the sick sailor, and we hope it will not be frittered away. Till, however, they begin to build, they have from the interest of this money an ample sum to aid towards their yearly expenses, and can well afford to allow the current of private charity to flow for a time in directions which urgently require it. It is anomalous for one hospital to be accumulating a prodigious reserve, whilst another, like Charing-cross, has to close some of its wards from lack of funds to provide for its ordinary requirements.

EXPLOSIONS.

THERE can be no question as to the substantial accuracy of the finding in the case of the recent explosion of a mixture of gas and common air in a main near the Tottenham-court-road, to the effect "that the deaths were caused by an explosion, that that explosion was caused by a light being ignorantly placed to a pipe by Hawkes, the gas having been introduced into the new main by some defect in the valve in Howland-street." The jury appended to their verdict a rider, giving it as their opinion that additional care should be taken by the Gas Light and Coke Company in the testing of new mains. Another explosion precisely of the same class, and from a like cause, has occurred at Bilston. It is, as the *Daily Telegraph* in an able leader on the subject points out, a grievance "that we should have gasmen as ignorant in their ways of dealing with gas as the untrained householder. . . . Everybody knows that it is quite safe to light an ordinary burner in a room; so that if any leakage is comparable to the common gas jet no harm will result by applying a burning match to it. Yet in that case the leakage must be an escape under strong pressure. If not, if it be a mere ooze, if the gas has stagnated either in a long pipe with a free opening to the air, or in a confined space to which air gets access, then as the atmosphere and the gas are of different degrees of heaviness a process of diffusion takes place. The gas comes to the surface, and air forces its way behind, where it may remain mixed with the gas in the proportion of one part to fifteen. If in these circumstances a light be applied the surface film burns, and its flame runs back until it ignites the explosive mixture behind—that mixture being the amalgamation of inflammable vapour and air, which has been formed in obedience to the law of diffusion." This is a very fair popular account of the facts, and if it should have the effect of opening the eyes of the gas companies to the nature of the article with which they have to deal—teaching them the rudiments of their business, so that they can educate their servants up to the point which is necessary to public safety,—the *Daily Telegraph* will have done good service. Meanwhile, M. Kæuffer, in the *Annales de la Société Médico-Chirurgicale de Liège*, has a lesson for us, of the medical profession, and for dispensing chemists and the public, which we are glad to be able to reproduce. The facts recited are easily forgotten, and should be kept in memory by prescribers. In some instances it is even possible that they may be unknown. We quote from the *Canadian Journal of Medical Science* :—

"M. Kæuffer has published, in the *Annales de la Société Médico-Chirurgicale de Liège*, an interesting study of pharmaceutical preparations, which in certain cases, often not well marked, may give rise to explosions. Amongst these very numerous substances we will cite only the most important.

The author, for example, while preparing a pomade composed of chloride of lime, flowers of sulphur and other substances, saw small detonations produced, and the entire mass entered into deflagration. Another time, essence of turpentine having been poured into a bottle in which remained some sulphuric acid, the vase burst. These explosions may be produced in many other cases. A German journal reports that in America, one of the most dangerous substances, nitro-glycerine, is found in all the homœopathic pharmacies. The hypophosphites may also be the cause of accidents. In one case, the mixture of hypophosphite of lime, chlorate of potash, and acetate of iron produced a violent detonation, which burned the preparator and put his life in danger. The trituration of the hypophosphite alone may be dangerous when the substance is very pure. The solutions of oxidising bodies in glycerine demand the greatest prudence. Thus, chromic acid in glycerine has been able to give rise to a violent detonation. In this case the solution should be made drop by drop in order to avoid accidents.

"The solution of permanganate of potash in glycerine presents an analogous danger. Pills of oxide of silver have equally been able to determine on the one who carried them a formidable explosion. The iodide of nitrogen, which may be formed in certain circumstances, is also detonating. Now, in America there are frequently seen prescriptions ordering a mixture of tincture of iodine with ammonia, which necessarily form iodide of nitrogen; if the explosion is rarely produced, it is because the trituration is generally made in the presence of water, which prevents this result. In any case, this mixture should only be made in very small quantities. A pharmacien ought then to refuse to fill a prescription for which tincture of iodine is to be mixed with an ammoniacal liniment; he ought also to refuse to make every mixture of chlorate of potash mixed with sulphur and analogous substances. Thus chlorate of potash mixed with tannin is dangerous, and these bodies ought only to be delivered separately, in the case where the physician prescribes them in substance, and not under the form of gargle. A tooth-powder, pointed out by Price, composed of chlorate of potash and cachou, and used with a dry brush, would be capable of producing a detonation in the very mouth of the patient. Price also noted danger from concentrated solutions of permanganate of potash in alcohol and water, which may be filled but never delivered in uncorked bottles; if not, explosion follows infallibly.

"Chlorate of potash with glycerine also constitutes a dangerous mixture. Once a gargle prescribed by one of the most renowned physicians of New York, containing equal parts of chlorate of potash, perchloride of iron and glycerine, exploded with great violence, not in the pharmacy, but in the saddle-bag of the bearer.

"Another time, a similar mixture exploded, only some time after its preparation, under the influence of the rays of the sun. This time the explosion caused the burning of the house. Lately there has been noticed an explosion of a powder containing chlorate of potash and hydrochlorate of morphine."

ROYAL COLLEGE OF SURGEONS.

FROM the annual report of the receipts and expenditure of the College from midsummer-day, 1879, to midsummer-day, 1880, and which has just been published, it appears that the income from all sources amounted to £15,612 17s. 5d., derived principally from fees paid by candidates for the diplomas of the College producing the large sum of £12,683 15s. Rents from chambers adjoining the College and dividends on stock yielded £2527 3s. 1d. Fees paid by members of the College on their election to the Fellowship, and which formerly added so largely to the funds of the College, only produced thirty guineas during the past year. Members of the Council and Court of Examiners paid on their admission as such just 100 guineas. Receipts from Trust Funds amounted to £247 7s. 10d. The annual expenditure amounted to £15,482 19s. 7d. The largest item appears in fees paid to the members of the Council—Courts and Board of Examiners—viz., £6326 18s. Salaries and wages to the large staff of officers and servants in the three departments of museum, library, and office, is not large in £3950 3s. 5d. For taxes, rates, and diploma stamps,

£1348 18s. 6d. was required; the lecturers receiving £144 18s. Museum specimens, &c., £606 11s. 8d. Books for the library, £368 6s. 11d. Notwithstanding these necessarily heavy expenses there appears a balance at the bankers of £384 14s. 7d. The accounts are all carefully examined by a committee of auditors consisting of six members of the Council.

MEDICAL NEWS FROM RUSSIA.

ON the initiation of the Medical Society of Tver, and with the support of the Municipal Council of the Zemstvo, it has been decided to establish a colony for the insane in the vicinity of the city. The colony is to give accommodation to 400 patients, and it is estimated that each patient will cost 632 roubles annually. The municipality have made a grant of 253,615 roubles towards the establishment of the colony, that sum representing 50 per cent. of the presumed total cost.—At the sitting of the Municipal Council of St. Petersburg on the 24th ult., the question of the deficiency of hospital accommodation in the city was debated. The deficiency was estimated at 2000 beds, and it was considered whether these should be provided by temporary hospital buildings or by weeding the hospitals of convalescents and placing them in buildings which might be prepared for them at a less cost than hospital buildings proper. In the end the Council determined to make a grant of 200,000 roubles for temporary hospitals and 30,000 roubles for the establishment of a convalescent institution.

THE DEATH OF MR. TOM TAYLOR.

THE medical profession will think regretfully of the death of Mr. Tom Taylor. He was a man of culture, and outside his work as a dramatist had a claim on the respect of the community. As one of the principal contributors, and in late years the editor, of our facetious contemporary *Punch*, Mr. Tom Taylor was always appreciative of the efforts made by the medical profession to relieve suffering and promote the public good. In his writings for the stage and for the leading satirist of the day and the age, he showed himself ready and anxious to help, instead of sneering at, the cause of public health promotion and the endeavours made in good faith, if not always successfully, by THE LANCET to inaugurate and advance useful sanitary and hygienic reforms. It is only fitting that we should record the regret we feel at having lost so excellent a friend, and in so doing we express the personal respect and regard which a large circle of friends in the medical profession entertain for the deceased gentleman.

THE GOVERNMENT AND THE IRISH FEVER CASES.

THE Report of the medical men sent to the districts where fever prevails is in the hands of the printers, and may be expected daily. Four nurses, too, have been sent down to the cases from the Hardwicke Hospital.

KING'S COLLEGE HOSPITAL will be closed from the 17th inst. until the 19th September (inclusive). Arrangements have been made to transfer the more serious cases to other hospitals. We hear that Professor Lister will remove about twelve of his more urgent cases to a private hospital in Fitzroy-square, so that they may continue under his personal supervision.

THE Medical Council has done one new thing which will require grave consideration at another time. It has passed a Resolution imposing a new examination on medical students, or on students before entering the profession—an examination corresponding to the Preliminary Scientific Examination of the London University.

THE
GENERAL COUNCIL OF MEDICAL
EDUCATION & REGISTRATION.

Session 1880.

Thursday, July 8th.

THE General Medical Council resumed its sittings on Thursday, the 8th inst., Dr. Acland, President, in the chair.

A report was read from the Committee on Ophthalmology and Midwifery with reference to the memorials received from ophthalmic surgeons and from the Obstetrical Society. The report stated that the memorials had been submitted to the licensing bodies, and answers had been received from all of them except the Universities of Cambridge, Durham, and Queen's, in Ireland. It added:—"With reference to ophthalmology, the opinion of the bodies is almost unanimous that, under the present arrangements of their respective examinations, the subject of ophthalmology receives its fair share of attention, and that it would not be desirable either to require attendance on a special course of lectures on ophthalmology as part of the curriculum for a medical student, or to make ophthalmic surgery a distinct subject of examination (separate from surgery) at the pass examination for a licence to practise. The Committee see no reason to dissent from that opinion of the licensing bodies, and they accordingly do not advise the Council to recommend that a special course of study of Ophthalmology, or a distinct examination in that subject, should be required. With reference to the subject of Midwifery, there is considerable difference in the requirements by the different licensing bodies as to the extent of study, some requiring as many as a hundred lectures, and others fifty or fewer, and some requiring as many as twenty cases of labour to be attended, while others do not require more than six. Seeing that the Council have not hitherto deemed it expedient to specify in their Recommendations the exact quantity of study to be certified in any particular subject, the Committee do not advise the Council to follow an exceptional course with regard to Midwifery. With reference both to Ophthalmology and to Obstetric Medicine, it appears to the Committee that if the Council should hereafter have to reconsider the conditions of the medical curriculum as a whole, part of such reconsideration must of course consist in the Council's satisfying itself that each of the several branches of practical study will receive its due share of attention from every candidate who proposes to present himself for examination; and the Committee can at present only suggest that, whenever the time for such general reconsideration may come, it will be well for the Council to refer again to the two memorials which are now reported on."

Dr. HUMPHRY moved that the report be entered on the minutes, and that copies should be sent to the memorialists.

Dr. HAUGHTON objected to dealing with the subject of ophthalmology on the same footing as the important subject of midwifery. He proposed that the latter subject should be at once considered by the Council, and that Dr. Humphry's motion should apply only to the former.

The consideration of the question was postponed till after the adjourned debate on preliminary education.

Dr. BANKS, in resuming the discussion, defended the Queen's University of Ireland from the imputation of neglecting preliminary education, and compared the requirements of that body with those of the Medical Council. He said that the great difficulty of the University had been the deficiency in the middle-class schools in Ireland—a deficiency that would no doubt be remedied by the measure on intermediate education passed by the late Government. He maintained that the University had fulfilled its mission to the utmost of its ability, and endeavoured to raise the standard of general and medical education. He had no doubt that better days were dawning, and that better prepared candidates would be sent up for the matriculation examination. As a proof of the stringency of the examinations of the University, he alluded to the small number of rejections of its student by the Army Board.

Dr. SCOTT ORR vindicated the Faculty of Physicians and Surgeons of Glasgow from the imputation of neglecting preliminary education, and asserted that its examinations were quite abreast of the requirements of the Medical Council.

Dr. PYLE made a similar vindication with reference to the University of Durham.

Dr. ROLLESTON alluded to the defects which had been pointed out in Glasgow, and expressed his regret that the Scotch bodies had opposed the scheme of conjoint examination.

Mr. TURNER complained of the course adopted by Dr. Storrar, and compared his speech to the Commination Service. He explained the nature of the examinations of the Scotch universities. He said there was no entrance examination to the Faculty of Arts in any of the Scotch universities, in which respect they resembled the Oxford and Cambridge Universities; but the Universities of Edinburgh and Glasgow had arranged to bring such an entrance examination into operation next winter. The examinations in general education for medical students, he said, were largely conducted by non-professional examiners, and were fully up to the requirements of the Council. Referring to the system of "remanet" examination, denounced by Dr. Storrar, he said that in Scotland the matriculation certificates of the English universities were accepted as far as they went, but the holders were required to be examined in additional subjects not included in those certificates. He objected to unduly harassing the student in regard to his preliminary education, and approved of the principle of one examining body accepting the certificates of another as far as they went. He opposed the suggestion of Dr. Storrar to refer the question to a Committee. There had been committees enough appointed already, and the time had arrived when the whole question should be considered by the Council itself. The standard ought no doubt to be raised, and then the preparation of students would be proportionately improved. The subjects of examinations, he thought, might be increased. He had a list of subjects which he was prepared to recommend, but this was perhaps not the fitting occasion for bringing it forward.

Mr. SIMON thought that the Council should at once deal with the reports of the Branch Councils, instead of referring to a Committee questions which had again and again been reported upon. He did not object to referring new questions, such as a revision of the system of preliminary examination; but to refer matters already reported upon would only be ridiculous. He thought it would be unwise, in the present provisional position of the Council, to enter upon any large prospective undertakings. They had all been advocating considerable and radical changes in the licensing system; and the constitution of the Council itself had been challenged; and until questions of that kind were settled, prospective resolutions, such as those proposed, would be of little use. For twenty years the Council had recommended that preliminary examinations should not be conducted by the licensing bodies; but the recommendation had not been regarded. He was himself prepared to take a vote upon the subject whether such examinations should be considered satisfactory for the purposes of the Medical Act. The question should be settled by the Council, and not referred to a Committee.

Dr. WOOD deplored the speech of Mr. Simon, which he said was tantamount to a proposal to the Council to abdicate its functions and declare itself incompetent. He agreed that it was useless to refer the question under consideration to a Committee. He denied the statement of Dr. Storrar that nothing had been done in regard to the improvement of preliminary education. The recommendations of the Council had been largely adopted by the licensing bodies. He admitted that they declined to adopt the recommendation to abandon their preliminary examinations, and they intended still to decline to follow that recommendation. The Council had its remedy, and could take the bodies, if it desired, before the Privy Council. The present Government had stated that it was not at present prepared to legislate; and it appeared to him, therefore, that the present was a breathing time for the Council, in which it could undertake the reforms which it considered necessary. He protested against waiting for possible legislation, which might not come till the Greek kalends. A waiting policy would only be throwing water on the licensing bodies in their efforts to meet the views of the Council in regard to education and examination. A number of important proposals were upon the programme for the present session; and he hoped those

questions would be considered in detail by the Council. With regard to the proposal to take away from the corporations the right to conduct preliminary examinations, he maintained that the Council had no more right to take away that power than it had to take away the power of conducting professional examinations. The examinations were conducted by eminent and competent men, and they were not a sham but a reality. In the body which he represented there had been at a recent examination 101 students examined in English, and of these 82 passed and 19 were rejected. In Latin, of 134 examined, 78 passed and 58 were rejected. In arithmetic, of 93 examined, 52 passed and 41 were rejected. In algebra, of 112 examined, 69 passed and 43 were rejected. In Euclid, of 125 examined, 99 passed and 26 were rejected. In mechanics, of 66 examined, 40 passed and 26 were rejected. In French, of 87 examined, 52 passed and 35 were rejected. As to the system of "remanets," he contended that it was not open to the objections brought against it. He saw no reason why a student who had passed a creditable examination in Latin, French, and arithmetic, and failed in algebra and Euclid, should not be allowed within a reasonable time to come up again for the latter subjects. He knew it was contrary to the system adopted in England, but they claimed in Scotland to be allowed to judge for themselves on that point and act according to their own genius. No doubt in some of their professional examinations there was a great deficiency in regard to grammar and spelling; but how did they know that some of the students had not been examined by the great universities? In some cases it had been proved that such was actually the case. He had no doubt that many improvements might be made, but he asked the Council to pause before raising the standard too high, and thus unduly to limit the number of general practitioners required by the country.

Mr. TEALE moved as an amendment, "That a Committee be appointed to draw up a series of propositions to be submitted to the Council, which shall embody the various motions on the programme in reference to preliminary examinations, and such other questions on the same subject as it shall seem desirable to such Committee to submit to the vote of the Council; this report to be brought up at the opening of the meeting on Friday, in order that a distinct vote may be passed upon them during the present session; and that the Committee consist of the following members:—Mr. Teale (chairman), Dr. Humphry, Dr. Storrar, Dr. A. Wood, Mr. Turner, Dr. Leet, Rev. Dr. Haughton, and Dr. Fergus." He objected to a waiting policy, as recommended by Mr. Simon, as it was very doubtful whether the subject would be taken up early by the Government; and it was very desirable to arrive at some definite conclusions on certain points. Many proposals had been made, and it would be a saving of time if a Committee were appointed to formulate the subjects for the consideration of the Council.

Dr. A. WOOD seconded the amendment.

Dr. HAUGHTON objected to the appointment of a Committee as proposed by Mr. Teale, believing that the desired result would not be obtained in time for discussion by the Council during the present session.

Dr. ROLLESTON also opposed the amendment, and spoke in favour of Dr. Storrar's resolution.

Dr. STORRAR said he was in no way opposed to the proposal of Mr. Teale, and was willing to adopt it instead of his own motion.

Dr. FERGUS urged the importance of the Council having some check upon preliminary examinations.

Dr. A. SMITH suggested that the Council should resolve itself into a Committee to consider the question.

Dr. STORRAR then replied, and asked permission to withdraw his motion in favour of that proposed by Mr. Teale.

Dr. HAUGHTON objected to the withdrawal of Dr. Storrar's motion, and it was accordingly allowed to stand.

Mr. Teale's amendment was then put and carried, and was also adopted as a substantive motion. Dr. Storrar's motion therefore fell to the ground.

On the motion of Dr. A. SMITH, seconded by Dr. QUAIN, the standing orders of the Council, as revised by the Committee appointed for the purpose, were received and adopted.

An application for registration from Mr. John Dwyer having been referred to the Council by the Executive Committee, with the recommendation that the evidence produced of his having acted as surgeon in the public service prior to 1858 be accepted as a qualification for registration, the application was granted.

A similar application was received, and granted, from Dr.

William Wotherspoon Ireland, who had acted as assistant-surgeon in the East India Company's Service prior to 1858.

A certificate was read of the conviction of George Frederick Totter (M.R.C.S. Eng. 1867, L.R.C.P. Lond. 1867) for manslaughter in January last at the Leeds assizes. The offence was that of riding over a boy, who died from the effects of the shock. The prisoner, it appeared, had been fined on several occasions for furious driving and once for drunkenness. The Council deliberated on the case in private, and resolved that it was not deemed expedient to remove the prisoner's name from the Register.

The Council then adjourned.

Friday, July 9th.

The Council reassembled under the presidency of Dr. Acland.

OPHTHALMOLOGY AND MIDWIFERY.

Dr. HUMPHRY moved the adoption of the Report of the Committee on Ophthalmology and Midwifery.

Dr. HAUGHTON objected to the reception of the report. It would be wrong, he said, to allow the arrangements of the licensing bodies for the teaching of midwifery to continue for another year in their present disgraceful condition, but he had no objection to postpone the consideration of ophthalmology, or any of the other "ologies" pressing for recognition. It often happened that a young man was appointed to a regiment or to a ship where he had to deal with midwifery cases, of which he was unable to take charge. The University of Dublin, in the view of such contingencies, had required from its licentiates a six months' course of lectures on midwifery, and a six months' attendance on a maternity, including thirty cases personally attended. Ophthalmology was an ornamental subject that was not of the pressing importance of midwifery, and its consideration might well be postponed. He proposed that the Council should recommend the plan adopted by the University of Dublin.

Mr. MACNAMARA seconded the proposal, and said that the College of Surgeons in Ireland was alive to the importance of the subject of midwifery, in which it had a distinct examination, and it did not allow a student to come up for a surgical licence until he had brought forward satisfactory evidence that he had been engaged in the study of midwifery. As to the number of cases of labour to be attended, that was a matter which should be left to the Branch Councils, but some amount of attendance should always be required. The Committee declined to recommend any exceptional dealing with midwifery; but he contended that there should be a special examination in a subject of such serious importance.

Dr. A. WOOD said that the subject was everywhere made part of the medical curriculum. It was considered by them all as a most important subject. The Council, however, ought not to lay down minute details as to the number of lectures or labour cases that should be attended, which might well be left to the bodies themselves. In Scotland it would be impossible to send each student to thirty cases of labour. Before the requisite number of accouchements could be provided it would be necessary to import a colony of Irishwomen.

Dr. A. SMITH thought that the Council should take care that every practitioner should be well qualified in midwifery; but the details of the subject might be left to the licensing bodies.

Dr. QUAIN said that midwifery was already one of the subjects a knowledge of which was required by the Council; and he did not know that anything further was needed.

Mr. SIMON said that the rule had hitherto been to recommend certain subjects of study, but not to prescribe the details of the lectures, &c.; and that rule had been followed in reference to midwifery. He thought the rule a safe one, and hoped it would be adopted by the Council. The Committee had not, as suggested by Dr. Haughton, proposed to deal with midwifery and ophthalmology as on the same footing, though it had dealt with them in the same report.

Dr. BANKS objected to laying down details of study and examination in midwifery, as proposed in Dr. Haughton's resolution.

Dr. HAUGHTON said he should be willing to modify his amendment by stating that the Council recommended a course of lectures in midwifery and a course of instruction in practical midwifery, without stating the number of attendances required.

Dr. HUMPHRY, in reply, said that the Committee had thrown no slur upon the study of midwifery, and had expressed no opinion as to the comparative value of that subject and of ophthalmology. The only question was, whether they were to deal exceptionally with midwifery, treating it in a different way from all other subjects. No such legislation as that proposed by Dr. Haughton had taken place in reference to anatomy, surgery, or other subjects, and he saw no reason for it in reference to midwifery.

The amendment was then negatived, and the motion for the adoption of the report was put and carried.

GREEK.

Dr. LEET proposed, "That on and after the 1st of January next Greek be included among the compulsory subjects of the preliminary examination for medical students." He stated that the Apothecaries' Hall in Ireland included Greek among its subjects of preliminary examination for medical students, and it did not feel disposed to lower its standard. Dr. Leet urged the importance of a knowledge of Greek in the way of general culture, and as affording a clue to the meaning of scientific terms; and cited the opinions of several eminent educationalists to that effect. He called attention to the fact that many years ago the Council had adopted Greek as a compulsory subject, but had never given effect to its resolution.

Mr. MACNAMARA seconded the motion.

Dr. A. SMITH said that Greek was now, according to the standing orders, an optional subject. He thought it should be compulsory; but he objected to the inadequate examination to which some students were subjected: it was no guarantee that a useful amount of knowledge of the language had been acquired.

Dr. STORRAR said he had fought the battle of Greek at the Council as long as he could, but he finally gave it up. Modern education was increasingly disregarding Greek, and he believed that before long the language would only be cultivated by a few scholars for its own sake. The London University gave its degrees in Science, Medicine, and Law, without a knowledge of Greek; and it was considered that German gave the student many of the educational advantages supposed to be limited to the older languages. Considering the limited time that could be devoted to preliminary education, he should vote against Dr. Leet's proposal.

Mr. SIMON, while acknowledging the great importance of Greek, believed that if it were made compulsory the supply of medical men for the public would be unduly limited.

Dr. ROLLESTON regretted that he could not vote for making Greek compulsory, which would, he said, exclude a number of boys attending the modern public schools, where Greek was largely superseded by modern languages and science.

Dr. FERGUS cited the opinions of several authorities, including Professor Huxley, against rendering Greek compulsory, and urged that there were other subjects, having a more direct bearing upon medicine, that would equally exercise the student's mental powers.

Dr. HAUGHTON, in supporting Dr. Leet's motion, said that from time immemorial law, physic, and divinity had stood side by side; but the proposal to lower the educational standard of medical men by declaring Greek unnecessary was the first step to placing them in an inferior position. He was aware that many of the Greek examinations of medical students were of a very unsatisfactory character; but the Council could always raise the standard. In the Apothecaries' Hall in Ireland the Greek examination was of a very high-class. Nothing was so distressing as to try and teach an uncultivated brute of a student who had never learned Greek, and he hoped that the Council would declare the subject compulsory.

Dr. BANKS supported the motion, and said if Greek were excluded the profession would enter on a downward course.

Dr. PETTIGREW said it was not proposed to exclude Greek, but only to allow it to remain, as he thought it ought to be, an optional subject. He believed that there were many other subjects equally valuable as instruments of intellectual training; while there were some students possessing excellent talents, and worthy to enter the profession, to whom the study of languages was a matter of great difficulty.

Dr. HUMPHRY regretted the loss of Greek, but thought that they must bend before the wind. A large number of schoolmasters had reported to the University in Cambridge in favour of giving up Greek as a compulsory subject,

adding that many of the boys were prevented by its retention from entering the University. The subject was accordingly no longer compulsorily required; and if that were the case at the University, it could hardly be contended that it should not be the case with the medical profession. If the standard were too high, there was a great danger that the number of persons entering the profession would be greatly reduced, to the disadvantage of the public.

Dr. A. WOOD reminded the Council that they were legislating for a minimum; and if they erected a barrier which it was very difficult to pass, a great evil would be inflicted upon the community.

Sir W. GULL said it was not honest to require Greek of ordinary medical practitioners. Such knowledge of Greek as the majority of medical students would acquire was nothing but a sham. He did not desire to depreciate scholarship; he wanted Greek for his idle hours as an amusement, but he did not require it for the practice of his profession. He ridiculed the notion of employing a few well-known passages in the Greek New Testament as a test of the student's knowledge of the language.

Sir JAMES PAGET said he agreed with Mr. Simon that the question in this case was what was the least amount of knowledge which a man must possess in order to be a safe practitioner. To say that a man could not acquire enough knowledge to allow him to begin to learn medicine unless he knew Greek was somewhat startling. He had a profound respect for a knowledge of Greek, but only for that which might fairly be called knowledge which would affect the whole of a man's life, or the whole of his mental character. But it would be absurd to suppose that that kind of knowledge could be possessed by all medical students. All that could be expected would be but a smattering, which would vanish in a year or two of serious work in the profession. It might be said that all the other subjects were in the same position, but though a man might come to the study of medicine with only a very elementary knowledge of mechanics or chemistry, that knowledge must almost of necessity grow with every step he took in the profession. That was not so with regard to Greek. Most persons must have noticed in reading medical literature that men often covered very bad English by the use of Greek words, which were ill understood and badly expressed. No doubt it was true that the derivation of English words was frequently taught in schools, but that method might give utterly false explanations. Such words as "asphyxia" and "hypertrophy" would be wrongly explained by their derivations. Much of the discussion seemed to proceed on the supposition that it was proposed to give up Greek, but that language was only to be made optional. He hoped that the Council would not declare that no man could be deemed fit to begin the study of medicine unless he possessed a knowledge of Greek.

The PRESIDENT said when this subject was first discussed in 1866, he had the honour of representing the University of Oxford, and therefore he thought it his duty to consult some of the skilled scholars connected with that University, among others Mr. Goldwin Smith and Dr. Temple, the then Head Master of Rugby. They all agreed in saying that whatever was done should be done thoroughly. It would lower the literary character of the profession to require the mere minimum. To make Greek compulsory would be to reverse the policy of the Council. It was true that it was at one time intended to enforce it after a certain date, but before that time arrived, the Council reconsidered its decision, and decided that it should not be made compulsory.

The motion was put and lost, the numbers being, for it 4; against 17.

Dr. HAUGHTON then proposed: "The General Medical Council being of opinion that the existing Preliminary Examination in Arts is unsatisfactory and insufficient, propose to replace it by the following Examinations:—(1) An Examination, previous to Registration, in the following subjects only:—(a) English; (b) Arithmetic; (c) Latin; (d) Elements of Geometry; (e) Elements of Algebra. (2) An Examination, to be passed not later than at the end of the first year of professional study, in the following subjects:—(a) Greek; (b) Elements of Mechanics. (3) An Examination, to be passed not later than at the end of the second year of professional study, in the following subjects:—(a) French or German; (b) Elements of Hydrostatics and Optics." He said he had been long satisfied that the preliminary arts examination was overloaded, and the consequence of its being so, and of there being seventy-two bodies for conducting it, was that the examination was becoming a farce. He there-

fore thought the Council should lay down a definite regulation. He would like to see more attention paid to handwriting and spelling. The resolution passed in July last year distinctly recognised the principle on which he had founded the latter part of his resolution.

Dr. LEET seconded the motion.

Dr. ROLLESTON objected to it on the ground of its multiplicity. He particularly objected to the suggestion to postpone a part of the preliminary examination till after the student had commenced his professional studies. He submitted as an amendment: "That the treble examination proposed by Dr. Haughton is in principle inadmissible."

The amendment was seconded by Mr. Simon, and supported by Dr. Pettigrew. On being put to the vote, the amendment was carried by a large majority, and subsequently was agreed to as a substantive motion.

Mr. TURNER moved: "That the Preliminary Examination should be raised to the following minimum standard—(a) English to include literature, history, grammar, composition. (b) One ancient language, either Latin or Greek. (c) One modern language, either French or German. (d) Arithmetic, including vulgar and decimal fractions. (e) Elements of mathematics, comprising algebra, including simple equations, geometry, first three books of Euclid or the subjects thereof. (f) Elements of mechanical philosophy, comprising statics, dynamics, hydrostatics, and optics; it being understood that the examination in this branch may be passed either as preliminary or as part of the first professional examination." After pointing out the differences between his proposal and the present regulations, he moved the adjournment of the debate; and the Council shortly afterwards adjourned.

Saturday, July 10th.

The Council reassembled under the presidency of Dr. Acland.

The Council went into Committee on Mr. Turner's motion with reference to preliminary examination.

Dr. HUMPHRY desired to make an explanation with reference to an agenda on the programme of the day. It would be remembered, he said, that a resolution had been passed by the Council in July, 1879: "That the subject of 'Elementary Mechanics of Solids and Fluids'—meaning thereby Mechanics, Hydrostatics, Pneumatics, and Hydraulics—be no longer recommended by the Council as an optional subject of preliminary education, but be recommended as one of the subjects 'without a knowledge of which no candidate should be allowed to obtain a qualification entitling him to be registered,' it being understood that the examination in this branch of knowledge may be passed either as preliminary or as first professional; and that it be referred to the Executive Committee to amend to this effect sub-Section 6 of Section 4, and sub-Section 1 of Section 23, of the edition for 1879 of the Council's standing *Recommendations*." Various bodies had modified their examinations in accordance with that resolution, but scarcely any examination had been instituted in hydrostatics, hydraulics, &c. One of the difficulties that had been mentioned was that if that class of subjects were made compulsory, one other language would be also made compulsory, which the Executive Committee felt was not the intention of the Council. It appeared that the intention of the Council could not be carried out in the way desired. The subjects in question did not form part of the preliminary examinations of the great examining bodies recognised by the Council, and under all the circumstances the Executive Committee had resolved:—"That the Executive Committee, having fully considered this resolution in all its bearings, finds that there are such difficulties connected with carrying it into effect, that it deems it right to refer it back to the General Council for reconsideration." The Council, he thought, ought to be cautious in prescribing additional subjects for the preliminary examinations. The great educational bodies would not modify their examinations in accordance with the wishes of the Council if changes were frequently made; and unless some great object were to be obtained, the Council should hesitate before making alterations.

Mr. SIMON thought that the Executive Committee had been outstepping its functions in not giving effect to the resolutions of the Council. Dr. Humphry's speech would have been appropriate enough last year when the subject was brought before the Council, but it was inappropriate

now. But that the general question of preliminary education was about to come before the Council, on Mr. Turner's motion, he should have felt it his duty to propose a vote of censure on the Executive Committee.

Mr. TURNER moved, "That the preliminary examination be raised to the following standard:—(a) English Language, including literature, history, grammar, and composition. (b) One Ancient Language, either Latin or Greek. (c) One Modern Language, either French or German. (d) Elements of Mathematics, comprising arithmetic, including vulgar and decimal fractions; Algebra, including simple equations; Geometry, including the first three books of Euclid or the subjects thereof. (e) Elementary Mechanics of Solids and Fluids, it being understood that the examination in this branch may be passed either as preliminary or previous to the first professional examination." He said it was not proposed to bring these subjects into the examinations at once, as that would be hardly fair to the students who had commenced their studies. It might be desirable that there should be a year's or two years' grace. He proposed to make distinct motions in reference to each of the subjects, and would first propose that an examination in the English language form part of the preliminary examination.

Sir JAMES PAGET seconded the motion.

Mr. ROLLESTON thought that the question should be referred to a committee, which could discuss it fully and with advantage before the next session of the Council.

Dr. A. WOOD thought it would be absurd to expect a knowledge of English literature from a lad sixteen or seventeen. He objected to making the changes proposed by Mr. Turner, believing that the present regulations were quite sufficient.

Dr. HAUGHTON seconded the amendment.

Mr. TURNER suggested that it might be convenient, for the sake of discussion, to strike out the word "language," and he would simply propose that there should be an examination in "English."

This was unanimously adopted.

Mr. TURNER then proposed: "That the examination in English embrace language, composition, and grammar, and that the General Medical Council will not consider any examination in English sufficient that does not fully test the ability of the candidate; (a) to write a few sentences in correct English on a given theme, attention being paid to spelling and punctuation as well as to composition; (b) to write a portion of an author to dictation; (c) to explain the grammatical construction of one or two sentences; (d) to point out the grammatical errors in a sentence ungrammatically composed, and to explain their nature; and (e) to give the derivation and definition of a few English words in common use; also (f) that a knowledge of at least two of following subjects be required:—English literature, history, modern geography."

Dr. ROLLESTON seconded the motion.

Sir W. GULL ridiculed the proposal and said it would be better to allow the regulations to remain as they stood.

Dr. A. WOOD said he believed the proposed legislation would only work mischief, and he proposed as an amendment: "That the examination in the English language be such as is now provided for in the 'Recommendations' of the Council, except that the last two lines of the footnote to p. 8 of the last edition of the 'Recommendations' be in future omitted."

Dr. HAUGHTON seconded the amendment, and objected to the introduction of literature and history, as subjects of too wide and vague a character for the preliminary examinations of the students.

Dr. ROLLESTON objected to the omission of literature, and dreaded lest medical men should not be able to hold their own with other classes of society. There were excellent text-books on literature which could be easily studied and mastered, and which would give the required information to the students.

Sir W. GULL supported Dr. Wood's amendment.

Mr. TEALE also supported the amendment.

Dr. HALDANE thought that an elementary knowledge of English literature, history, and geography should be compulsory. Ignorance on such subjects was absolutely disgraceful to the profession.

Sir JAMES PAGET said the Council was bound to make the best use of the improvements that had taken place of late years in general education. To say that more English should not now be required than was required fifteen or twenty years ago, seemed to him unreasonable. He thought

that the proposed change was desirable, supposing it to come in force two or three years hence. Of course the subject of literature would not take an unlimited range; a certain definite range could be prescribed, as in the case of many other subjects.

Mr. SIMON thought that instead of prescribing additional subjects, the examinations in existing subjects should be more complete. The student would almost necessarily take up the subjects of literature, history, and geography; and it was most desirable that he should do so; but he did not see his way to making the subjects compulsory. It would be an immense advantage if every student passed an examination in Shakspeare, but it could not be considered essential.

Mr. TURNER said he was greatly disappointed at a proposal being made and supported to allow things to remain as they were, notwithstanding the greatly improved means of education possessed by students at the present day. There was not, he supposed, a school in the country where history and geography were not taught, and he could not understand the objection to include those subjects in the preliminary education of medical students. The objection really meant that the Council was not to advance with the times, and the Council would be covered with ridicule if it gave effect to that view.

Sir W. GULL said the great error of the present day was the want of thoroughness. He repudiated the notion that he did not wish the Council to advance with the times, but he opposed Mr. Turner's proposal.

After some remarks from Dr. A. Wood,

Dr. ROLLESTON referred to the educational requirements of German medical students, and urged the necessity of insisting on literary culture for medical practitioners if they were not to occupy an inferior position in society.

Sir JAMES PAGET said that the College of Surgeons examined in two out of the three proposed subjects, and low as the examination was it had the effect of excluding two-fifths of the students. He thought that the Council was bound to do its best to encourage an enlargement of education in all the schools, and to work constantly with them.

Dr. PITMAN hoped that the present regulations would be amended. As far back as 1867 the Council had adopted the report of a Committee, which urged the necessity of literary and scientific education; and attention had recently been drawn to complaints that had been made by the licensing bodies with regard to the insufficiency of general education among the candidates presenting themselves. In the face of those facts he thought it strange that it should now be proposed to allow the present regulations to remain unaltered.

Mr. MACNAMARA pointed out that the subject of history would be difficult to deal with in Ireland, owing to the prevalence of sectarian prejudices.

Dr. BANKS thought that the subjects under consideration should be compulsory, and he did not regard as serious the objections stated by Mr. Macnamara.

Mr. TURNER said he was willing to modify his motion by requiring students to pass in two out of the three subjects.

Dr. A. WOOD objected to any change being made in the motion.

Dr. HUMPHRY said if Mr. Turner's proposal were adopted the examinations, which did not include the subjects in question, would not be accepted, and that would be a most serious result. He doubted the possibility of carrying out the proposal.

The amendment was then put; the votes were—for, 12; against, 8; majority, 4. On the amendment being put as a substantive motion,

Dr. HAUGHTON moved, as an amendment, that students should also be required to pass either in modern geography or English history. He was glad, he said, that the "misty bugbear" of English literature was removed out of the way. He agreed with Mr. Macnamara that many Irish students would decline to take up English history, but they would not object to geography.

Mr. MACNAMARA seconded the amendment.

Dr. WOOD pointed out that Dr. Haughton's proposal was not an amendment, and should be submitted as a distinct motion.

After some discussion on this point of order, Dr. Haughton's proposal was put as a substantive motion.

Dr. ROLLESTON proposed as an amendment that the

student should have the option of passing in literature, history, or geography.

Mr. SIMON admitted the extreme value of the subjects in question, but would rather trust for them to the stimulus of social circumstances than to any compulsion.

Mr. TURNER thought that candidates should be specially encouraged to cultivate literature, and he therefore seconded Dr. Rolleston's proposal.

Dr. A. WOOD opposed the motion, and alluded to the numerous subjects required by the Council, asking it not to lay too heavy a burden upon the student.

Dr. HUMPHRY asked the Council to pause before adding fresh subjects of examination, which, he said, would be likely to lead to cramming and superficiality, which were the great defects of modern education. He did not think that the optional system was a good one, and would prefer that definite subjects should be prescribed. It should be remembered that at present examinations the rejections were very numerous. If more subjects were added the standard in the others would necessarily be lowered. He denied the utility of text-books on literature, which, he believed, would rather give a student a dislike to the subject, than prove an incentive to its study.

Mr. MACNAMARA hoped that Dr. Rolleston would not persist in his amendment.

Sir W. GULL ridiculed the notion of the Council discussing the question whether a medical student should be examined in such a subject as geography.

Sir JAMES PAGET asked in what way a student could be better tested than by ascertaining whether he had been able to learn the subjects that had been set before him at school.

Dr. QUAIN urged the importance of a good preliminary examination, and mentioned that at an examination at the College of Surgeons a student, when asked what was the principal event in the reign of King John, replied, "The ship *Magna Charta* was lost off the Wash."

The amendment was then put, and the numbers were—for, 10, against, 11. It was accordingly lost; and the original motion was put and carried.

Mr. TURNER then moved the adoption of the next subject: "One ancient language—either Latin or Greek."

Dr. HAUGHTON said he had an important amendment to move to that resolution.

Mr. TURNER: What! Is there to be no ancient language?

Dr. HAUGHTON: No. I am going to ask the Council to follow out its resolution to its logical conclusions; and I shall propose: "That in the opinion of the Council the English language is the only language absolutely necessary for the Preliminary Arts Examination in Great Britain and Ireland." There must be no Greek sham, no Latin sham, no French sham, no German sham. You have opened up a dangerous precedent.

As the hour for adjournment had nearly arrived, it was resolved to postpone the debate on Preliminary Examination.

The Council then resumed; and on the motion of Dr. Quain, seconded by Mr. Simon, adopted the following financial report:—

The Finance Committee begs to report that the income of the General and Branch Councils for the year ending January 5th, 1880, has been £6381 17s. 9d., an amount which exceeds the income of the year 1879 by £175 4s. 2d. The expenditure during the year 1879 has been £5420 7s. 9d., which is less in amount than the expenditure of the preceding year by £902 7s. 7d. The Committee has therefore the satisfaction of reporting to the Council that, as the result of this increase of income and diminution of expenditure, the actual income has exceeded the expenditure by the sum of £961 10s. Of the tables annexed to this Report, Table (B) indicates the increase or decrease in the several items of expenditure which has taken place during the years 1877, 1878, 1879 respectively. Comparing the items of expenditure of the year 1879 with those of 1878, it will be seen, first, with reference to the items of increased expenditure, that they amount altogether to the sum of £381 4s. 1d., consisting of £23 10s., the cost of improvements in the printing of the Medical Register, and £202 2s. additional for house expenses, due chiefly to the cost of painting and decorating the Council-room. Comparing the items of decrease of expenditure during the years 1879 and 1878 respectively, it will be seen that the principal items of diminished expenditure are in the fees paid to members of the General Council—viz., £660 6s. 6d., and to the Executive Committee £144 18s. There is also a decrease in the cost of printing to the amount of £175 13s. 1d. It will be further noticed that there is a decrease in the items of law expenses, advertisements, &c., amounting to £151 2s. 6d. Table (C) shows the average income and expenditure of the General and Branch Council during the last seven years. It will be seen that the average excess of expenditure over income is £131. The same table shows, however, as already stated, that the income of the year exceeds the expenditure by the sum of £961 10s.

DENTAL FINANCE.—Reference must be made to table (D), which shows the receipts and expenditure of the Dental Registration Fund for the year ending January 5th, 1880. It will be seen that there remained then to the account of the Dental Fund a sum of £7253 17s. 8d. of New Three Per Cent. Stock, and of £3665 13s. 4d. in the Bank of England.

The treasurers have informed the Committee that of this latter sum £2000 has since been invested in the purchase of £2027 17s. 7d. New Three Per Cent. Stock. By request from the Committee, the Registrar has prepared the following approximate estimate of the probable future annual income and expenditure of the Dental Fund:—

ESTIMATED INCOME.		ESTIMATED EXPENDITURE.	
	£ s. d.		£ s. d.
Dividends	274 0 0	Proportion of General Council's Fees	306 0 0
Fees (at present rate)	250 0 0	Fees for Executive and Dental Committees	105 0 0
Total income	524 0 0	Proportion of General Expenses	452 0 0
Deficiency	755 0 0	Printing	290 0 0
		Law Expenses	16 0 0
		Miscellaneous	80 0 0
	£1279 0 0		£1279 0 0

This table shows a probable future excess of expenditure over income of about £750, which, of course, must be met by drafts on the invested capital.

The Council then adjourned.

Monday, July 12th.

At the meeting of the Council to-day,

Dr. HAUGHTON brought forward his amendment to Mr. Turner's motion on Saturday. He contended that the Council had nothing to do with the higher education of medical practitioners, and that a knowledge of Greek, Latin, French, or German was not necessary for the man who had to learn Chemistry, Physics, Medicine, Surgery, and Midwifery in such a way as to be a safe practitioner in the humble position to which he might be called. He therefore proposed, "That the English language is not absolutely necessary for the minimum preliminary examination." He did not know that Hippocrates spoke any other language than Greek, and he maintained that the only language absolutely necessary to the medical practitioner was that of the people among whom he practised. If Mr. Turner's motion were carried an injustice would be done to the students who were preparing themselves in Greek, which was largely taken up in Ireland. Of the 3218 students who went up for the intermediate examination in Ireland under the Act of last session 1209 went up in Greek, 2120 in Latin, 1602 in French, and 121 in German. Greek and Latin, he contended, ought to go together, and it would be a great hardship to students if Mr. Turner's proposal to dissociate them were adopted. If Greek were abandoned, Latin ought not to be retained. He denied that Latin formed any considerable part of the English language, although attempts had been made by Milton and others to latinise the tongue. The language of Swift, Fielding, Smollet, and John Bright, the language of the people, was connected not with Latin, but with the Romance languages and Anglo-Saxon. As to the writing of prescriptions in Latin, God forbid that he should degrade the language of Cicero and Horace by calling medical prescriptions Latin! How many medical men could parse a prescription? The whole thing was a mere *hocus pocus*, and an imposition upon the public—an attempt to hide from every one but the apothecary and the doctor what the unfortunate patient was taking.

Dr. HALDANE, in seconding the amendment, said that Latin, as taught to the majority of students, was of little or no good in the way of mental training; nor could it be said to be a language which would be of any great advantage to the ordinary medical practitioner in his professional career. At the final examinations what little Latin had been learned was often forgotten; for when the students were required to write a Latin prescription without contractions, the ignorance displayed in doing so was simply deplorable. The rank and file of medical men were not now expected to be classical scholars.

Dr. ROLLESTON cited the evidence given by Sir R. Christison before the Royal Commission, in which he stated that he knew no more admirable training for the youthful mind than the study of Greek and Latin. He protested against cutting away the common ground and culture that linked together all the learned professions.

Sir W. GULL said that it was not for the Council to lay down special subjects for preliminary examination, but to look to the school training of the day and simply demand such a test as would be prescribed by intelligent schoolmasters.

Dr. BANKS supported Mr. Turner's motion, and said he should deeply regret the omission of Latin from the preliminary examinations of medical students. Every boy in Ireland learned Greek and Latin at school.

The amendment was then put, and negatived, there being only three votes in its favour.

Mr. MACNAMARA then moved another amendment to Mr. Turner's motion, "That the present recommendations of the Council with regard to Greek, Latin, French, and German, do stand." He said that all students in Ireland learned Latin and Greek, and if neither of those languages was accepted instead of a modern language, great injustice would be done to those students.

It was ruled that the amendment was not then in order, and it was postponed.

Mr. Turner's motion in favour of "one ancient language" was adopted.

Mr. TURNER then moved, "That the candidate may select Latin or Greek, and that the examination shall include translation and grammar."

Dr. A. WOOD objected to giving the student an alternative. It would, he said, be a retrograde movement if Latin were not to be made imperative. It was the best mental trainer ever devised, and it would be a disgrace if it were not rendered compulsory. He should be ashamed to go home to Edinburgh and say that Latin was no longer regarded as a necessity to the medical student. He moved as an amendment that, as at present, there should be an examination in Latin, including composition and grammar.

Dr. STORRAR seconded the amendment.

Dr. ROLLESTON urged the importance of giving the widest scope to spontaneity, and supported Mr. Turner's proposal to give the student an option between Latin and Greek.

Mr. SIMON was also in favour of giving the student a choice between the two languages. The systematic study of any language was a good mental training, and the same might be said of the study of scientific subjects.

Dr. HUMPHRY was in favour of a more liberal view as to the basis of education, and therefore supported Mr. Turner's motion. The time would probably come when the Council would not be able to demand either Latin or Greek as compulsory.

Dr. QUAIN contended that Latin was an essential portion of medical education, and supported the amendment.

The amendment was then put, and the votes were—for, 11; against 11.

The PRESIDENT declared that, there being an equality of votes the amendment was not carried. On the names being taken down, however, it appeared that there were 12 for the amendment, and 11 against. It was accordingly declared carried.

MODERN LANGUAGES.

Mr. TURNER moved: "That an examination in one modern European language form part of the preliminary examination." He said that at present French and German were merely optional, but he thought the time had now come when one modern language should be regarded as an essential part of the preliminary examination. There could be no doubt that it was of great importance to enable a practitioner to become acquainted with what was going on in the science and practice of medicine in foreign countries. The report on the condition of the Scotch universities was very decided on this point. It had been suggested to him that if the principle were approved they should draw the limit at the two languages he had spoken of. At present no country in Europe was more actively engaged in scientific medical work than Italy. Dutch was also a very important language in its scientific aspects, and the option might be extended to that. The same thing might be said of the Scandinavian languages. The schools from which the students came usually taught French, and Dr. Haughton had showed that out of 3218 candidates in Ireland no fewer than 1602 were willing to present themselves for examination in French. The experience at the University of Edinburgh was that whilst very few went in for German yet most of those who did passed.

The motion was seconded by Dr. Banks.

Dr. HAUGHTON said the difficulty he found in voting for the motion was that he conceived the Council was drifting into a possibility of conflict with the higher educational bodies. No one could accuse the University of Dublin of a desire to lower the standard, for with the single exception of Oxford they were the only university in the United Kingdom that required a degree in arts as a preliminary to a degree in medicine, and that degree in arts was only granted after four years' study. But while they had 1200 students in arts on their books not more than 300 of those were

students in medicine. They did not believe in a medical curriculum in arts. Therefore, if the Council came to a decision to require as a compulsory thing a modern language from a medical student, it would clash with the present regulations which had been considered and carefully revised several times during the last ten years, and which made Latin and Greek compulsory and modern languages optional. It would place the University in the unpleasant position of being practically called upon to alter their whole curriculum for all their students, or, on the other hand, if they still continued to follow out their own idea of arts culture, they might run the risk of their students ceasing to register. For these reasons he should vote against the motion.

Mr. TURNER said none of his propositions were intended at all to interfere with that portion of the recommendations of the Council which provided that a degree in Arts of any university in the United Kingdom or the colonies should be considered a sufficient test of preliminary education.

Dr. HUMPHRY moved as an amendment that Greek, French, and German be optional subjects, as at present. He considered that Mr. Turner's motion would practically exclude Greek, for if Latin and one modern language were made compulsory it would be almost impossible that students should take up Greek. The Council had to a certain extent gone out of its way to demand a preliminary examination, and no doubt had done well in doing so. The educational bodies had responded to the wish of the Council, and had modified their requirements accordingly; but if the Council put a strain upon them and demanded a foreign language, he could quite understand that they might be disinclined to respond to it.

Dr. A. WOOD seconded the amendment. If another compulsory subject were added to the curriculum he would much prefer that it should be mechanical philosophy.

Dr. PETTIGREW thought if an additional compulsory subject were introduced it should be Elementary Mechanics of Solids and Fluids, without which no step could be taken in physiology or anatomy.

Sir W. GULL said it would be a serious thing if after a parent had spent a small fortune on a boy in a public school where modern languages were held in contempt he should be rejected by the Medical Council because he did not know a little French.

Mr. HALDANE suggested that the Council had better first settle what subjects were to be compulsory, and then go on to the optional subjects.

This suggestion was approved of, and the amendment was withdrawn.

The motion was put and lost, five only voting for it.

MATHEMATICS.

Mr. TURNER moved, "That an examination in the Elements of Mechanics form a necessary part of the preliminary examination."

The motion was seconded by Dr. FERGUS, and agreed to.

On the motion of Mr. Turner it was also agreed that it should include Arithmetic, including vulgar and decimal fractions.

Mr. TURNER moved, "That Algebra, including simple equations, should also be included."

Mr. SIMON regarded simple equations as not worth having, and recommended that the algebra should extend to quadratic equations.

Sir JAMES PAGET agreed with Mr. Simon in his opinion as to the uselessness of simple equations; but as he had never in his profession found it necessary to use algebra, he thought if mechanics were added algebra had better be left out altogether.

Dr. ROLLESTON moved, and Dr. FERGUS seconded, "That quadratic equations be added."

Dr. ANDREW WOOD said they could not get quadratic equations.

Dr. HUMPHRY said the preliminary examination was already very extensive. By adding to it they would not improve general education, but would lead to more and more cram, and more superficiality.

The amendment, to include quadratic equation, was put to the Council, and rejected.

The Council then adjourned.

Tuesday, July 13th.

At the meeting of the Council to-day,

Dr. ROLLESTON asked the President whether any communication or reference had been made to him by the Govern-

ment on the subject of the Vaccination Bill. He said there could be no doubt that there would be an increase of mortality if there were any relaxation of the Vaccination laws. He was about to speak further on the subject, when

The PRESIDENT interposed, and said that it was out of order for a member to make a speech when asking a question.

The PRESIDENT said, as far as he knew, no communication had been made to him by the Government on the subject of the Vaccination Bill. A copy of the Bill had been sent to him by the President of the Royal Society, and addressed to him as President of the Medical Council; but on what ground it was sent, or whether in pursuance of instructions from the Government, he did not know.

The Council then went into committee for the consideration of the adjourned motion on preliminary examination.

Mr. Turner's motion, "That the examination in mathematics include algebra and simple equations," was put and carried.

Mr. TURNER moved that the examination in geometry include the first three books of Euclid or the subjects thereof.

Dr. ROLLESTON moved, as an amendment, the addition of Euclid, book iv. prop. 1—9.

Dr. HAUGHTON said it was absurd to stop short at proposition 9; the 10th proposition being, he said, the gem of the whole book.

Dr. ROLLESTON said he was willing to include the whole of the 14th Book, and would alter his amendment accordingly.

Dr. HUMPHRY opposed the introduction of the additional subjects, and said that the great examining bodies of the country only required the first two books of Euclid.

Sir JAMES PAGET also spoke against the addition, and said it would be difficult to compel all the bodies to conform to the wishes of the Council. If any additional subjects were prescribed, they should be such as would have a direct utility in regard to the study of medicine. It would be absurd to reject a student who came from Canada, for instance, simply because he had only been examined in two books of Euclid instead of four.

Mr. MACNAMARA objected to overloading the curriculum, and preferred a stricter examination in a more limited set of subjects.

Dr. BANKS said that the Queen's University recommended two books only, and he agreed in that recommendation.

Dr. PETTIGREW also opposed an overloading of the preliminary curriculum.

After some further observations from members of the Council, Dr. Rolleston's amendment was put and negatived.

Dr. HUMPHRY proposed another amendment, to the effect that two books of Euclid only, as at present, be required; and this was carried by a large majority.

Mr. TURNER said that taking stock of what had been done, he was afraid it would be best represented with a round O; for with the exception of two trifling alterations, they remained just as they were at the beginning of the discussion. They had recommended an examination either in English history or modern geography, and had struck out an objectionable foot-note to the effect that in the English examination a sufficient grammatical knowledge of the English language was all that was required. He regretted that the Council had not seen its way to add something to the requirements of the preliminary examination. Judging from the spirit which had been manifested by the Council, he feared that the motion he was about to make with regard to the elementary mechanics of solids and fluids might be rejected. Last year, however, a resolution on the subject had been passed by the Council, and the only reason why it had not been confirmed was that the Executive Committee found that there were certain technical difficulties in the way. All he asked of the Council at present was its sanction to the general proposition that the elementary mechanics of solids and fluids should form part of the preliminary examination. There might, however, be some difficulty in forcing the subject into the preliminary examination, because there were so many schools in which it was not taught; and he would therefore add to his resolution:—"It being understood that the examination in this branch may be passed either as preliminary, or before, or at the first professional examination."

Dr. HAUGHTON, in seconding the motion, said the subject included in it was absolutely necessary for the furniture of a student's mind. So great was the ignorance on the subject on the part of army officers in India, that

some of them did not know the difference between a barometer and a thermometer.

Dr. PETTIGREW approved of the introduction of the subject, but thought that it should be rendered compulsory before the commencement of the medical curriculum, and he moved an amendment to that effect.

Dr. A. SMITH expressed a similar view, and seconded the amendment. He said he did not think there would be any difficulty in the acquisition of sufficient knowledge of the subject. He believed that the educating bodies would fall in with the requirements of the Council in reference to a subject of so much importance.

Dr. ROLLESTON also moved an amendment giving the student the option of taking the elementary mechanics of solids and fluids; qualitative chemistry, with practical work; botany, geology, or the elements of logic.

Sir W. GULL seconded Dr. Rolleston's amendment.

Mr. SIMON said he would take his stand upon the resolution of the Council last year that the subject of elementary mechanics of solids and fluids should be recommended as one of the subjects "without a knowledge of which no candidate should be allowed to obtain a qualification entitling him to be registered." Local officers of health were taken from the rank and file of the profession; and how could they advise the local authorities on matters of ventilation, drainage, and the like, unless they possessed some knowledge of the subject in question? The period at which the knowledge was acquired was a matter of comparative indifference so long as it was regarded as compulsory before the giving of a registrable qualification.

Dr. A. WOOD hoped that the Council would not go back from its previous resolution.

After some further discussion Dr. Rolleston withdrew his amendment.

Dr. SCOTT ORR spoke in favour of Dr. Pettigrew's amendment, that the subject be made a compulsory part of the preliminary examination.

Dr. A. SMITH also urged the importance of making the subject part of the early training of the student.

Mr. TURNER suggested that his motion should be divided into two parts, and that a vote should first be taken on the simple question that there should be an examination in the elementary mechanics of solids and fluids, making the period at which it was taken the subject of a distinct motion. This course was agreed to, and the question was unanimously decided in the affirmative.

Sir W. GULL ridiculed the idea of the Council going over the same ground as last year, and said they appeared to be constantly deciding the same thing over and over again, and always congratulating themselves on their success.

Dr. Pettigrew's amendment was then put and negatived, and Mr. Turner's motion as to the period of the examination was carried by a large majority.

Mr. TURNER then moved: "That the examination in the Elementary Mechanics of Solids and Fluids comprise statics, hydrostatics, and dynamics," which, after a short conversation, was agreed to.

This concluded the discussion on compulsory subjects.

Dr. FERGUS then brought forward a motion relating to the optional subjects. He said he had been accustomed to regard the Council as a body which aimed at elevating the education of the profession, but he was now afraid that they had been leveling down instead of up. They ought to have increased the stringency and breadth of the examinations. More than one-third of the candidates who came up to the first professional examination were rejected. Such a state of things ought not to exist. The preliminary examination should be such as would weed out the incompetent, and therefore should be greatly extended. Instead of that the Council had for the last few days been bringing the examination down to the level of boys fresh from school. It had been said that in the interest of the practitioner it should be made as easy as possible, but if any man entered the profession merely as a trade for a morsel of bread and cheese and silver he would be the most miserable being in the world. His object should be the performance of duty. The Council should not try how rapidly they could manufacture doctors, but in every way to elevate them. He moved: "That one of the following optional subjects must be passed as preliminary—namely, French, German, Greek, Logic, Moral Philosophy, Botany, Chemistry, Zoology, Geology."

Dr. ROLLESTON seconded the motion.

Mr. SIMON said he was not quite clear that even one

optional subject was necessary, but he thought a distinction might very properly be drawn according to whether or not the examination in the elements of mechanics had been passed as a part of the preliminary. He was disposed to think that if a candidate practically said, "My educational circumstances have not allowed me to learn elementary mechanics in time for the preliminary examination," an optional subject should be required. In that way he would hold out an inducement to the students to pass the examination in elementary mechanics as a preliminary, and if they did so they should be excused from all the optional subjects.

Dr. HAUGHTON thought chemistry should be excluded from the list. The Council would have a very mean opinion of what chemistry was if they considered the wretched schoolboy knowledge as sufficient. A few years ago, when intermediate examinations for Ireland were started, meetings of all the schoolmasters in the country were held, and the overwhelming majority were of opinion that the amount of chemistry that could be acquired at school was not worth possessing. Any one who had experience in teaching higher chemistry knew that when a schoolboy came to learn it the first process he had to undergo was to unlearn all that he had previously learned of so-called chemistry. Contrary to the advice of the Irish schoolmasters chemistry was kept on last year by the Intermediate Education Commissioners, who thought, like the Council, that they were a great deal wiser than those who had practical knowledge of the subject. The result was that the highest prizes at the examinations in chemistry were taken by men who had never seen an experiment in their lives, and who had obtained all their knowledge from books.

After some discussion, it was agreed to postpone the question of whether one or two of the subjects should be required until the subjects themselves had been decided upon.

French, German, and Greek were agreed to.

On the suggestion of Mr. TURNER, Italian and Dutch were added to the list.

Logic was also agreed to.

On the proposal to include Moral Philosophy,

Dr. HAUGHTON said this was a subject which required a mature mind, and he thought it would be a misfortune to send forth into the profession a crowd of pert prats who fancied they understood it. He would not give sixpence for all the knowledge of moral philosophy which a schoolboy could possess.

On being put to the vote, the proposal was negatived.

Botany was agreed to.

With regard to the proposal to include Chemistry,

Mr. TURNER said he should like to know what was meant by putting it as an optional subject in the preliminary examination. Was it intended by doing so to exclude chemistry from forming a necessary part of the professional examination? If that was so, he should most strongly protest against it. It was perfectly clear that such a knowledge of chemistry as was necessary for the requirements of the profession in regard to physiology, pathology, materia medica, and therapeutics could not be tested by any examination that could be imposed upon a student in the course of his preliminary. He would be sorry if the Council adopted any resolution which would lead the licensing bodies or the students to believe that, if acquired, a certain minimum of chemistry for the preliminary examination that would absolve them not merely for further examination in the subject, but also for attendance on a systematic course of lectures and instruction.

Dr. PITMAN drew attention to the fact that there were no less than ten optional subjects proposed, and the preliminary examining boards must be prepared to meet the requirements of every candidate. That was a very serious matter, and the Council would do well to limit the number of its subjects.

Mr. TEALE said what was intended was that the door should be opened for a student to select an examining board which was prepared to test him in his special subject.

Dr. HUMPHRY agreed with Mr. Teale's view. With regard to the examination in chemistry, he thought there was nothing that would prepare a man for his future studies in medicine better than a rudimentary knowledge of chemistry. He did not set so low an estimate as Dr. Haughton did on the knowledge of the subject which could be obtained from books. He remembered that on one occasion at Cambridge a man attained a very high position in chemistry, though it was well known that he had received no practical instruction in it. Of course it could not be a perfect knowledge, and

he would not think of substituting the preliminary for the professional examination in chemistry.

Dr. WOOD considered it a most heretical doctrine to lay down that anyone could learn chemistry from a book, and if it was allowed to be scamped at first the students would not devote themselves to a serious study of it in after life.

Dr. ROLLESTON regarded chemistry as the very alphabet of natural science, and thought it should be recognised in the preliminary examinations.

Dr. SMITH said all that Dr. Fergus meant by the proposal was the merest elementary chemistry, and it was most desirable to introduce that into the preliminary examination.

Dr. STORRAR said there were a great number of schools in which chemistry was taught in the laboratory, and he was in favour of including it among the optional subjects.

Elementary Chemistry was then agreed to, but Elementary Zoology and Elementary Geology were negatived.

Mr. SIMON suggested that a higher qualification in one of the compulsory subjects should be regarded as a substitute for a smattering in one of the optional subjects.

Dr. FERGUS said he had at first intended to include higher mathematics, and was quite prepared to propose it now.

Dr. HAUGHTON seconded the motion, which was lost.

A short discussion followed upon the question whether one or two of the optional subjects should be required. It was ultimately resolved that only one should be regarded as necessary.

Mr. SIMON moved as a rider to the resolution: "Provided that if the candidate have passed his examination in the Elementary Mechanics of Solids and Fluids he shall be excused for the examination on the optional subject."

Dr. HUMPHRY seconded the motion, which was negatived.

The Council then resumed. The Registrar read the whole of the resolutions passed in Committee, and Mr. Turner moved their adoption.

The Council then adjourned.

Wednesday, July 14th.

The Council reassembled under the presidency of Dr. Acland.

Mr. TURNER asked the President if he could furnish the Council with information why the Naval Medical Department had ceased to furnish a statement of the results of the examinations for admission to the Medical Department of the Navy; also if the returns from the Army Medical Department include the candidates for commission in the Medical Department of the Indian Army.

The PRESIDENT replied that there had been some delay in obtaining the desired information, and he was unable to give a complete answer. He had reason, however, to believe, from communications he had had with both Departments, that there would be no difficulty in obtaining the information.

Dr. HAUGHTON said that the subject was under the notice of Parliament, and it was important that the information asked for should be communicated.

The PRESIDENT said that as soon as it was received it should be communicated to the Council.

Mr. SIMON called attention to an answer given by the President on Tuesday with reference to the transmission to him of a copy of the Vaccination Bill by the President of the Royal Society, and he said he assumed that document was sent by Mr. Spottiswoode in his private capacity, and not officially. He said he had himself received a copy of the Bill from Mr. Spottiswoode.

The PRESIDENT stated that the document had been sent to him on Royal Society paper, and was addressed to him as President of the Medical Council. In former years there had been considerable inconvenience from their seeming to be compelled to receive communications on all sorts of subjects, and he had acted in the cautious way described, not knowing whether the communication in question was to be considered as official.

The debate on Mr. Turner's motion for the adoption of the resolutions passed by the Council with regard to preliminary examination was resumed.

The following resolutions were adopted without discussion:—(1) "That an examination in English form part of the preliminary examination." (2) "That the examination in

the English language be such as is now provided for in the 'Recommendations' of the Council, except that the last two lines of the footnote to p. 8 of the last edition of the 'Recommendations' be in future omitted."

On the motion (3) "That No. 2 of clause 4 of the 'Recommendations' be as follows: either English History or Modern Geography," Dr. QUAIN suggested the substitution of the word "and" for "or," and contended that the two subjects could not well be separated. Mr. Turner adopted the suggestion, and the motion was altered accordingly, and agreed to.

The following resolutions were adopted without discussion:—(4) "That an examination in one Ancient Language form a part of the preliminary examination." (5) "That Latin, including Translation from the original and Grammar, be the Ancient Language which is to be rendered compulsory." (6) "That an examination in the Elements of Mathematics form a necessary part of the preliminary examination." (7) "That the examination in Mathematics comprise: (a) Arithmetic, including Vulgar and Decimal Fractions." (8) "That the examination in Mathematics comprise: (b) Algebra, including Simple Equations." (9) "That the examination in Geometry comprise, as at present: (c) Geometry, the first two books of Euclid or the subjects thereof." (10) "That there be an examination in the Elementary Mechanics of Solids and Fluids." (11) "That it be understood that the examination in the Elementary Mechanics of Solids and Fluids may be passed either as preliminary, or before, or at the first professional examination, so that the passing of this examination is not to be regarded as necessary for registration." (12) "That the examination in the Elementary Mechanics of Solids and Fluids comprise the Elements of Statics, Dynamics, and Hydrostatics."

Mr. TURNER proposed the adoption of the next resolution:—(13) "That the following be the optional subjects: Greek, French, German, Italian, Dutch, Logic, Botany, Elementary Chemistry."

Greek, French, German, and Italian were adopted as optional subjects without discussion.

Dr. ROLLESTON opposed the introduction of Dutch—a language which, he said, was of very little value in the way of mental training.

Sir JAMES PAGET thought if Italian were to be taken as an optional subject, Dutch should also be included. There was a great deal of good scientific literature in that language.

Dr. HAUGHTON suggested that, instead of Dutch, "any one modern language" should be accepted.

Mr. TURNER accepted the suggestion.

Sir WM. GULL asked the Council not to make itself ridiculous. He believed that all the work of the last few days had been a mistake. The question discussed should have been referred to a committee of gentlemen who were well acquainted with the education of boys up to sixteen or seventeen. With regard to the proposal to examine in Dutch, he thought they might as well propose to examine in the patois spoken in the Channel Islands or in Sanscrit.

Dr. PETTIGREW said, if a student presented himself for examination in Dutch, and there was no examiner to be found, the examining body would be in a serious fix.

Dr. A. WOOD said the Council would be adopting a ludicrous course if it assented to the proposal, and he strongly opposed it.

After some further discussion, the proposal for the adoption of "any one modern language" was agreed to.

Logic, Botany, and Elementary Chemistry were also agreed to as optional subjects.

Dr. HAUGHTON moved the addition of zoology (which he thought ought not to be separated from botany) to the optional subjects.

Dr. BANKS seconded the motion, and said that zoology was taught in all the national schools in Ireland.

The motion was negatived.

It was then resolved, "That one of the foregoing optional subjects be made compulsory."

On the motion of Mr. TURNER, seconded by Sir JAMES PAGET, the following resolution was agreed to:—"That the General Council's amended Recommendations on education and examination be communicated to the several examining boards, whose examinations are recognised by the Council, that their attention be drawn to the changes which have been made; that they be informed that the Council proposes that the additional requirements be not made obligatory on students until Jan. 1st, 1882; and that on and

after that date no person be allowed to be registered as a medical student unless he shall have previously passed a preliminary examination in the subjects of general education as specified in the following list" (the list agreed to during the present session).

Mr. SIMON proposed: "That, in the opinion of the Council, it is desirable that intending candidates for the medical profession should, before they enter on the purely medical curriculum, have been instructed and examined in the rudiments of natural science—physical, chemical, and biological, and that, in proportion as this can be done, the present medical curriculum and present professional examinations should be lightened of all such matters." He said there was no reform on which competent persons were more entirely agreed than the necessity of their getting, if possible, a preliminary scientific examination; it would be a most important assistance to the progress of medical education in this country.

Dr. FERGUS seconded the motion.

Mr. TURNER said he was entirely at one with Mr. Simon as to the importance of having an examination in the natural sciences as a part of the general training required from students of medicine, and that the examination on these subjects should, of course, take place before the examination in subjects more directly bearing on medical training. He should like, however, to have some further information as to what Mr. Simon meant by the "rudiments of natural science"; was it intended to place this examination on the same level as the elements of chemistry and botany which they were willing to accept as optional subjects, or was it to be something further, and to be taken after registration?

Mr. SIMON said he had endeavoured to avoid unnecessary detail. The Council was not a regulating body, but a recommendatory one, and they would be troubling themselves needlessly by going minutely into detail provided the principle was properly stated. The examination should be after the preliminary general examination, and before commencing the distinctively medical curriculum, or at the latest before the end of the first year. It should, in his opinion, embrace an elementary knowledge of mechanics, solids, and fluids, of heat, weight, and electricity, of general chemistry, and of the constitution of plants and animals.

Sir JAMES PAGET was satisfied that no conclusion could be arrived at on this subject during this session of the Council, and, therefore, if Mr. Simon's motion was adopted it must be on the understanding that it should not come before the Council, but should be referred to a committee.

Sir WILLIAM GULL, in supporting the motion, said the result would be that more time must be occupied in the study of the profession than was the case at present. It was quite impossible to educate a man so that he should be fit to enter on the practice of his profession at the age of twenty-one. It could not be done, and, therefore, they ought to ask that a man should be twenty-three at least, and perhaps twenty-four, before he was entitled to practise. In making this inquiry they certainly must take in the whole question of professional time.

Dr. HAUGHTON said the practice of the University of Dublin was precisely in accordance with the proposal of Dr. Simon, the Arts curriculum and the medical teaching occupying together six years. He did not object to the resolution, but it must involve an additional time of study after registration before commencing practice.

Dr. ANDREW WOOD said this was a very important subject, and one well deserving the consideration of the Council, but he might put it to Mr. Simon, whether on this the penultimate day of the session the Council was in a condition to enter upon the consideration of this matter. He had made out a very good case for a Committee, and no doubt a Committee over which Mr. Simon presided would be able to lay before the Council a most valuable report. It would be a most important subject to bring before the next session of the Council.

The motion was then put to the Council, and agreed to.

Mr. SIMON, after expressing his gratification at seeing the principle of his resolution so entirely approved by the Council, moved: "That this resolution be referred to a Committee of seven, with instructions to propose to the Council before the close of the present session the draft of a communication to be addressed to the licensing authorities with a view to giving it practical effect." He did not propose anything like a Committee of investigation, but simply a Committee to draw up a letter to be sent to the licensing bodies.

Dr. FERGUS seconded the motion.

Mr. TURNER thought there would be some difficulty in getting a satisfactory communication drafted and approved by the Council this session, as it would no doubt involve some discussion.

Mr. MACNAMARA suggested the omission of the words, "to giving it practical effect," and substituting "of getting their opinion thereon." That would not pledge the Council to anything, and would enable the licensing bodies to forward by the next meeting of the Council a report that would be very valuable for the discussion of the subject.

Dr. HALDANE, although entirely agreeing with the principle involved in Mr. Simon's resolution, would not vote for it, because it involved so complete a change in medical education. This was a point of very great importance, and the Council should not take action in the matter without consulting the various licensing bodies. He therefore proposed as an amendment: "That the Council having agreed to the preceding resolution, a copy of this resolution be sent to each of the licensing bodies, with a request that they will at an early date express their opinion on the subject."

Dr. ANDREW WOOD seconded the amendment.

Sir JAMES PAGET said if the amendment was carried it would really defer all possible progress until the beginning of next session. He urged the formation of the Committee, whereby the whole information might be collected and placed before the next meeting of the Council.

Mr. SIMON, in order to meet objections, asked leave to withdraw his motion and to substitute the following: "That the resolution be communicated to the licensing authorities under the Medical Act, and that it be recommended to those authorities to consider whether they can separately or conjointly take steps to promote the establishment of a preliminary scientific examination, and to require of candidates for their respective licences that after passing the preliminary examination in general education, and either before commencing the purely medical curriculum or at latest before the end of the first year thereof, shall pass such preliminary scientific examination as is proposed."

After some further discussion Dr. Haldane's amendment was put in the following form: "That a Committee be appointed to communicate on the subject with the licensing bodies, and to report to the Council at its next meeting." This was agreed to.

On its being put as a substantive motion,

Mr. MACNAMARA moved as an amendment: "That this resolution be referred to a Committee of seven, with instructions to propose to the Council before the close of the present session the draft of a communication to be addressed to the licensing authorities, with a view of getting their opinion thereon."

Mr. SIMON seconded the amendment, which on being put to the Council was negatived by a majority of 10 to 9.

The motion as proposed by Dr. Haldane was then put and agreed to.

The Committee was appointed, comprising Dr. Storrar, Dr. Rolleston, Dr. Hudson, Mr. Turner, and Dr. Haldane, with power to add to their number.

Mr. SIMON then moved the following resolution: "That in Section 3 of Chapter 1 of the Council's Recommendations on Education and Examination the list of bodies from which testimonials of proficiency in preliminary general education may, in the opinion of the Council, be properly accepted by the licensing authorities under the Medical Act, be amended by omission of its Part II—this amendment to take effect on and from the 1st of January next; and that notice be forthwith given to each licensing authority that after the end of the present year the examinations mentioned in Part II. of the aforesaid list will not be regarded by this Council as satisfactory for the purposes of the Medical Act." He was proceeding in his address to the Council in support of the motion when the time for closing the discussion arrived, and the debate was adjourned.

An application for registration by Mr. Nathaniel Chappell, referred to the General Council by the Executive Committee, was refused.

The Council then adjourned.

Thursday, July 15th.

The Council was occupied during the early part of to-day's sitting with Dental business. A motion was passed to the effect that the bodies conferring licences in Dental Surgery be requested to furnish yearly a statement of the nature of

the examinations, and the number of candidates, showing the numbers passed and rejected. Certain letters received from the British Dental Association, and other persons, with reference to Dental Registration, were referred to the Dental Committee. A motion to the effect that the opinions of counsel on Dental Registration should be read was adopted; but strangers were requested to withdraw, and the Council deliberated on the subject for some time in private. The later hours of the sitting were devoted to the further consideration of Mr. Simon's motion, proposed on Wednesday, with reference to testimonials of proficiency in preliminary general education. After a lengthened discussion, at the suggestion of Dr. Storrar, who seconded the motion, the motion was withdrawn, and the Council adjourned to Friday.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL INSPECTORS OF THE LOCAL GOVERNMENT BOARD.

New and Old Swindon.—New Swindon is the town created by the Great Western Railway Company in the vicinity of the station on its line so well known to travellers. Old Swindon is the neighbouring town, and the original Swindon from which the railway station and the new town took their name. Last year both towns suffered from a severe outbreak of scarlet fever, and the Local Government Board directed their inspector, Dr. Blaxall, to make inquiry as to the circumstances of the outbreak, and generally as to the sanitary condition of the two towns. The report of this inquiry has now been made public. It describes of both towns that common-place condition of things which is now so frequently found in small towns, and which we must look to another generation fully to remedy. Both towns have not hesitated to spend money on sewerage; and New Swindon is supplied wholly, Old Swindon partly, with fair water from the works of a Company. But the sewerage is incompletely carried out in several important respects. Old Swindon has still recourse too largely to shallow wells; and in both towns that continuous sanitary supervision and care, without which the best arrangements for sewerage and water-supply must largely fail of their object, are conspicuously wanting. Both towns carefully store their excrement in privies adjacent to the houses; and both hold the medical elements of their sanitary work properly provided for by appointing medical officers of health, one each, at a salary of £10 a year—New Swindon having a population of 16,000, and Old Swindon of 4250! Dr. Blaxall's recommendations indicate that the ordinary sanitary administration of both places is generally neglected, and that in respect to infectious diseases there is no serious hope of checking them until the administration is much amended.

Castleford Registration District.—An unusual prevalence of scarlet fever and enteric fever in this district led the Local Government Board, early in the year, to cause a medical inspection of it to be made by Dr. H. F. Parsons. His report of the results of this inspection is now before us. The district contains four principal centres of population, Castleford, Whitwood, Methley, and Glass Houghton, and the report instructively illustrates the slowness with which sanitary work makes progress among semi-rural communities. Castleford has been the subject of repeated official inquiries regarding its sanitary condition, nevertheless, after the expenditure of much money, and notwithstanding the aid of extraneous skilled advice, Dr. Parsons describes much that is defective in the sanitary administration and state of the town. This, it appears, is not to be attributed to parsimony, but to the failure of the Sanitary Authority "to apprehend and apply the ascertained principles of sanitary science to the suppression in details of the particular nuisances which have characterised the district from the time of Mr. Babbage's inquiry [for the General Board of Health] in 1850 to the present time." An instructive illustration of the wasteful inaptitude of the sanitary authority in carrying out its work is given in an account of their attempt to introduce a pail system of excrement disposal,

and the frustration of the attempt by their way of going about it. Whitwood and Methley (Glass Houghton being included in the district administered for sanitary purposes by the Pontefract Rural Sanitary Authority) have the common characteristics of West Riding communities, which depend on shallow wells for water-supply, on the old-fashioned open midden privy for the deposit of excrement, and on surface drains for drainage. Whitwood has begun to sewer, and so far gives promise of amendment; Methley stands at ease, so to speak, in her filth. Scarlet fever and enteric fever are endemic in the registration district, and the mortality among infants from diarrhoea there is "excessively" high. A much higher standard of sanitary administration will have to be reached before reasonable hope of holding in check scarlet fever or removing the conditions fostering enteric fever can be entertained. Dr. Parsons terminates his report by a long list of recommendations to the several sanitary authorities in the district—recommendations which pretty well cover all the things they were appointed to do, and have not done.

SMALL-POX IN DUBLIN.

The Public Health Committee of the Corporation of Dublin have recently issued a report on the prevalence of small-pox in that city. They refer to the neglect of the Guardians in not putting into force the powers conferred on them by the Vaccination Act, and recommend that vaccination should be made compulsory. They believe that there is much force in the suggestion that temporary houses should be provided for families in which infectious disease has occurred, pending the disinfection of their dwellings, and that observation wards and a convalescent home should be established. Further, that the governors of the Cork-street Fever Hospital be requested to help in establishing a hospital for the treatment of small-pox patients and a convalescent home in connexion with their hospital; the Corporation to contribute to the erection and maintenance of such an institution. We may add that during the June quarter 125 deaths were registered in Dublin from small-pox, being an increase of 64 as compared with the first three months of the present year.

THE PUBLIC HEALTH (IRELAND) ACT (1878) AMENDMENT BILL.

A Bill has been introduced into the House of Commons by Mr. Redmond and others to amend the Public Health (Ireland) Act, 1878. This Bill provides that notwithstanding anything contained in that Act the Local Government Board may, on the application of the urban sanitary authority of any urban district, vary, amend, or enlarge any existing provisional order, notwithstanding that such provisional order was obtained previous to the passing of the Public Health (Ireland) Act, 1878.

THE "FEVER" IN MAYO.

Mr. W. E. Forster laid upon the table of the House of Commons on the 12th inst. a report received from Dr. Nixon, who had been sent to the fever-stricken districts of Mayo to report on their condition. Notwithstanding the warnings given several months ago with regard to the probable appearance of fever sooner or later among the populations of these districts, it is to be gathered from the report that they had been unheeded, and that the guardians were quite unprepared to deal with the outbreak. The sanitary condition of the infected districts is described as deplorable. From other sources we learn that both maculated typhus and relapsing fever exist there.

In answer to a question from Mr. Hastings, the President of the Local Government Board stated in the House of Commons on the 12th inst. that some further time must elapse before his department would be able to commence the issue of vaccine lymph from the calf. He observed that as the department would be held responsible for the quality of the lymph, great care was necessary in maturing the plans for its cultivation and issue.

The vestry of St. Mary Abbott's, Kensington, as sanitary authority for that important district of the metropolis, have prepared a petition for presentation to Parliament against the Vaccination Acts Amendment Bill. The petition has been published in the form of a circular prefaced by an abstract from a report on the subject by Dr. Dudfield, their medical officer of health.

Mr. J. A. Forrest, the Chairman of the Scavenging Subcommittee of the Liverpool Corporation, has prepared a report on the final disposal of those products of the scavenging operations of that city which possess no value to the farmer. It would seem that in Liverpool part of these materials is used in raising the level of new streets and in covering marsh lands along the line of the Lincolnshire canal, and part has been carried out to sea in a barge constructed for the purpose and sunk there. It proves that the carriage of these refuse matters out to sea is the most economical method of disposal, and the Corporation is to be asked to sanction the construction of one or more additional barges.

The question of a district medical officer ordering out-door relief was considered at a recent meeting of the Medway Board of Guardians, one of the general inspectors of the Local Government Board being present. It seems strange that a question of this sort should arise, seeing how clearly the Orders of the Central Authority set forth the respective duties of the medical officer and relieving officer; and it causes a suspicion that the Poor Law Authorities are not sufficiently careful in making medical officers, when first appointed, acquainted with the rules which should govern the performance of their duties.

The members who represented St. George's, Hanover-square, on the deputation from metropolitan vestries and Boards of Guardians to Mr. Dodson, on the Vaccination Amendment Bill, reported the result of their interview with that gentleman to the meeting of their Board on the 7th instant, and the Board passed the following resolution:—"That this Board regret the introduction of the Bill limiting the penalties for refusing to have children vaccinated, and would gladly see the compulsory powers increased by giving the Guardians power to enforce the Act."

The Eccles and Barton Local Board, it is reported, have had to request their medical officer of health to refrain from introducing political controversy into his reports. In a recent report, it appears, this gentleman had offered some observations on the free-trade policy of the country, he, seemingly, being a staunch protectionist; and in so doing he had given offence to the Board.

The recent heavy downfalls of rain have caused overflows from the sewers and flooding of basements in several parts of the metropolis. The evil seems to have been most markedly experienced in Limehouse, along the line of the low level main-sewer. Deputations from the several districts which have suffered have had interviews with the Metropolitan Board of Works on the subject.

A story is current in the press of a sewer-man at Chester having narrowly escaped suffocation in the mud of a blocked sewer. When will the local authorities of our ancient cities learn that it is a disgrace to lag behind the time in matters of sewerage, and that even the antiquity of a place does not justify the retention of arrangements for the disposal of filth which are pernicious to the inhabitants?

Scarlet fever, which has been prevalent at New Brompton, is now reported to have disappeared from the locality.

VITAL STATISTICS.

HEALTH OF LARGE ENGLISH TOWNS.

The rate of mortality in our large English towns continues unusually low. In twenty of the largest English towns, estimated to contain in the middle of this year seven and a half millions of persons, or nearly one-third of the entire population of England and Wales, 5072 births and 2760 deaths were registered last week. The births were 113, and the deaths as many as 515, below the average weekly numbers during 1879. The deaths showed an increase of 38 upon the number returned in the preceding week, and were equal to an annual rate of 19.2 per 1000, against 18.9 in each of the previous three weeks. During the thirteen weeks which ended on the 3rd inst. the death-rate in these towns averaged but 20.4 per 1000, against 23.3, 22.7, and 22.2 in the corresponding periods of the three years 1877-78-79. The lowest death-rates in the twenty towns last week were 10.1 in Hull, 13.2 in Birmingham, 14.6 in Brighton, 14.7 in Bristol, and 15.6 in Portsmouth. The rates in the other towns ranged upwards to 21.4 in Manchester, 23.7 in Salford, 24.1 in Sunderland, 25.3 in Liverpool, 28.9 in Oldham, and 29.8 in the city of Norwich. The comparatively high rates in these

last-mentioned towns, with the exception of Manchester, were due to excessive zymotic fatality.

The deaths referred to the seven principal zymotic diseases in the twenty towns, which had risen from 406 to 476 in the four previous weeks, further rose in the week ending Saturday last to 522; these included 183 from diarrhoea, 130 from scarlet fever, 81 from measles, and 74 from whooping-cough. The annual death-rate from these seven diseases averaged 3.6 per 1000 in the twenty towns; it was but 1.4 in Wolverhampton and 1.9 in Brighton, whereas it ranged upwards to 5.9 and 7.3 in Salford and Norwich. Scarlet fever showed the largest proportional fatality in Norwich, Sheffield, Sunderland, and Salford; measles in Leicester, Oldham, and Sunderland; and whooping-cough in Norwich, Liverpool, and Bradford. Small-pox caused four deaths in London and one in Birmingham, but not one in any of the eighteen other large towns. The number of small-pox patients in the Metropolitan Asylum Hospitals, which in the two preceding weeks had been 237 and 216, further declined to 191 on Saturday last; 17 new cases of small-pox were admitted to these hospitals during last week, against 50, 47, and 38 in the three preceding weeks. The number of patients in the Highgate Small-pox Hospital was 10, against 11 and 10 in the two previous weeks.

The deaths referred to diseases of the respiratory organs in London, which had been 176 and 177 in the two preceding weeks, were 171 last week, and corresponded with the corrected weekly average; 99 deaths were referred to bronchitis and 51 to pneumonia. The annual death-rate from diseases of this class did not exceed 2.4 in London, whereas the rate from the same diseases was equal to 3.5 in Liverpool, and 4.5 in Salford.

HEALTH OF LARGE SCOTCH TOWNS.

In eight of the largest Scotch towns, having an estimated population of rather more than a million and a quarter persons, the annual death-rate last week averaged 20.4 per 1000, against 20.6, 20.5, and 20.9 in the three preceding weeks; it exceeded, however, by 1.2, or 6 per cent., the average rate in the twenty large English towns. The rates in the eight Scotch towns ranged from 13.3 and 14.6 in Leith and Aberdeen, to 23.4 and 25.5 in Perth and Paisley. The deaths referred to the seven principal zymotic diseases in the eight towns were 97 last week, and included 36 from diarrhoea, 20 from whooping-cough, 15 from scarlet fever, 9 from measles, and 9 from fever. The annual death-rate from the seven diseases averaged 3.9 per 1000 in the eight towns, and in the twenty English towns it was 3.6; this zymotic rate corresponded with the average of the three preceding weeks, and while it was but 1.0 in Aberdeen and 2.3 in Dundee, it ranged upwards to 5.3 and 5.8 in Paisley and Perth respectively. The 9 deaths from fever showed a decline from the recent increasing weekly numbers, and included 5 in Glasgow. The mortality last week from measles decreased, whereas that from scarlet fever showed a marked excess. The 36 deaths from diarrhoea exceeded by 11 those returned in the previous week, and included 19 in Glasgow, 6 in Dundee, and 4 in Edinburgh. A fatal case of small-pox was returned last week in Glasgow, the first from this disease in any of the Scotch towns since the week ending 3rd April last. The deaths from acute diseases of the respiratory organs (bronchitis, pneumonia, and pleurisy) in the eight towns, which had been 79 and 91 in the preceding weeks, were 90 last week, and were equal to an annual rate of 3.6 per 1000; the rate from the same diseases in London last week did not exceed 2.4 per 1000. As has been noticed in recent weeks, the excess of mortality in the Scotch towns compared with the English appears to be mainly due to the excessive mortality from lung diseases and to zymotic fatality.

THE HEALTH OF DUBLIN.

The annual rate of mortality in the city of Dublin, which had been 32.7 and 33.7 in the two preceding weeks, declined last week to 31.2, the lowest rate recorded in any week since the beginning of April. The annual rate of mortality in Dublin during the thirteen weeks on the 3rd inst., without any correction for defective registration, averaged no less than 36.6. In London, during the same period, the death-rate averaged but 19.4 per 1000. The 188 deaths in Dublin last week included 47, or 25 per cent., which were referred to the seven principal zymotic diseases, against 48 and 53 in the two preceding weeks; 12 resulted from scarlet fever, 10 from small-pox, 9 from whooping-cough, and 9 from

fever. The annual death-rate from these seven diseases was equal to 7·8 per 1000 in Dublin, against 3·6 in London, and 3·4 in Edinburgh. The fatal cases of small-pox, which were 19 and 14 in the two preceding weeks, further declined to 10 in the week ending Saturday last.

HEALTH MATTERS GENERALLY AT HOME AND ABROAD.

FAMINE AND DEARTH.

Although under the term of the "Irish distress" (and careful avoidance of the word "famine" with reference to Ireland), we have sought to veil from ourselves, after a fashion, the actual suffering from scarcity of food in the distressed districts in the sister island, there can be no doubt that we have been and are dealing there with famine in a sufficiently painful, although not in its most painful, form. We may congratulate ourselves, at least, on having been able to stave off that awful extremity of famine which has existed for several months, and still unhappily exists, in parts of Asia Minor. The scarcity observed in Ireland is but one of many manifestations of scarcity which have occurred, or are now occurring, over vast tracts of territory in Europe, Asia Minor, and in Central Asia. The state of the southern and eastern provinces of Russia in respect to food is such as to awaken the profoundest anxiety. There is little doubt that in not a few localities the scarcity is such that the peasantry must be suffering actual famine, and the prospect for the coming winter is of the darkest. The food supplies kept in store were so largely exhausted by the sufferings of the past winter that in not a few districts the seed corn was consumed, and large tracts of ground were unsown. Moreover, such crops as were sown, and which during the spring gave promise of abundant harvest, have been now very largely destroyed by an invasion of locusts and other insects. The local governments are in despair in face of this dreadful plague of insects. Hands fail to deal effectually with it. Migrations during the dearth of winter partly depopulated some districts, and in others the superstitious feelings of the peasantry have proved an effectual impediment to their rendering help to save themselves from the impending scarcity. "It is the will of God," they say, and it is questionable whether even the interference of the Church will serve to remove their apathy. Rye, which forms the staple food of the peasant and lower orders, and which in June, 1875, sold in St. Petersburg at 6 roubles 40 c. the 8 pouds, 32 lb., had risen to 11 roubles and 50 c. for the same quantity in June, 1880. It is probable that we shall never know accurately the details of the dreadful famine which prevailed over a great part of Central Asia during the last winter and spring, and which there is reason to believe annihilated several tribes. The famine which still prevails over a large part of Asia Minor, of Kurdistan, and of Turkish Arabia, has become better known to us through numerous correspondents in the daily press, and the reports from the various missionary stations in the distressed districts. The famine in European Turkey appears to have attracted less attention, but, nevertheless, it would seem that the population of the districts visited by the late war are suffering from extreme destitution, and in some of them the people are dying from actual famine.

THE OUTBREAK OF FEVER IN SWINFORD UNION.

Dr. Grimshaw, Registrar-General for Ireland, has recently gone through the records for the Swinford district for the past ten years, and has analysed minutely those for the last year and the first half of the present. During the ten years he finds that fever has prevailed there—in fact, is endemic—and that there is, therefore, nothing remarkable about its presence this time more than at any other. Beginning with 1870, in that year there were 24 deaths from fever, in the next 25, in the next 22, in the next 38, in the next 33, in the next 13, in the next 18, in the next 16, in the next 36, and last year there were 48 deaths. In the first half of the present year there were altogether 22 deaths from fever, while in the first half of last year there were 23, so that this half year there has been one death less than in the corresponding period of last half. In the second quarter of this year there have been 8 deaths from fever in the whole of the Swinford Union, which contains a population of 53,000. For the first half of this year the deaths from all causes in Swinford Union has been

508, while in the corresponding period of last year it was 585, or a decrease of 77. The most fatal epidemic disease during the last year has been whooping-cough, which has proved very destructive. The average death-rate of the Union has been only 14·8 per 1000 for the ten years, and the average death-rate per annum for the second quarter during the ten years has been 12·5, while for the second quarter this year it was 18·8, which is probably below the average for the whole of Ireland. So far as can be ascertained, these outbreaks of fever are quite common among the people of Ireland. For example, there has been on outbreak on the Kilkerran Islands, another in Skibbereen, another in Donegal, besides others at places where there has been no exceptional distress at all.

THE "HOWARD MEDAL."

It is announced that five essays have been received by the Council of the Statistical Society in competition for the "Howard Medal" of the present year, the subject being "The Oriental Plague." It is further announced that the subject for the Howard Medal for 1881 is "Jail Fever, from the earliest Black Assize to the last recorded outbreak in modern times."

The municipality of Paris have decided to establish (as a beginning) three ambulances, to be distributed in various parts of the city, for the removal to hospital of persons suffering from infectious sickness, hitherto the ordinary public carriages having been used for the purpose. Much importance is now being attributed in Paris to the introduction of infection by travellers in reference to recent outbreaks of disease there. It is stated that the later prevalences of small-pox have all begun in furnished apartments, and these and hotels are to be subjected to special supervision in view of infectious diseases.

The Sanitary Institute of Great Britain held its anniversary meeting in the Royal Institution on the 8th inst. The Earl of Shaftesbury, K.G., presided, and distributed the medals and certificates awarded for useful sanitary inventions and appliances exhibited at Croydon last year; and Captain Douglas Galton, R.E., C.B., read a paper on "Some Preventible Causes of Impurity in London Air." In the evening the members of the institute dined together at the St. James's Hall Restaurant, Dr. B. W. Richardson in the chair.

We learn that the reports as to the prevalence of small-pox in Norway are much exaggerated. To the 8th inst. the total number of cases which had occurred amounted to 120, of which 89 had taken place in Christiania. Of these cases 7 (all young unvaccinated children) had proved fatal.

Recent reports from Russia state that diphtheria is raging among the working classes of the government of Saratov; but that the disease is declining in the government of Catherinoslav.

INTERNATIONAL MEDICAL CONGRESS.

At the meeting of the Committee of Organisation, held on Tuesday last, the list of sections and officers subjoined was finally decided upon. The Congress will meet from the 3rd to the 9th of August, 1881, in rooms granted by the University of London and the Royal and other learned Societies meeting in Burlington House. Invitations to attend the meetings will be issued to all legally qualified medical practitioners in the United Kingdom, and will be sent to the different countries of Europe, to America, the Colonies, and India. Papers may be read in English, French, or German, and will be published in the volume of Transactions in the language in which they are read. We presume it is only an oversight that the word "male" is omitted from the qualifications of those to whom invitations are to be sent. The names of many of the officers of the sections are an assurance that the "lady-doctors" will not be asked to attend and contribute; but if by any want of clearness in issuing the invitations mistake should occur, a very considerable proportion of the leading members of the profession will, of course, decline to co-operate. The point should be determined at once.

It will be necessary for all who wish to make communica-

tions to the Congress to intimate their intentions to the secretary before the end of March, 1881.

All communications respecting the Congress should be addressed to William MacCormac, Esq., Hon. Secretary-General, 13, Harley-street, London, W.

The following is the list of officers:—

President of the Congress.—Sir James Paget, Bart., LL.D., D.C.L., F.R.S.

Vice-Presidents of the Congress.—President of Royal College of Physicians, London; Presidents of Royal Colleges of Surgeons of England, Ireland, and Edinburgh; President of Royal College of Physicians of Edinburgh, and of the King and Queen's College of Physicians, and Faculty of Physicians and Surgeons, Glasgow; Master of Society of Apothecaries, London, Governor of Apothecaries' Hall, Ireland; Professor Acland; Sir George Burrows, Bart.; G. Busk, Esq.; Dr. W. B. Carpenter; Sir Robert Christison, Bart.; Luther Holden, Esq.; Sir J. Hooker; Dr. Hudson; Professor Huxley; Sir W. Jenner, Bart.; Thomas Keith, Esq.; Professor Lister; Robert MacDonnell, Esq.; Professor Owen; Professor George Paget; Professor Burdon Sanderson; Professor Spence; Professor Allen Thomson; Sir Thomas Watson, Bart.; Spencer Wells, Esq.

Section I., ANATOMY.—*President:* Prof. Flower, F.R.S. *Vice-Presidents:* Prof. Macalister, M.D., Dublin; Prof. Rolleston, M.D., F.R.S., Oxford; Prof. Turner, F.R.S., Edinburgh. *Secretary:* Prof. Thane.

Section II., PHYSIOLOGY.—*President:* Prof. Michael Foster, F.R.S., Cambridge. *Vice-Presidents:* Dr. F. W. Pavy, F.R.S.; Prof. John Mallet Purser, M.D., Dublin; Prof. William Rutherford, M.D., F.R.S., Edinburgh. *Secretaries:* Dr. C. S. Roy; Prof. Gerald Yeo.

Section III., PATHOLOGY AND MORBID ANATOMY.—*President:* Dr. Samuel Wilks, F.R.S. *Vice-Presidents:* Dr. John Syer Bristowe; Jonathan Hutchinson, Esq.; Professor Sanders, M.D., F.R.S.E., Edinburgh. *Secretaries:* Dr. J. F. Payne; Marcus Beck, Esq., M.S.

Section IV., MEDICINE.—*President:* Sir William Gull, Bart., M.D., F.R.S. *Vice-Presidents:* Prof. Gairdner, M.D., Glasgow; Dr. Quain, F.R.S.; Dr. William Roberts, M.D., F.R.S., Manchester. *Secretaries:* Dr. Duckworth; Dr. W. M. Ord.

Section V., SURGERY.—*President:* John Eric Erichsen, Esq., F.R.S. *Vice-Presidents:* Professor E. H. Bennett, M.B., Dublin; Professor Humphry, M.D., F.R.S., Cambridge; W. S. Savory, Esq., F.R.S. *Secretaries:* H. Greenway Howse, Esq.; Thomas Smith, Esq.

Section VI., OBSTETRIC MEDICINE AND SURGERY.—*President:* Dr. McClintock, LL.D., Dublin. *Vice-Presidents:* Dr. Barnes; Dr. Matthews Duncan, LL.D., F.R.S.E.; Dr. Priestley. *Secretaries:* Dr. Galabin; Dr. John Williams.

Section VII., DISEASES OF CHILDREN.—*President:* Dr. West. *Vice-Presidents:* Dr. Gee; Timothy Holmes, Esq. *Secretaries:* Dr. Donkin; R. W. Parker, Esq.

Section VIII., MENTAL DISEASES.—*President:* Dr. Lockhart Robertson. *Vice-Presidents:* Dr. Crichton Browne, F.R.S.E.; Dr. Maudsley. *Secretaries:* Dr. Gasquet; Dr. Savage.

Section IX., OPHTHALMOLOGY.—*President:* William Bowman, Esq., F.R.S. *Vice-Presidents:* G. Critchett, Esq.; Henry Power, Esq., M.B.; Dr. Argyle Robertson, F.R.S.E., Edinburgh. *Secretaries:* Dr. W. A. Brailey; E. Nettleship, Esq.

Section X., DISEASES OF THE EAR.—*President:* William B. Dalby, Esq. *Vice-Presidents:* Dr. Cassells, Glasgow; Dr. Fitzgerald, Dublin. *Secretaries:* Dr. Urban Pritchard; Dr. Laidlaw Purves.

Section XI., DISEASES OF THE SKIN.—*President:* Erasmus Wilson, Esq., F.R.S. *Vice-Presidents:* Dr. Cheadle; Dr. R. Living. *Secretaries:* Dr. Cavafy; Dr. Thin.

Section XII., DISEASES OF THE TEETH.—*President:* Edwin Saunders, Esq. *Vice-Presidents:* John Tomes, Esq., F.R.S.; Charles Spense Bate, Esq., F.R.S. *Secretary:* C. Tomes, Esq.

Section XIII., STATE MEDICINE.—*President:* John Simon, Esq., C.B., F.R.S. *Vice-Presidents:* Dr. George Buchanan; Professor de Chaumont, F.R.S.; Dr. Douglas MacLagan, F.R.S.E., Edinburgh; J. Netten Radcliffe, Esq. *Secretaries:* Professor Corfield, M.D.; Dr. Thorne Thorne.

Section XIV., MILITARY SURGERY AND MEDICINE.—*President:* Surgeon-General Professor Longmore, C.B. *Vice-Presidents:* Sir William Muir, M.D., K.C.B., Director-General Army Med. Dep.; Sir Joseph Fayrer, M.D.,

K.C.S.I., F.R.S., India Office; Dr. J. W. Reid, Director-General Med. Dep. of Navy. *Secretaries:* Surgeon A. B. R. Myers, Coldstream Guards; Surgeon-Major Sandford Moore, Aldershot.

Section XV., MATERIA MEDICA AND PHARMACOLOGY.—*President:* Professor T. R. Fraser, M.D., F.R.S., Edinburgh. *Vice-Presidents:* Dr. Lauder Brunton, F.R.S.; Professor Sydney Ringer. *Secretaries:* Dr. E. B. Baxter; Dr. F. T. Roberts.

MUSEUM OF SCIENTIFIC APPARATUS AND MATERIA MEDICA.—*Museum Committee:* Jonathan Hutchinson, Esq., *Chairman;* Waren Tay, Esq.; C. Stewart, Esq.; Dr. G. V. Poore; Dr. F. Macnamara; J. F. Goodhart, Esq.

Reception Committee: Prescott Hewett, Esq., *Chairman;* Sir Trevor Lawrence, Bart., M.P.; Sir Henry Thompson; Dr. Farquharson, M.P.; Dr. Lyons, M.P.; J. H. Puleston, Esq., M.P.; Dr. A. Vintras; Dr. Lionel Beale; Dr. Andrew Clark; Dr. Philip Frank; J. Cooper Foster, Esq.; Ernest Hart, Esq.; Dr. George Johnston; John Marshall, Esq.; Dr. W. O. Priestley; Dr. Owen Rees. *Secretaries:* Dr. Samuel West; Dr. Seymour Sharkey.

Executive Committee.—Dr. Risdon Bennett, LL.D., F.R.S., Pres. Roy. Coll. Phys., London, *Chairman;* Sir W. Jenner, Bart., M.D., K.C.B., D.C.L., F.R.S.; Sir James Paget, Bart., LL.D., D.C.L., F.R.S.; Sir William Gull, M.D., F.R.S.; Luther Holden Esq.; Professor J. Lister, D.C.L., F.R.S.; Dr. H. A. Pitman; W. Bowman, Esq., F.R.S.; Dr. Sieveking; Dr. Herman Weber; Jonathan Hutchinson, Esq., Dr. J. Matthews Duncan, LL.D., F.R.S.; Prescott Hewett, Esq., F.R.S.; Dr. Andrew Clark; A. O. Mackellar, Esq.; Dr. A. B. Shepherd, Dr. P. H. Pye-Smith, W. MacCormac, Esq.

Correspondence.

"Audi alteram partem."

ON THE EXCISION OF OBSTRUCTION AT THE NECK OF THE BLADDER.

To the Editor of THE LANCET.

SIR,—Will you kindly permit me, through the columns of your magazine, to give publicity to the few comments I wish to make upon the subject of Dr. Mercier's operation of excision of prostatic valvules, to which, I think—for brevity's sake, if for no other reason—the name of "Prostatectomy" should be given, while, for the same reason, "Prostatotomy" may be applied to incision of the valvules. I now broach this question on account of the appearance of a letter by Mr. G. Buckston Browne in THE LANCET of June 5th, 1880, p. 896.

Mr. Browne begins his communication by challenging Mr. Teevan's statements concerning Mercier's operation; but as Mr. Teevan is well able to make good all his utterances, I shall leave him to fight his own battle, feeling confident that he will be victorious, for I am sure he is right in all that he has said about Dr. Mercier and prostatectomy. Dr. Mercier, however, does not know English; he is an aged man, needing rest of mind and body; and besides, he is now at his country-house to recruit his shattered health, and may not be aware of the present attack upon his good name and fame.

It is as a friend and disciple of Dr. Mercier, and as a lover of fair-play, that I write to refute the statements of Mr. Browne regarding prostatectomy. It seems to me that Mr. Browne has been hasty in condemning this operation, as it does not appear in his letter that he has the warrant of actual experience and observation for his denunciation; on the contrary, he acknowledges that the operation has never been performed in England. His views and objections are therefore purely theoretical, and must fall before Mercier's facts. If Mr. Browne will for several years carefully study the four volumes pertinent to the subject written by Dr. Mercier, make numerous trials of prostatectomy and prostatectomy upon the cadaver, and then perform these operations upon the living, and wait at least a year for the final result, he may possibly come to the point of advocating them as strongly as I do; if not, then it is to be hoped that he will propose some-

thing better, but until that time his condemnation should go for nothing. I do not think it fair to say, of a gentleman of Mr. Teevan's erudition, that he does not "appear to have consulted the chief English literature" of the subject upon which he has lectured so well. I believe Mr. Teevan to be thoroughly familiar with all the literature—good, bad, and indifferent—of the subjects which he treats, otherwise he never would have been appointed Lettsomian Lecturer by the learned body which has the power of conferring that honour.

The statement that the "operation is rarely if ever employed by more than one surgeon in Paris, and that many years ago, and now abandoned there," is not correct. It has been performed by other surgeons in Paris within a few years, and has never been abandoned, at least by Dr. Mercier. It has been very badly done by some surgeons, who, not understanding it, never should have undertaken it. They have abandoned it, and wisely too. All those who refuse to study the operation as it should be studied will either execute it badly or refuse to perform it. In bad hands it is worse than useless; in good hands it is eminently successful. Mr. Teevan has doubtless looked carefully into all the facts connected with prostatectomy, and deserves to be thanked for calling the attention of a learned Society to so important a subject, about which one-third of mankind after the age of fifty is so deeply concerned.

To the best of my knowledge and belief I declare that Dr. Mercier has performed his operation on upwards of four hundred patients. Hæmorrhage has been more frequent and abundant in incision than in excision, but has never been fatal. He considers it as merely a bugbear; consequently the Italian method is unnecessary. In a prostatectomy followed by prostatotomy (the excision and incision giving a depth of two centimetres) performed by me a week ago the patient lost half an ounce of blood, and the urine was tinged with blood for two days only. He sat up half of the day following the operation, and was up and dressed every day thereafter. He has not had a bad symptom. I may say the same of another patient sixty-seven years of age—operated upon two months ago—who sat up in bed in a few days and was up and dressed in a week. My oldest patient was seventy-six, was operated upon nearly two years ago, and is now in fair health and better of his urinary trouble than he had been for several years before.

The operation which I performed a week ago was done with an improved instrument, a modification which I made of Mercier's first excisor. I have within a few days ordered a new prostatectome, whose male blade will be much more easily opened to seize the valve than Mercier's present excisor, and with which one centimetre of the depth of the valve can at once be removed.

I have several new cases under preparation for prostatectomy, and see no reason why I should not continue to perform the operation. After my results have become generally known, this operation will, I think, make great progress in America. May it thrive in England, and may Mr. Browne be the first in Great Britain to say of it, in the language of Chaussier and Percy when they reported upon lithotomy, that it is "equally glorious to French surgery, honourable to its author, and consoling to humanity."

I am, Sir, very respectfully yours,

JOHN W. S. GOULEY, M.D.,

Professor of diseases of the genito-urinary system in the
Medical Department of the University of the
City of New York, Surgeon to
Bellevue Hospital, &c.

New York, June 22nd, 1880.

TEACHING AND EXAMINATIONS IN THE UNIVERSITY OF EDINBURGH.

To the Editor of THE LANCET.

SIR,—In the course of a pleading in favour of the one-portal system, you have given publicity to statements regarding the teaching of, and examining in practice of, physic in the University which are quite erroneous, and I shall be obliged if you will insert this letter, and give the same publicity to the contradiction as you have accorded to the assertion.

I have never objected to any question put by an assessor in any examination, and the area of examination has never been restricted. I cannot imagine the possibility of my objecting to any question put by such examiners as those with whom I have been associated—Dr. Dyce Duckworth of St.

Bartholomew's Hospital, and Dr. Duffin of King's College—with both of whom I have enjoyed the most complete accord, and for whose depth of knowledge and precision in examining I have the highest admiration.

As to my course of lectures, I beg to refer you to the University Calendar, p. 82, from which I extract the following paragraph:—"It is intended that each course shall be, so far as possible, complete; but that while the general principles (included in Part 1) shall be fully discussed each session, the diseases of individual systems (included in Part 2) shall be taken up in different order year by year, and certain systems selected for more minute consideration."

It must be obvious to any one acquainted with what you justly call the "great theme" of practice of physic that no one can at the present day give a satisfactory course in a single winter session. I am personally of opinion that the Universities, and even the General Medical Council, should require two courses on such a subject. But considering that in the meantime only one course is required, I have uniformly striven to condense as much as possible, and each session include some account, at least, of the diseases of each physiological system. I venture to think that the course which you have selected for criticism would be found, on inquiry, one of the most complete delivered anywhere in a single session.—I have the honour to be, Sir,

Your obedient servant,

T. GRAINGER STEWART.

July 12th, 1880.

** We gladly insert Dr. Grainger Stewart's letter. Taken in connexion with Dr. Duckworth's letter and others which we publish, it makes it pretty clear that if the Edinburgh University student is not prepared for his examinations in the Practice of Medicine, it is not the fault of his teachers or their modes of teaching. If Dr. Stewart will read our remarks over again, he will see that while giving publicity to the "notion" of our correspondent as having possibly some basis in truth and raising one or two interesting questions, we expressed our belief that he was in actual error in his main suggestion, that an assessor in examinations was hindered in his choice of subjects by the professor. The case is very much as we surmised. Dr. Stewart's exposition of the Practice of Medicine in its completeness can only be got by a student attending two courses. Further proof that Dr. Stewart does not merely repeat himself is found in the large classes of students who attend two courses of his lectures, though only required to attend one. We agree with Dr. Stewart that it is scarcely possible in a single winter session to cover the wide field of practice of physic. But we think that the professor should not only overtake in each session the diseases "of each physiological system," but should emphasise the common and serious diseases of each chief organ, even if at the expense of some incompleteness of detail and system.—ED. L.

To the Editor of THE LANCET.

SIR,—Under the heading of "Teaching and Examinations in the University of Edinburgh," you make a statement which I feel it incumbent upon me immediately to correct. You there say "an assessor in the University of Edinburgh, examining in the practice of physic, put a very proper and straightforward question, which was objected to by the examining professor on the ground that the subject had not been discussed by him in the course of lectures which the student had attended."

Being the assessor referred to, I beg emphatically to deny that any restriction was placed on the subject-matter at my disposal. It was from the first clearly understood that the range of my examinations was not to be in any way limited by the group of subjects which Professor Grainger Stewart had touched upon during the preceding winter. Far from that, Professor Stewart expressly desired me to examine upon any and every subject that might legitimately be included as "practice of physic." "The men are presumed to have prepared these subjects, whether they have heard them lectured upon or not." Professor Stewart never even gave me a list of the subjects that had formed part of his

previous winter course, and I am at this moment ignorant of what his curriculum comprised. As a matter of fact, I drew my questions from the whole range of the practice of physic, and was extremely gratified at the good "all round" standard of excellence they elicited.

I am, Sir, your obedient servant,

ALFRED B. DUFFIN, M.D.,

Physician to King's College Hospital.

King's College, London, July 12th, 1880.

To the Editor of THE LANCET.

SIR,—I read with regret your remarks on "Teaching and Examinations in the University of Edinburgh," and as first senior medallist of the class of Practice of Physic, I have been asked to represent the class; and so I beg of you that you will do the Professor of the Practice of Physic the justice of publishing the following:—

The whole range of medicine cannot possibly be satisfactorily discussed in a hundred lectures of one hour each, but one set of systems is fully treated of in alternate sessions—the remaining systems not being neglected, but so dealt with as actually to give the student the most important points, and guide him to the rest. Consequently in no session is any system left untouched; and if one of the systems receiving a minor share of attention in any year happens to be the respiratory system, certainly such a disease as pneumonia would in any case be fully studied. In point of fact, I have attended the class of Professor Grainger Stewart during the past two sessions, and, after comparing the notes taken during these courses, I can state definitely and precisely that your fears of a necessarily imperfect education of the Edinburgh University medical student are entirely groundless. At the opening days of the session Professor Stewart distinctly told us that in the systematic course he would not be able to go over the whole subject with us, but said what he would do, and recommended the text-books necessary to get up the rest. Moreover, the Professor in his clinical lectures and bedside teachings constantly endeavours to illustrate more fully the imperfectly treated subjects; and since every student must attend the clinical lectures, and most students attend his clinics in the Infirmary at least one session, I am decidedly of opinion that if any student be imperfectly educated the shortcomings are not from the side of Professor Grainger Stewart.

I am, Sir, yours obediently,

Edinburgh, July 13th, 1880.

ANDERSON STUART.

To the Editor of THE LANCET.

SIR,—In your issue of the 10th inst. I find attention called to the conduct of the Examinations in Practice of Physic at Edinburgh.

Inasmuch as the alleged circumstances in your paragraph must refer either to Dr. Duffin, of King's College Hospital, or to myself, I am constrained, for my part, to offer the most unqualified denial to them.

After holding office for five years as a University Examiner, in association both with the late and the present Professors, I am free to state that I have no recollection of having been interfered with on any occasion in the course of my duties. I acted in the most strict and impartial spirit, all the candidates being strangers to me, and I certainly covered the whole field of subjects.

Not knowing the members of the Professor's class from those who had attended the lectures of other teachers, I could, of course, make no distinction in framing my questions; and, I may add, that I was equally ignorant of the particular subjects developed, or less fully treated of, by the Professor in his previous prelections.

So far as I am concerned, I am content to give a simple denial to your correspondent's assertions, leaving it to those who must, in this matter, have most knowledge—the numerous body of gentlemen whom I had the honour to examine, and to those who know me best to give me credit, or the reverse, for fairness and independence as an examiner.

Looking back upon my term of office, I may state that I could no more conceive of such interference, as alleged on the part of the Professor, than I could contemplate my own subserviency in paying any heed to it.

I am, Sir, your obedient servant,

DYCE DUCKWORTH.

Grafton-street, Piccadilly, July 12th, 1880.

HOSPITAL STATISTICS OF ALCOHOLIC STIMULATION.

To the Editor of THE LANCET.

SIR,—Nearly twenty years ago I came to the conclusion that a careful analysis of the wine, spirit, and malt liquor roll of every hospital in the kingdom, with reference to the average daily quantities administered to each patient, would be a very important and valuable contribution to hospital statistics, if set forth in such a way as to show the limits of variation depending upon the practice of individuals in medical, surgical, fever wards, &c., over determinate periods, as, e.g., from month to month, from year to year, &c. In a volume entitled "Clinical Medicine," published in 1862, I submitted a statement of this kind bearing on my own practice for five years in the Royal Infirmary of Edinburgh; and in relation to fever, similar returns were afterwards published in even greater detail by myself and by Dr. Russell, indicating in daily averages the amount of alcoholic stimulants used by each patient in our respective fever wards in the treatment of typhus. These returns were not without an effect on medical opinion; but their usefulness would have been greatly increased had the method indicated in them been generally followed. And now that you are again directing attention to the subject, I would take the opportunity of urging that in every public hospital such returns should be regularly submitted, and an analysis of them published in the annual reports. The rough aggregates usually given as representing the practice of individual hospitals are of comparatively small value. If some one having authority would promulgate a blank schedule with the particulars required, it might be adopted, after due consideration, by every hospital in the kingdom without further delay.

I remain, Sir, yours truly,

Glasgow, July 13th, 1880.

W. T. GAIRDNER.

"ARMY MEDICAL REPORT FOR 1878."

To the Editor of THE LANCET.

SIR,—My attention has just been called to a passage in the review of the Army Medical Report for 1878 in your issue of the 10th inst., in which you comment on the absence of any contribution from the medical division of this hospital. Will you permit me to say that I am not responsible for the omission. A very interesting, and, as it appeared to me, instructive report, was drawn up for the Blue Book at my request by Dr. Veale, Assistant Professor of Military Medicine in the Army Medical School, on the causes of fever under treatment in this hospital from Cyprus, Malta, and Gibraltar.

The interest of this report, to my mind, consisted in the fact that it established on a sure scientific basis the specific difference between the fevers of Cyprus and those of Malta and Gibraltar. This report was forwarded, through the usual official channel, to the authorities for publication. The executive medical officers of the medical division of this hospital are in no way responsible for its non-appearance.

I am, Sir, faithfully yours,

N. C. MACLEAN, M.D.,

Professor of Military Medicine, Army Medical School.

Royal Victoria Hospital, Netley,

July 13th, 1880.

THE VACCINATION ACTS.

To the Editor of THE LANCET.

SIR,—As a general practitioner, I think, with you, there is much to be said for the Legislature limiting the multiplicity of fines of parents for not having their children vaccinated. I object to make fools and fanatics into martyrs by fines and imprisonments, and to have the greatest discovery of medicine and the pure benevolence of the profession disparaged and misrepresented in the process. For my part, I should object to vaccinate a child brought to me by Dr. Brewer's policeman, and not by its parents. The limited fines will sufficiently indicate law and duty and civilisation. They will suffice to secure the vaccination of all children whose parents are not incurable fools, and, with all respect to Mr. Carlyle, these are not so very large a proportion of

the human race. The unlimited fines do no more than this, and they do great harm by creating agitation and sympathy, for which there will be no room under the amended Act.

The medical profession has acted with pure benevolence and unselfishness in this matter. It has nothing to gain but credit, not even money, from neglected or despised vaccination. Small-pox is a disease on which good-sizeable medical bills may be founded, very different from the paltry fees got for vaccination.

I am by no means, however, disposed to let the fools and fanatics off too easily. I would suggest that under the new Act fines for exposure of small-pox should be increased, and that medical men be empowered to charge double fees for attending a disease so disgusting and so preventable. Only yesterday a strange servant-girl walked into my house, covered with small-pox pustules, after being at a chemist's, and perhaps another medical man's. This is surely a great nuisance, against which the profession has a right to claim some protection. To have one's servants and children recklessly and needlessly exposed to so preventable a disease, is a grievance of which we have a right to complain. In other words, if the non-vaccination fine is to be mitigated, for which I think there is much to be said, I maintain that those who deliberately court small-pox should be regarded as having cultivated personal liberty in a most selfish and offensive way, and should be made to pay for it, in the general reprobation of sensible people, in severe isolation, and in heavy medical taxes. It is reasonable, too, in this connexion, to consider the propriety of a law requiring revaccination. I have, you will see, more faith in law and less in fines than some of my medical brethren. Medical men will, in the course of time, be better appreciated for their strong and unselfish advocacy of vaccination, and the disease of small-pox will come to be rightly regarded as at once a crime, a disgrace, and a punishment.—I am, Sir, your obedient servant,

July 12th, 1880.

A GENERAL PRACTITIONER.

To the Editor of THE LANCET.

SIR,—Readers of the *Echo* on Thursday and Friday evenings of last week must have been somewhat surprised to see that a petition had been presented from the British Medical Association, signed by 2000 medical men, "against vaccination." The facts of the case are, that I had the honour of presenting a petition from the Committee of Council of the British Medical Association against the "Vaccination Acts Amendment Bill"; that this having been incorrectly described by the *Echo*, the Editor of that paper has ignored my twice repeated request to make that explanation which I am now glad to have the opportunity of laying before your readers.

Faithfully yours,

R. FARQUHARSON.

July 14th, 1880.

H.M. PRISON, COLDBATH-FIELDS.

To the Editor of THE LANCET.

SIR,—You have been grossly misinformed as to the mortality in this prison; the fact being that only two deaths have occurred from January 31st to this date—namely, one from acute pneumonia on the 24th of June and a case of suicide by strangulation on the 25th of June, our daily average number of prisoners being about 1500.

I am, Sir, faithfully yours,

W. SMILES, M.D., Surgeon.

July 12th, 1880.

* * We are pleased to receive Dr. Smiles's correction with regard to the general health and mortality among the prisoners at the Coldbath-Fields Prison. Still it does not affect the question at issue, which is, that since the introduction of the new dietary scale there have been three deaths, *all among short-termed prisoners*, on whom the new scale presses with undue severity. The death of the prisoner Nolan, we have always maintained, was never satisfactorily explained. And the circumstances attending the two recent deaths mentioned by Dr. Smiles require to be more fully detailed before the public conscience can be satisfied that the fatal issue in both cases was not hastened, if not actually induced, by the depression caused by the severity of the dietary.—ED. L.

MEDICAL NOTES IN PARLIAMENT.

IN the House of Commons on Friday, the 9th inst., a petition from the British Medical Association was presented against the Government Bill for the Abolition of Multiple Penalties for Non-vaccination. Curiously enough, this petition was reported in an evening paper as "against vaccination." Other petitions against the Bill were presented from London, Leeds, and Manchester.—The twenty-ninth Report of the Inspectors of Lunatic Asylums in Ireland was presented.—A short discussion took place on the appointment of the Select Committee on Contagious Diseases Acts. Mr. Childers urged, in reply to objectors, that there was still time to get through one branch of the subject, in continuation of the labours of the previous Committee, and promised to consider some suggested additions to the number of the Committee. The Government nomination was then agreed to, as follows:—Mr. Cavendish Bentinck, Mr. Stansfeld, Colonel Alexander, Sir Harcourt Johnstone, Viscount Crichton, Mr. Burt, Mr. O'Shaughnessy, Mr. Osborne Morgan, Mr. Brassey, Mr. Cobbold, General Burnaby, Sir Henry Wolff, Mr. Ernest Noel, Colonel Digby, and Mr. William Fowler.

On Monday Mr. Dodson replied to Mr. Cowen that the regulations for the prevention of the overcrowding of canal boats rested with the local authorities to carry out, and no representation had been made that increased powers were necessary. There was considerable difficulty in dealing with the occupants of gipsy tents and other movable dwellings, but the Local Government Board would endeavour to deal with them, in the way of sanitary regulations, at a favourable opportunity.—Mr. Hastings inquired when the National Vaccine Establishment would begin to supply calf vaccine. Mr. Dodson was sorry he was unable to give a definite answer. The Local Government Board were making inquiries to ascertain what would be the best arrangement in order to secure an adequate and constant supply; but inasmuch as the Department would be answerable for the quality of the lymph the greatest care was required, and therefore, with every desire to push the matter on as rapidly as possible, he was afraid some further time must elapse before they would be in a position to commence the requisite supply. Sir H. D. Wolff put a series of questions as to the shipping of lunatics to England by the Indian military authorities, and referred to two cases in which such persons had been quartered on the rates at Portsmouth. Mr. Childers said the soldier's wife and the boy referred to in the question were taken to the union, as alleged, but stoppages were made on the highest scale from the pay of the husband and the father respectively towards their maintenance. It was not within his province to say whether the Indian authorities were justified in sending them home, but in the case of the boy, who had been in an asylum in India, the medical officer there reported, that the climate was dangerous to him. He had asked the Secretary for India to make inquiry in the matter. Sir H. D. Wolff gave notice that he would ask for the correspondence relating to cases of Indian lunatics landed at the port of London. Mr. Forster, in reply to questions from the Irish members, promised to lay on the table a report from Dr. Nixon, a temporary medical inspector who had been sent into the fever districts. Fever prevailed chiefly in the union of Swinford, and although some additional cases had been reported within the last few days, he had reason to believe that the disease was on the decline. The last return from Swinford stated that there were 96 fever patients in the infirmary. The vice-guardians advertised for a second doctor, but no one answered the advertisement. They had now, however, succeeded in obtaining the services of one from Dublin, and also one or two trained nurses, and an ambulance. The sanitary condition of the places where the fever most prevailed was deplorable, and when the fever once got a hold it was very difficult to check it. The difficulty was much increased by the fear which the people had of infectious disease, and their unwillingness to acknowledge its existence in their houses. Mr. O'Connor Power inquired whether the right honourable gentleman had given any special instructions with a view to improving the sanitary arrangements of which he complained. Mr. Forster was sorry to say that he referred mainly to the condition of the cabins; and these defects were not very easily removed. The guardians were doing what they could, but it was not an easy matter to assuage the condition of a large

population. The overcrowded and bad condition of the cabins made the fever spread very rapidly. Mr. Parnell said it appeared there was an entire want of preparation for the outbreak of fever at Swinford. Were steps being taken to be in readiness in other unions? Mr. Forster replied that the Local Government Board were taking steps. Boards of guardians had been requested to provide ambulances. Something must be left to local government, and it was hoped the guardians would do their duty, as in a great many cases they were doing. What had happened at Swinford was likely to be a warning to other boards.

On Tuesday, in reply to Mr. Elliot, Mr. Peel stated that in August, 1879, the ambulance classes established under the auspices of the Order of St. John of Jerusalem were transferred to certain divisional surgeons of the metropolitan police, who voluntarily undertook the duty of instruction. More classes would be held in October next, and all necessary facilities would be given. The course of instruction embraced the treatment of persons in a state of insensibility, casualties in the streets, and other practical matters connected with ambulance work, and rendering the first aid to the sick or injured. The police, who had hitherto attended the classes, were reported by Sir E. Henderson to have evinced great interest in the course and marked ability to grasp the subjects taught.

On Wednesday, petitions against the Vaccination Acts Amendment Bill were presented from the Royal College of Surgeons, Ireland, from the Forfarshire Medical Association, and from Cambridge and Prescott.—The second reading of Mr. Dillwyn's Lunacy Law Amendment Bill was again deferred for a week.—Nearly all the time of the House is now occupied by Irish debates. Mr. Parnell, as leader of the "active party," has too much to do to attend Committees, and he was to-day discharged from further attendance on the London Water Supply Committee; Mr. Maurice Brooks, one of the moderate Irish members, being appointed in his place.—The Births and Deaths Registration (Ireland) Bill was read the third time and passed.

The Vaccination Acts Amendment Bill stood for second reading on Thursday evening, but inasmuch as the Irish Disturbance, Budget, and Hares and Rabbits Bills were before it, a further adjournment was, of course, inevitable.—The same remark applies to the completion of the Select Committee on the Contagious Diseases Acts, which has been on the Order Book for some days. Mr. Childers proposes to substitute Mr. Massey for Mr. Brassey, who was put on the list by mistake, and Mr. Puleston will move that Dr. Farquharson be added to the Committee, which Sir Harcourt Johnstone will oppose.—Sir H. D. Wolff put another question as to the practice of sending pauper lunatics home from India, and the Marquis of Hartington said he was making inquiry into the matter.—Mr. Hanbury Tracy had a question on the paper as to compensation for officers for injuries sustained on torpedo service, but it was deferred.—Mr. Storer interrogated the Home Secretary with regard to the infliction of fines, amounting to £9, for ear-marking cattle at Bedale, in Yorkshire. Sir W. Harcourt postponed the answer until he had had time to obtain information, and elicited a loud cheer by suggesting that all complaints against magistrates should first be addressed to him privately at the Home Office.—Dr. Lyons asked the Chief Secretary to the Lord Lieutenant of Ireland whether it is true that trained nurses skilled in the management of fever have been supplied by the Hardwicke Fever Hospital, Dublin, to take charge of the fever cases at Swinford at the request of the Local Government Board, Ireland, and whether it is true that up to the present date there has been no report of the occurrence of purpura hæmorrhagica as a complication of the fever now prevailing in the west of Ireland. Mr. Forster replied in the affirmative to both questions. Two trained nurses had been secured, and the complication that was represented by two words which he would not venture to pronounce had not yet appeared. The right honourable gentleman added that there was reason to hope, from information he had received, that the fever was abating. The guardians had been instructed to obtain the services of nurses, where required, and to take such steps as might be possible to put the people's houses in a better sanitary condition.

QUEEN'S UNIVERSITY, IRELAND.—John T. Collier, M.D., passed the examination for the degree of Master in Surgery, but was absent at the conferring of the degrees.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—At the last meeting of the Council the following Member was elected a Fellow of the College:—

Haward, Edwin, M.D. Edin., M.R.C.P. Lond., Harley-street; diploma of membership dated Feb. 3rd, 1887.

The following gentlemen passed the Primary Examination in Anatomy and Physiology at meetings of the Board of Examiners on the 9th, 12th, 13th, and 14th inst.:—

Ernest A. White, Ernest H. Simmons, Henry W. Hooper, John U. Bolton, Sidney Davies, Harry A. Francis, John L. Stretton, and John H. Harris, St. Bartholomew's Hospital; William Wilson, Samuel B. A. Edsall, Albert Green, William D. Snallpiece, Edward S. Tresidder, Albert S. Topham, Edward W. Roberts, Arthur L. Fireman, Edward O. Newland, Alfred M. Sutton, Francis G. F. Chittenden, and John H. Greenway, Guy's Hospital; Cecil M. Hendriks, Alexander I. Grant, Charles O. Fowler, Harry Harlock, Henry J. Harries, Edward H. Tenison, Percy F. Money, Edward O. Croft, Walter F. Scott, James W. Draper, Mohamed J. Khan, William H. Horsman, Robert W. Watson, Wilmot H. Evans, William H. Tomlins, and Charles L. Ashby, University College; George Greenwood, John H. Williams, Charles M. Chadwick, William A. Norry, Charles J. Dabbs, and B. Aslamian, London Hospital; Montagu W. Williams and William Davies, Middlesex Hospital; Thomas E. Rogers, Charing-cross Hospital; Mark Style, St. Mary's Hospital; James E. Kershaw and Frederick W. S. Stone, St. Thomas's Hospital; George E. Bloxam, St. George's Hospital; Richard H. Botham, King's College; Edward T. Collins, Middlesex Hospital; James F. Saunders, Guy's Hospital.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on July 8th:—

Knight, Alfred Osborne, Tewkesbury, Gloucestershire. Villanueva, Francis Horton, Southampton-row.

The following gentlemen also on the same day passed the Primary Professional Examination:—

K. R. Divecha, Grant Medical College, Bombay; Daniel Thurston, London Hospital; Gilbert Thomas Smith, St. Bartholomew's Hospital; John Cornelius Garmon, Edinburgh Infirmary.

ROYAL COLLEGE OF SURGEONS OF EDINBURGH.—The following gentleman was admitted a Fellow of the College on the 3rd inst.:—

Hamilton, John, L.R.C.P. Edin., Swadlincote, Burton-on-Trent.

DR. BUZZARD has been elected an Honorary Fellow of King's College, London.

JAMES RUSSELL, M.D., has been placed on the Commission of the Peace for Birmingham.

ST. MARK'S OPHTHALMIC HOSPITAL, DUBLIN.—A portrait of the late Dr. Ramsford, Senior Surgeon to this institution, has been presented by a near relative.

At the quarterly meeting on the 14th instant of the Directors of the Naval Medical Supplemental Fund, Dr. H. J. Domville, C.B., M.D., Inspector General, in the chair, the sum of £65 was distributed among the several applicants.

DUBLIN ORTHOPÆDIC HOSPITAL.—Her Excellency the Countess Cowper visited this institution last week, and, expressing herself much pleased with the manner in which it was conducted, distributed a quantity of choice flowers amongst the inmates.

VACCINATION GRANTS.—The following gentlemen have received Government grants for efficient vaccination in their respective districts:—Mr. William Smith, Redditch District of the Bromsgrove Union (third time); Mr. Beaven Rake, No. 2 District of the Fordingbridge Union (third time); Dr. W. Hoffmeister of Cowes, Isle of White District (third time in succession).

BEQUESTS ETC. TO MEDICAL CHARITIES.—Mr. Thomas Gray, of Willow Bank, bequeathed £100 to the General Infirmary; £100 to the Hospital for Women, and £50 to the Public Hospital and Dispensary, all at Sheffield. The Middlesex Hospital has received £210, the amount realised by a performance of the Inseparables Amateur Dramatic Club at the St. James's Theatre. Mr. Henry Levy Keeling, of Albany-terrace, Regent's-park, bequeathed £100 each to the London Hospital and the Metropolitan Free Hospital. Mr. Charles Montague Chester bequeathed £100 to the Samaritan Free Hospital for Women and Children. The Cordwainers' Company have given a third twenty guineas to the Asylum for Idiots, Earlswood, near Redhill.

Medical Appointments.

Intimations for this column must be sent DIRECT to the Office of THE LANCET before 9 o'clock on Thursday Morning, at the latest.

ANNINGSON, B., M.D., M.R.C.S.E., has been re-elected Medical Officer of Health for the Chesterston District.
 BATTYE, J. H., M.D., M.R.C.S.E., L.R.C.P.L., has been appointed Third Attending Medical Officer to the Provident Medical Institution, Picnic-road, vice J. J. Sewell, retired.
 BRISCOE, W. T., A.B., M.B., & M.Ch., has been reappointed Medical Officer of Health for the Chippenham Union District.
 CONSTABLE, J., M.D., C.M., has been appointed Medical Officer and Vaccinator for the Parish of Logie, Fifeshire, vice Dr. J. W. R. Mackie, deceased.
 DUNLOP, J., M.B., C.M., has been appointed Assistant Medical Officer to the Woodilee Asylum, Lenzie, near Glasgow.
 EDMOND, G. M., M.A., M.D., has been appointed Medical Officer of Health for Dunottar, at a salary of £10 per annum, vice J. T. Thom, M.D., deceased.
 GOUDE, H., F.R.C.S.Ed., M.R.C.S.E., L.S.A.L., has been appointed Resident Surgeon to the Small-pox and Vaccination Hospital, Highgate-hill, vice F. W. Strugnell, resigned.
 HARRISON, J., M.R.C.S.E., L.S.A.L., has been reappointed Medical Officer of Health to the Braintree Union, for one year.
 HASLET, J. C., M.D., M.Ch., L.A.H.D., has been appointed an Honorary Physician to the Ulster Hospital for Children, Belfast.
 JONES, J. R., M.B., L.R.C.P.L., has been appointed House-Physician to the Hospital for Women, Soho-square, vice J. H. H. Bottrell.
 JONES, R. R., M.R.C.S.E., has been elected a Junior House-Surgeon to the Newcastle Infirmary, vice Dr. Dodd, resigned.
 MORRIS, J. W., L.R.C.P.L., M.R.C.S.E., has been re-elected Medical Officer for the Llannon District.
 SPOFFORTH, J., M.R.C.S.E., L.R.C.P., has been elected Honorary Surgeon to the Kidderminster Infirmary.
 WILLIAMS, W. R., L.R.C.P.L., M.R.C.S.E., has been appointed Senior House-Surgeon to the Wigan Royal Infirmary.

Births, Marriages, and Deaths.

BIRTHS.

EDIS.—On the 13th inst., at 22, Wimpole-street, the wife of W. Edis, M.D., F.R.C.P., of twins (both girls).
 HILL.—On the 7th inst., at Earl's Court-road, the wife of T. Wood Hill, Surgeon, of a daughter.
 HOPKINS.—On the 7th inst., at Kingswear, Sutton, Surrey, the wife of Surgeon-Major Nathaniel Hopkins, I.M.D., of a daughter.
 MADELEY.—On the 4th inst., at The Quadrant, Coventry, the wife of Staff-Surgeon G. H. Madeley, H.M.S. *Albatross*, of a son.
 PARSONS.—On the 6th inst., at 13, Whitworth-road, South Norwood, the wife of H. Franklin Parsons, M.D., of H.M.'s Local Government Board, of a daughter.
 RAHILLY.—On the 12th ult., at Secunderabad, Deccan, India, the wife of Surgeon-Major J. Roche Rahilly, M.D., 12th Royal Lancers, of a son.
 WEBB.—On the 7th inst., at Gibraltar, the wife of Brigade-Surgeon W. M. Webb, Army Medical Department, of a son.

MARRIAGES.

FRIKART—MCDONOGH.—On the 7th inst., at Zofingen, Canton Aargau, Switzerland, Emil Frikart, M.D., only son of the late Emil Frikart, J. P., of Zofingen, to Eliza Foster McDonogh, M.D., L.K.Q.C.P.L., daughter of John McDonogh, Surgeon, of Clapham, London. No cards.
 HOLMES—HAMILTON.—On the 6th inst., at Hamilton House, by the Rev. Joseph Corkey, M.A., LL.B., assisted by the Rev. George Magill, M.A., Dr. Henry Holmes, of Brookview, co. Tyrone, son of the late John Holmes, Esq., J.P., of Strandabrosny, co. Tyrone, to Charlotte Amy, youngest daughter of W. J. Hamilton, Esq., M.D., Fleet-Surgeon, R.N., of Hamilton House, Londonderry. (No cards. At home after Aug. 8th.)
 ROUGHTON—ROBINSON.—On the 1st inst., at the Parish Church, Streatham, by the Rev. T. T. Griffith, Rector of Seale, assisted by the Rev. W. C. Roughton, Vicar of Great Harrowden, Northamptonshire, and the Rev. J. R. Nicholl, Rector of Streatham, James Woolley Roughton, M.R.C.S.E., L.R.C.P., of Streatham-common, third son of James John Roughton, Esq., of Kettering, to Frances Mary, eldest daughter of Aug. O. Robinson, Esq., of Greta House, Streatham.
 STEVENS—BERGH.—On the 3rd ult., at Robertson, South Africa, by the Rev. A. MacGregor, Lewis William Stevens, L.R.C.P. & M.R.C.S.E., to Jesse Wilhelmina Bergh, youngest daughter of the late Olof M. Bergh, Esq., of Cape Town.

DEATHS.

FLUKER.—On the 19th ult., at Mussorie, from the effects of sunstroke, William Henry Fluker, of the Bank of Bengal, eldest surviving son of Robert Carr Fluker, M.D., J.P., of Berwick-upon-Tweed, in the 34th year of his age.
 GWYNN.—On the 11th inst., at New-street, Wem, Salop (very suddenly), Samuel Betton Gwynn, F.R.C.S.E., aged 67.
 SPENCER.—On the 2nd inst., at his residence, 9, Winckley-square, Preston, Lawrence Wilson Spencer, L.R.C.P., M.R.C.S.E., Medical Officer of Health to the Rural Sanitary Authority, youngest son of the late Lawrence C. Spencer, M.D., J.P., aged 29.
 WARD.—On the 16th inst., at 23, Finsbury-circus, Stephen Henry Ward, M.B., M.D., F.R.C.P., aged 61.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8 a.m. by Steward's Instruments.)

THE LANCET OFFICE, July 15th, 1880.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radiation in Vacuo.	Max. Temp. Shade.	Min. Temp.	Rain fall.	Remarks at 8.30 A.M.
July 9	29.75	W.	61	56	106	69	52	0.52	Cloudy
" 10	29.89	W.	59	55	102	68	52	0.13	Cloudy
" 11	29.97	W.	60	56	107	72	53	0.11	Cloudy
" 12	30.21	W.	63	57	99	72	53	0.24	Overcast
" 13	30.17	WSW	63	58	102	73	55	..	Overcast
" 14	30.07	S.S.E.	63	60	109	74	56	0.11	Cloudy
" 15	29.89	E.	64	62	..	69	58	0.44	Overcast

Notes, Short Comments, and Answers to Correspondents.

PAUL BROCA.

A SPECIAL memoir of the life and work of Paul Broca—whose death on the night of Thursday, the 8th inst., we deeply regret to announce—is crowded out, with many other matters of interest, by the report of the proceedings of the Medical Council. The obituary will appear next week.

A. Z.—We cannot counsel any young man to enter the profession who has not private means at his disposal.

J. W. R.—See THE LANCET, March 27th, page 477.

SCURVY IN CIVIL PRACTICE.

To the Editor of THE LANCET.

SIR,—I read with interest the cases of Scurvy in Civil Practice by Dr. Eade, recorded in THE LANCET of June 26th. One example of that disease came under my observation many years ago, which may also have some interest.

On the 17th December, 1863, I was requested to see a farmer in good circumstances, aged about forty-five, who was said to be dying of cancer of the stomach. In addition to the stomach disease—which was in an advanced stage, and had occasioned a very restricted diet,—he was scorbutic to a degree which had made him bedridden and helpless. His legs were swollen, purple in colour, and so stiff as to be perfectly useless. Under change of diet, and lemon-juice in effervescence with bicarbonate of potash, the man recovered from the scurvy in a few weeks, and was able to leave his bed. He died of stomach disease on the 13th of April, 1864, nearly four months after I first saw him.

Although I had opportunities, more than thirty years ago, for watching the results of scurvy in seamen who were carried into hospital from vessels engaged in the whale fishery, I do not remember to have seen a better illustration of the disease than that which I have now briefly described.

Yours obediently,

Kington, Herefordshire, July 2nd, 1880.

G. S. GARRARD.

THE HOLLOWAY MURDER.

MR. SIDNEY SMITH, the Governor of Newgate, on Wednesday last received a communication from the Home Office, announcing Her Majesty's pleasure that the capital sentence passed upon James Sweetland for murder should be respited. The execution was to have taken place on Monday, the 26th inst. Probably the sentence will be commuted to penal servitude for life. The official notification was received at 5 P.M., and was at once made known to the prisoner, who received it with much emotion.

Nec temere nec timide.—Address the inquiry to the Dean of the Medical Faculty of the University of Durham.

SCURF IN RINGWORM.

To the Editor of THE LANCET.

SIR,—Can any of your numerous readers recommend a cure for scurf left after an inveterate case of ringworm of the scalp? Two healthy children (brothers) have been under treatment for eighteen months. The one had the patches covered thickly with scurf; the other has been almost free from it. Now the hair is quite long and healthy, and no fungi can be detected under the microscope. Several applications, as sulphur and white precipitate ointment, clear the scurf entirely away; but in the course of a few days after discontinuing them it reappears, not only on the spots formerly diseased, but for some distance around them. As nothing is said on this point in the interesting papers on Ringworm which have recently appeared in your journal, I should be greatly obliged to hear of a remedy.

Yours &c.,

July 6th, 1880.

M.D.

W. M.—Foreigners, desirous of practising medicine in Spain and her colonies, require to have a University Spanish diploma, and their own titles and qualifications must be previously verified before a Spanish Consul.

ROTHERHITHE.

SANITARY matters, as concern the medical officer of health's and inspector of nuisances' departments, appear to be working with some friction in Rotherhithe. At a recent meeting of the vestry, a question was raised as to the body of a child, dead from scarlet fever, having been suffered to remain several days in a room occupied by four persons, after the fact of the death had become known to the inspector of nuisances. The inspector imputed blame to the medical officer of health in the matter, but he appears simply to have made it evident that he was not working well together with that officer. The medical officer of health does not seem to have been called upon for an explanation.

Mr. W. Todd Patterson.—The information required will be best obtained from the Regulations, a copy of which may be procured from the College. Apply to the Secretary.

REGISTRATION OF DISEASES IN HOSPITALS.

To the Editor of THE LANCET.

SIR,—I am glad to observe that in THE LANCET of July 3rd you draw attention to the subject of the Registration of Diseases in Hospitals, and I hope that the prominence you have given to the matter will lead to united measures being adopted for the development of this somewhat neglected branch of hospital work. Your correspondent, Mr. Howlett, justly remarks that a very vast amount of scientific material is lost and dissipated under the present mode of registration, and suggests that a uniform system of recording cases should be adopted at all hospitals. I am sure that all interested in the subject will fully agree both with the remark and the suggestion. But although I am convinced that a uniform system of registration is not only desirable, but an absolute necessity, I do not think that any such system could remedy either the whole or even a part of the present imperfections one must own exist in our hospital registers.

A definite system applied to the registration of diseases would render the clerical element in such registration certainly simple, possibly perfect, and undoubtedly give to the records a much more extended field of usefulness; but registration, I take it, deals not only with the arrangement of the material, but also with the character and quality of the material arranged. Imperfect facts, incomplete observations, and ill-recorded cases are more serious defects in registration than any flaws in the mere arrangement of the material. Indeed, the basis of all registration depends upon note-taking, and the more excellent the note-taking the more valuable the register, in spite of the fact that, from lack of some definite method of arrangement, the materials may not be so readily accessible as they ought to be. The simple arrangement and tabulation of acquired facts is under the sole control of one individual, the registrar, and for him to adopt a particular system in his arrangement would be no difficult proceeding; but the collecting of these facts is a matter less under control, less easy to influence, and yet no less in importance, and, while it forms the backbone of the register, can still be but little, if at all, affected by any system of registration, however excellent or precise. I would not for one moment underrate the great importance of a uniform system of record-keeping, as ably advocated in your columns; but if reform is to take place in the registration of diseases in hospitals, I fancy it is most required in the department of note-taking, and not the less because that department occupies a definite educational position. Difficulties in the matter of note-taking have probably presented themselves to most registrars, and I have no doubt that many have found that, however elaborate their system of recording those notes might be, such system does not insure with certainty excellence of quality in the matter recorded. As Mr. Howlett states, the notes of the cases are in most instances taken either by the registrar himself or by the students. The objections to note-taking by the registrar alone, are serious and well founded. In the first place, in most hospitals the extent of the work is such as to render it impossible for one man, or even for two, to carry it out in any way effectually, and, moreover, the registrar would very constantly lose the great advantage possessed by the dresser—namely, that of seeing the cases on their admission, and of participating in their immediate and subsequent treatment. Under any circumstances, details of a case obtained at second-hand may be regarded as less valuable than notes made actually on the spot. But, in the second place, the registrar, by undertaking such work, would deprive the student of a most valuable educational means; for although note-taking may involve a great deal of monotony, it at least involves the practice of accurate and repeated observations, the habit of arranging and criticising facts, and, not least, the faculty of expressing the matter observed in terms of precision. The encouragement and development of note-taking as an educational aid may, I believe, in many instances be considerably extended without disadvantage. On the other hand, if note-taking be entrusted solely to the dressers or clinical clerks, the value of the material noted is likely to suffer both in quality and amount, and it becomes at once obvious that such note-taking will be practically useless unless conducted under constant supervision, and here one is confronted with the great difficulty in the case. Allowed that the notes of cases should be taken by students, that such note-taking is of great educational advantage to them, and that without supervision its advantages is minimised, and the question naturally presents itself, By whom should such supervision be exercised? I think most certainly by the registrar. To expect the complete and systematic supervision that would be required from the proper conduct of the

work from the staff of a hospital is unreasonable. It would be almost impossible, even if considered advisable, for a surgeon or physician to go into the details of the notes of every case under his care every time he visited the wards. His general interest in note-taking, and his known determination to have it properly carried out, would be of the greatest influence with students, and, moreover, the habit of dictating special notes and the details of examinations of cases, as practised by many hospital surgeons and physicians, supply the register with its most valuable information. It is obvious that the more interest and the more active part the members of a staff take in note-recording, the more valuable will these notes become; but in the routine work of case-taking, in the minor details it involves, and in the supervision of any particular system of recording observations, they cannot be expected to take a constant part. How this supervision is to be conducted is a matter of difficulty, and it is upon this point that I think expressions of opinion are needed. Mr. Howlett considers it likely to prove a "superhuman labour." I would, therefore, wish to detail the method of exercising supervision I adopted during the time I held the post of surgical registrar at the London Hospital, and I think it will be seen that such a system is practicable, that it tends to promote the first interests of registration, and at the same time does not involve any superhuman labour. The ward notes at the London Hospital are taken upon loose sheets of paper fixed to a board by means of elastic, this arrangement allowing of their being readily bound at the end of the year. The dressers are supplied with a form for note-taking, compiled by my predecessor, and with diagram figures, if necessary, for marking the position of fractures &c. The notes are supposed to be taken according to the form supplied. The supervision required involved an examination of all the notes in the surgical wards two or three times a week; a mark affixed at each visit prevented the misfortune of reading the same notes twice. Where any defects were observed in the notes, the first difficulty was to communicate the fact to the dresser, who probably was not on the spot. This difficulty was easily overcome by the use of slips of conspicuous red paper, with a printed heading stating their source, and upon these slips any defects in the notes were written. These slips affixed to the bed-board were too conspicuous to be overlooked by the dresser, who on seeing the case would correct the defect in the manner advised. This plan I found answered very well, and would enable a registrar to compile notes upon any arranged plan. At the same time it is necessary that the staff and governing body should be interested in the matter of note-taking, or else the difficulty of enforcing rules of any kind becomes considerable. At the London Hospital this interest is vigorously expressed both by the staff and the house committee, and has been the chief means of greatly improving the whole aspect of registration at that place.

Finally, I hope that, now the subject has been broached, fresh interest will be aroused in the work of registrars, and that, if reform is to be made, attention will be directed in the first instance to the source of registration—note-taking.

I remain, Sir, yours faithfully,

FREDERICK TREVES, F.R.C.S.,

July, 1880.

Assistant-Surgeon to the London Hospital.

Surgeon-Major complains of an evil which must occur in all branches of the service—occasional slowness of promotion. It is quite impossible that all executive officers can obtain promotion to the administrative grades, or all deputy surgeons-general to the rank of surgeon-general. The late Government did a great deal to diminish the hardship of this by the creation of the grade of brigade surgeon, and by making the age of retirement for administrative officers 60 instead of 65. We do not see that any good would be gained by the publication of our correspondent's letter. In a few years we shall probably see promotion much more rapid. To make promotion flow at a steady pace in any branch of the public service is a problem which has not yet been solved, nor has our correspondent suggested any means by which this could be accomplished.

THE USE OF THE HOT VAGINAL DOUCHE.

To the Editor of THE LANCET.

SIR,—In reference to the use of the hot vaginal douche in your issue of July 3rd, I may mention that I have employed it with great advantage in two or three cases of rigid os, acting according to suggestions made by a correspondent in your journal some time ago. At the same time the mess made, in spite of every care, and the discomfort to the patient caused by the wetting of the bedclothes &c., constitutes a great obstacle to its satisfactory employment.

Perhaps some of your readers may be able to offer some advice on the subject. I am, Sir, yours &c.,

Meadowside, Putney, July 6th, 1880.

G. STANLEY MURRAY, M.D.

THE COST OF SCHOOL BOARD CERTIFICATES.

The following extract is taken from the *Catholic Times* of July 2nd:—

"Mr. John Flagg, M.P., has received a letter from the Educational Department, stating that whenever a medical certificate is required by School Boards, in explanation of the absence of a child from school, the cost of the certificate should be defrayed by the Boards themselves. Parents would do well to bear this fact in mind."

A. M. Y.—Our correspondent had better let his solicitor write to the Company, requiring removal.

SIR ANTHONY CARLISLE.

THE Council of the College of Surgeons has just acquired, by purchase at Christie and Manson's, the fine portrait painted by Sir Martin Archer Shee, President of the Royal Academy, of Sir Anthony Carlisle, who was elected President of the College in 1828, and again in 1837. It was engraved for Pettigrew's Medical Portrait Gallery.

"CRUELTY TO WOMEN."

To the Editor of THE LANCET.

SIR,—The efforts which you are making to render the work of the young women in drapery establishments less irksome and deleterious to them induce me to call your attention to the fact that ill health among this class is not wholly dependent upon hard work and bad treatment. Fashion has a great influence with these women, it may almost be considered a part of their business, and tight stays and wretchedly misshapen boots not only interfere materially with their powers of locomotion, but seriously impair their general health. The overwork and bad treatment to which you refer occur probably only in the second- and third-class shops; for in the leading establishments I have reason for believing that the principals take care of the women in their employ, and that the latter are perfectly satisfied with the treatment they receive. You are, doubtless, well acquainted with the various disorders produced by deformed boots and tight stays; but you possibly may have overlooked the important part they take in the ailments of the class under consideration.

There are other occupations for women which are probably quite as unhealthy in their nature as that of drapery houses, but few where so much attempt at fashionable dressing takes place.

I am, Sir, yours faithfully,

Queen Anne-street, July 6th, 1880.

E. NOBLE SMITH.

COMMUNICATIONS, LETTERS, &c., have been received from — Dr. Poore, London; Dr. Duffin, London; Mr. T. Smith, London; Mr. Probert, London; Mr. Sydney Jones, London; Dr. Grainger Stewart, Edinburgh; Dr. Duckworth, London; Mr. Bader, London; Mr. Gamgee, Birmingham; Mr. Spoffath; Dr. Slade King, Ilfracombe; Mr. Carter, Leighton Buzzard; Mr. Barclay, Birmingham; Mr. Parry, Liverpool; Dr. Coombs, Castle Cary; Mr. Holmes, Limerick; Mr. Carter, Ramsgate; Messrs. Holbrook and Son, Portsmouth; Dr. Massey, Nottingham; Mr. H. Elliott, Bristol; Mr. Souter, London; Mr. Bauargee, Allahabad; Mr. Roberts, Manchester; Mr. A. G. Brown, London; Mr. Inghen, London; Mr. Benham, London; Mr. Rivington, London; Messrs. Lynch and Co., London; Messrs. Marriott, London; Dr. Stuart, Edinburgh; Dr. Churton, Leeds; Dr. Swann, Batley; Mr. Constable, Leuchars; Dr. McLean, Netley; Messrs. Baker and Sons, Dublin; Mr. Taberner, Wigan; Messrs. Byles, Bradford; Mr. Rutherford, Newcastle; Messrs. Lawrie and Co., London; Messrs. Burgoyne and Co., London; Messrs. J. and A. Churchill, London; Mr. E. Clarke, Hampstead; Dr. Page, London; Mr. Jukes, Dera Ghazikan; Dr. Haslett, Belfast; Dr. Lewinson, Newcastle-on-Tyne; Messrs. Fraser Brothers, London; Mr. Denny, Blackwater; Mr. Little, Kiel; Mr. Whitehead, London; Mr. Taylor, Warwick, Queensland; Dr. Temple, Hatcham; Mr. Gray, Ottery St. Mary; Mr. Walsh, Chester; Dr. Turle, Finchley; Dr. Steele, London; Dr. Collier, Scarborough; Mr. Smiles, London; Mr. Hamilton, Swadlincote; Mr. Anderson, Edinburgh; Dr. Stewart, West Hartlepool; Mr. Anderson, Edinburgh; Dr. Dunlop, Melrose; Mr. Townsend, Exeter; Mr. Venman, London; Mr. Goode, London; Mr. Boyce, Shrewsbury; Dr. Gale, Manchester; Dr. Lyon, Thatcham; Dr. Bradford, Smethwick; Mr. Vance, West Brighton; Dr. Diamond, Brixton; Dr. Gairdner, Glasgow; Mr. Curtice, Sydenham; Mr. Rake, Fordingbridge; Mr. Patterson, Kingsland; Mr. Adcock, Bermondsey; Dr. Tatham; Dr. Farquharson, London; Mr. Collier, London; Mr. Horsley, Croydon; Mr. Holmes; Dr. Hoffmeister, Cowes; Mr. Alliot, Sevenoaks; Mr. Workman, Reading; Dr. J. R. Jones; Dr. Williams, Enfield; Sir Gilbert Lewis, Kingston; Dr. W. H. White, London; Mr. Goude, Holloway; M.R.C.P.E.; Constant Subscriber; C. D. V., Leeds; P. H. R.; B. M.; A. B., London; Medicus; B. A.; A. Z.; An Old Subscriber; O. S.; J. W. R., Ellesmere; S. J.; A. M. Y.; Candidate; A Correspondent; &c. &c.

LETTERS, each with enclosure, are also acknowledged from — Mr. Astley, Dover; Messrs. Braidey and Martin, Newcastle-on-Tyne; Dr. Roe, Patricroft; Dr. Edis, London; Messrs. Keith and Co., Edinburgh; Mr. Badger, Penicuik; Dr. Coates, Salisbury; Dr. Taylor, Cheltenham; Mr. Roberts, Thatcham; Mr. Sweetapple, Reigate; Mr. Gardner, Portsea; Mr. Harding, Finchley; Mr. Medley, Oxton; Mr. Heywood, Rochester; Dr. Robinson, Dukinfield; Mr. Crowley, Sheffield; Mr. Jones, Dowlais; Mr. Woodcock, Bradford; Messrs. Christy and Co., London; Mr. Cox, Williton; Mr. Jeffries, Chesterfield; Dr. Gibbons, Cape Colony; Mr. Nichol; Mr. Huggins, Melbourne; Mrs. Smith, Hythe; Mr. Wilson, Yoxall; Mr. Stillard, Birmingham; Mr. Abbott, Sheffield; Messrs. Eccleson and Co., Kent-road; Dr. Franklyn, London; Mr. De Fraine; Mr. Luideman, Hammersmith; Mr. Burchell, Kingsland; Mr. Goode, London; Mr. Wilson, Eastbourne; Dr. Colmer, Yeovil; Mr. Corbett; Dr. King, Ilfracombe; House-Surgeon, Halifax; M. A.; L. A. G., Hackney; B. C. L., Norwood; P. W.; P. W.; P. W.; O. J.; X., Macclesfield; G. F.; Sussex; M. B., Manchester; Medicus, Cardigan; M. O. H.; M.R.C.S., London; W., Dublin; H. W.; F. B.; M.D., Kennington; Medicus, Cashel; Epsilon; A. B. C.; Omega; Statim, Peckham; H., Basingstoke; Alpha, Wandsworth; L. M., Edinburgh; &c.

L'Union Médicale d'Orient, Liverpool Daily Post, Bristol Mercury, Age, Le Réveil Médical, Manchester Guardian, Scientific Review, Welshman, National Board of Health Bulletin, Chelmsford Chronicle, Cambridge Chronicle, Bucks Herald, &c. &c., have been received.

Medical Diary for the ensuing Week.

Monday, July 19.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS. — Operations, 10½ A.M. each day, and at the same hour.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL. — Operations, 1½ P.M. each day, and at the same hour.

METROPOLITAN FREE HOSPITAL. — Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL. — Operations, 2 P.M.

ST. MARK'S HOSPITAL. — Operations, 2 P.M.; on Tuesday, 9 A.M.

Tuesday, July 20.

GUY'S HOSPITAL. — Operations, 1½ P.M., and on Friday at the same hour.

WESTMINSTER HOSPITAL. — Operations, 2 P.M.

WEST LONDON HOSPITAL. — Operations, 3 P.M.

Wednesday, July 21.

NATIONAL ORTHOPÆDIC HOSPITAL. — Operations, 10 A.M.

MIDDLESEX HOSPITAL. — Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL. — Operations, 1½ P.M., and on Saturday at the same hour.

ST. THOMAS'S HOSPITAL. — Operations, 1½ P.M., and on Saturday at the same hour.

ST. MARY'S HOSPITAL. — Operations, 1½ P.M.

KING'S COLLEGE HOSPITAL. — Operations, 2 P.M., and on Saturday at 1 P.M.

LONDON HOSPITAL. — Operations, 2 P.M., and on Thursday and Saturday at the same hour.

GREAT NORTHERN HOSPITAL. — Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL. — Operations, 2 P.M., and on Saturday at the same hour.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN. — Operations, 2½ P.M.

Thursday, July 22.

ST. GEORGE'S HOSPITAL. — Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL. — 1½ P.M. Surgical Consultations.

CHARING-CROSS HOSPITAL. — Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL. — Operations, 2 P.M., and on Friday at the same hour.

HOSPITAL FOR WOMEN, SOHO-SQUARE. — Operations, 2 P.M.

Friday, July 23.

ST. GEORGE'S HOSPITAL. — Ophthalmic Operations, 1½ P.M.

ST. THOMAS'S HOSPITAL. — Ophthalmic Operations, 2 P.M.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL. — Operations, 2 P.M.

QUEKETT MICROSCOPICAL CLUB. — 8 P.M. Annual Meeting.

Saturday, July 24.

ROYAL FREE HOSPITAL. — Operations, 2 P.M.

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The postal arrangements relating to the distribution of THE LANCET will be considered from time to time in the interests of subscribers.

Tables of Contents, with the Index of Advertisements, for each Number can be had on application to the Publisher.

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Clinical Lectures ON DISEASES OF WOMEN.

By ROBERT BARNES, M.D.,
OBSTETRIC PHYSICIAN TO ST. GEORGE'S HOSPITAL.

LECTURE III.

On the genital mucous tract; some general properties of mucous membranes, many diseases begin in them; it is an absorbing medium, a "toxicode" or "poison-route"; effect of closure of mucous canal; dysmenorrhœa by retention.

GENTLEMEN,—In pursuance of our scheme I propose to-day to begin the study of the pathology of the genital organs, by tracing the morbid conditions of the mucous membrane. There are many reasons for beginning thus. It is the most active in function. The processes of menstruation and reproduction are largely effected through its agency. Owing to this functional activity and other circumstances it is exposed primitively to a great variety of morbid influences. A very large proportion of the diseases of the genital organs begin in this tissue, and it rarely escapes being involved in the diseases which take their origin in the other tissues. It is peculiarly exposed to direct injury, traumatic and toxic, from without. Like the mucous membranes of the respiratory and alimentary systems, it is remarkably prone to suffer congestion and inflammation from the influence of cold. Although it may be true that in zymotic diseases every tissue in the body suffers from the empoisoned blood, still it is not less true that the effects of the poison are often especially conspicuous in the mucous membranes. And this applies to the genital mucous tract along with the rest. Many years ago I made the observation that variola and scarlatina were attended by intense vaginitis which might be the unsuspected starting-point of chronic disease. Again, we know that syphilis primary, secondary, and tertiary, first in the case of primary syphilis, and if not always first in the constitutional phases, most conspicuously writes its history upon the mucous membrane. Again, we know that it is the mucous membrane which most readily shows the work of constitutional diatheses, as struma, tuberculosis, and cancer.

The study of the action of remedies—we have it from Hippocrates, and daily experience proves the wisdom of the aphorism—shows the nature of the disease. Now, excepting on the skin, we can nowhere see the action of remedies so well displayed as on that part of the genital mucous tract which is brought into view by the speculum. This is true of some constitutional remedies, as of mercury and iodine, in syphilitic affections. But it is of far wider and more instructive application in the case of topical remedies. The immediate and consecutive effects of the actual cautery, of caustics, astringents, styptics, antiseptics, solvents, anodynes, offer a wide and most interesting field of clinical experiment,—a perfectly legitimate field, because the motive of their employment is the good of the subject. In this field of clinical study we have the opportunity of not only observing the topical action of various agents upon healthy and diseased mucous membrane, but of contrasting this action with that of morbid agents, and thus of extending our knowledge of pathology. We shall, of course, best follow up this study by actual demonstration. I therefore leave it for the present, merely stopping to remind you of the fact that several agents, more or less chemically and therapeutically potent *in loco*, may be absorbed through the mucous membrane into the system, and produce general toxic effects. Accidents of this kind not infrequently occur. They enforce the important physiological law that the mucous membrane is an active absorbing medium. They enforce the correlative clinical law of caution in the topical employment of toxic agents. They suggest—and to this point I wish particularly to invite your attention, because it is not sufficiently appreciated—that we may in many cases turn this property to account, and so apply remedies to the mucous membrane as to produce valuable constitutional effects.

No. 2969.

The mucous membrane is thus an active "poison-route." To give two or three examples. There is first the familiar one of narcotic and sedative pessaries and suppositories. Morphia we know, thus used, acts first locally as a sedative, secondly as a narcotic. Mercury in the form of pessaries, or as calomel applied in substance to syphilitic warts, or as the caustic-acid nitrate to hyperplastic tissue, not only acts with immediate local effect upon the morbid tissues, but it may be absorbed, and thus, carried throughout the system, it exerts its specific constitutional influence; and coming round again through the circulation to the morbid structures where it entered, it again affects them by exerting its modifying influence upon tissue-nutrition. This combined topical and constitutional medication is especially well seen in the action of iodine. In some cases of disease of the uterine mucous membrane, of hyperplasia of the muscular coat, and of peri-uterine inflammatory deposits, the free application of iodine in the liquid form surpasses every other mode of treatment. Iodine permeates the tissues of the uterus either by direct imbibition or osmosis, or through the veins and lymphatics, acting first directly upon them, and thus gets into the general circulation. Thus I have seen intense iodism, manifested by salivation, by the breath, and by the starch test on the skin and on the urine, follow the injection of a solution of iodine into the uterus. But injections require great care. You may introduce iodine and mercury in the form of ointment or by painting. I believe that in this way I have obtained excellent results. At any rate, it is useful to bear in mind that we may, in cases where it is inconvenient to administer mercury and iodine by the stomach, realise what we want by applying them to the genital mucous membrane.

One more example. Of late years a method practised by Harvey of washing out the uterine cavity when charged with noxious matter has come into vogue. The favourite agent at present in use is a solution of carbolic acid, and thus we get the twofold good of clearing the uterus of foul matter and of modifying the surface which produced it. But we may, I am persuaded, obtain a third good. We may, by throwing carbolic acid, or, better still, iodine or quinine, or sulphate of soda, into the uterus, chase the septic matters through the tissues and vessels by which it entered. We may thus, whilst cutting off further supply of poison to the system, do much to neutralise the action of that which had already entered. In this way, you see, the antidote tracks the poison.

There is this great and singular advantage in beginning pathological investigation with the study of the mucous membrane, that it is so completely under observation. It lends itself so readily to direct inspection and touch that we may here acquire the most accurate and complete knowledge of morbid processes, knowledge which we may usefully apply to aid ourselves in the investigation of the pathology of the deeper and less accessible tissues. We thus, you see, proceed by the most logical order from the comparatively easy to the more difficult. And since there is unity in pathology, our progress will thus be considerably simplified.

Let us now recall a few general facts belonging to mucous membrane in order to trace their bearing upon our special inquiry.

All mucous tracts have external openings. These external openings serve for ingestion and egestion. All mucous membranes secrete fluids in varying quantities, according to varying physiological and pathological conditions. In certain of these conditions, often recurring, these secretions must be excreted—that is, discharged from the body. Hence, a first necessity for health and safety is free patency of the mouths or orifices which open on the surface. The patency of these mouths or orifices is regulated by sphincters. The secreting action of mucous membranes is governed or modified by several factors. First, we may note the influence of the nervous centres. The influence of emotion in suppressing some secretions and in increasing others is familiar. There seems to be an inhibitory power exerted by the brain over certain glandular systems, especially marked in the waking state. The mucous canals are embraced by a coat of involuntary muscle, and their outlets are guarded by voluntary circular muscles, partly under the dominion of the will, partly under reflex influence. A mucous canal generally resents the presence of any excess of matter in it. Reflex irritation is set up, and the muscular coat becomes the active factor in discharging the offending matter. In health this is accomplished almost insensibly; in disease pain and colic attend, and the sphincters often share in the distress. The

glandular system of the mucous membranes acts in alternation or in compensation with the skin. All possess an absorbing property. All act occasionally as depuratories, like the skin. All may act exceptionally in compensation for, or vicariously with, each other. Thus again you see how physiology and pathology link all parts of the body together in one indissoluble whole; that is, how they re-integrate what the anatomist and the specialist dissect and differentiate. The genital mucous tract is subject to all these common laws.

Another fact we may recall is that each part of a mucous tract fulfils a particular function or part of a function; and the particular duty involves particular variations of structure, mainly seen in the glandular element. And these particular functions or parts of functions are attended by particular secretions. I will but suggest to you the example of the alimentary tract. From the mouth downwards, through the pharynx, stomach, duodenum, ileum, colon, rectum to anus, we have a succession of special glands adapted to the successive stages of duty. So in the genital tract, from the Fallopian tubes, through the uterus, its body and neck, vagina to vulva, we have a succession of glands adapted to different stages or kinds of duty. One general duty is common to all mucous membranes—that is, the secretion of a moderate amount of mucus for the purpose of lubrication, to obviate the tendency to atresia, to keep the canal open, to facilitate the passage of bodies which have to make their way along the canal. Except for sexual acts and parturition, the amount of fluid thus secreted normally is rarely in such quantity as to give rise to external discharge. The origin of these secretions is principally in the cervical canal of the uterus, and at the vulva, from the vulvo-vaginal gland—that is, at the sphincters, the gates of the canal.

We need not now refer more particularly to this function. I wish especially to dwell upon the special share the uterine mucous membrane takes in the function of menstruation. Menstruation is coeval with the potentiality of reproduction; it is the overt or visible effect of ovulation. Assuming, for the sake of obtaining a definite idea of the relation of ovulation to menstruation, that menstruation proper, meaning by this word the periodical flow of blood from the uterus, returns every twenty-eight days and lasts four or five days, closer observation will reveal the fact that there is a preparatory work going on at least eight days before the flow begins. This work is announced by nervous phenomena of varying intensity according to: (1) idiosyncrasy of the subject; (2) to the state of the ovary and uterus. The main characteristic is exalted nerve-tension; the emotional element is often predominant, the temper is more sensitive, the reflex or diastaltic function is more active, less readily curbed by the will. Concurrently with this nerve-tension we find the heart and vascular system in greater activity; the sphygmograph shows high arterial tension resembling the high tension of pregnancy. Indeed, the two conditions exhibit many other points of resemblance. Now, these conditions are intimately linked with the maturation of the ovum going on in the ovary. The *primum mobile* of menstruation is probably in the ovary, the uterus playing a secondary part. This secondary part is marked by four phenomena: (1) The development of the mucous membrane of the cavity of the uterus into decidua; it becomes thickened and its glands enlarge. (2) There is an active determination of blood to the uterus as well as to the tubes and ovaries. These two processes set in probably very soon after the commencement of the nervous tension provoked by the maturation of the ovum. (3) There is the escape of blood from the lining membrane of the tubes and body of the uterus, and concurrently with this, (4) the breaking-down and exfoliation of the decidua. One or two more points call for attention. The determination of blood in unusual proportion to the genital or pelvic vascular region involves an increase of the activity of the circulation throughout the body. Hence we may see, if we search intelligently, a general hyperæmia of the skin and mucous membranes. The vessels everywhere seem more distended. If there are piles, they now become turgid and are apt to bleed. And when tension is at the maximum, the distension is relieved by the bursting of blood from the uterus. Almost immediately the sphygmograph will show a fall of tension. Given, normal conditions of system and of structure of the uterus, speedy, almost instant relief ensues. Although the blood-flow may go on for some days, the mimic pregnancy is at an end, and things subside into the ordinary quiescence. You will see in this central

arterial tension and general peripheral hyperæmia, a key to the phenomenon of "vicarious menstruation," or "menoxenia." These cases are deeply interesting. I hope to make them the subject of a special lecture. Should there exist any obstacle to the flow of blood from the uterine surface, or should the physiological blood-tension be less instead of higher at the uterus than elsewhere, the full vascular system will seek relief at some other outlet. This may be the nares, lungs, stomach, small or large intestine, bladder, or, in rarer cases, the skin, or the nipples, or the conjunctiva. Almost always, you see, a mucous membrane, proving Trousseau's aphorism, that all physiological hæmorrhages come from mucous membranes. The reason is obvious. The blood so poured out finds a ready vent. If it does not thus find exit by a mucous membrane there is imminent danger of extravasation into a serous cavity or into the parenchyma of vital organs. Some cases of apoplexy of the brain and lungs are thus accounted for, especially in subjects approaching the climacteric. Can we shut our eyes to the logical therapeutical deduction? If we see the system labouring under high nervous and vascular tension, the uterus failing in its duty, shall we risk effusions in abnormal places, or shall we not rather bring relief by tapping the gorged vessels at a place of our own selection? The principle and practice are old, and therefore have fallen under the ban of modern progress. In young persons the best plan is at the time of menstrual molimen to apply five or six leeches to the anus, thus tapping the pelvic vascular region. You attract the blood-flow to the natural site and aid in restoring the lost physiological habit.

In climacteric women, some of whom make blood with surprising facility, and in whom there is usually more head-disturbance, greater relief is often attained by cupping from the nucha, and sometimes bleeding from the arm is better still. I would advise you not to look upon venesection as an obsolete or exploded practice. Extremes are proverbially bad. Because venesection had long been abused, that is no reason why the readiest and most potent agent known for reducing dangerous vascular tension should be absolutely abandoned. You see in this example of menstruation that hæmorrhage is a physiological process; and since pathology is but physiology out of order, hæmorrhage, spontaneous or artificial, may be useful in pathology.

Two other effective means we possess of relieving tension by diminishing the volume of the blood. First, purgation; second, reducing the supply of food, especially of fluids, and, above all, of stimulants.

The menstrual blood comes mainly by exudation from the mucous membrane of the body of the uterus. But the menstrual fluid does not consist of blood alone. It is freely mixed with, diluted, and kept fluid by mucus. In many women the first appearance or show consists entirely of mucus; then comes a little ruddy blood; then a fluid, glutinous, darker-coloured, consisting of blood and mucus in variable proportions; and lastly mucus again, simple or blood-stained. And with this you will find, by the naked eye or microscope, débris of the shed mucous membrane. The mucus comes from the glands of the body of the uterus and from those of the cervical canal. This mucus is alkaline. Of this you may get proof by turmeric paper carried on forceps into the neck, or by a solution of iodine in small quantity, the colour of which will be discharged. This mucus it is which maintains the fluidity of the blood, thus facilitating its escape as fast as it flows from the uterine surface. This is one of the postulates for easy menstruation. The blood must escape readily, and for this end two conditions are required: one is that the blood be moderate in quantity and fluid; the other is that the canal for excretion be freely patulous. If the reverse conditions obtain—that is, if the quantity of blood poured out be in excess of that of the mucus—a portion coagulates, and is for a time retained in the cavity of the uterus. This is enough in many cases to set up dysmenorrhœa, or painful menstruation, as we observe it in many multiparæ. For the retained clots, under the general law already cited, irritate, set up reflex expulsive efforts, and these are marked by colic. But there is another efficient cause of dysmenorrhœa frequently attended by, and, indeed, inducing that just described. This is obstruction of a mechanical kind in some part of the excretory cervical canal. This is sometimes called the obstructive or mechanical theory of dysmenorrhœa. There are two principal or primary efficient causes of obstruction. First is atresia, or constriction, more or less marked at some part of the cervical canal. This is most frequent at the os externum, which is

often so small that the point of a sound is passed not without difficulty. When this is the case the canal above is commonly more dilated than natural, as we are accustomed to find in other mucous canals when obstruction exists at the outlet. The second efficient, sometimes occurring alone, but often combined with the first, is flexion, amounting at times to angulation, in the cervix, or at the junction of cervix and body. When this flexion exists, the cervix, like a bent tube, is closed by the spur or convexity of one wall being compressed into the concavity of the opposite wall. When one or the other or both of these conditions occur, it generally, not always, happens that dysmenorrhœa ensues. Blood is imprisoned in the cavity of the uterus, coagulates and sets up colic pain. The normal course of menstruation is disordered. Nor is the situation without danger. In a former lecture I described the mechanism by which fluids are propelled from the uterine cavity through the tubes into the peritoneal cavity. Here we have the conditions for this catastrophe. There is accumulation of fluid in the uterine cavity, part of it, perhaps, clotting; it excites reflex or diastaltic action, the body of the uterus contracts concentrically in the endeavour to throw out the offending matter, the lower or natural outlet is partially closed; the tendency is great to force the fluid along the tubes. And this tendency increases with time, for egress being difficult by the lower orifice the compressed fluid dilates the cavity above it, first the body of the uterus, then the tubes. Thus we get one of the forms of retro-uterine hæmatocele. I do not say that this accident is frequent, but I know that it occurs occasionally in an aggravated form, and I have seen not a few cases of pelvic peritonitis in young women the subjects of habitual dysmenorrhœa, of which this back flow or regurgitation of a small quantity of menstrual blood offers the most rational explanation.

I could heap proof upon proof in support of this theory of *dysmenorrhœa by retention*, as I prefer to call it. I will but mention two or three before I pass to the crucial test of treatment. There is one form of dysmenorrhœa by retention, not frequent certainly, but so complete in its history that its pathology is universally admitted. I refer to what is known as menstrual retention from total atresia at some point below the proper uterine cavity; for example, in the vagina or from imperforate hymen. Here we witness the whole series of events I have above described in unmistakable evidence. The vagina first dilates above the imperforate hymen. (Here is a valuable specimen from our museum showing this, of which a drawing is given in my book.) Then, in succession, the cavity of the cervix, that of the body, and of the tubes. The accumulating fluid sets up pains like labour-pains; the concentric contraction of the uterus drives the blood in all eccentric directions, and unless the hymen gives way or is punctured, the danger is imminent of the tubes, the weakest part, bursting; or fluid may be projected through the tubes without their bursting. Now all this is precisely what occurs in a modified form and degree when the obstruction is only partial. The points of resemblance may be carried farther. We see one in the characters of the retained fluid. In the exaggerated case of imperforate hymen the menstrual blood is commonly of sticky, treacly consistency, dark in colour, showing blood-corpuscles breaking down in fatty metamorphosis; sometimes it contains loose, soft clots, easily breaking down. The fluid in severe cases of dysmenorrhœa from retention often closely resembles this. Why? Is it not because it is affected in a like manner?

But, admitting that the extreme catastrophe does not occur—and I readily admit that it is rare,—still let us ask, Are there no other dangers to be apprehended? Most assuredly there are. Menstruation cannot be performed month after month under the difficulties described with impunity. One inevitable result of constantly-recurring congestion and spasm is alteration of the muscular wall of the uterus. It becomes first thickened from excessive action, then hypertrophied from hyperplasia, which may pass into fibrous change. The mucous membrane undergoes chronic change; that of the body is impeded in its normal development into decidua and exfoliation; instead of being shed in impalpable débris, it is apt to be cast off with pain in shreds, perhaps entire as a cast of the uterine cavity, thus constituting one form of what is called “dysmenorrhœa membranacea,” or sometimes “inflammatory dysmenorrhœa.” In the cervix especially the glands become hypertrophied, and instead of yielding their due supply of clear viscid mucus, secrete a copious, often turbid, muco-purulent fluid; one form, a common one, of leucorrhœa. Here then we

have gradually developed disease of the uterus, entailing serious and often very distressing constitutional disorder. The discharges drain the blood and impair nutrition; the bulky uterus becomes more or less displaced, causing local distress; and the nervous system is worn by the constant pain.

Now this theory, built as you see upon a solid foundation of facts and well-known physiological and pathological laws, is not universally accepted. The facts of the coincidence of stenosis of the os externum or os internum of the uterus, or of flexion with dysmenorrhœa, are beyond dispute; but the reasoning, the pathological deductions from them, are disputed; and consequently the logical therapeutical deduction is practically repudiated.

This seeming contradiction, or perverseness I am almost tempted to call it, may be explained by a metaphysical reflection. It is an infirmity of the human mind—from which none of us are altogether exempt—to cling to one favourite idea, to the exclusion of others, which may each be the idol of some other man. Let me mention two or three rival theories:—Firstly, congestion explains dysmenorrhœa; secondly, inflammation explains it; thirdly, the membranous decidua; fourthly, some general nervous or other constitutional disorder may explain it. And certainly there is truth in every one of these and other theories which I cannot stop to enumerate. The causes of dysmenorrhœa are various. But if you watch a few cases of dysmenorrhœa in women who have never been pregnant, through all the phases of their history, you will hardly fail to recognise the conditions I have described.

And now if we apply the recognised rules of treatment when we meet with closure, complete or partial, of mucous canals, what is the indication here? Can we hesitate for an answer? If the anus is closed—imperforate, as in some new-born infants, or obstructed by disease as in adults—do we not make an opening at the anus, or failing that open the bowel higher up, as in colotomy? In the case of stricture of the urethra, do we not dilate if we can, or failing that, cut into the canal above the seat of stricture? Why, then, should the genital canal be treated on different principles? The surgical treatment, however, of these cases demands especial care, and will be discussed on another occasion.

Clinical Lectures ON

SOME CASES OF HEART DISEASE.

*Delivered at the Hospital for Consumption and
Diseases of the Chest, Brompton,*

By R. DOUGLAS POWELL, M.D., F.R.C.P.,

PHYSICIAN TO THE HOSPITAL, SENIOR ASSISTANT-PHYSICIAN TO THE
MIDDLESEX HOSPITAL.

LECTURE III.

GENTLEMEN,—The second form of mitral disease—the diaphragm or true buttonhole variety—being, as I believe, always of inflammatory origin, varies much more in degree of narrowing, and is not unfrequently complicated with other valve lesions. In fact, after we have taken out from the general group of cases of mitral stenosis those well-marked examples which constitute the funnel variety, the remaining cases are not nearly so uniform and well defined in their characters. I have, significantly, this form of cardiac disease more richly illustrated by morbid anatomy than by clinical examples. In these large hearts you will observe enlargement of the left auricle, right ventricle, and left ventricle; and you will note the thickened, more or less tuberculated and rigid valve stretched across the mitral orifice, presenting a mere transverse chink, a well-marked buttonhole, or a wider opening. In this heart—the largest and heaviest specimen I have seen, weighing, with portions of adherent pericardium, thirty-one ounces,—you will observe that the valve, although very decidedly narrowed, admits of unusually free regurgitation.

The following is a list of phenomena presented by cases of

the diaphragm, or true buttonhole variety of mitral stenosis, in which the curtain of the mitral valve is stretched more or less tightly across the orifice to form a diaphragm-like partition between auricle and ventricle:—

MORBID ANATOMY OF HEART.

Valve.—Stretched across the orifice, with only slight convexity towards the ventricle; a transverse, buttonhole-like slit, extending across the centres of the “diaphragm,” thus formed; valve greatly thickened, especially around margin of buttonhole, which is often nearly occluded by semicalcareous projections or vegetations; size of aperture very variable; papillary muscles enlarged, and cords thick and matted; regurgitation through valve free, according to size of aperture.

Left ventricle always hypertrophied and dilated, often very greatly so.

Left auricle greatly thickened and enlarged, and more dilated than in funnel variety.

Right ventricle hypertrophied, dilated, and hardened; never exceeds the left ventricle so far as to extend beyond it to form the apex of the heart.

Other phenomena.—Lungs heavy, congested, and toughened, sometimes with minute hæmorrhages or typical “brown induration”; pulmonary apoplexy; infarcts in other organs; enlargement and hardening of abdominal organs from congestion.

CLINICAL PHENOMENA.

Cardiac impulse.—Apex-beat outside nipple-line, and lower than natural; impulse diffused between apex and sternum, and strong, but usually irregular.

Thrill short and irregular, sometimes before, sometimes with systole; rarely absent.

Pulse, as a rule, irregular, small, and frequently intermittent; varies much from time to time.

Bruit.—1. Double; the presystolic continuous with the systolic, so as to make up a continuous but undulating murmur, through which, but at variable periods of it, the first sound of the heart can be more or less distinctly heard. 2. The murmur varies often from day to day, now being more decidedly systolic, again more presystolic. 3. Only the systolic murmur may be audible, and with the stronger beats of the heart only. Sometimes the murmur will completely disappear for a while, the heart's action being extremely irregular.

First sound usually more or less distinctly audible through the bruit; sometimes very loud and battering; sometimes wholly lost in systolic murmur.

Second sound accentuated, but less clearly so than in the funnel variety; more “thudding” in character; often reduplicated.

Patient becomes distressed at an early period of the disease from palpitation and heart cough. Dropsical and other astylosic symptoms supervene.

Onset of symptoms dates from a first or second attack of rheumatism.

Origin of Disease.—In almost all cases from rheumatic endocarditis. A second attack of rheumatism probably more likely to induce this form of lesion than any other. Syphilis may probably be an occasional cause of the disease.

Prognosis.—Very unfavourable, and directly so in proportion to preponderance of regurgitation. Tendency to sudden death from paralysis of right ventricle from over-distension.

FIG. 2.



FIG. 3.



The vertical lines rising from the base line (Fig. 3) represent the first and second sounds of the heart. The shading lines mark the position of the murmurs, and the dots signify thrill. The diagram, Fig. 2, illustrating the position of murmur and thrill in the funnel form of the disease, is placed above for comparison.

The above list epitomises the main features by which the diaphragm variety of mitral narrowing is marked. The

symptoms may be said to be those which characterise the funnel variety in the advanced stage, when mitral incompetency supervenes. In typical cases the transverse cardiac dullness is greatly increased, and with the impulse diffused between apex and sternum, shows both ventricles to be enlarged. The apex-murmur is double, its double character being only recognised, however, on attentive auscultation, for the presystolic runs into the systolic murmur, only a slight variation in pitch distinguishing them. The first sound of the heart can often be heard through the double murmur, partially obscured by them. There is in these cases thus a murmur on both sides of the first sound (Fig. 3), by which feature they are very strikingly separated from those of the funnel variety. In other cases, and they are the most serious, the first sound is altogether replaced by murmur. A satisfactory account of the murmur present in this variety of mitral disease is a matter often of great difficulty to the most practised auscultator, this very difficulty being an important factor in the diagnosis. It is difficult from physical signs alone to distinguish the last stage of funnel mitral from the diaphragm variety, nor can I say that the distinction at this stage continues to be of any practical importance; for from this point the two diseases start about level as regards prognosis, the mechanical conditions present in both being about the same. The following case, awaiting your examination, illustrates this point.

Edith T—, aged fifteen, had rheumatic fever when four years old. Has suffered occasionally from palpitation when digestion disordered, otherwise no complaint of breathlessness or inconvenience until one day in December, 1868, when she caught a cold, which was followed by pain in left side, cough, and blood-stained sputa, which laid her up for six weeks. She had a relapse soon afterwards, and has been breathless and suffered from cough since; never had dropsy. Apex-beat at sixth space, one inch and three-quarters outside, and two inches below nipple. Area of dullness bounded by third cartilage, right parasternal line, and apex-beat. A short presystolic thrill and murmur over a restricted area at apex, running into the first cardiac sound, with long, high-pitched systolic bruit audible all over heart, well-conducted to sternum, and round to scapula. Second sound at pulmonary cartilage accentuated, thudding, perceptible to finger applied. Pulse quick, regular. Veins of neck full, and fill from below (patient lying down). No dropsy or manifest enlargement of organs. Urine deposits lithates, and contains a slight trace of albumen.

I take this case to be one probably, in the first instance, of mitral regurgitant disease, in which narrowing has subsequently taken place by irritative growth, thickening and shortening the valve and contracting its orifice, and, perhaps, that of the mitral opening also.

This case further illustrates two points, upon which I touched in my last lecture—viz.: first, that hypertrophy in early life is a better and more durable hypertrophy. It has carried on this patient's circulation through eleven years of great mechanical difficulty; and, secondly, although now we have distinct evidence in the filling of the veins of the neck and their pulsation that the heart is yielding, yet we have no present dropsy. The heart is still acting regularly; the *vis à tergo* of the left ventricle is still powerful enough to sweep on the blood through the capillaries, and thus to prevent that retardation in the tissues and organs which favours effusion and engorgement. The condition is very analogous to that of another patient who came in with some dropsy, but who under the influence of rest and digitalis has acquired increased ventricle power and lost the symptoms. The tension of circulation is now, however, great, and, unless we can relieve it, we must soon get astylosis and dropsical phenomena, the heart's action and pulse becoming irregular.

The difficulty in diagnosis consists chiefly in recognising this form of stenosis from—1. Irregularly acting heart from chronic dyspepsia, &c. 2. From mitral regurgitation, simple. 3. From aortic regurgitation. One would think that no one disease could be confounded with three such distinct diseases as these. But variability as regards murmur and rhythm is the crowning feature of this valvular lesion—variability from case to case, and in the same case from time to time.

In some cases and at some times no murmur at all can be heard; the heart's action is tumultuous and irregular, and save for perhaps a slight thrill, easily overlooked, or for a brief whiff occasionally audible (whether systolic or pre-

systolic one cannot always tell) the diagnosis from functional irregularity is extremely difficult, for dyspeptic symptoms are never wanting. The history of the case and a second careful examination after long repose, when we may more accurately estimate the evidences of ventricular enlargement and hypertrophy, and the value of that important sign of mitral disease, accentuated *pulmonary*¹ second sound, will usually clear up the case. The rhythm of the murmur, if there be one, may also during repose be better judged of. The presystolic portion of the bruit often for a time disappears, and the mitral systolic becomes alone audible, leading to a diagnosis of the simpler disease. A walk up and down the room, however, only renders clearer the mitral systolic bruit if regurgitation alone be present; and in the other case it often brings out the presystolic portion of the murmur. A thrill, however short, is also almost diagnostic of contraction.

I bring a case before you to-day (H. H.—, a dyer, aged twenty-nine), in which for a long time I had great difficulty in deciding whether the murmur was *diastolic aortic*, or double mitral. When the man came in he was extremely breathless and weak, scarcely able to walk across the room. No first sound was audible, and the heavy thudding second sound, succeeded by a long bruit, very loud and audible all over the heart, closely resembled aortic regurgitation. The pulse, it is true, although sharp, was not characteristically aortic, and the man had some pulmonary congestion and enlargement of liver and spleen. Still the rheumatic history was not distinct; he was laid up with pains in the hip-joints for three weeks five years ago, and had had syphilis eight years previously: he had been accustomed to drink, and four years ago had been knocked down by the falling of a heavy wet carpet upon him—a blow which did not apparently injure him at the time, although next day he spat a little blood. The onset of his cardiac symptoms had been gradual but progressive for three months, supervening upon a lowered state of health apparently induced by gastric catarrh of alcoholic origin. Here then we had syphilis, drink, and possible strain, all favourable to aortic rather than to mitral disease, in a case the physical signs of which were very uncertain. The man is now, however, improved, having acquired distinct ventricular hypertrophy, and the physical signs are accordingly more distinct, although they are yet not entirely satisfactory. With the signs of hypertrophy of both sides of the heart there is a distinct second sound at the base, and a short systolic thrill at the apex, with a prolonged wavy systolic—in part presystolic—murmur, through which the first sound can be heard. The murmur is most loud at the apex, and is audible in the scapular region. There is a slight diastolic whiff at the base of the ensiform cartilage. I take it that the mitral regurgitation here is free, and is attended with some narrowing. The valve may have been injured, but more likely syphilis has to do with the origin of the disease, and to syphilis the enlargement of the liver and spleen may be in part due.²

Taking the physical signs of a number of cases of mitral stenosis with regurgitation, of which the diaphragm mitral valve is the type, we find that a *variable character of the murmur or murmurs is an important diagnostic feature*. If there is any dispute over a case of cardiac disease of rheumatic origin, that is an important fact in favour of stenosis.

As regards prognosis, these cases are far more serious than those of funnel mitral disease. They begin, so to speak, on a level with that stage of the latter disease in which over-strain of heart or of valve has occurred. Again, these cases are serious in direct proportion—excluding, perhaps, the most extreme degrees of stenosis—to the freedom of regurgitation. There is with stenosis necessarily a constant difficulty in the pulmonary circulation, a constant over-fulness on the pulmonary side of the valve, but the right ventricle and left auricle between them, the one supplementing the other, can contend against great difficulties, as we have seen in speaking of the simpler form of constriction. So long as the valve, constricted though it be, interposes a thick diaphragm which but slightly leaks and takes off the backward pressure of the left ventricle, the patients are better off than those with simple but free mitral regurgita-

tion. But if with constant obstruction we have anything like free regurgitation, the ventricular systoles oppose one another, and we have the most aggravated form of mitral lesion possible, speedily productive of other signs of heart failure and of a specimen after this pattern—the big heart already referred to.

THE WINTER STATIONS OF SICILY.

By C. THEODORE WILLIAMS, M.A., M.D., F.R.C.P.,
PHYSICIAN TO THE HOSPITAL FOR CONSUMPTION AND DISEASES
OF THE CHEST, BROMPTON.

THE growing number of our winter emigrants, and the increased facilities of travelling, tend to widen the area of our health resorts, and the building of good hotels and pensions open to invalids excellent climatic stations hitherto closed to them by this one defect. As it is desirable to have as large a choice as possible I propose to say a few words about Sicily in the light of a sanitarium, and having made a tour in that island during the late severe winter, I can speak from recent and, I hope, trustworthy information. Very few English invalids, or even tourists, reach Sicily, the most part stopping short at Naples. This is partly owing to a dislike of the sea voyage to Palermo or Messina, or the terribly fatiguing land journey *viâ* Foggia, Bari, and Reggio, but it is still more to be attributed to the stories of brigands so rife in the English papers, which are, for the most part, gross exaggerations. Since the capture of Leone's band the danger has greatly diminished, and even the most timid strangers can now walk and drive in every part of the country without fear; moreover, it should be borne in mind that the disputes which have led to brigandage relate to landlords and landholders, and do not affect travellers and visitors, about whom the brigands know and care little.

The sub-prefect of Termini, near Palermo; assured me that he and his brother rode alone last autumn on a ten days' tour to visit their possessions near Girgenti in perfect safety, although this was formerly accounted one of the most dangerous districts, and other authorities confirmed this improved report of the country.

The east coast of the island is well worth our notice on account of its exposure to the south-east and its shelter from northerly and north-westerly winds by the Montes Neptunii or Pelorides, and by the huge mass of Etna, while the presence of the Mediterranean tends to equalise the extremes of temperature experienced by the inland localities. This region is one of the most beautiful in the south of Europe, commanding views of the Straits of Messina, of the mountains of Calabria, and of the wooded hills of Aspromonte; while on its own shores lie the exquisite headlands and capes of Capo Alessio and Taormina, and the picturesque and smiling villages which fringe the lower slopes of Etna, and are sprinkled over the mountain sides.

Owing to the latitude, to the shelter from cold winds, and, in the case of the Etnean district, to the volcanic soil, this region is of remarkable fertility, and produces wine and oil of very excellent quality. Oranges, lemons, and almonds are abundant and delicious, their trees attaining a size nearly double that of their brethren on the Genoese Riviera, and the wild flowers appearing much earlier and in greater profusion.

When we reach Syracuse the vegetation is still more southern, especially in the well-sheltered Latomia or quarries, in one of which we saw a good-sized *Pointzettia* tree, and the African papyrus fringes the river Anapo, the only stream where it grows wild in Europe. But it is the luxuriance of the *Cactus opuntia* which strikes the visitor most. Its presence everywhere, on the hill side, in the valley, on the fertile plain, and on the towering crag, sometimes grown in fields, and sometimes marshalled into hedgerows, forms the chief feature of the vegetation of Sicily. The old plants lose in time their flabby appearance, and present knotted and gnarled stems, consisting of wood worthy of an exogen. The finely-coloured figs, growing on the fleshy leaves, while much appreciated by the upper classes for their juicy and cooling qualities, form a staple food of the poorer

¹ The cases of intermittent irregularly acting heart referred to may be of gouty origin and attended with notable accentuation of the aortic second sound.

² This patient died in the hospital, but unfortunately no post-mortem could be obtained. The slight diastolic whiff at the ensiform cartilage was probably due to some aortic leaking.

Sicilians. On this coast three towns might be utilised for English invalids—Catania, Aci Reale, and Taormina,—the two former being already in great reputation among the Viennese physicians, who send a good many pulmonary cases to Sicily.

Catania is situated on the Mediterranean on the slope of Etna, being built, and partly hewn out, of the lava rock. It is about four hours by rail from Messina, and between sixteen and eighteen hours by rail and diligence from Palermo. It faces south-east, is tolerably sheltered from the north and north-west by the mighty Etna, the glory, and, alas, the terror, of the eastern coast, whose bold outline closes in the chief street of Catania, the Strada Stesicorea or Etnea. The town is comparatively unsheltered on the north-east side, and complaints are made of occasional cold winds from that quarter. The meteorology has been most carefully studied at the University observatory, and Dr. Ughetti's excellent brochure¹ contains reliable information on all points, the tables being generally based on twelve years' observations. From these it appears that the winter (Dec., Jan., and Feb.) mean temperature is 52° F., about three degrees higher than that of Mentone, but slightly lower than that of Malaga, and the extremes lie within a moderate range. There is rarely ever frost, but during the recent severe season snow fell one day, and, though it did not lie on the ground, created great astonishment amongst the natives, who had most of them only viewed it at a distance clothing the sides of Etna. The rainfall is 528 cubic millimetres, distributed over forty rainy days in the year, occurring in the winter and autumn months. The mean annual percentage of humidity is 70, a figure considerably greater than that of Nice or Mentone. The prevalent winds in winter on the south-east and south-west—the former the well-known sirocco, terrible in summer—are not unpleasant during the winter months. These data show a mild winter climate, dry compared with that of England, but not so dry or subject to such great extremes as that of the Riviera, and gaining the advantage over the latter which 5° southern latitude give. Catania is a bright, clear, bustling town of 84,000 inhabitants, built on a wave of an old lava stream, and consequently abounding in ups and downs, which facilitate drainage. Under the superintendence of my friend the Marchese di Casalotto, formerly mayor of the city, and now deputy in the Italian parliament, fresh improvements have been made. The streets have been widened and partially levelled, provided with subways, and paved, in the admirable Italian fashion, with lava blocks laid diagonally, which form a durable surface, free from dust and easily cleansed. The public gardens, where a military band plays daily, are charming, and command a fine view of Etna; and it is in contemplation to extend their area considerably. The neighbourhood also offers pleasant drives and excursions, many of which are recommended for invalids as lying within the sheltered district. There are several good hotels, the Grand Hotel and the Hôtel Centrale being the best; and visitors can live at moderate pension prices. Food of all sorts is good and abundant. For the water-supply the town depends on wells, which are liable to the usual contaminations; but Dr. Ughetti considers it to be fairly good. I may mention that during my stay in Catania in December I heard of some cases of diphtheria.

Aci Reale is reached in twenty-five minutes by rail from Catania, being eight miles to the north. It is near the sea, but not on the shore, and stands at an elevation of 560 feet, on another lava stream. The town contains 24,000 inhabitants, is clean, well paved, and well kept, and has a public garden, with exquisite views both of the volcano and of the sea. Just outside are the baths of Santa Venera, which, famous in the times of the Romans, have been resuscitated from oblivion by the spirited enterprise of Baron Pennisi, of Floristella, who has, at his own expense, erected a splendid establishment, in which nothing is wanting for the convenience of the bathers and drinkers. The waters are chiefly sulphurous and saline, and contain small traces of lithium and iodine. They are used as well for drinking as for external application, by means of douches, sprays, and baths, and, it is needless to add, are recommended for all the ills to which flesh is heir. Opposite to the bath establishment is the Hôtel des Bains, facing south and east, fitted up with all the comforts an invalid can require. It has excellent public rooms, and a garden adjoining; besides one hundred private rooms, each with a fireplace,

which is indeed seldom required for heat, but is acceptable in the evening to the comfort-loving Britisher. The food, especially the meat, is of first-rate quality, and the cuisine and wine irreproachable. The hotel is also the property of Baron Pennisi, who seems to aim more at the completeness of his enterprise than at any possible profits, for the pension prices, though somewhat high for Sicily (10 fr. to 15 fr. a day), cannot reimburse him for his enormous outlay; and be it told to his honour, several of the baths are set aside for the gratuitous use of the poor. I have not yet received the promised meteorological data of Aci Reale, but I understand the climate much resembles that of Catania. It is less well sheltered, but would have for some invalids an advantage in being farther from the sea.

Taormina, a long straggling village of 3000 inhabitants, lies to the north of Etna, and is reached in half an hour from the station of Giardini, which is one hour by rail from Aci Reale and an hour and a half from Messina. The town occupies a narrow plateau on the side of the mountain, 800 feet above the sea, and is protected from the north and north-east by the spur on which stands the beautiful Græco-Roman theatre, and also by the rocky hills of Mola and Monte Venere. The tramontana was blowing one day while I was there, and could not be felt in the town itself, but on passing through the northern gate and thus quitting the shelter of the Theatre-hill, I encountered the cool blast. But though Taormina stands high and is well sheltered, it cannot yet pretend to the comfort and good living of the last-mentioned towns. The hotels Timeo and Bella Veduta are clean and unpretending, and very moderate in their prices, but the food, especially the meat, is not sufficiently nutritious for invalids to thrive on. The landlord of the Timeo, an enterprising and most obliging young man, is now improving his hotel and doing his best to remedy the deficiency, and in time it may become a fit sanitarium for invalids in winter, and at present it would serve as a delightful change for some days or weeks in the spring. For the scholar and the artist few scenes can vie in interest with the view from Taormina. We see the coast-line dotted with the ruins of Ionic and Doric grandeur, all that remains of the Greek cities of Catana, of Naxos and Messene, and far off to the south can be descried Mount Hybla, of honey fame, and Syracuse, once the greatest city of Magna Græcia, before whose walls the pride of Athens fell in the famous siege. As one gazes over the blue expanse of the Ionian sea, the page of Thucydides rises to one's memory and pictures to us the white sails of the triremes of Nicias and Alcibiades approaching the shore which proved the scene of their disaster and of their destruction. For the lover of nature the grand study of Etna, half clothed in snow, the long reaches of sea separated by headlands of rare beauty, and backed by rugged mountains, lighted up at sunrise and at sunset in exquisite gradations of colouring, is a feast of real enjoyment, especially when seen from the foreground of the varied and picturesque ruins of the famous Greek theatre.

South of Catania the country becomes flat and marshy, abounding in small lakes, the haunts of wild fowl, and therefore better suited to the sportsman than the invalid. Malaria prevails here in summer, and also along the south coast of the island in the low-lying country, where the climate, as evidenced by vegetation, is still milder. Girgenti, which faces south, on this coast, occupies a splendid position, crowning the rock, which was the citadel of old Agrigentum, and this neighbourhood is unrivalled in wealth of Greek temples and classical remains; but the insanitary condition of the town, and the prevalence of malaria in the district, render it unfit for a sanitarium, though a tolerable hotel has been lately opened there.

Palermo, the capital of the island, on the north coast, has been too long known as a health resort to require description, but it is curious that with the many advantages it undoubtedly possesses it is not more frequented by invalids in winter. Situated on the shore of its beautiful harbour, and girt with the lovely plains of the Conca d'Oro, backed by a magnificent amphitheatre of mountains, its position lacks nothing in beauty, though it cannot be said to be perfect in the matter of shelter. The Monte Pellegrino screens it to the north, but as the town faces north-east, it is open to the cold winds from this quarter and even slightly to the north-west, although tempered as these currents are by passing over a wide expanse of sea, they carry with them less cold and more moisture. The high winter mean temperature—namely, 53° F.—and the freedom from great extremes, show

¹ Il Clima di Catania.

that its southern latitude compensates for its want of shelter, and the meteorology generally point it out as a mild climate, moister and more equable than the Riviera, as well as three degrees warmer. The vegetation in the rich plain on which one gazes from Monreale is most luxuriant, and the size of the lemon trees and of the exotics in the beautiful grounds of the villas and in the public gardens testify to the rare occurrence of extreme cold. Here, too, there is no lack of good hotel accommodation, and the Hôtel Trinacria, justly famed as one of the best in Europe, facing the sea, and in the town, is most excellent; while the same owners (Ragusa) have lately opened a suburban hotel near the English Church, specially fitted for invalids, on account of its better shelter, covered galleries, and extensive gardens. Food of all kinds is good, and cooking all one can wish. The pension terms are from ten to fifteen francs a day.

The town of Palermo is well kept, very gay, and rich in architectural and in mediæval antiquities; while the ex-

cursions, now that the neighbourhood is free from the pest of brigands, are almost inexhaustible for variety and beauty. The best way for invalids to reach Palermo is in the good boats of the Messageries Nationales, in about forty-eight hours from Marseilles; and there are also daily steamers to and from Naples in twelve to twenty hours.

In writing these few words about Sicily, I do not wish to give too favourable an impression of the island and its resources for invalids. There are undoubtedly drawbacks, such as the distance from England, the lack of English medical men settled in any of the above localities, and the want of many luxuries to be found in the sanatoria much frequented by the British; but Palermo, Catania, and Aci Reale possess sufficient positive advantages as winter stations to warrant their being recommended. And if they were so, most, if not all, of the drawbacks would soon disappear.

Upper Brook-street, W.

AURAL NOTES.

By A. GARDINER-BROWN, F.R.C.S. EDIN.,

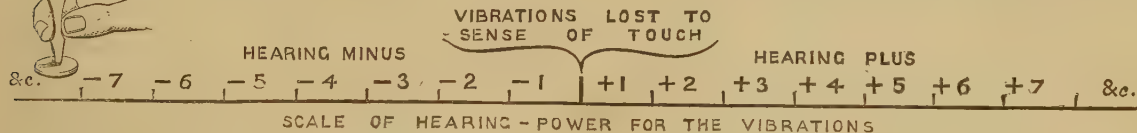
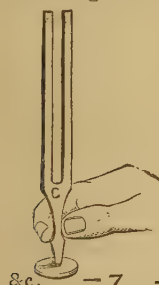
AURAL SURGEON TO THE LONDON HOSPITAL, AND LECTURER ON DISEASES OF THE EAR TO THE MEDICAL SCHOOL.

IV.—A NEW STANDARD OF MEASUREMENT FOR HEARING-POWER BY COMPARISON WITH THE SENSE OF TOUCH.

There has hitherto been no way of accurately examining the power of the auditory nerve by the tuning-fork so as to enable us to record for clinical purposes the *degree* of deafness in a given case. And it is often not possible accurately to describe the details of a case for want of the means of giving an arithmetical value expressive of the sensitiveness of this nerve at different periods of its examination, or for comparison with its fellow of the opposite side of the head.

Testing the hearing-power by means of a watch or tuning-fork through the conducting apparatus of the ear is frequently unsatisfactory, and open to many objections as regards giving reliable data for diagnosis and prognosis, but, accompanied by a test such as that about to be described, the watch affords complementary information of much value.

If the surgeon takes a middle C tuning-fork (as shown in the diagram),



the greater or lesser length of this increase will be proportional to the *amount* of the obstruction.

There is occasionally to be observed an exception to this law, as also to the conducting power of the cranial bones for vibrations, but these questions and others will be discussed in the next "Aural Note."

OBSERVATIONS IN URINARY PATHOLOGY AND THERAPEUTICS.

By C. H. RALFE, M.D. CANTAB., F.R.C.P. LOND.,

ASSISTANT PHYSICIAN TO THE LONDON HOSPITAL, LATE SENIOR PHYSICIAN TO THE SEAMEN'S HOSPITAL, TEACHER OF PHYSIOLOGICAL CHEMISTRY IN THE MEDICAL SCHOOL OF ST. GEORGE'S HOSPITAL.

II. A FORM OF DYSPEPSIA USUALLY ASSOCIATED WITH AN ALKALINE CONDITION OF THE URINE.

(Continued from p. 87.)

CASE 1. — A gentleman, aged sixty, consulted me during Dr. Murchison's absence from town (August, 1874). He stated that during the past four months he had lost flesh and had suffered considerably from muscular pains, especially in the thighs, with a sense of indescribable weariness. General appearance worn; complexion sallow; con-

junctivæ slightly yellow. Complains of papitation of the heart and shortness of breath. Bowels constipated; much flatulent distension; troubled with frequent micturition, and is frequently awake early in the morning for this purpose. Physical examination elicited that there was no disease of the heart and lungs. The liver was of normal dimension, and there was no pain in the epigastric or right hypochondriac region. The urine was clear, slightly acid when passed, but became alkaline on boiling, and threw down a filmy cloud of phosphates, which redissolved with considerable effervescence on the addition of *dilute* acetic acid. The specific gravity was normal, 1020, no albumen, no sugar, and there was no excess of either alkaline or earthy phosphates, nor any trace of ammonia. The alkalescence was solely due to the presence of carbonates of potash and soda. He was ordered two-drachm doses of Carlsbad salts twice a week, and to take a mixture containing ten drops each of dilute hydrochloric acid and tincture of nux vomica. On Aug. 23rd he called, and said that shortly after commencing the treatment he began to feel better. He has lost the worn expression of countenance, and his complexion is clearer. The sense of weariness, backache, and muscular pain have disappeared, and he has regained some of his lost weight.

His urine is normal in all respects, and the tendency to frequent micturition has quite subsided. He considers himself quite well. Advised him to continue the use of the Carlsbad salts for some time longer, but to leave off the acid mixture. Saw him four years afterwards; he had been free from the symptoms ever since.

CASE 2.—A lady, aged thirty-six, the wife of a schoolmaster. Has lately been very anxious about her husband's health and that of her only child. Has lost flesh considerably of late. Suffers much from muscular pain, and especially in the legs; much backache. Bowels constipated; suffers much from flatulence. Worn, anxious appearance; complexion sallow, but conjunctiva clear. No enlargement or tenderness in the epigastric or right hypochondriac region. Heart and lungs healthy. Urine neutral in reaction; the quantity passed in twenty-four hours amounts to 800 cc. Specific gravity 1020. The phosphoric acid about normal in quantity, being 2.2 grammes. Uric acid 0.32 gramme. No ammonia present. There was no sugar; no albumen. Phosphates were thrown down on boiling, but were redissolved with violent effervescence by the addition of dilute acetic acid. The patient was ordered two-drachm doses twice a week of Carlsbad salts and a mixture containing ten-minim doses of dilute hydrochloric acid and tincture of nuxvomica. The patient improved materially under this treatment, but not so rapidly as did Case 1. It was not till she was able to leave home and its cares and anxieties for a while that the improvement in her condition became permanent.

CASE 3.—A Cambridge graduate, aged thirty-five, fellow of his college, who for some months previously had been engaged in arduous mathematical studies. Had suffered for six weeks from despondency, and a sense of indescribable weariness, backache, and muscular pains, chiefly in the legs. Has lost flesh. Bowels constipated; suffers much from flatulence. Micturition frequent; is roused often in the night time to pass water. Fears that he is suffering from diabetes. On physical examination his organs were found healthy. Urine normal in appearance, slightly alkaline in reaction, throwing down on boiling a cloud of phosphates, which cleared up with considerable effervescence on the addition of dilute acid. Phosphoric acid normal in quantity. No albumen; no sugar. No carbonate of ammonia. Ordered two drachms of Carlsbad salts two mornings in the week and a mixture with ten-minim doses of dilute hydrochloric acid and nuxvomica. In three weeks' time he reported himself quite well.

CASE 4.—A gentleman, aged sixty, whom I saw during Dr. Murchison's absence from town. Had spent many years of his life in India, in a Civil Service appointment. Has lately been losing flesh, and suffering much from weariness, with muscular pains in limbs. Bowels constipated, with considerable flatulence. Sallow complexion, micturition frequent. Urine alkaline; phosphates normal, no sugar, no albumen, no carbonate of ammonia. On boiling, the urine deposits phosphates, which clear up with effervescence on the addition of dilute hydrochloric acid. Ordered Carlsbad salts and a mixture, with dilute hydrochloric acid and nuxvomica. A fortnight afterwards he reported himself as much better, and in a month he wrote to say he was quite well.

The remaining cases presented similar conditions, so that it is unnecessary to quote them in detail. There was loss of weight, weariness, constipation, flatulence, frequent micturition, more or less sallowness of complexion. Urine alkaline, neutral or faintly acid, effervescing on the addition of dilute acid, with no increased elimination of phosphates nor any trace of ammonia or ammonium carbonate. They all rapidly improved under the same treatment.

In the eight cases under observation the alkalescence of the urine was clearly due to the presence in excess of the carbonates of soda and potash, and to no other cause; and the inference may fairly be drawn that the dyspeptic symptoms, in the absence of any other determinable condition, were due to the presence of these salts in abnormal quantities in the blood.

At present we know very little with regard to the effect alterations in the reaction of the blood have upon general nutrition and the metamorphosis of tissue. The blood, we know, has a constantly alkaline reaction during life; and it is probable that in health the intensity of this reaction is pretty constant, and considerable variations are followed by functional disturbance. This is admitted in the case of lithæmia, when lithic acid is either formed in excess or accumulates in the blood, owing to insufficient oxidation in the system or defective elimination by the kidneys. In scurvy,

too, it is probable¹ that the primary change that occurs is a chemical one, due to a diminution in the alkalinity of the blood caused by an increase of acid salts (chiefly urates) and the withdrawal of salts having an alkaline reaction (the alkaline carbonates derived from the vegetable constituents of the food). Experiments made on animals to reduce the alkalinity of the blood, or to neutralise it, have all ended sooner or later in the death of the animal, and the changes observed in the blood and tissues after death are identical with those found in bodies of patients dying from scurvy. Thus Hoffman,² who fed pigeons for a considerable time on food yielding only an acid ash, found that not only did the post-mortem changes resemble those of scurvy, but the symptoms preceding death were exactly alike—namely, great feebleness, tremor, and failure of the heart's action. It is, therefore, not unreasonable to suppose if diminution of the alkalinity of the blood produce such definite results that an increase in the other directions should also cause a disturbance of healthy nutrition. No definite experiments have been made in this direction on animals, but I have frequently observed that a large dose of an alkaline carbonate taken on an empty stomach, when in health, produces almost immediately a feeling of malaise, headache, and for a time frequent and copious urination.

The causes that may lead to an undue accumulation of alkaline carbonates in the blood can be thus summarised.

(a) *Feebleness with which the respiratory act is performed leading to the accumulation of carbonic acid in the system, and its combination with the alkaline oxides of potash and soda.* It is probably this condition that accounts for the alkaline state of the urine so frequently met with in convalescence from acute diseases. In these cases it will be observed the urine generally effervesces on the addition of dilute acid. Care, anxiety, overwork, &c., by inducing nervous exhaustion, tend to diminish the exhalation of carbonic acid, and lead to its accumulation in the system.

(b) *Accumulation of alkaline carbonates in the blood may be produced by long-continued respiration of impure air, and this is probably the cause of the languor experienced after being exposed for a while to the impure air of churches, theatres, &c.* It may also account for some of the weariness complained of by business men after a day's confinement in close, ill-ventilated offices.

(c) *Functional derangement of liver, attended with diminished secretion of bile.*—In the cases related it is probable that functional derangement of the liver was partly the cause of the increased alkalinity of the urine. The constipation, flatulence, and sallow complexion noticed in all show that bile was not passing freely into the intestinal canal, and the speedy relief that followed the administration of Carlsbad salts points also in this direction. That diminished functional activity of the liver should tend to produce increased alkalinity of the blood is not to be wondered at, since bile is the most important secretion by which alkaline salts are removed from the body,³ and though a portion of the alkaline salts is undoubtedly reabsorbed into the blood from the intestine, a considerable proportion of them is discharged with the fæces. A diminished secretion of bile would lead to their being retained in the blood, and consequently eliminated in greater quantity by the kidneys.

Whatever may be the theoretical explanation, there is no doubt of the fact that alkalescence of the urine arising chiefly from the presence of alkaline carbonates of potash and soda is frequently to be met with. In some cases this condition is associated with other morbid conditions, as in chronic pulmonary affections, convalescence from acute diseases, or with excessive elimination of the earthy phosphates; but in others it appears as the only tangible pathological phenomenon present. In this latter class of cases the dyspeptic symptoms, which were causing grave anxiety to the patient, speedily yielded to treatment directed to restoring the functional activity of the liver, and improving the general tone of the system by rest and, above all, change of air. Where the condition is associated with other diseases, especially with that marked by excessive discharge of phosphates, similar treatment is generally followed by improvement, but

¹ Inquiry into the General Pathology of Scurvy. By Author. Lewis: London. 1877.

² F. Hoffman, Ueber der uebergang von frein Säuren durch das alkalische Blut in den Harn. Zeitschrift für Biologie, vii., 238.

³ It has been calculated, from experiments on dogs by Nasse, Platner, and Stackman, that a man weighing 154 lb. should secrete daily about 40 oz. of bile, which would represent a considerable amount of alkaline bases discharged into the intestinal canal in the twenty-four hours.

it is neither so rapid nor so permanent in its effect. Indeed, when in a case of simple phosphaturia we find the urine becoming more alkaline from the constant presence of the fixed carbonates, it becomes very intractable as regards treatment. Of this class of cases, as well as those which closely resemble those described by Tessier under the term "phosphatic diabetes," I hope to consider in a future communication.

A NEW INSTRUMENT FOR THE INTRODUCTION OF STITCHES IN OPERATIONS FOR CLEFT PALATE, AND OTHER DEEPLY-SEATED LOCALITIES.

By EDWARD WOAKES, M.D. LOND.,

SENIOR SURGEON TO THE HOSPITAL FOR DISEASES OF THE THROAT AND CHEST.

EVERY surgeon who has frequent occasion to operate for cleft palate will agree that a simplification of the process for inserting the stitches, which is equally efficient with those commonly adopted, will, by shortening the period over which the anæsthesia has to be kept up, be a gain both to himself and his patient. The instrument, of which the following is a description, is introduced by the author to meet this want. It consists in the adoption of a shuttle in the form of a needle-point, containing an eye or slot to carry the silk or wire, A. This fits on to a slight projection or pin, standing out at right angles very near the end of one blade of a strong pair of spring forceps. Between the needle and the extreme end of this blade the latter is indented by a slit to receive the silk after it leaves the shuttle or needle-point, B. When the silk is drawn home through this slit it is carried along the outside of the blade through a groove in a projection for the thumb, C, situated at a convenient distance for making pressure on the blade when using the instrument. By this means the needle is held firmly upon the inner aspect of the blade. The opposing arm of the forceps is somewhat broadened out to support the tissues when clamped between the blades. The centre of this is bored through exactly opposite the point of the needle when the blades are made to come together. This hole, E, has a projection or flange, which fits into a notch behind the point of the needle.

It is made slightly smaller than the needle, to receive which it opens somewhat by means of a spring, the blade being split for the purpose, the right degree of tension of the spring being provided by a slide, F, which is placed in position before use. The accurate juxtaposition of the needle-point with the split-ring when penetrating the tissues is secured by the guide, D, which effectually prevents any lateral swerving of the blades. When these are closed upon a flap, the fact of the needle being caught in the ring on the opposite side is indicated by a clicking noise. The thumb is now taken off the boss, C, which releases the silk, and allows the forceps to spring open. The needle is then firmly held in the other arm of the forceps, as shown at G. A little manipulation of this arm of the instrument suffices to draw the short shuttle or needle through the tissues now perforated, and with it the silk with which it is armed. This is drawn towards the operator, a good length of silk being provided for the purpose, and when well out of the mouth, the slide, F, is drawn back, allowing the spring to open at E, the needle is then slipped out with the silk still attached. It is next readjusted at B as at first, and the slide, F, replaced in its former position. The other side of the flap is now dealt with in a reverse manner—i.e., the needle is passed through from behind. The process is thus completed, the silk being passed through each side in a much shorter time than the above details would take to read. The suture thus passed is double, but it is easy to draw one thread out, should the operator elect to tie his knot with a single thread. Several needles are furnished with each instrument, and these being threaded beforehand, are readily adjusted to the instrument

in succession, as stitch after stitch is inserted. The shuttle being left on the silk when this is used double, serves to identify each particular suture, and so facilitates the process of tying when all are inserted.

The shuttles now made for me have the eye a little further from the point than shown in the engraving. Other modifications in the instrument, suggested by experience of its use, may require to be made, but the principle of the shuttle, now introduced for the first time as a surgical appliance, will not be affected by such alterations.

The applicability of the instrument for gynecological operations, vesico-vaginal fistula, &c., will suggest itself. It is not improbable that its usefulness may extend to all cases where stitches have to be inserted in deeply-seated localities, in which manipulation with an ordinary needle adds to the difficulty of the operation. It is made by Messrs. Mayer and Meltzer, of Great Portland-street. The diagram is about one-fourth the size of the instrument.

Harley-street, Cavendish-square.

TWO FATAL CASES, BELIEVED TO HAVE RESULTED FROM SNAKE-BITE AT MOUNT ABU, RAJPUTANA, INDIA.

By G. S. SUTHERLAND, M.D., SURGEON-MAJOR,
SURGEON, RAJPUTANA POLITICAL AGENCY.

ABOUT 10 P.M. on 29th May, two native girls, aged ten and seven, were sleeping on the floor of the room of the Matron of the European Hospital, who was in bed. There was a light burning in the room. The elder girl called out that she had a pain in her right hand, as if something had stung her, and the younger complained of her skin itching. The Matron thought that some insect—a wasp or scorpion—might have bitten the one, and that the other had nettle-rash, and presently took them to their own house, about a quarter of a mile off. The elder girl carried the younger one. Their uncle, employed as a cook in the barracks, returned to her house with the Matron, and as she opened the door of the room which they had just left she saw a snake cross the floor. He then sent for the apothecary, who came and killed the snake. The cook on returning to his house found the girls vomiting; and thinking they had eaten something to make them ill, went to the bazaar, about half a mile distant, for a *baker*, reputed to have some medical skill. When he returned the younger girl was dead, and the elder died within a few minutes after. It was then about 11 o'clock, about an hour after they had begun to complain. In the morning it was reported to the magistrate that the two girls had died of cholera. No one up to this time seems to have connected their deaths with the snake that had been killed. The magistrate ordered an inquiry by the police, which resulted in the bodies being brought to me for report, with the snake. This turned out to be a full-grown specimen, thirty-nine inches long, of a very venomous species, the "*Bungarus ceruleus*" (Krait).

The back of the right hand of the elder girl was a little swollen, and near the tip of the palmar surface of the first finger the mark of a single very fine puncture was barely visible in the thick skin. After a prolonged search for the mark of a snake's bite on the younger girl, some swelling was noticed over the left collar-bone, where the skin pitted on pressure, and two very indistinctly-marked punctures were seen. On pinching up the swollen skin at the punctures a blood-stained fluid oozed from numerous points as well as from the punctures. On making an incision through the skin of the bitten parts in each case the tissues below were found stained of a claret-colour, and a dark bloody fluid oozed freely from the wounds. As the girls' uncle objected strongly to a dissection of the bodies, no internal examination was made.

The story is an instructive one medico-legally, as the evidence connecting the death of the two girls with snake-bite is entirely circumstantial. No snake was seen at the time when they were bitten, and had one not been killed shortly after in the place where they had been sleeping the cause of their death might not have been suspected, and might even have escaped discovery in post-mortem examination. The marks of the snake's fangs being so very small would cer-

tainly have escaped notice, and the amount of discoloration of the dark skins and of swelling was too slight to attract attention. The fluidity of the blood would have been observed, but might have been attributed to other causes.

I have no doubt myself that these deaths were due to the bites of a snake, most probably of the one killed, possibly of another. I may add that Dr. Spencer, surgeon to the Jodhpore Political Agency, who saw the bodies with me, was of the same opinion.

Abu, Rajputana.

A Mirror

OF

HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORAGANI De Sed. et Caus. Morb., lib. iv. Proœmium.

ST. GEORGE'S HOSPITAL.

DISLOCATION OF THE FEMUR INTO THE SCIATIC NOTCH
IN A MAN SEVENTY-TWO YEARS OLD; REDUCTION
SEVENTY-TWO DAYS AFTER THE INJURY.

(Under the care of Mr. G. D. POLLOCK.)

FOR the following notes we are indebted to Mr. C. T. Dent, F.R.C.S., surgical registrar.

William H—, aged seventy-two, a vigorous and strong man for his age, was admitted on March 27th, 1880. Seventy days before admission, as he was walking by the side of a horse drawing some trucks laden with bricks, his foot slipped, and he fell across the metals on which the trucks were running. As he fell his legs were widely stretched apart, the right being in front of the wheels. In this position he was dragged along for some few yards before the horse could be stopped. He experienced great pain in the left hip, and was unable to support himself on the left leg, which was noticed to be much drawn up. A good deal of ecchymosis appeared about the seat of injury a few days later. No attempt at reduction had been made previous to his admission. The left lower limb was then drawn up, with shortening of one inch. By Nélaton's test the left trochanter was found to be on a higher level by one inch than the right. When standing up the axis of the left femur was directed across the lower third of the opposite thigh; the left foot rested on the dorsum of the right. Passive flexion was permitted, but no abduction was possible. The same day ether was administered. The patient was laid on a couch on the sound side, and steady extension was made by the pulleys for five minutes, first in a line at right angles to the trunk, and subsequently in the line of the new axis of the limb. Some adhesions about the head of the bone were felt and heard to give way. The shortening and deformity remained as before.

Two days later ether was again given and the patient placed in the same position as on the previous occasion, especial care being taken to keep the pelvis square with the horizontal line of the couch. On rotating the thigh the head of the bone could be distinctly felt close to or in the sciatic notch. Steady extension was made with pulleys for ten minutes. During this time several attempts were made to lift the head of the bone into the acetabulum by means of a jack-towel placed round the thigh close to the perineum. These, however, failed. The patient was turned over on to his back when it was considered that the muscles were tired out; the thigh was flexed in the abdomen and abducted as forcibly as possible. The great resistance offered by the adductor muscles was very noticeable during this proceeding. The thigh was then rotated outwards and brought down towards its normal line. At this attempt the head of the femur evidently reached only the brim of the acetabulum, and was very distinctly felt and seen to slip off again. A second attempt with rather more forcible abduction was successful, and reduction was effected with an audible snap as the thigh was again rotated outwards and brought down straight. In the various movements of the head of the bone prior to its reduction, a doubt was expressed by Mr. Pollock as to

the possible existence of some slight fracture of the acetabulum. It was difficult to decide this point accurately, and it is possible that the idea of fracture may have been occasioned simply by the rubbing of the cartilaginous surface of the head of the bone against the edge of the acetabulum. This grating sensation, which was, however, unlike that of true bony crepitus, was distinctly felt by the finger introduced into the rectum.¹ A considerable amount of swelling followed the reduction. The limb was placed in a long splint, and perfect rest in a straight position was enjoined. After three days the splint was removed. It happened that same evening that the patient became much excited, got out of bed and walked across the ward. Shortly after this the deformity was found to have returned. Five days after the former reduction ether was again given, and the bone again replaced, this time without the aid of the pulleys. A long splint was applied, and kept on for twenty-one days. He was discharged thirty-two days later, and was then able to walk well with a stick. He limped slightly, but was able to move the limb freely in all directions without pain.

Remarks.—Mr. Pollock stated that some years ago a man seventy-two years of age was admitted under his care with dislocation of the femur into the sciatic notch. He was a very spare subject, and the dislocation was caused by his simply slipping off a low stool on which he had been sitting. This was readily reduced by pulleys within forty-eight hours of the accident. But with regard to the present case Mr. Pollock felt satisfied that unless the thigh and leg had been used as a lever to act on the displaced head of the femur, the pulleys would have failed in its reduction, and that the man would have remained a cripple for life—a condition of things which, no doubt, would have been the result prior to the introduction of manipulation for the reduction of dislocation of the hip. It remains to be seen how far manipulation may be hereafter attempted in dislocations of still longer standing than the one recorded above—a question well, worthy the attention of all surgeons.

Notwithstanding a tolerably diligent search through the works of various authorities, no parallel case can be found. In the *Medical Times and Gazette*, December, 1865, p. 661, Verneuil relates a case of fracture resulting from an attempt to reduce a pubic dislocation in a man eighty-one years of age, after many attempts at reduction had failed. Sir A. Cooper relates a similar case occurring during manipulation. Bigelow (*op. cit.*, p. 55) relates the case of a woman at twenty-seven, where reduction was effected after eight months. Unfortunately, in many of the cases recorded the age of the patient is not mentioned. There can be no doubt that the case of W. H— described above is of a very exceptional character.

ST. PANCRAS WORKHOUSE INFIRMARY.

A SUCCESSFUL CASE OF OVARIOTOMY.

FOR the following notes we are indebted to Dr. William Dunlop, resident medical officer.

E. R—, aged twenty-one years, single, was admitted on June 15th, 1878, on her own statement that she was in labour. She was not confined, however, until August 30th, and she made a good recovery. About five weeks after her confinement she began to suffer from abdominal pain, and an abdominal tumour was then discovered in the right iliac region, which for the next few weeks kept steadily increasing in size. About the middle of November of the same year she was seen by Dr. Edwards of Gloucester-crescent, Hyde-park; and as an accurate diagnosis could not be made then he saw her again in six weeks, when he was of opinion that the case was one of unilocular ovarian cyst.

On May 12th, 1879, ovariectomy was performed by Dr. Edwards. An incision, three inches in length, was made in the middle line between the umbilicus and the pubis, and

¹ As regards the probable complication of fracture it may be remarked that, considering the length of time that had elapsed since the accident, it is possible that, if fracture of the acetabular rim took place at the time of the accident, union may have occurred. Thus, Maisonneuve relates a case of dislocation in which a fragment of a broken acetabulum had in twenty-seven days united with the rest of the rim so firmly that the fracture could hardly be discovered. (*Rev. Méd. Chir.*, tom. xvi., p. 48.) In a case of Sir B. Brodie's, of twelve weeks' standing, failure to reduce a dorsal dislocation was attributed to fracture of the acetabulum. (*THE LANCET*, vol. xxiv., p. 671.) On the other hand, cases have been recorded (cf. Bigelow on Dislocation of the Hip, p. 144) where in supposed fracture of the acetabulum no crepitus could be felt.

the tumour, being exposed, was tapped, and its fluid contents drawn off. The walls of the cyst were then removed, and this had to be done with considerable care, as there were adhesions along nearly the whole of the anterior surface of the tumour, and also some recent adhesions to the broad ligament. The tumour having been removed, the pedicle was found to embrace the right ovary. The pedicle was secured by a clamp, and separated by the hot iron. There was little hæmorrhage during the operation. The wound was closed by two deep catgut carbolised sutures and three superficial wire sutures; it was dressed with lint and carbolised oil and prepared oakum, the abdomen being supported and the dressings kept in place (including the clamp) by strips of porous plaster. Over the whole was placed a layer of cotton-wool and three layers of broad flannel binding.

In its subsequent course the case presented no symptoms to cause any anxiety. The patient made a gradual and excellent recovery. On May 24th the clamp fell off. She was able to sit up on June 5th, and shortly afterwards was sent down to Margate, where she became perfectly well.

The tumour, which was a large one, was removed through a very small opening. A very small quantity of stimulants was given throughout the case. No ice was used at any time, and the operation was conducted on antiseptic principles.

LEEDS' GENERAL INFIRMARY.

CASES OF INJURY TO THE EYE.

(Under the care of Mr. OGLESBY.)

THE history of the following three cases is interesting from the similarity of accident and the results of each.

CASE 1. — A young man, working as a mechanic, was struck in the left eye by a piece of metal, which had entered through a wound involving the lower two-thirds of the cornea on the left side. The wound, although large, had healed by first intention, and, except a slight redness of the conjunctiva, no objective symptoms pointed to the serious nature of the case. The subjective symptoms were pain and dimness of vision; tension of the globe — 2. The right eye was healthy, and not in the least affected sympathetically. Careful examination failed to detect any foreign body within the eye, and it was surmised that the piece of iron had struck the cornea obliquely, and after wounding it glanced off. This, the man said, was not so, as he could distinctly feel the foreign body move when looking upwards. Mr. Oglesby decided to remove a large piece of iris corresponding to the wound in the cornea. Iridectomy having been performed, it was hoped that the iron would present, but such was not the case. The iris forceps were then gently introduced and search made. The blades of the forceps, after slight separation, were pressed directly downwards and then closed. The closing of the blades was interfered with by the edge of the foreign body, which was evidently lying across the fundus, and not placed vertically as supposed. A second attempt was more successful, and after the use of considerable force, a piece of iron resembling in size and shape an ordinary pin was removed. A considerable quantity of lens matter escaped. The immediate treatment consisted in the frequent instillation of atropine and the constant application of cold. Mr. Oglesby predicted that, from the force which it was necessary to use in the extraction of the iron, little chance remained of saving the eye, and that extirpation must soon be resorted to. Three days after the operation the eye was examined, when the following symptoms were noticed: redness of the second degree; pupil more or less filled by opaque lens matter; wound of cornea healthy in appearance; tension — 2; pain of the second degree; intolerance of light but slight. From this day the eye improved rapidly, and when last seen (May 29th) it was free from inflammatory troubles, and vision so far improved as to enable the man to recognise the features of his friends. During the whole of the case no single symptom of sympathetic ophthalmia appeared. The successful termination of this case was due in a great measure to the energetic treatment of the resident assistant, Mr. Norman Porritt, who watched the case closely, and on several occasions applied the artificial leech with marked benefit.

CASE 2 presented itself during the same week the above case was admitted. The history was similar in many particulars to that of the first patient, the main difference being the bulging of the iris, indicating the position of the foreign

body. It was evident that the piece of iron had passed through cornea and iris in a direct line. The tissues generally had suffered but slightly, the objective symptoms being redness degree No. 2; intolerance of light degree No. 1; tension — 1; pain degree No. 2. No ciliary zone. Iris apparently healthy. The sound eye not sympathising. Mr. Oglesby decided to, if possible, extract the foreign body without removing any portion of the iris. A section of the cornea, one line from the sclero-corneal junction, and immediately over the distended or bulging part of the iris, was decided upon. This having been done, the iris forceps were introduced through the section then made, and then pressed gently on the iris, and at the same time the blades were separated. This procedure was followed by the appearance of the foreign body squeezing its way through the rent in the iris, which had been made by its entrance. The blades of the forceps were then closed, and the iron grasped; gentle traction proved of little avail, so firmly was it imbedded in the structure of the iris. Very considerable force had to be employed before it could be dislodged. It was afterwards noticed that the piece of iron—which resembled an ordinary tin tack in shape and size minus the head—had a serrated edge, and to this fact is due the resistance experienced. Mr. Oglesby much feared that after such rough treatment of the iris that inflammation of the ciliary body would result, and possibly sympathetic mischief if the man were made an out-patient and no proper supervision exercised. The treatment was the same as in the last case. Again much good was obtained by the application of the artificial leech freely used by Mr. Porritt.

The result proved contrary to anticipation, no single untoward symptom resulting. When last seen the eye was quiescent; the pupil was fairly active. There was opaque capsule in the lower segment; vision was good for ordinary purposes.

CASE 3.—Whilst Cases No. 1 and No. 2 were as yet undergoing treatment, No. 3 was admitted as an in-patient. He was a joiner by trade, and had a short time previously been struck in the left eye by a splinter of wood—a piece of which remained as a foreign body within the eye. When first seen there was evidence of a foreign body partially concealed by the fibres of the iris. The wound in the cornea was only partly healed, and a considerable breach existed, through which the aqueous humour passed. There was evidence of intense iritis, the pupil was blocked by soft lens matter from rupture of the capsule. Mr. Oglesby decided to remove a large piece of iris, and if possible the foreign body, at the same time. So soon as the iris was seized in the forceps pus in large quantities bathed its anterior surface, and gave evidence of universal mischief. There was considerable difficulty, as in the other cases, in extracting the foreign body, which proved to be a piece of rough wood, a quarter of an inch in length and the eighth of an inch in breadth. Mr. Oglesby felt confident that the ultimate result would be extirpation. This proved to be so, as all treatment failed, even the artificial leech, although applied twice or thrice, and Mr. Oglesby removed the eyeball at the end of four days.

The history of these cases goes far to prove how tolerant of injury the human eye is, and how readily it responds to remedial measures properly selected. The artificial leech is invaluable in certain cases when applied with judgment and skill, and was probably the means of saving the eyes in the first two cases. Mr. Porritt has most thoroughly worked out in detail when and how to apply it, and to him Mr. Oglesby is much indebted for the success which has attended the treatment of many apparently hopeless cases.

Reviews and Notices of Books.

A History of Classical Greek Literature. By the Rev. J. P. MAHAFFY, M.A., Fellow of, and Professor of Ancient History in, Trinity College, Dublin, &c. Two vols. London: Longmans, Green, and Co. 1880.

AS Mr. Mahaffy himself hints, a history of Greek literature has probably become too great a task for any single man to accomplish adequately. Not only is a large and intimate acquaintance with the many and various Greek writers indispensable, but the vast and complicated literature of commentary and criticism must also be taken into account. It would be unreasonable to expect to find in any

one person a combination of all the qualifications for such a task. Mere scholarship is only one of these. A wide and exact knowledge of the various departments of philosophy and of science must be superadded. One of the chief merits of Mr. Mahaffy's work is that it combines in useful proportions a sufficiently correct knowledge of the original Greek authors, and a familiarity with the best English and foreign criticisms thereon.

For the average reader, the second volume, which deals with the Greek prose writers, will be the more serviceable; though scholars may perhaps prefer the first volume, which is devoted to a consideration of the Greek poets. Those whose critical capacities may not be satisfied with the intricacies of the Homeric question, as discussed at the beginning of the first volume, will find plenty of scope in the learned Appendix A, by Professor Sayce, "On the Language of the Greek Epic Poets, and more especially of the 'Iliad' and 'Odyssey.'" This is a feat of learning far beyond the ordinary reader.

We have already hinted at our preference for the second volume; and in this volume it is only natural for a medical reader to turn to the chapter on Herodotus and Hippocrates. Herodotus is not only the Father of History (though Mr. Mahaffy thinks this title belongs by right to Hecataeus of Miletus), but he is in a sense the Father of the History of Science. By travelling through Greece and foreign countries, Herodotus made himself acquainted with the manners, customs, and learning of many nations. But for Herodotus we should know much less than we now do of the science in Egypt and the ancient East. Numerous incidents are related by him which give us an insight into the state of the science and art of medicine and surgery in Greece, Egypt, and Persia five hundred years before the Christian era. It is unfortunate that Herodotus, who has done so much to perpetuate the memorials of early medicine, should, during his lifetime, or shortly after, have had a virulent detractor in Ktesias, the private physician of Artaxerxes at the battle of Cunaxa.

In discussing the writing of Hippocrates Mr. Mahaffy for the most part follows M. Littré, both in his criticisms and in the classification of the genuine Hippocratic writings. "The style of Hippocrates," says our author, "is nervous, exceedingly compressed, and at times obscure from brevity; but, on the other hand, profoundly suggestive, picturesque, and full of power and pathos. He uses poetical words and images freely, but always to increase the fulness of his meaning, never for mere ornament. He is far terser in thought than Thucydides, though he resembles him in shortness of expression; indeed, he more resembles Heraclitus than any other Greek prose writer." This criticism, though more sweeping, agrees in the main with that of the only competent scholar the medical profession in England has produced in recent times—namely, Dr. W. A. Greenhill. This gentleman, in his excellent article on Hippocrates in Smith's Dictionary of Greek and Roman Biography and Mythology, says, "The style of the Hippocratic writings, which are in the Ionic dialect, is so concise as to be sometimes extremely obscure; though this charge, which is as old as the time of Galen, is often brought too indiscriminately against the whole collection, whereas it applies, in fact, especially only to certain treatises which seem to be merely a collection of notes, such as 'De Humoribus,' 'De Alimento,' 'De Officina Medica,' &c. In those writings, which are universally allowed to be genuine, we do not find this excessive brevity, though even these are in general by no means easy."

Mr. Mahaffy's history embraces only the purely classical Greek literature, and does not, in consequence of stopping at the fourth century B.C., include what has been called the literature of erudition and science. The literature of the Alexandrian school and all that followed it

is thereby necessarily excluded. But within its limits Mr. Mahaffy's work is very complete. It is emphatically a trustworthy guide; and the addition of short bibliographical notices at the end of the sketches of the authors enhances the general utility of the work both for the student and the general reader.

THE GENERAL COUNCIL OF MEDICAL EDUCATION & REGISTRATION.

Session 1880.

Thursday, July 15th.

THE Council reassembled at the usual hour, Dr. Acland, President, in the chair.

Mr. TURNER moved a resolution to the effect that the bodies conferring licences in Dental Surgery be requested to furnish each year a statement of the nature of the examinations, whether written, *visà voce*, or practical (one or all of the three), and of the number of candidates for their licences, showing the numbers passed and rejected.

Dr. STORRAR seconded the motion, which was agreed to.

A memorial was received from the Association of Surgeons Practising Dental Surgery with reference to Dental Registration, and a counter memorial on the same subject from the British Dental Association.

A letter was also received from the Hon. Secretary of the British Dental Association, transmitting a corrected list of persons who, in the opinion of counsel, were liable to have their names erased from the Dentists' Register, on the ground that, not being registered in the Chemists' and Druggists' Register, they had illegally declared themselves to be engaged in the *bonâ-fide* practice of dentistry with pharmacy.

Dr. PITMAN proposed, "That the foregoing letter from the British Dental Association, and other communications received on the same subject, be referred to the Dental Committee, to ascertain the facts as to the several cases referred to in such letters."

This was agreed to, and it was also resolved, "That certain persons having requested that the words 'with Pharmacy' be omitted after their names from the Dentists' Register, it is recommended that the Council refer all such cases to the Dental Committee to ascertain the facts in each of such cases."

Dr. QUAIN moved, "That the opinions on the subject of Dental Registration specified in the minutes of the Executive Committee for Nov. 28th, 1879, be referred, with all preceding documents, to the Dental Committee." He said it was desirable that the opinions of counsel, which in some respects were contradictory, should be laid before the Dental Committee for their guidance, but he thought they ought not to be published.

Dr. PITMAN seconded the motion.

Dr. STORRAR supported the motion, but did not agree with Dr. Quain as to the desirability of withholding the opinions of counsel from publication. He disapproved of their being retained as secret documents.

Mr. SIMON thought that as the opinions were not before the Council, they ought not to be sent to the Dental Committee.

THE PRESIDENT said there was a doubt in the minds of some members as to the precise functions of the Dental Committee; and he would ask Mr. Ouvry, the solicitor of the Council, who was present, to make a statement on that subject.

Mr. OUVRY said that the thirteenth and fourteenth clauses of the Dentists Act gave directions as to the mode of erasing names from the Register, or restoring names that had been struck off; and the fifteenth clause directed the mode in which that operation had to be carried out. It was the opinion of Mr. (now Justice) Bowen, that the Dental Committee could not initiate anything, but that the Council should refer any proposal to erase or restore a name to the Committee to ascertain the facts; and on the basis of the facts so ascertained and reported the Council would have to

form its judgment. The question of publishing the opinions of Council was in the discretion of the Council, but he thought it might be embarrassing to do so.

The question of the propriety of publishing the opinions of Council was then discussed, and it was ultimately resolved that the opinions should be read, but that strangers be requested to withdraw. The Council deliberated for some time in private. In the course of the private sitting it was moved by Dr. STORRAR, and seconded by Dr. HAUGHTON, "That the cases relating to the Dentists' Register, submitted for the opinions of Mr. Bowen and Mr. Fitzgerald, and their opinions thereon, be inserted in the Minutes." The motion was negatived, and it was then resolved, on the motion of Dr. A. WOOD, and seconded by Mr. SIMON, "That the opinion of counsel be taken as to whether the Council can delegate to the Executive Committee the initiation of proceedings by the Dental Committee under Section 15 of the Dentists Act, and that if the opinion of counsel be that such power can be so delegated, the Council hereby delegate the same to the Executive Committee." It was also resolved that the case of Mr. John Hamilton be referred to the Dental Committee, to ascertain the facts, and report thereon forthwith to the Council.

On the readmission of the public, Mr. SIMON proposed, "That, in Section 3 of Chapter I. of the Council's Recommendations on Education and Examination, the List of Bodies from which testimonials of proficiency in Preliminary General Education may, in the opinion of the Council, be properly accepted by the licensing authorities under the Medical Act, be amended by omission of its Part II.: this amendment to take effect on and from the 1st of January next: and that notice be forthwith given to each licensing authority that, after the end of the present year, the examinations mentioned in Part II. of the aforesaid List will not be regarded by this Council as satisfactory for the purposes of the Medical Act." He said the object of the Council was as far as possible to secure that all who came into the profession should be well-educated gentlemen, and that the test should be applied in the same way as among other classes of society. A man who entered the medical profession should be able to mix as an equal with other educated persons. Of course that did not mean that every one should be an M.A. Grades of education must be recognised; but what was required was a standard which, so far as it went, should be applicable to all classes. To secure that object the test ought to be applied, not by medical authorities, nor by boards under medical influence, but by bodies generally conversant distinctively and professedly with common school education. He wanted the standard to be as high as could fairly be expected, and that whenever it was fixed by the Council it should be strictly enforced. Would that be done by the professional bodies? His own opinion was that it could not be enforced. The question was not what amount of Latin and algebra and geography, and other subjects, was necessary to make a member of the Royal College of Surgeons of England, Scotland, or Ireland, but what amount of education would make a well-educated gentleman; and the fear was that if the test were in the hands of the medical authorities it would be applied in too special a sense. From first to last the Council had held but one language on this subject. When first the preliminary examinations were instituted they had to recognise an absence of common examining boards, and therefore, provisionally, certain examinations by the medical bodies were accepted. It was understood that that arrangement was exceptional; it was simply agreed to for want of a better. In 1877 very decided action was taken, chiefly on the motion of Dr. Humphry, who compiled the report of the Executive Committee on the answers received from various licensing bodies. Upon the report the subject again came under the consideration of the Council, and it was decided that it was desirable that the examinations in general education should be left to the national educational bodies. In 1879 the subject was submitted to the several branch councils, the result to be brought before the Council at the present meeting. The report of the Branch Council for England contained this very important sentence: "They do not believe that the preliminary examinations will ever commend themselves to the confidence of the profession or the public till they cease to be conducted or controlled by medical corporations or medical faculties at the universities." The matter was now brought up for decision, the Council having before them the reports of the branch councils. It was farcical to keep on repeating to the educational public that they recommended things to be done at some indefinite

future day. So many years had passed since the Council first decided upon this subject, and so many non-professional examining institutions that could be trusted had sprung up, that he thought the time had now arrived for closing the question. As regarded the terms of his resolution, he wished to point out that it was not, and could not, be imperative. Those who read it carefully would see that it only put in an unambiguous form what he believed to be the decided wish of the Council. They should cease to give to what they considered a bad system the sort of sanction which was implied by continuing the Part II. of their Recommendations. They had gone on long enough. Other institutions had been established which would fulfil all the purposes, and now was the time when the Council might distinctly say that the old system could no longer be considered satisfactory. Of course the motion would not have the force of law, but it would have the weight that the opinion of the majority of the Council always had with the minority. Those who believed the existing system to be wrong were at present conniving at its continuance. The Council ought not to speak with two voices; there ought to be no uncertainty about their views. It was not a question whether or not the examinations at particular institutions were well conducted, but it was a question of the tendency of the system, and from first to last it had been the opinion of the Council that that tendency was bad. He now asked them to pronounce an unmistakable opinion. In one sense such a vote would be obligatory, for he believed that every one at the table would feel that an honest, large, clear majority in favour of what had throughout been the policy of the Council ought to be deferred to. It was not an attempt to exercise any improper control, but only an endeavour to bring the absolutely unquestionable opinion of the Council to bear on the continuance of the present system.

Dr. STORRAR seconded the motion.

Mr. MACNAMARA said it had long been the dream of his life to see the day when everyone entering the ranks of the profession should be possessed of a degree in arts of some university, for that would be the true way of raising the standard of the profession; but in the present condition of public wants he felt that that desire was Utopian. One of the reasons why Mr. Simon wished to take away the examination in arts from the corporations was that he felt that the corporations were influenced in their verdicts by their desire to secure the students from their professional ranks. Were not the universities open to the same charge? The two universities in Ireland boasted of their large classes. But on behalf of the corporations he repudiated the charge, as he was sure the representatives of the universities would do. The College of Surgeons in Ireland held examinations in arts, and he believed the examination to be as efficient as the Council could deem it desirable at present to require from students; and to prove that that college could not be in the slightest degree influenced by the desire to swell their medical student list he would mention that the examiners did not live near any medical school. They came to Dublin from provincial towns to conduct the examinations. How then could they be influenced by the sordid wish to swell the medical classes, with which they had no connexion whatever? It was now proposed to deprive the bodies of their chartered right by a recommendation of the Council, and his college, for one, would challenge the Council to go before the Privy Council and prove that that college was incompetent to perform its duty. The passing of the resolution would do a great injustice to the students in Dublin. For submitting themselves to the public entrance examination at the University of Dublin they would have to pay £16 each, instead of one guinea, which they now paid at the College of Surgeons. The Queen's University occupied a lofty position from the education it gave its students, but in order to pass the entrance examination they would have to go to Galway, Cork, or Belfast. Mr. Simon wanted the Council to settle the question now, but it was utterly impossible that it could be settled so far as the College of Surgeons was concerned, and he implored the Council not to pass recommendations that they knew would be treated with the most thorough contempt. They were all anxious to respect the recommendations. The College of Physicians in England and the College of Physicians in Ireland had already adopted the suggestion of the Council, and no longer conducted preliminary examinations. The College of Surgeons of England had taken the matter into their serious consideration and

had not decided against it; they were on the whole in favour of it, but at present they saw difficulties in the way of carrying out the recommendation. If the Council passed such a resolution as Mr. Simon had proposed, he feared that they would interfere with the progress of that very action which they desired, and it was not unlikely that it would be resented by the College of Surgeons of England. In such a matter they ought to proceed carefully, quietly, and slowly. The principle of the resolution he thoroughly assented to, but its wisdom he greatly questioned. The result of passing it would be that the Council would not admit upon its register the examinations of these bodies, though they had no power to prevent them; and if he would go there and make a report to the Council on what he saw, he would certainly not condemn the examinations. It might be that in a short time the Irish bodies might be in a position to carry out the recommendation of the Council, when they saw how the Board of Intermediate Education worked, but it had only just been started. The College of Surgeons was quite anxious to get rid of these examinations, for they were inconvenient, but it was utterly impossible for them to discharge their duty at present without them.

Dr. HUMPHRY said his own feeling was that, as a matter of principle, it was desirable that these examinations should be left to the great national educational and examining bodies. The universities, with scarcely an exception, recommended that that principle should be carried out; but if something was recommended by the Medical Council which was thoroughly impracticable what could the College of Surgeons do but implore to be brought before the Privy Council, and then probably the Medical Council would not be quite satisfied with the result. Mr. Simon said that the Council believed the present system to be bad, but he altogether protested against the statement. What grounds had they for believing so? It was all very well for a lot of gentlemen sitting around that table to say they believed so and so; but the Council had a duty imposed upon them which they had neglected to perform. If they visited the examinations they would be in a position to say whether they believed them to be good or not; but until then they were not justified in saying that they were bad. He was sure that the Irish members would be charmed to see Mr. Simon in Dublin. When the students' certificates came up for registration, either the Council would accept them, and so act in opposition to their own resolutions, or the registration would become a thing of naught. There was no likelihood of the Privy Council confirming their view if they appealed to it, for the Medical Council was only a Council of medical education and registration. He very much doubted whether the Medical Act gave them any power in the matter of general education, and in his opinion they would act most unwisely, and probably counteract the very end they had in view, if they passed such a threatening resolution as was now proposed.

Mr. TURNER said he entirely coincided with the views expressed by Dr. Humphry; and although he would like to see these examinations in the hands of the national educational examining bodies, he thought the time had not arrived for passing such a resolution as that which Mr. Simon had proposed. The Council should trust to the powers of moral suasion, and not enact such a peremptory resolution as was now submitted to them. Mr. Simon had not sufficiently taken into consideration that the Council had no power whatever to insist upon the registration of medical students, and there was nothing to prevent any corporate body admitting to its examinations a student who was not registered.

Dr. BANKS said he quite agreed that the examination in Arts should be conducted by men who were daily conversant with the subjects in which they examined, but at the same time he thought that the Council should confine itself to what Mr. Turner had called "moral suasion."

Dr. WOOD said that the different licensing bodies had to so large an extent adopted the various recommendations which the Council had passed, that when they made a strong objection in any single case the Council ought to hesitate before they applied coercion. The result of the present resolution would be to disfranchise the Royal College of Surgeons of England, the Apothecaries' Society of London, the Royal College of Physicians of Edinburgh, the Royal College of Surgeons of Edinburgh, the Faculty of Physicians and Surgeons of Glasgow, the Royal College of Surgeons of Ireland, and the Apothecaries' Hall of Ireland. Considering that those bodies had been so willing to act according to the recom-

mendations of the Council in times past, he did not think anything would be gained by putting them in hostility to the Council. The proper way to coerce them would be to call upon them to desist from the examinations, and if they refused to do so to appeal to the Privy Council. He was sure that the Scotch members were quite willing that Mr. Simon should come to Edinburgh and report upon the preliminary examinations there.

Dr. ROLLESTON said it appeared to him that the licensing bodies had already put themselves into a position of hostility against the Council, because for the last nine or ten years the Council had been recommending what was now proposed, and the bodies had not adopted it. He thought it would be better to enlarge the time to January, 1882. It was not the proper business of the Council to deal with general literary subjects, and they could not do so without being suspected; and the present system put the corporations in a position of temptation.

Dr. PITMAN said that the majority of the Council had hitherto only expressed their opinion that it was desirable that the examinations should be left to the universities; but what was desirable and what was possible were two different things. It was not possible to carry out what Mr. Simon proposed. The consequence of adopting the resolution would be that the bodies which objected would continue to conduct their examinations in general education, and the students would not be registered by the Medical Council, but when they received their qualification to practise they could not be refused.

Sir JAMES PAGET thought that a large portion of the time of the Council had been wasted in accusations and defences. In his opinion the motion was simply impracticable, and as indiscreet as it was impracticable. The wishes of the Council were being complied with everywhere, and it was absolutely untrue to say that there was anything like a general opposition in the College of Surgeons to the Medical Council. If the resolution was agreed to, what was to be done with the 600 or 700 students who came up to the College of Surgeons for their preliminary examination every year? The whole profession was at one upon the view that the preliminary examination should be gradually improved, and as time went on entrusted to bodies which were not engaged on professional subjects; but if anything could obstruct the course of things in the College of Surgeons it would be such a mandatory resolution as that which was now before the Council.

Dr. STORRAR said, though he had seconded the motion he would recommend Mr. Simon to withdraw it after what had been said by Dr. Humphry and Sir James Paget.

After a very brief discussion, Mr. Simon expressed his willingness to withdraw the motion; but as Dr. Wood objected to the withdrawal, it was put to the vote, and the permission to withdraw was given by a considerable majority.

On the motion of Mr. TEALE, the Council resolved to instruct the Executive Committee to consult an expert with regard to improving the ventilation of the room in which the Council met.

The Council then adjourned.

Friday, July 16th.

At this the last meeting of the Council

Mr. TURNER asked the President if he could furnish the Council with information why the Navy Medical Department had ceased to furnish a statement of the results of the examinations for admission to the Medical Department of the Navy.

The PRESIDENT said he had received a letter from the First Lord of the Admiralty stating that he could not find that the Medical Council had asked the Admiralty to furnish the information, but there was not the slightest objection to their being furnished with the same information as was given by the Army Department.

Dr. HAUGHTON asked the President to take into his consideration the propriety of holding the usual annual meeting of the General Medical Council during the Easter recess.

The PRESIDENT replied that care was always taken to ascertain what time would be most convenient for the Council to meet. He had been told by more than one member of the Council that it would be very desirable to have a fixed time for the meeting of the Council, but in that opinion he could not concur. Every care would be taken to ascertain what was the most convenient time, and to

that end it was necessary to obtain information from various parts of the country with regard to the state of business.

Mr. MACNAMARA asked the President whether he could communicate to the Council the names of such of the authorities mentioned in Schedule A to the Medical Act as accept, *ad eundem*, either in whole or in part, the "previous medical examinations" conducted by other bodies, and, if so, whether he would be good enough to give the Council the information, and to state in each case to what extent the acceptance goes.

The PRESIDENT said there was no information in the office which enabled him to answer the question.

A communication was received from the Royal College of Surgeons in Ireland in regard to Mr. John Hamilton stating that that gentleman's diploma as licentiate in dental surgery had been cancelled. A report was also received from the Dental Committee with reference to the case of Mr. Hamilton, upon which a motion was submitted from the chair to the effect that the qualification of licentiate in dental surgery of the Royal College of Surgeons in Ireland appended to the name of Mr. Hamilton in the Dental Register be erased, and the motion was unanimously adopted.

Mr. MACNAMARA proposed and Dr. HAUGHTON seconded the motion, that Mr. Hamilton's name should be removed from the Register; but it was pointed out by the President that that course could not be adopted without previous inquiry, and the motion was accordingly withdrawn.

It was then resolved, on the motion of Dr. A. Wood, that the case of Mr. Hamilton be referred for inquiry as to the facts to the Dental Committee.

Dr. STORRAR said that there were many cases referred to the Dental Committee, and he thought it would appear that many of the persons concerned richly deserved to be struck off the Register; he therefore suggested that the Council should meet again on dental business before the end of the year, so that the names in question might not appear in the Register for 1881.

Mr. MACNAMARA moved, "That all such bodies the preliminary examinations of which cannot be visited by this Council, be removed from the list of bodies receiving its sanction." There were on the list seventy-two different and distinct examining boards, the testimonials of which were recommended by the Council to be of service, but he strongly suspected the only knowledge of these examining boards on the part of members of Council was derived from hearsay. The object of a preliminary examination was to secure that a medical man should have such education in general and polite literature that he should be able to act the part of a gentleman in the course of his profession. That would, of course, include a thorough knowledge of English, and he did not believe that was given in some of the foreign educational bodies. Even if the student had passed such an examination it could be no great hardship to ask him to pass a second examination before one of the English examining bodies.

Dr. HAUGHTON seconded the motion. No doubt that some of the bodies in the list gave a thoroughly trustworthy examination, but many of them ought to be removed.

Dr. STORRAR asked Mr. Macnamara to withdraw the motion for the present session. He had himself looked over the list, and, having regard to the slight knowledge possessed by the Council of many of the bodies, he thought it might be advisable to sweep away the list altogether, and leave it to the Branch Councils of the three kingdoms to decide upon the admission of cases.

The motion was then withdrawn.

Mr. TURNER moved, "That the 'Gymnasial Abiturienten Examen' in Germany, and the corresponding Examinations in other Continental countries, required for admission to their respective universities, be accepted as qualifying for registration as a medical student." Mr. Turner explained that this was in reality the entrance examination to the German universities. It included a thorough knowledge of German and Latin; a sufficient knowledge of Greek to enable the student to read any author in prose or verse without preparation; a general knowledge of history; French, mathematics, geometry, algebra, the elements of natural science, and the elements of logic. These subjects were compulsory, and altogether this examination was on an infinitely higher platform than the preliminary examination which the Medical Council during the present session had considered all that was necessary for entrance to the study of the profession in this country.

Dr. ROLLESTON seconded the resolution, which was agreed to.

Dr. FERGUS moved, "That the following additions be made to the Council's Standing Orders or Recommendations:—1. During the month of January in each year, the examining bodies which are recognised by the General Medical Council as capable of giving certificates of proficiency in the subjects required for preliminary examination shall make a return to the General Council according to a prescribed form, stating the number of the candidates who, in the preceding year, have passed the respective examinations of such bodies, and the number of those who have been rejected at such examinations. 2. All preliminary examinations shall be by written papers, and the answers shall be regularly numbered and preserved by each body for at least two years. 3. The General Medical Council shall from time to time request that certain of the papers, both passes and rejections, shall be forwarded to its office, there to be examined either by members of Council, officials of that body, or by gentlemen appointed by the Council, or its Executive Committee. If the examiners find that there are 'cases in which decided ignorance in general education has been displayed by candidates' (Minutes, vol. xiv., p. 142) who have passed their preliminary examination, such cases shall be reported to the General Medical Council or its Executive Committee, either of which shall intimate the fact to the examining body, and request more attention in future. If laxity is persisted in, the General Medical Council shall 'represent the body' to the Privy Council. 4. A degree, either in arts or science, granted by a university or a licensing body recognised by the Council, shall be held a sufficient qualification as regards the subjects in which the holder of the degree has been examined. Subjects not covered by the degree must be passed before the person can be registered as a medical student." He said that in 1877 the Council had passed resolutions on the subject, but there had been no outcome from them and they had remained a dead letter. The bodies had not sent the answers required, possibly because no remedy had been suggested for the evil that was pointed out. With a view of providing such a remedy, he proposed the resolutions of which he had given notice.

Dr. PETTIGREW seconded the motion.

Dr. PITMAN thought that the licensing bodies would be offended if the Council resolved that they "shall make" the required returns.

Dr. FERGUS said he would alter the words to "be requested to make."

Dr. STORRAR pointed out that the London University would be unable to meet the proposed requirements, as it did not know what percentage of those who passed its matriculation passed to the study of medicine.

Dr. FERGUS said he was willing to withdraw his motion and bring it forward next session.

Dr. HUMPHRY hoped that the proposal would not again be brought forward, as it was utterly impracticable.

After a short conversation the motion was withdrawn.

Dr. HAUGHTON moved, "That the General Medical Council are of opinion that the first medical examination should include an examination in physics, meaning thereby the elements of heat, electricity, and magnetism," but afterwards consented to refer it to the consideration of a committee.

Mr. MACNAMARA moved, "That a Pharmacopœia Committee be appointed, with the view of considering and of reporting to this Council how best any future edition of the British Pharmacopœia may be brought up to the scientific standard of the present day." He said he did not wish to say a word in disparagement of the British Pharmacopœia. It was published thirteen years ago, and it was no condemnation of the work to say that it was not up to the scientific standard of the present day. Its nomenclature was behind the times, and was not to be found in any modern work on chemistry. There were numerous omissions, including antonine lozenges, chloride of barium, chloride of methylene, seidlitz powders, &c., and there were also many errors in the work. He thought that with a view of keeping the work up to the required standard, a Pharmacopœia Committee should be appointed, and should sit *en permanence* and watch the progress of science.

Dr. A. SMITH seconded the motion.

Dr. A. WOOD pointed out that there was a Pharmacopœia Committee already in existence, of which Dr. Quain was chairman, and said it would be the duty of that committee to consider what would be required for the next edition of

the work. He thought it would be dangerous to introduce changes too often, and he hoped that the Committee would not be in a hurry to bring out a new edition.

Dr. QUAIN said the Pharmacopœia Committee had not met for some time, as there had been nothing for it to do. With regard to the omissions referred to, it was impossible to please everyone; and what one person desired to be inserted, another was most anxious should be excluded. No doubt there had of late been a change of nomenclature, but that was no reason why *materia medica* and pharmaceutical chemistry should follow the fantasies of scientific chemistry. The subject would have to be considered by the Committee some time hence, but he saw no necessity for the passing of Mr. Macnamara's resolution.

Sir JAMES PAGET said it was a little singular to propose that a "future" edition of the Pharmacopœia should be up to the scientific standard of the "present" day.

Mr. MACNAMARA withdrew his resolution.

A communication was read from the Carmichael College of Medicine and Surgery, Dublin, in which it was stated that at the request of some of the students courses of evening lectures had been established. The letter stated that the action of the college "has been called in question by the Council of the Royal College of Surgeons in Ireland, and it has been stated that the General Medical Council would not sanction the course they have adopted. The directors have no wish to oppose the College of Surgeons in the matter. At the same time they cannot but feel that the laying down of any limits within which lectures must be given is an interference which is hardly justifiable, especially when the sole object of the directors was to afford the benefits of the lecture system to those students who, on their own showing, cannot otherwise obtain *bona-fide* certificates. It has been stated that men in business ought not to be encouraged to become medical students, and the authority of the General Medical Council, in recommending that four years should be spent exclusively in the study of medicine, has been urged in support of this view. In both statements the directors most fully concur; but they fail to see, as men in business are permitted to be medical students, that it is not a great deal better for them to have the opportunity of gaining such knowledge as the directors believe can only be obtained from lectures than that they should not. Under these circumstances the directors are anxious to know the opinion of the General Medical Council on the point; and it may be added they would only be too glad to retire from a position imposing so much personal inconvenience on their lecturers, should the Council consider the course they have taken undesirable." The Royal College of Surgeons in Ireland passed the following resolution on October 30th, 1879:—"That in the opinion of this Council the system about to be introduced in two of the Dublin schools of medicine (as stated in the public advertisements) of giving courses of lectures late in the evening, and at night, in addition to those given during the day, is objectionable, and should not be put in practice."

Dr. HAUGHTON moved, and Dr. BANKS seconded, "That in answer to the foregoing letter from the Directors of the Carmichael College of Medicine and Surgery (of date November 5th, 1879), the General Medical Council do not desire to express an opinion as to the hours of the day during which medical lectures should be delivered."

Dr. ROLLESTON moved as an amendment, "That this Council expresses its approval of the resolution arrived at by the Royal College of Surgeons on this subject."

Mr. SIMON opposed the amendment. He said the Council could not possibly introduce a new law, that lectures were not to be tolerated which were delivered at night. It was a matter in which they had no right to interfere.

The amendment was negatived, and the motion adopted.

The following communications in regard to certificates of attendance on lectures were read:—

(a) Resolution passed by the General Council on July 19th, 1879:—"That the Branch Council for Ireland have its attention drawn to a statement made by a member of this Council, to the effect that certificates of attendance have been issued in a Dublin school to students who have not given such attendance, and that the Branch Council be requested to inquire into this matter, and to report thereon to this Council at its next meeting." (b) Letter from the Irish Branch Council, referred to the General Council by the Executive Committee:—

35, Dawson-street, Dublin, March 11, 1880.

Sir,—The Branch Medical Council for Ireland have had before them

the resolution of the General Medical Council which was communicated to them in your letter of July 22nd last, viz.:—

"That the Branch Council for Ireland have its attention drawn to a statement made by a member of this Council to the effect that certificates of attendance have been issued in a Dublin School to students who have not given such attendance, and that the Branch Council be requested to inquire into this matter, and report thereon to this Council at its next meeting."

And having carefully considered the same, adopted the report, of which the enclosed is a copy.

Yours faithfully,

W. J. C. MILLER, Esq.

W. E. STEELE.

Dr. HAUGHTON said the resolution of which he had given notice was necessary for his own vindication, as he was the member of Council referred to. When the communication from the General Council was read to the Irish Branch Council they reported that they were not able to throw any light on the case, and a resolution was passed to address letters to the secretaries of the several schools and hospitals inquiring what precautions had been adopted to insure the *bona-fides* of certificates of attendance issued by them to their several students. After referring at some length to the answers received from the several schools and hospitals, and commenting on their unsatisfactory character, Dr. Haughton moved the following resolution:—"The General Medical Council are of opinion that no medical authority should receive a certificate of attendance upon lectures or hospitals, unless such certificate state the actual number of attendances made by the holder, and the total possible number of attendances."

Mr. TURNER seconded the motion.

Dr. ROLLESTON opposed the motion on the ground that the Council could only control the examinations and not the certificates. If their examinations were real and trustworthy it was unnecessary to take the number of precautions which the postulation of bodily attendance would involve.

Sir J. PAGET thought the Council would be drifting back if the chief thing they required for the medical education of the student was his bodily attendance at lectures. The Royal College of Surgeons of England had certainly outlived that. They no longer required that the precise number of lectures personally attended by the student should be set down. There were many things done in the schools now which they considered very far better than an absolute rigid numerical attendance at lectures. Students were carefully watched, and their certificate of attendance was on the responsibility of their teachers. They did not think it right to say a student should attend a certain percentage of lectures, but they did not sign certificates of attendance at all, though the man might have been there every day, unless he passed such an examination as induced them to believe that he had made good use of his time. If a student had attended every day, and had not passed his examination, they could stand the test of law to say whether they should sign his certificate or not. That was a far better system than the record of the number of attendances at lectures or demonstrations of any kind. He protested against the idea that because there were a certain number of dishonest persons in Dublin therefore all honest men everywhere else were to be placed under regulations which were grievously burdensome, and very mischievous.

Dr. HUMPHRY also opposed the motion, which, on being put to the Council, was negatived—5 voting for it, and 9 against.

MEDICAL LEGISLATION.

Mr. SIMON proposed the following motion, "That the Council beg leave to bring under the particular notice of Her Majesty's Government the position in which the question of legislation for the medical profession was left standing at the time when the late Government retired from office, and respectfully submit to Her Majesty's Government that, in the opinion of the Council, it is essential for those important public interests which are involved in the good ordering of the medical profession that Her Majesty's Government should at their earliest opportunity consider and determine the course which they will advise the Legislature to follow, with a view to terminate a period of indecision and unsettlement, which is most injurious to the progress of medical education; and that the President be requested to give effect to this resolution."

Dr. QUAIN seconded the motion.

Dr. ANDREW WOOD moved the previous question. At this period of the session, and considering that the Government had already told them that they were taking the matter into consideration, it was far better to leave the matter where it was.

Dr. PYLE seconded the amendment.

Mr. SIMON said he had thought the resolution would be passed without comment, but seeing that it was opposed it was necessary that he should speak to the point. As the Council had resolved to go into detailed business he felt it his duty to give his best attention and labour to every question brought before it; but he had felt most strongly that they were conducting business, in the present state of the great questions affecting their profession, at so serious a disadvantage that he should hardly use too strong an expression if he spoke of it as waste of time. Prospective regulations such as they were considering, or prospective recommendations, could hardly be made by them with any force. Except for a political accident, with which the Council had nothing to do, the Committee of the House of Commons would before now have made recommendations to the House on proposals affecting the whole work of the Council—proposals for a variety of changes in the working provisions of the Medical Act, and proposals not originating there, for a change in the constitution of the Council. He appealed to every gentleman who sat at that Council as the representative of a teaching and licensing authority whether that state of things had or had not acted most prejudicially to the medical profession? The College of Surgeons had been seriously obstructed in the consideration of reforms in the arrangements of that institution by the knowledge that these great questions were being Parliamentarily agitated; and that, he was persuaded, had been the case in every one of the medical institutions of the country. A discussion was also going on in Parliament on the constitution of the Council, and that question had been before the Select Committee. That Committee, appointed at the instance of Dr. Andrew Wood, had sat for two years, and its final report, by an accident, had not been made. Was it not the duty of the Council to ask to have an answer on the questions which had been put before the Select Committee, so as to provide a termination of this state of trouble and uncertainty? The Select Committee, if it had continued its sitting, would doubtless long before now have reported. It was unable to do so, and was obliged to send in a provisional report. Its evidence, however, was almost all collected, and it might be that Government would think the evidence given was enough to justify action thereupon. He urged, therefore, that the Council should beseech the Government to terminate the present state of uncertainty and suspense. The course taken by Dr. Wood was part of a consistent opposition which he had offered to a policy accepted by the majority of the Council. It was not, however, as an advocate of the system of conjoint boards that he brought forward this resolution. He was an advocate of that system, and hoped it would be adopted, and that the Council would stand to its colours in the matter; but his reason for bringing forward the present motion was because the Council was paralysed by the presence of uncertainty. ("No, no.") He said "Yes." There might be a pretence of business, but it could not be real business, and could not exercise its legitimate influence while questions about its constitution remained in suspense.

Dr. QUAIN said the reason which specially led him to second the resolution was because the Council remained under the gravest accusations made before Parliament, and it was their duty to ask the Government to continue its inquiries, and to remove those accusations from them. If they remained quiet under those grave charges it would be taken that they were admitting their guilt.

Mr. MACNAMARA supported the motion as being a more straightforward and courageous proceeding than moving what he might be excused for calling, he hoped the expression was not unparliamentary, a cowardly resolution such as the "previous question."

The PRESIDENT said he thought the expression was objectionable.

Mr. MACNAMARA said he would withdraw it, but might he say a resolution which was not characterised by much courage? Unquestionably the Council ought to say one thing or the other. There was no question about this fact that grave disapprobation was expressed in public upon the working of the Council, about its constitution, and the way in which examinations were conducted, and they ought to be in a position either to stand or fall by those accusations. The resolution proposed by Mr. Simon would give them an opportunity of justifying themselves, and would put an end to the present state of uncertainty. The Council would never have the influence it ought to have until an end was put to

this agitation, and he could not see in what other way it was to be done than by requesting the Government to proceed in the matter.

Dr. ROLLESTON said that the principle on which he could not vote for the motion was that, of all evils in Church and State, and everywhere else, Government interference seemed to be the very greatest. Pending legislation, he advised the Council to do the best it could, and to show that it was doing its duty. Now that the Scotch gentlemen had destroyed the conjoint scheme, for which he would never forgive them, let them try to do their duty by going round and visiting, which was the proper thing to do. Let them show, at all events, that they had vitality. As to the grave disapprobation outside, he did not care one farthing for it so long as he knew he was doing his duty.

Dr. PYLE said he did not think the motion was at all called for. No one was more anxious than himself that the Select Committee should be reappointed, because many things had been stated in that Committee with regard to the University of Durham which were incorrect, and as to which they were to have had an opportunity of reply. It would be better, however, for the Council to leave the matter in the hands of Government, and to give no expression of opinion there.

Dr. HAUGHTON supported the motion on the ground that though it was all very well to speak of being independent of the Government, there were things which the Council could not do without the help of an Act of Parliament. There was a glaring defect in the legislation of 1858, and if they expressed an opinion to the Government that steps should be taken to reform this glaring deficiency, and to require that everyone should possess a knowledge of all three branches of the profession before registration, they would only have done their duty.

The PRESIDENT said the statement made by Mr. Mundella on the 27th of May was that during the coming session the whole question would be considered by the Government.

Dr. HUMPHRY said he should vote against Mr. Simon's motion, and for this reason, that he would rather bear the ills he had than fly to those he knew not of. It was not a question of asking for any particular legislation or of giving any opinion to the Government with regard to any particular subject, but it was a question broadly and plainly of asking for legislation, and he was not prepared to do that. It was not wise for the Council to be dabbling in this matter of legislation unless it was called upon; they had had too much of it already. Their time had already been wasted, and their attention diverted from their real work. He should be very glad if there was no legislation at all, and the Council was left to go on armed with the powers it had in its own proper way. As to the Council carrying weight, it would carry weight if it did its duty, and its resolutions were wise and just. He regretted that the conjoint scheme was not carried further, and he laid it to the charge of England that it was not done. England had been to blame not to do that which it thought right in spite of legislation, in spite of Scotland, and in spite of Ireland. He felt that if England would do its duty Scotland would do likewise, and a good work would be carried on.

Mr. SIMON, in replying, said it was preposterous to pretend now to a horror of Government interference, it having been at the instance of the Council that the Government had acted in the matter. He (Mr. Simon) was not asking for legislation, but for a settlement. It might be that on inquiry the Government would not think it desirable to legislate. All that he asked for was for some decision which would put an end to their present indeterminate state. But it did not depend on the Council whether Parliament would be asked to legislate; private Bills would be introduced next session if the Council took no action, and they would then be thrown into a new unsettlement.

The amendment was then put, and carried by 12 votes against 7.

The following notice of motion having been placed on the programme:—"To submit to the General Council a communication from the Apothecaries' Society of London, relative to certain evidence which has been given before the House of Commons' Select Committee on the Medical Act (1858) Amendment Bill,"

Mr. BRADFORD moved that the communication be read.

Dr. PYLE seconded the motion.

Dr. PITMAN asked whether there was not a discretion in the President to withhold such information as he considered did not relate to the matter of business of the Council. The

letter referred to some evidence that had been given before the Select Committee against the Society of Apothecaries, and was not in any way connected with the Council. He therefore moved as an amendment that, "Inasmuch as the evidence given before the Select Committee of the House of Commons in 1879, on the Medical Act (1858) Amendment Bill, was not given by any one under the authority of, or on behalf of, the General Medical Council, it would be improper for the Council to receive any statement in correction of that evidence."

Dr. ROLLESTON seconded the amendment.

The PRESIDENT said that, acting on his discretion, he had not put the letter on the programme, because it entered into the debateable question of the truth or non-truth of charges brought not at that Board, but before the House of Commons. Of course the document was in the registrar's office, and could be seen at any moment.

Sir JAMES PAGET said from what he knew of the letter it would be most indiscreet to read it; it would evoke at once answers from at least five persons.

The PRESIDENT said he should certainly suggest if the letter was read that strangers should withdraw.

Mr. BRADFORD said as it seemed to be the wish of the Council he would withdraw his motion.

On the motion of Dr. ANDREW WOOD, seconded by Sir JAMES PAGET, it was resolved, "That the Council resume the visitation of examinations, and carry it on systematically from year to year," and also, on the motion of Dr. HUMPHRY, seconded by Dr. ROLLESTON, "That it be a direction to the Executive Committee to instruct visitors to inquire into the causes of the rejections that appear in the annual returns."

The thanks, &c., of the Council having been accorded by acclamation to the President for his efficient services during the present session of the Council, and also to Dr. Andrew Wood, the Chairman of the Business Committee, the proceedings of the session terminated.

Analytical Records.

CONFECTION OF FRESH BAEI FRUIT.

(SQUIRE, OXFORD-STREET.)

THE fruit of the Bael (*Egle Marmelos*), which enjoys some reputation in India for the treatment of dysentery, has lately been used to some extent in England, and we have heard of more than one case where it has apparently been beneficial. Messrs. Squire's preparation is all that can be wished, as it is bright and agreeable in appearance and pleasant in taste.

HYPOPHOSPHINE.

(GALE & Co., BOUVERIE-STREET, LONDON.)

Cod-liver oil in emulsion, with the hypophosphites of iron, lime, soda, and magnesia. The taste is nauseous, but might, we think, be disguised.

MACKAY'S QUINQUININE.

(MACKAY, MACKAY, & Co., BOUVERIE-STREET.)

Contains the alkaloids of the bark in a colourless and easily soluble state. It is of course much cheaper than pure quinine, and is in some cases equally efficacious. There are, indeed, some patients who derive more benefit from Peruvian bark than from quinine; for such patients the use of quinquinine is obvious.

VAN ABBOTT'S PREPARATIONS FOR DIABETICS, ETC.

(VAN ABBOTT, PRINCE'S-STREET, CAVENDISH-SQUARE.)

1. *Real Turtle, Mock Turtle, and Ox-tail Soups*. — Free from starch, and as free as possible from fat and seasoning; excellent in quality and flavour.

2. *Extract of Vegetables, for flavouring Extract of Meat, Soups, Gravies, Hashes, &c.* — A wonderfully well-flavoured and powerful essence. A few drops give quite an appetising taste to beef-tea, broth, &c.

3. *Chocolate with Liebig's Extractum Carnis*. — A French preparation, sold in cakes, sticks, and croquets. It is made

without sugar, and will be thought unpleasant in taste by many. Of course it is highly nutritious and stimulating.

ALLEN AND HANBURY'S MALTED FARINACEOUS FOOD.

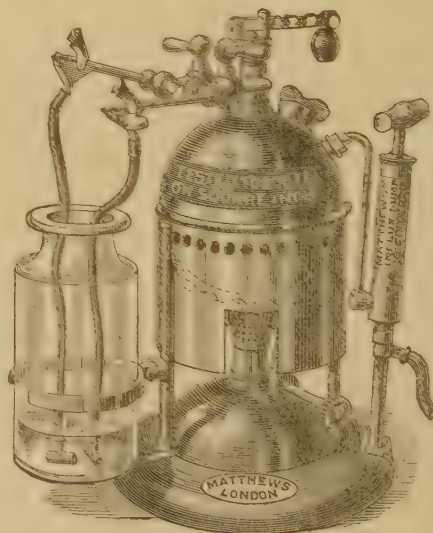
(ALLEN & HANBURY, PLOUGH-COURT.)

This is introduced as an improved form of Liebig's well-known food. It is excellent in quality and flavour, is perfectly free from grit, can be made up in a few minutes, and requires no straining. Children will be sure to thrive upon it.

New Invention.

A STEAM ANTISEPTIC SPRAY-PRODUCER WITH INFLUX-PUMP.

SOME months ago we were able to speak in favourable terms of a steam spray-producer manufactured by Messrs. Matthews Brothers, of 27, Carey-street, W.C. (See THE LANCET, Oct. 25th, 1879, p. 629.) These makers have recently still further improved their apparatus by attaching to the boiler a powerful influx-pump for the purpose of supplying water to the boiler. The advantages of this arrangement are obvious. The spray may be started within two minutes, and then kept up for an indefinite time. At first, a small quantity of water, not more than a few ounces, may be pumped into the boiler, and a good jet of spray will be obtained within two minutes. When the steam has once been raised, more water may be injected at short intervals by means of the pump, without stopping the spray. Both the spirit in the lamp and the water in the boiler may at any time be replenished without interfering in any degree with the working of the apparatus; so that, when once set a-going, very little attention is needed to keep it continuously in action for any length of time, from a few minutes to many hours, days, or even weeks, if required. The principle of the apparatus is extremely simple, and there are no dangers or practical difficulties in carrying it out.



In some experiments we made, using cold water to begin with, we obtained a large jet under 50 lb. pressure in a minute and a half; and by gradually injecting fresh water by means of the pump, the spray was kept up continuously for forty minutes, and at the end of that time the boiler contained sufficient water for a continuous spray, under 50 lb. pressure, for one hour, without further attention. This arrangement is a most satisfactory improvement in the spray-producer, and has long been a desideratum.

THE LANCET.

LONDON: SATURDAY, JULY 24, 1880.

THERE is no serious cause to regret that the items of information to be required by the Census enumerator on the 3rd of April next are essentially the same as those obtained at the last Census on the corresponding day of 1871. In order to justify an enlargement of the scope of the inquiries contained in the Census schedule, it should be conclusively proved not only that the new information would possess undoubted value, but that there would be no general objection to supply it. We have no hesitation in saying that, as regards a religious Census, an industrial Census, and a Census of health and disease, the returns would be of doubtful value, while there would be much risk that the irritation and prejudice excited by these new questionings would affect the accuracy of replies to inquiries to which the public has become accustomed at recent Censuses. Under these circumstances, we see little cause for regret that the Census schedule under the Act for 1881, now before Parliament, is essentially the same as that authorised by the Act for the last Census. *The Times* of Tuesday last contained an example of the hundred and odd purposes which many persons would endeavour to make the decennial Census enumeration serve. It was there proposed that the relationship (if any) of the parents of all persons enumerated should be ascertained and recorded. We do not pretend to say that this and a host of other items of wished-for information would be valueless; but knowing the machinery by which the Census of this populous country has to be taken, the ignorance of a very large proportion of those to be enumerated, and the important fact that the whole of this information has to be collected on a single day, we hold that it would be mischievous to complicate the inquiry. There may be good grounds for objecting to the length of time (nearly three years) which elapsed between the last Census enumeration in 1871, and the issue of the final report. It appears, however, to be lost sight of that a detailed preliminary report of the population numbers is always issued within four months of the Census, and that the fully revised and elaborated tables are issued from time to time as they are completed. That the date of this completion might be anticipated after the approaching Census there is little reason to doubt, but this is not, we fear, to be effected by the proposals of Mr. EDWIN CHADWICK, C.B., which are now being supported in the House of Lords by Earl FORTESCUE. The proposal to delegate the preparation of the Census tables to about 600 local solicitors and their clerks in different parts of England and Wales, who may happen at the time to be clerks to the Guardians and Superintendent Registrars, is impracticable. The registration district, it is true, is in a certain sense the registration unit, but for practical purposes it is only so nominally. The city of Bristol, for instance, is situated in three registration districts (Bristol, Barton Regis, and Bedminster), and, therefore, under Mr. CHADWICK'S

system, the statistics of that city would be prepared and tabulated in three parts, and under the quasi-superintendence of three different local officers. It is to be hoped that this suggestion for the local preparation of the Census tables may be withdrawn. At the same time it should not for a moment be lost sight of that the value of the Census information depends in great measure upon the promptness with which it can be rendered available. Above all, however, is the absolute necessity for uniformity in the preparation of the various tables, which could not be secured if this process were superintended by more than 600 local officers, whose interest in registration matters is, in the large proportion of cases, of the very slenderest description.

THE discovery, some years ago, by M. GRÉHANT, that carbonic oxide is one of the products of the combustion of tobacco, has led to the suggestion that the deleterious effects of tobacco-smoking are due to this substance. The suggestion seems improbable enough when we consider what powerful poisons are liberated at the same time, but the theory has seemed to M. GUSTAVE LE BON worthy of a careful experimental investigation, the facts of which are of some interest. The quantity of carbonic oxide formed was found to amount to about 800 cubic centimetres for each ten grammes of tobacco burned. One per cent. of carbonic oxide in the air breathed will cause death in twenty minutes, and its action is effected, as CLAUDE BERNARD showed, by combining with the hæmoglobin. What dose of carbonic oxide, however, without being fatal, will cause dangerous accidents? M. GRÉHANT formerly killed dogs by compelling them to breathe air which had passed through a pipe containing some grammes of tobacco in combustion, and ascertained by spectroscopic examination the quantity of carbonic acid in the blood. These observations, repeated by M. LE BON, yielded the same results as M. GRÉHANT had obtained. The air, passing through four grammes of tobacco in combustion, caused death in a quarter of an hour; clots were found in the heart, and the blood contained traces of carbonic oxide. Evidently, however, such experiments are of little value, because the air breathed is deprived of its oxygen, and the proportion of nicotin, &c., is so great that the effects cannot reasonably be ascribed to the carbonic acid. Some experiments were then made by first removing the nicotin from tobacco by the action of boiling ether and ammonia, many times repeated, and then adding to the air which passes through the burning tobacco a sufficient quantity of oxygen to replace that lost in combustion. Nevertheless, in the experiment thus performed, in fourteen minutes the dog was dead, and the spectroscopic examination of the blood showed the presence of carbonic oxide. This result was to be anticipated, for the amount of carbonic oxide produced by the combustion of the tobacco employed amounted to a fatal proportion of the air respired. But this result is scarcely applicable to the conditions met with in ordinary tobacco-smoking. To ascertain the effect of the carbonic oxide in the latter, it was necessary first to determine the minimum proportion which is deleterious, and then the quantity actually present in a smoker's most limited atmosphere. On the former point physiological researches give little information. To

decide it, M. LE BON shut himself in one of the extremely small kitchens met with in some of the Paris lodging-houses, and lighted two stoves (we presume charcoal). In this room, in spite of a chimney, it was ordinarily necessary, for safety, to have the door open. With the closed door, he remained in it until violent headache and nausea became unbearable. Then, before opening the door, he filled with air, by means of bellows, an india-rubber ball holding twenty-five litres. This was not accomplished without difficulty, for his condition had become most unpleasant. Analysis showed that the air contained only one part of carbonic oxide for 3000 parts of air. In order to produce this proportion of carbonic oxide, it would be necessary to burn 4 grammes of tobacco per cubic metre of air. In a small room—say one of a capacity of 30 cubic metres—it would be necessary to burn 125 grammes of tobacco to produce this quantity of carbonic oxide—an amount of tobacco which would be represented by 50 pipes, 25 cigars, and 250 average cigarettes. The renewal of the air by the door and windows, even if these were closed, would render the amount of tobacco needed much larger; but without considering this, it is evident that the quantity of tobacco could not be burned by the small number of persons who could be accommodated in such a room. In a compartment of a railway carriage, however, or in a closed cab, a number of smokers might be confined in a much smaller atmosphere. The renewal of the air by the imperfectly-fitting doors and windows would be, however, much greater than in the other case. The effect could only be determined by an actual experiment. Accordingly, M. LE BON and a friend entered a single-seated cab, which, when their own bulk was deducted, contained about thirty cubic feet of air. The windows of the cab were closed, and for three-quarters of an hour M. LE BON and his friend drove about, and smoked during the time seven grammes and a half (a quarter of an ounce) of tobacco. The temperature of the interior of the cab was 55° F. at the commencement of the experiment, and 71° F. at the end. As some discomfort was experienced, the observation was stopped, an india-rubber bag, holding twenty-five litres, being filled with the air. According to the quantity of tobacco burned, the air should have contained 500 cubic centimetres of carbonic oxide in each cubic metre of air; the quantity was found on analysis, however, to amount to scarcely 100 cubic centimetres—too small a quantity to produce serious inconvenience. It is thus evident that in a carriage, in spite of closed windows, there is such an extensive change of air, that the greater part of the carbonic oxide escapes. It is also certain that, even if it did not escape, long before it reached a deleterious amount the effects of the other poisons, nicotin, &c., produced by tobacco-smoking, would be much more obtrusive.

“By the permission of the Council this motion was withdrawn.” This sentence is the only indication on the smooth surface of the Minutes of a sharp passage of arms between Mr. SIMON and Dr. ANDREW WOOD, two members of the Council whom it is difficult to respect too much, but who sometimes have strangely different views of its duties and its dignity. The withdrawal of “this motion” almost as soon as it was mooted, signified recession on the part of the Council from high ground which it has taken up on several

former occasions. There are few subjects on which the Council has been more agreed than on the following proposition, which is taken from its Recommendations:—“That it is desirable that the examination in general education be left to the universities and such other bodies engaged in general education as may from time to time be approved by this Council.” Mr. SIMON, on the “penultimate” day of the late session, probably thinking that there was little to show for a week’s work, that the difference between the recommendations agreed to this year and those agreed to in former years was very much the difference between *tweedledum* and *tweedledee*, and that something in the nature of decision and progress should be shown, proposed to omit from the list of bodies giving testimonials of efficiency in general education the names of the Medical bodies which continue to grant such testimonials. In doing so he was evidently merely endeavouring to put into force the oft-repeated opinion of the Council. But he little remembered the difference between a general expression of opinion by the Council and the proposal to enforce it, and he was soon fain to retire from the fray. The great principle of requiring the national educational bodies to examine in general education, leaving the medical bodies free to complete the system of medical examinations, was not even reaffirmed. “With the permission of the Council the motion was withdrawn.”

Mr. SIMON was the proposer of two other resolutions, one carried and the other rejected, which call for some notice at our hands. As has often been the case in previous sessions, these resolutions were put far back on the programme, and had to be disposed of with more haste than was quite fit. The motion which Mr. SIMON carried was as follows:—“That, in the opinion of the Council, it is desirable that intending candidates for the medical profession should, before they enter on the purely medical curriculum, have been instructed and examined in the rudiments of natural science, physical, chemical, and biological, and that, in proportion as this can be done, the present medical curriculum and present professional examinations should be lightened of all such matters.” In explaining his views on this motion, Mr. SIMON said that this examination should be after preliminary general examination and before commencing the distinctively medical curriculum, or, at the latest, before the end of the first year, and should embrace an elementary knowledge of mechanics, solids and fluids, of heat, light, and electricity, of general chemistry, and of the constitution of plants and animals. The examination here indicated by Mr. SIMON, it will be seen, corresponds in nature very much with the Preliminary Scientific Examination of the London University, which comprises the subjects of Inorganic Chemistry, Experimental Physics, Botany and Vegetable Physiology, and Zoology, and is not to be passed before the completion of the seventeenth year. Notwithstanding the promise included in Mr. SIMON’S resolution, that in proportion as these subjects can be passed by intending candidates for the medical profession, the present medical curriculum and the present professional examinations shall be lightened of all such matters, it looks very like the imposition of a new examination, which may prove a very hindering one to intending candidates. If this is the object of it, or if Mr. SIMON agrees with Sir WILLIAM GULL that the great object of all medical examinations is to

exclude 33 per cent. of those who try to pass them, then it may be all right; but we venture to say that in the present state of general and professional education the Council would have done better to have left the institution of a Preliminary Scientific Examination alone, or to have been content with adding Zoology to the list of optional subjects. There can be no doubt as to the abstract desirableness of such an examination as Mr. SIMON foreshadows, carried even to the extent of the Preliminary Scientific Examination of the University of London. But until the Council has been much more successful than it has been in improving the general preliminary education of the candidates for the profession, it is premature to speak of imposing a new examination. It was the general opinion that if such an examination is to be carried out, it must lead to the postponement of the age at which a diploma can be granted by several years, and it is questionable whether any such change would be looked on favourably by those who have to see the ranks of the profession filled. We need not, however, be much alarmed. The Council has, in its own happy way, only referred the subject to a committee. This will have a pleasant correspondence with the licensing bodies on the subject, and report at its next meeting. Probably on the last or "penultimate" day of the session a motion may be brought forward, and possibly, by the permission of the Council, the motion will be withdrawn.

Mr. SIMON failed to carry a motion which should have had the hearty support of every member of the Council, but which was rejected by the following majority of twelve:—Sir JAMES PAGET, Mr. BRADFORD, Dr. ROLLESTON, Dr. HUMPHRY, Dr. PYLE, Dr. HALDANE, Dr. ANDREW WOOD, Dr. SCOTT ORR, Mr. TURNER, Dr. AQUILLA SMITH, Dr. LEET, and Dr. BANKS. The motion in question was one urging on Her Majesty's Government at their earliest opportunity to consider and determine the course which they will advise the Legislature to follow, with a view to terminate a period of indecision and unsettlement, which is most injurious to the progress of medical education. Mr. SIMON's motion was seconded by Dr. QUAIN, and very ably supported by Mr. MACNAMARA, the representative of the Irish College of Surgeons. Mr. SIMON never spoke with more power or dignity, and he is not given to speak without displaying both of these qualities. There can be little doubt that the Government will perceive the force of his representations and those of Dr. QUAIN, who well observed that this question was sure to be raised in Parliament, even if the Government failed to raise it. Some of the speakers did not hide their feeling of hope that the Government would find itself too busy to take notice of the subject. And this is probably the feeling of many who did not express it. They must have strange notions of what a Government owes to such a profession as ours, and to the public who are deeply interested in its efficiency. And we cannot understand how, with respect merely to the influence and dignity of the Council, they can be content to remain in their present position in Parliament—accused and not acquitted. There are some things which one Parliament owes to another, and amongst these is the amendment of the Medical Acts, from which the Government is not likely to be deterred by the self-complacency of the Medical Council.

Annotations.

"Ne quid nimis."

NAVAL MEDICAL DEPARTMENT.

EIGHT months have now elapsed since the War Office issued its warrant for the improvement of the position of the army medical officers. It has been so satisfactory in its results that there is every probability of the staff being brought up to its normal standard at the approaching competitive examination, and thus the nomination scheme will be staved off.

The navy awaits the issue of a corresponding document, of which, however, no shadow is apparent. Possibly the Admiralty may contemplate keeping the service in its present bare working order with a margin of about thirty-five officers on half-pay, and filling up the vacancies that occur in it with rejected candidates for the army. We would rather see this important branch of our profession maintaining its ancient prestige with a sprinkling of F.R.S.'s in its ranks; and, therefore, we shall hope to be able to hail, with a welcome, a liberal and comprehensive Warrant placing the naval service on its old relative superiority to the army in regard to full pay, retired pay, and good-service pensions, in respect of which the balance has been shifted by the late Army Warrant. Much is wanting on these grounds, if comparison be made of the chances of promotion to administrative ranks in the sister services, by which alone the higher scales of retirement can be reached.

THE LIABILITIES OF FOREIGN EMPLOYERS.

THE reports on the laws in force in France and Germany with regard to the legal liability of employers from a short but interesting document, prepared in order to facilitate legislation on this subject in England. We cannot, however, attempt to discuss the economical and social problems involved in the measure now before Parliament and in the laws actually extant on the Continent. What we would insist upon is the necessity of adopting more ample precautions in England so that efficient help may be forthcoming in case of accident. In France, so far back as 1604, a special degree of the Conseil du Roi had ordered that one-thirteenth part of the net proceeds of each mine should be applicable to the maintenance of one or two priests and of a surgeon, and to the purchase of healing appliances in aid of workmen who had met with accidents. In France the principle of civil liability of employers has no limit, and though special provisions have been laid down in the case of certain industries, the general law suffices to protect workmen, to insure compensation for accidents, and a pension for the wife or children in case of death. This rigour has led to the adoption of precautions unknown in this country. Thus the railway companies, responsible for the lives not only of the passengers, but of their workpeople, provide each train with a large medical chest, with splinters, bandages, and even the necessary implements for amputations, &c. Considering that railway accidents are far more frequent in England than in France, we regret that this detail could not be introduced in the report before us. It is a useful hint.

In Germany we find that the employer is, in case of bodily injury, liable to the payment of the medical expenses and of the losses which may have accrued to the injured party through his inability to earn. This regulation should result in securing efficient medical aid, which would not always be the case if the workmen were left to their own resources and devices. Indeed, there remains much to be done abroad and still more in England for the prevention of accidents and to insure better and more prompt assistance when they do occur. By increasing the liability of employers a greater

amount of intelligence will be brought to bear on the methods of prevention and of cure. Thus accidents will not be so frequent or so fatal, and that, after all, is the most important consideration.

AMATEUR STARVATION.

THERE seems to be no doubt that Dr. Tanner, of Minnesota, is honestly bent on starving himself, or going as near to doing so as circumstances permit. He has already accomplished twenty-four days of fasting, out of the forty which he has planned to complete, and as yet gives no evidence of danger. Meanwhile, the daily papers are filled with the fame of his exploits, and all the details of his irritability of temper, &c., are recorded with repulsive minuteness. It would ill become a paper with any reputation for science to take too much notice of this latest development of sensationalism. As a scientific experiment Dr. Tanner's fast ranks but little higher than the prolonged walks, swimming contests, &c., which have of late been so common. Its sole object, so far as we can learn, is to ascertain, not whether a man can live forty days without food, which has already been proved in undoubted cases, but whether Dr. Tanner can live, as he says he can, forty days without food. On the other hand, it has also been proved that death may occur at a much earlier period; and the main question is, whether Dr. Tanner will be allowed to starve beyond the point of recovery. If, as is possible, he survive the forty days, he will be an interesting case for treatment, and may run further chances of death before he can resume his normal condition. It is difficult to understand what will be gained by this experiment. No doubt it would have been of some physiological interest if careful investigation had been made as to the amount and nature of excreta, the temperature, respiration, &c.; but beyond some very crude observations on weight, pulse, and temperature, nothing of the kind seems to have been done. Indeed, *pace* the anti-vivisectionists, the same thing has been already much better done on certain of the lower animals. Experiment has shown that animals live much longer when supplied with water than without, and Dr. Tanner has already found it necessary to stay the cravings of thirst, and now takes water freely—so far departing from his earlier procedure, when he only rinsed his mouth with a measured quantity, which was again measured after having been used.

In carrying out his proposed experiment, Dr. Tanner would appear to have found plenty of people to aid and abet him, and encourage him to persevere. There is no reason to believe that he proposes to make money by it, though it would seem that he might easily do so. There have been suspicions of surreptitious supply of food, but these are now believed to be groundless. He appears to have been received with open arms by the "United States College of Physicians," whose offices are above, and their dissecting-room (*absit omen*) below the faster's reception-room. Here the faster performs his abstinence, his ablutions, and his rest, in the presence of an admiring public, and is constantly watched by physicians of the "regular," "irregular," and "eclectic" schools, in order that by no chance or design any morsel of food may reach his lips. Even his finger-nails are examined, lest he should have concealed morphia beneath them, and thus assuage the pangs of hunger; everything, in fact, is done to prevent any possibility of deception. How far this is morally justifiable is an open question. Perhaps if the faster become delirious, have convulsions, or any other sign of impending dissolution, humanity may gain the day, and attempts be made to restore him; but it is noteworthy that if this is done before the forty days the experiment will be spoiled, and it may be worth while to wait to make sure that a fatal termination is approaching. Or again, if a forty days' fast is completed, would it not be

worth while to try exactly how long he can live beyond that time without food? for it would be a pity to spoil so good an experiment, which has gone so far, without making quite sure of how much longer it may be continued. An arbitrary limit of forty days is unscientific, as a case is on record extending to fifty-eight days. An additional argument is to be found in the fact that the experiment will not be complete without a post-mortem examination. Apart from these considerations, we see little in the experiment to excite interest or approbation; its final issue will be of statistical value, and its complete record one of the most unpleasing of sensational tales. So far as can be guessed from the reports of American newspapers—not always a very trustworthy source of information—none of the more respectable or scientific of New York physicians or physiologists have taken any part in the experiment, if such it can be called; and we trust that they will discountenance it in the interest alike of science and humanity.

THE "NEWCASTLE CHRONICLE" ON MEDICAL QUALIFICATIONS.

OUR able contemporary, commenting on the recent exposures of the system of bogus diplomas, has some very important remarks on the Medical Acts and their administration, "and the successive amendments to which these Acts have been subjected with a view to greater efficiency." It is eminently desirable, our contemporary says, that those to whose care the national health is in a large measure entrusted should be strictly competent for their duties, and to this end candidates are required to pass rigorous examinations. So far true enough, but only so far, as our contemporary's correspondent "Justitia" has well said. An investigation of this subject yet further will reveal the fact that the most important amendments in the Medical Acts are unaccomplished, and waiting to be dealt with by the new Ministry. These amendments aim at reducing the harassing and injurious number of competing examining bodies, the improvement of medical education and medical examinations, and the making more easy to the public the distinction between qualified medical men and unqualified. If the *Newcastle Chronicle* will help us in procuring such amendments it will be completing "one of the most beneficent features of modern legislation."

THE BELL NUISANCE.

COMPLAININGS come from the City of what may be called the bell nuisance. This is a matter in which the sick and the sensitive have a keen interest. To healthy persons generally it may not be a source of serious annoyance, though many would, if they confessed the truth, be found to agree with Mephistopheles, in the play of "Faust"—so admirably rendered by the late Mr. Phelps,—when, stopping his ears, he exclaims, "What execrable taste some people have!" No inconsiderable proportion of the community, however, are not in such robust health as to be able to endure the clanging of church bells in a city, where the sound reverberates along the roofs of lofty houses and around chimney-stacks, reaching the ground between high and bare walls, like the noise of keys rattling in a box. In the rural districts, where the sound is softened and subdued by trees, and there are no long and confined streets to intensify the clangour, the result is different. The suffering caused to the sick by these bells is very great, and to many persons who are in health but have the misfortune to be compelled to work with "what they are pleased to call their" brains, the effect is almost maddening. It is much to be regretted that something cannot be done to mitigate this nuisance, for such it really is. Prejudice will, of course, defend the ringing and tolling of church bells in cities as elsewhere,

although the conditions are altogether different; but if the clergy are considerate as well as wise, *they* will consent to minimise instead of augmenting the stress of the evil, else there may come a time when the maledictions heaped on the practice of bell-ringing and tolling *sotto voce* will be loud and deep as the clanging that now rouses the evil spirits instead of laying them.

THE ARCIFORM FIBRES OF THE MEDULLA OBLONGATA.

M. LUYLS has made an interesting communication to the Société de Biologie on the subject of the connexions of the arciform fibres of the medulla oblongata. He maintains that they are nothing more than the terminations of the inferior cerebellar peduncles. After these have reached the lateral parts of the medulla, the fibres pass obliquely into this region, and increase its size by passing between the ascending fasciculi from the spinal cord. Some of the fibres, however, pass into the interior of the medulla, and these are the concentric fibres which form so conspicuous a feature in all transverse sections of the medulla. That part of the fibres which apparently remains on the external surface of the medulla, and extends on the restiform bodies and anterior pyramids, presents great variations in direction and terminal distribution. Some of the fibres surround the olivary bodies, and penetrate the median raphe; while others have a serpentine direction towards the pons. The conspicuous fact regarding these fibres is that, whatever be their course, all seem to decussate at the middle line, and this decussation in fact constitutes the median raphe, the significance of which has not been accurately estimated. The ultimate destination of these fibres is still uncertain. M. Luys thinks it probable that, after decussating, they enter one of the deposits of grey matter which are seen close to the raphe, and which are composed of large cells, with interlacing processes. Others probably pass to the network of cells of the olivary bodies on the side opposite to that on which they entered the medulla from the cerebellum. In support of these views, he showed sections from a case of congenital atrophy of one lobe of the cerebellum. The inferior cerebellar peduncle on that side was completely atrophied, and so also was the olivary body on the opposite side, which contrasted strikingly with the full development of the olivary body on the same side. This important observation speaks strongly for the view advanced by M. Luys, that there is an intimate connexion between the olivary bodies and the cerebellar fibres.

THE METROPOLITAN HOSPITAL SUNDAY FUND.

THE Council of this Fund is summoned for Monday next to sanction the awards recommended by the Distribution Committee. The Council will have the pleasant duty of awarding to all the institutions on their list on a higher basis than last year. We cannot but feel some satisfaction that it will have over a thousand pounds more to distribute than in the previous year. We proposed to the clergy the imitation of a provincial town, and they have made a noble beginning of such an imitation by pleading most earnestly and with great success for the Fund. It is to be hoped they will attend in good numbers on Monday and show as much interest in the distribution of the Fund as they have shown in its collection.

THE WELBECK CASES OF POISONING.

WE understand that Dr. Ballard is still pursuing his inquiry into the curious series of cases of apparent poisoning—some fatal—which occurred at the Welbeck sale. It was assumed at the inquiry of the jury that the consumption of certain sandwiches, in which both beef and ham were used,

was the immediate cause of the sickness produced; and it was suggested that the poisonous quality of the meat had been developed in consequence of exposure to sewer air in a somewhat concentrated form in a particular larder. The case throughout proves to be unusually complicated, and even the number of cases of poisoning have not yet been ascertained. For it appears that persons coming from long distances to the sale have suffered from sickness by partaking of food, or exposure to some unwholesome cause, there, and information has still to be sought out before the whole range of mischief can be ascertained, and the cause determined.

H.R.H. THE PRINCESS LOUISE (MARCHIONESS OF LORNE).

THE *Toronto Globe* has the following:—"Her Royal Highness has been suffering ever since her departure hence for Metapedia, on a salmon-fishing expedition, from nervousness and sleeplessness. The visit to Metapedia was shortened by about a fortnight on account of the indisposition of the Princess, which it is believed by the physicians to be the result of the sleigh accident last winter. No local affection is, however, feared as the result of that accident, but the entire nervous system has been upset. Her Royal Highness has been advised by her medical attendants to visit a German Spa, after which she will spend some time in England before returning to Canada. There is nothing fresh known about Prince Leopold's state of health. His Royal Highness and his sister, the Princess Louise, will sail together with their respective suites on board the Allan Line Royal Mail steamer *Polynesian*, from Quebec, on the 31st instant. Secrecy has been maintained up to the present concerning the indisposition of the Princess, and it is only to be accounted for on the supposition that it was feared exaggerated reports might reach Queen Victoria through the newspapers."

POST-MORTEM EXAMINATIONS.

WE thought the silly old prejudice against "post-mortem examinations" had died out. The example set by the educated classes has not, it seems, yet wholly dispelled the dense ignorance of the lower orders. A few days ago at Gloucester an action was brought by a labouring man against the house-surgeon of the county infirmary to recover the sum of £2 for injuries inflicted on his "feelings" by an examination of the body of his wife, who had died of an obscure malady. It is time this very foolish prejudice became extinct. The ministers of religion, who sometimes act with strange folly in the matter, should make it their business to explain the necessity for a verification of the medical opinion formed during life. Pathological research is the only mode of investigation in the interests of the living. The position assumed by the clergy, by boards of guardians, and by magistrates in respect to this matter is not satisfactory. They do not appear to recognise the difference between an inquiry with pathological purposes and a mere anatomical study. Surely persons of average intelligence cannot be so obtuse as to confound things which not only differ but, in practice, conflict.

"LEGALISED QUACKERY" AND LOW CHARGES.

The *Hastings and St. Leonards Times* comments on an article headed "Legalised Quackery" contained in the *Chemists' Journal*. The persons attacked are medical men who profess to give medicines and advice for sixpence at a so-called "Dispensary." The *Chemists' Journal* says the stock in trade of such a dispensary consists simply of Epsom salts, chalk, carbonate of soda, castor oil, methylated spirits, and the like, with burnt sugar and other colouring matter. We have little respect for the system of giving advice and

medicines for sixpence. It is a delusion to the patient and a snare to the practitioner. The practitioner goes through the form of a professional duty under altogether bad conditions. The money will not cover the cost of proper drugs, and the scanty time and attention that can be given to such forms of practice and for such considerations must be demoralising. If the patients cannot pay more, they are veritable paupers, and medicine acquires no benevolent or dignified character in pretending to treat them on private and independent terms.

CRUSTACEAN PERCEPTION OF LIGHT.

THE beautiful experiments of Dewar, in which he ascertained the action of light of different colours upon the retina of various vertebrate animals, by investigating the force of the electrical current which was generated in the retina and optic nerve by the impinging rays, have been repeated upon the arthropoda by M. J. Chatin. The observations were made chiefly upon beetles and crayfish. The gasteropoda were found inconvenient for the investigation. The maximum deviation of the electro-motor needle was constantly found to be produced by the yellow rays, the next with the green, and the minimum was usually obtained with red light. Hence Dewar's law is as true for the arthropoda as for the vertebrata, that "the maximum effect is produced by those parts of the spectrum which appear to us to be the most luminous—the yellow and the green."

CHELSEA HOSPITAL FOR WOMEN.

ON Friday last, July 16th, H.R.H. the Princess of Wales, accompanied by H.R.H. the Prince of Wales and two of their children, laid the foundation-stone of the new building about to be erected for the Chelsea Hospital for Women. The present hospital, which was opened in 1871, is in the King's-road, Chelsea, and has accommodation for eight in-patients only; but the committee was soon compelled to consider the necessity of having a larger and more suitable building, as the demand for beds was constantly in great excess of the supply. In 1878 a site was purchased in the Fulham-road, nearly opposite the Brompton Hospital for Consumption, but the building was not commenced until sufficient funds were in hand to prevent financial embarrassment. Up to the present time over £8000 has been received or promised towards the new building, which is to provide accommodation for nearly sixty in-patients, as well as a commodious out-patient department. The plans have been drawn up by Mr. F. T. Smith, of Parliament-street, under the direction of Mr. Wilkins, a supporter of the institution. The building will be forthwith proceeded with.

THE STRUCTURE OF SPERMATOOZOA.

IN the current number of the *Quarterly Journal of Microscopical Science* is a short paper by Dr. Heneage Gibbes, in which he states that he has found the spiral filament, discovered by him in the spermatozoa of several species of animals, as the rat, mouse, axolotl, pigeon, fowl, snail, and leech. In the examination of different specimens of human spermatozoa, he has noticed a variation in the length of the tails, and in one specimen he found a number of heads with no corresponding tails. He throws out the suggestion that these variations may have some important bearing. It is quite possible that tailless spermatozoa may not be able to fertilise the ovum, while the greater the length of the tail the greater their locomotion and fertilising power may be. Dr. O. S. Jensen, of Bergen, has found the spiral filament in the semen of horses; and Professor Fleming, of Kiel, has also confirmed Dr. Gibbes's observations, both as to the existence of this filament, with its mesentery, and the different reaction to staining fluids of the head and middle part of spermatozoa.

THE DUCHESS OF WESTMINSTER.

THE illness of the Duchess of Westminster has, we believe, been due to cardiac obstruction, with the symptoms commonly called cardiac asthma. The condition has obviously created anxiety, but by absolute rest there has been during the last week an improved state of the circulation, and it may be hoped that this will continue.

STIMULANTS IN WORKHOUSES.

REFERRING to our recent article on Alcohol and Hospitals, Mr. Alpass, one of the Toxteth guardians, shows that in their workhouse, with an average of 320 inmates under medical treatment, the total cost of stimulants during the last quarter had been £1 18s.; for out-door cases the total cost of stimulants was 5s. 4d. Mr. Alpass does not say whether any pressure had been put on the medical men in this matter, or whether their action was entirely spontaneous; neither does he accompany his statement with any particulars of disease and mortality. Our opinion is strong in regard to pauper dietaries—that, if beer and spirits are withheld, the money which the use of them would have cost should go to the improvement of the diet.

A CONTRAST.

AT the examinations for the first half of the diploma in surgery of the Royal College of Surgeons in Ireland, which terminated last week, more than 50 per cent. of the candidates were rejected for insufficient answering; while, on the other hand, of twenty-four candidates who presented themselves this month for the licence in medicine of the College of Physicians in Ireland, all were successful.

A PRIVATE dissecting-room, duly licensed, in the old, disused burial-ground of St. George-the-Martyr and St. George, Bloomsbury, in the parish of St. Pancras, has been made the subject of local complaint for nuisance, and generally it has been sought to excite popular prejudice against it as "a scandal." The room (a temporary building standing in the burial-ground) has been inspected by the three medical officers of health of St. Pancras, Holborn, and St. Giles, and found to be free from anything that could act injuriously on the public health. The burial-ground belongs to the Holborn Board of Works, and it is understood that Dr. Septimus Gibbon, the medical officer of health of the Board, will be instructed to maintain a general supervision over the building in the interest of the public health.

GENERAL SKOBELEFF reports that on the 3rd instant Dr. Studitsky, of the Red Cross Society, was despatched from Bami to Bendessen with an escort of twelve Cossacks, for the purpose of examining the body of a Cossack killed on the road on the 1st inst.; they were surrounded by a body of Tekkés numbering about 300, and at once attacked, and for eight hours exposed to the cross fire of the enemy; a company of infantry came to the rescue, and after a hand to hand encounter were defeated. Dr. Studitsky was unfortunately slain with two comrades. The Emperor, on receiving the report, ordered all the surviving Cossacks to receive military decorations.

AT a meeting held in connexion with the Order of St. John of Jerusalem on Wednesday, at Bolton-row, Mayfair, Dr. Sieveking delivered a lecture on "The Employment of the Hospital Patient after his discharge." The lecturer said few things were more distressing to the thoughtful physician in his hospital ministrations than the knowledge of the unfitness of many of his patients, after their discharge, for the duties of the calling in which they had been placed. The matter was referred to the Ambulance Department of the Order.

THE gold medal of the British Medical Association has been awarded by the Committee of Council to Dr. William Farr, F.R.S., D.C.L., C.B., as an expression of their high appreciation of his long, unwearied, and successful labours in behalf of statistical and sanitary science, as a recognition of the light he has thrown upon many physiological and pathological problems, and on account of the extraordinary services his work has rendered to the advancement of the health of the nation.

ON Saturday last, at the Charing-cross Hospital, Mr. Barwell extirpated the left kidney of a girl aged sixteen, the removal being effected through an opening at the loin. Long-standing and severe suppuration had greatly reduced the patient's strength. The organ was large (six ounces and three-quarters), tuberculous, and suppurating. Since the operation the patient has been doing so well that hopes of her recovery are entertained.

THE appointment of a commission to report on medical aid and poor-law relief in the Isle of Man seems to have provoked considerable hostility in the island. A vote of censure on the Governor for the part he has taken in the matter appears to have been threatened, which induced that functionary to inform the Manx Legislature that if such a course were adopted he would place his resignation in the hands of the Imperial Government pending inquiry.

A "Society for the Advancement of Oral Science" has been started in America. It is based on the principle that all practitioners in the dental art should be diplomated members of the medical profession. Article III., Sect. 4, in its constitution, provides "that every person practising any department of medicine should be a graduate of some reputable medical school." The President is Dr. Joshua Tucker, and the Secretary Dr. W. H. Rollins.

THE first meeting of the Court of the Victoria University took place on the 14th inst. at Owens College, Manchester. Amongst other appointments, Professor Roscoe, of Owens College, was chosen pro-vice-chancellor for the term of vice-chancellorship. The Chancellor (the Duke of Devonshire) and the other authorities of the University were in the evening entertained at a banquet in the town-hall.

MADAME SKOBELEFF, the murder of whom near Philippopolis has created so much grief and indignation, had been most active in organising schools and hospitals at Constantinople and elsewhere. At the time of her assassination she was, it appears, on a journey from that city, supplied with money and medical necessities for the benefit of the hospital at Tchirpan.

THE death of Dr. Arnold Beer, at the Grand Hotel, Paris, on the 13th inst., at the age of forty-five, is announced. Many years ago he relinquished the practice of medicine to engage in the pursuit of general literature, of which he was a distinguished ornament.

MR. HENRY FROWDE asks us to notice that the Queen has been graciously pleased to accept copies of the special editions of the Oxford Bible for teachers, which have been printed to commemorate the centenary of Sunday schools.

AT a general meeting of the members of University College, Sir Julian Goldsmid, Bart., was elected treasurer of the College, in place of the Right Hon. G. J. Goschen, M.P., who has resigned.

A BILL to amend the law in Ireland relating to the registration of births and deaths, and a Bill entitled an Act for taking the Census of Scotland, have been issued.

IN the despatches of Lieut.-General Sir F. S. Roberts, commanding the Cabul Field Force, amongst the officers reported as having done good service at the operations at Charasiah on the 25th of April last, are included the names of Surgeon J. Lewtas, M.B., Corps of Guides, and Surgeon J. J. Morris, M.D., 92nd Highlanders.

AT a late meeting of the Manchester Geological Society an ingenious instrument, termed a "spark tube," was exhibited and explained by Dr. Angus Smith. The object of the apparatus is to indicate the presence of inflammable gas in mines.

The Lancet Commission ON THE MEDICAL USE OF WINES.

III. RED BORDEAUX WINES.

THE enormous number and variety of true red wines from the Gironde, most of which are now freely imported into this country, make it a task of no small difficulty to discuss their medical value and uses. This wide range of selection has recently been brought before us in a most striking manner, by contrasting the price of a *vin ordinaire* of the cheapest and commonest type (10*d.* or 1*s.* per bottle) with the sums that well-matured wines of the best vintages may command. At a sale by public auction during the present month, Léoville Lascazes' (1864 vintage) was sold at £10 per dozen, whilst Château Latour (1858 vintage) reached the almost fabulous price of £12. The patient's daily question, "What shall I drink?" requires more consideration than is usually devoted to it before the medical adviser gives the stereotyped reply, "Oh, you can take a little claret." For more than a century the various vineyards on the different estates of the Médoc district have been classified in five great classes. The first class comprises only the three great vineyards, Château Lafite, Château Margaux, and Château Latour; the second class includes sixteen vineyards, of which the best known in England are perhaps Mouton, Rauzan-Gassies, Léoville-Lascazes', Cos d'Estournel, and Pichon-Longueville; the third class, thirteen in number, includes Lagrange, Giscours, Brown-Cantenac, &c.; the fourth class, eleven in number, embraces St. Pierre, Château Beychevelle, Duhart-Milon, La Tour-Carnet, &c.; whilst among the best known of the seventeen in the fifth class are Pontet-Canet, Batailley, Camensac, and Clerc-Milon. To the general public the mere name of these vineyards is of scarcely any value, even if the accuracy of the label on the bottle can be assured, for much depends on the year in which the wine is produced and the period at which it has been bottled. Besides the wines admitted into the great classes, there are many others produced on estates in the Médoc district, cultivated by the *bourgeois* proprietors; and although these take a lower rank in the estimation of the wine-importer, they are, especially in good years, often as sound and good as those which have been fortunate enough to secure an entrance into the classified lists. Still cheaper clarets are bought from the peasant-proprietors, and these form the *vin ordinaire* or Médoc which is supplied to everyone with his meals at the French restaurants. It has been estimated that of the total yield of wines in an average year, the classed wines form only 2 per cent., the superior table wines 12 per cent., the medium 20 per cent., and the *vins ordinaires* the remaining 66 per cent. Besides names derived from the estate, other clarets are merely marked with the name of the commune in which the wine has been grown, such as St. Julien, St. Estèphe, or Margaux. As far as the classified wines are concerned, none are to be trusted without the brand of the estate; of the others with simply the name of the commune, the veracity and knowledge of the importer form the only guarantee for the purchaser. As a rule, the name of the commune is put on to indicate rather a certain class and price of wine than to show its place of growth.

Too frequently for market purposes the different wines are blended, so that except under special circumstances, or by securing a classified wine, a pure growth is unattainable. As an additional precaution, we may mention that adulterated claret is common enough in the market, and this must be particularly borne in mind when the cheaper varieties are recommended. Such mixtures are usually compounded of water, alcohol, and cheap Spanish wine, with a small quantity of sour claret added thereto. In true claret the taste is astringent and subacid, never really sour, and even in the roughest samples the peculiar vinous bouquet is well-marked. The date of the year of vintage, not mere age, is all-important in regard to the quality of claret; and of course this can only be known with certainty when the buyer purchases his wine on the spot from the grower, and lays it by himself for future use. Red clarets with much tannin and an average percentage of alcohol require to be kept for ten or twelve years, that they may fully develop their best qualities, and their market value increases with their age. The best vintage of late years has undoubtedly been that of 1875, and next to that 1870, 1868, and 1865, until we go back to the exceptionally fine year of 1864.

The clinical value of red clarets is exceedingly great, and every therapist is fully aware of the marked benefit that is derived from their use in most cases in which tonics are indicated. There are few conditions in which they really disagree, if taken in ordinary quantities. Their especial value consists in the fact that when taken with the meals they are true tonics, and have neither a stimulating nor a sedative effect. Even the higher-priced red clarets are much less stimulating than the Sauternes, and of course cannot be compared for a moment in this respect to either the red or the white Burgundies. The tonic effect of claret is due most probably to the peculiar combination of tannin with a certain but low percentage of alcohol, and it is remarkable how little variation in chemical composition exists between true red clarets, although the price differs very greatly. The year of vintage, the age of the wine, and the characteristics of the vineyard, by determining the bouquet and fragrance of the wine, enhance the price, but interfere only very slightly indeed with its chief constituents as far as can be shown by chemical analysis. In cases of anæmia, ordinary debility from overwork, feeble digestion, &c., a sound red claret is almost as good a prescription as most of the tonic drugs in the Pharmacopœia, and is always an advantageous adjunct to this class of remedies. Of course, it must only be taken with the meals, and in no case should more than half a bottle be permitted with the meal. In this quantity the amount of alcohol is very small, as may be seen by the analyses. In addition to the tonic properties of red claret, its value in increasing the appetite and aiding digestion is of great importance. Many patients who can eat but little, and so lose strength, especially in hot weather, improve very much if they take wine with their meals, and for this purpose claret is especially suitable. The percentage of grape-sugar is very small indeed; it is much less than in ordinary Sauternes, or white clarets, although not so small as in the specimens of Chablis and Meursault, to which we referred in our former article. Hence the diabetic patient may safely take an occasional wine-glass of red claret, and there is this special advantage—that he need not be prohibited from the more expensive wines of this class, whereas Sauternes and white Burgundies of high class would inevitably increase his malady. Clarets are generally spoken of as "sour" wines, and avoided by the gouty and rheumatic; but this is certainly a mistake. The amount of fixed acid is less than in most wines, and the low percentage of alcohol is a still further advantage in such cases. In several cases of atonic goat a glass or two of good claret daily has been taken with great benefit, although the patients may have been told that whisky, gin, and brandy were the only permissible forms in which they should take alcohol. In the treatment of persons with a tendency to obesity claret, as is well known, is particularly useful, and this is doubtless also, in part at least, due to the absence of any amount of unfermented sugar. The amount of tannin sufficiently explains the astringent character of red wine, and this is of great advantage in treating cases of atonic and so-called bilious dyspepsia, anæmia, and patients with any tendency to relaxed or chronically congested mucous membranes. It is this astringency which clinically separates the thin red clarets from the thin white ones, and renders them available for so many more forms of disease. Of course, if diluted

they are as grateful as refrigerants in cases of fever and in hot weather as are the corresponding white varieties.

As an example of the cheapest clarets—a little too rough for ordinary use, except diluted, but then a pleasant aid to digestion—we selected for analysis Gilbey's Castle A claret at 12s. per dozen.

	(H.)	In 100 vols.
Total solids ...	...	1.95
Grape sugar ...	...	.07
Fixed acid ...	...	.40
Volatile acid ...	...	.26
Tannin ...	...	.22
Absolute alcohol { by weight ...	...	9.14
{ by volume ...	...	11.35

With the exception of a specimen of Cos d'Estournel (*vide analysis*), this wine gave the largest percentage of tannin, and the fixed acid is also rather above, whilst the grape-sugar falls below the average. For every-day use it is greatly improved by dilution with an equal quantity, or even more, of water or one of the natural mineral waters. Cheap clarets, varying in price from 12s. to 16s. per dozen, have been submitted to us by many other merchants [Feltoe, McGavin and Co., Fidler], and have much the same characters as the above.

Medium-priced wines, varying in cost from 18s. to 24s. per dozen, are especially numerous and important; of these typical specimens have been submitted [Gilbey, Ward, Barnard, Feltoe, Campbell, and Massingham]. Some of these were merely labeled claret, others St. Estèphe, St. Julien, &c.; whilst those submitted by Ward and Gilbey were respectively marked Château Quinsac, 1875, and Château Loudenne, 1875. Although these specimens differed very much in body and bouquet, the proportions of the chief constituents approximated very closely, as seen by the following analyses:—

	(I.)				
	Superior dinner claret [Feltoe].	Château Loudenne [Gilbey].	Château Quinsac [Ward].	Claret M. 1875 [Massing- ham].	
	In 100 vols.	In 100 vols.	In 100 vols.	In 100 vols.	
Total solids ...	2.14	1.33	1.64	2.01	
Grape-sugar ...	.10	.09	.08	.12	
Fixed acid ...	.41	.35	.34	.42	
Volatile acid ...	.24	.19	.21	.23	
Tannin ...	.14	.19	—	.19	
Absolute alcohol { by weight ...	9.07	9.07	8.21	8.71	
{ by volume ...	11.26	11.26	10.21	10.82	

The classified wines submitted for examination varied greatly in price according to the class and year of vintage, from a wine of the fifth class, Pontet-Canet [Barnard], at 30s. per dozen, to such remarkably fine specimens as Cos d'Estournel in the second class [Denman], 1869 vintage, at 72s., and Château Lafite [Gilbey], 1875 vintage, at 78s. per dozen. The superior flavour, soundness, and bouquet of these classified wines need scarcely be mentioned, but we were scarcely prepared to find how little they differed in chemical analysis from the cheaper unclassified varieties. The analysis of a Duhart Milon [Barnard & Co.], 1875 vintage, at 48s. per dozen, may be taken as a very favourable specimen of these classified wines, for this vineyard is a well-known member of the fourth class.

	(K.)	In 100 vols.
Total solids...	...	2.06
Grape-sugar ...	...	.09
Fixed acid ...	...	.35
Volatile acid ...	...	.22
Tannin ...	...	.14
Absolute alcohol { by weight ...	...	8.21
{ by volume ...	...	10.21

The specimen of Cos d'Estournel referred to above gave the following results:—

	(L.)	In 100 vols.
Total solids...	...	1.93
Grape-sugar...	...	.09
Fixed acid ...	...	.35
Volatile acid ...	...	.22
Tannin ...	...	.24
Absolute alcohol { by weight ...	...	9.29
{ by volume ...	...	11.52

Good sound red Bordeaux wines evidently differ very little in rough analysis, and a patient may take either the cheaper or the more expensive varieties without running any risk of their having different medicinal effects, provided he is

satisfied that he is dealing with a true and not a manufactured claret. The seven analyses which we have given as typical of wines of different degree, from the high-priced classified samples to the cheapest *vin ordinaire*, show a difference of only 1·3 per cent. by volume of absolute alcohol (from 10·21 volumes to 11·52), of 1 per cent. in tannin, of 0·05 per cent. of grape-sugar, and 7 per cent. of fixed acid, whilst the sum of total solids only varies from 1·64 to 2·14 parts in 100 volumes.

The importance of this constancy in chemical composition is the more striking if we compare it with the great variability that is shown by the different typical samples of the white Bordeaux and white Burgundy wines which we have referred to in our previous articles. It is obvious that in choosing a red claret, diabetic, gouty, rheumatic, dyspeptic, or anæmic patients have a much more extensive range, with perfect safety, than they possess if the white wines have been ordered for their malady.

It is generally considered that the wines from the Château Haut Brion and from the St. Emilion district contain more alcohol and tannin than red clarets in general, but we had no certified specimens submitted to us for analysis.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

West Sussex Combined Sanitary District (population 85,102).—This district includes the sanitary districts of Steyning (rural), Horsham (rural), Petworth (rural), Thakeham (rural), East Preston (rural), Midhurst (rural), Worthing (urban), Littlehampton (urban), and West Worthing (urban). Dr. Kelly's report for the year 1879 (his sixth annual) is of exceptional interest. In it he endeavours to determine by a closer analysis of the mortality of the several districts in his combination, and particularly of the mortality from zymotic diseases, from consumption, and from lung disease, what progress, if any, has been made in their health condition since he became medical officer of health to them. After a fashion he balances his five years' health accounts, setting an example which we shall hope to see generally followed by medical officers of health, and doing this in so thoughtful and far-seeing a fashion as to give to the effort a value far beyond its local bearing. Nor is this all. The report contains very much that is interesting and instructive relating to the sanitary administration of the several districts in combination. To do justice to the report, each district should be considered apart, but space restricts our observations upon it necessarily to the part which deals with the district as a whole. We note simply in passing the diminution of the general mortality of the combined district in recent years, and the low infant mortality, and direct our attention to the observations on zymotic or catching disorders, and on phthisis and lung diseases. The mortality returns for the district show a very marked decrease during the current decade in the prevalence of zymotic disorders—a decrease, however, which Dr. Kelly points out is not peculiar to his district, but has been noted throughout the kingdom, and he adds, "whether these disorders are less prevalent than at former periods, or whether, the cases of disease being as numerous, the fatality is less, is a point which cannot be decided unless the total number of cases of sickness were known." With regard to the particular diseases observed in the district, Dr. Kelly's observations on diphtheria are of most interest. He describes this disease as occurring in two classes of cases, to wit (1) those which seem to depend upon inhaling sewer-gas, and where the patient suffers from a form of blood-poisoning; and (2) those which seem to occur independent of any defective drains or water-supply, and which are most common in bleak and exposed situations. On the form of the disease observed in the second class of cases, Dr. Kelly observes that unlike the cases in the former class (which are generally found as house-epidemics) they appear in an epidemic form, and that, associated with the more severe and well-marked cases, several other persons are attacked with sore-throat, about which no thought is

taken. Dr. Kelly's observations on this subject deserve careful attention. Neither the drainage, nor the water-supply, nor the milk-supply, Dr. Kelly states, seems to afford any due explanation of the prevalence of this disorder in one district more than another. A comparison of soils, however, seems to show that it is far more frequent on the Weald clay than elsewhere, and next upon the greensand, where this formation crops out just above the impervious gault. Dr. Kelly adds an interesting table showing the distribution of the mortality from diphtheria in his district with reference to different soils. Dr. Kelly has also much that is of interest to say with reference to the distribution of the mortality from phthisis and its relation to soils. But first he shows that there has been an "enormous reduction of the death-rate from consumption" in his district. A marked diminution of mortality from this disease has also not been peculiar to the district, but has been common to England and Wales generally. In town districts it might have been, perhaps, reasonable to attribute much of this decrease to works of drainage, but in the rural districts under Dr. Kelly's observation, he says "there has been no change whatever in the drainage, and as far as the subsoil water is concerned the houses are in much the same state as they were twenty years ago." Dr. Kelly is disposed to assign the decreased mortality in the rural districts to the improved state of the cottages, the rise of wages leading to the children being better clothed and fed, and to the increase of railway communications, which tends to diminish intermarriages, and to cause more interchange of population. He thinks that the examination of the more recent mortality statistics as to phthisis in his district, and of the distribution of the deaths, do not altogether bear out the views of those who maintain that dampness of soil and phthisis are intimately related, and he has some important observations on this subject.

The Stratford-on-Avon, Evesham, and Alcester Combined District.—Mr. G. H. Fosbrooke's reports for 1879 to the several authorities of the combination for which he acts as medical officer of health are now before us, and prove that a sure, if somewhat slow, progress is being made in the sanitary administration of the different districts.—*Stratford-on-Avon (Urban)* which is about to merge the lesser dignity of a Local Board into the higher dignity of a Corporation, awaits the completion of the next census before entering upon calculations as to its existing rate of mortality; but the relatively small number of deaths among children under one year of age suggests that the rate when determined will prove low. The year saw the end of an epidemic of scarlet fever which had been fatal the previous year. The sewerage of the town has been extended, and the method of excrement disposal improved.—*Evesham (Urban)* had a population of 4588 in 1871, and Mr. Fosbrooke holds the population to have been stationary since then. The rate of mortality was 20·6 per 1000 population in 1879, as compared with 19·6 in 1878. The rate of mortality among infants is described as excessive, and is attributed to "insanitary surroundings, climatic influences, ill-chosen and improperly-administered food, overcrowding, &c." Mr. Fosbrooke observes that the sanitary authority has taken no action under the Adulteration Act, and urges them to do so. Much bad house-accommodation and overcrowding appear to exist in the district. An outbreak of typhoid fever, numbering thirty-three cases, of which six proved fatal, and which was due to impure water, was made the subject of a special report.—*The Stratford-on-Avon, Evesham, and Alcester Rural Sanitary Districts.* These districts have a combined population of 44,000 (1871), and had in 1879 an average annual rate of mortality of 17·9 per 1000 population. The general report on the districts shows that a good deal has been done towards getting their sanitary administration into systematic working order, by means of a house-to-house survey, the adoption of urban powers for various purposes in several places, inducing medical practitioners to inform the authorities as to the existence of cases of infectious diseases, the establishment of an infectious diseases hospital ("sanatorium") at Alcester (the establishment of other hospitals is held over, it would appear, until the final decision of the Courts of Law in the Hampstead Hospital case is arrived at), the extension of good systems of water-supply, the sewerage of numerous towns and villages, the improvement of house-accommodation, diminution of overcrowding, and large abatement of nuisances. We quote from the report the following statement of results of observation on diphtheria by Mr. Fosbrooke in this district:—

"1. That it is more liable to appear and spread in rural than in urban districts. 2. That geological position has little, if any, connexion with the disease; but that local influences of various descriptions have a most important relationship to it, for it is marvellous how diphtheria, when once fairly established, persistently clings to the *immediate neighbourhood*. 3. That 'dampness of site' does not in my experience bear that intimate relationship to the disease that some very competent observers are prone to believe. 4. That the dissemination of diphtheria is not dependent upon 'seasons,' and that excessive 'rainfall' does not *materially* influence the disease. 5. That 'age' is a predisposing cause; infants under one year being less susceptible than children of any other age, and that the greatest incidence is in children above five and not exceeding nine years. 6. That 'family susceptibility' is an important predisposing cause, although not a few instances have come under notice in which one child *only* of a large family living under precisely similar conditions has been attacked. 7. That the younger the child the less the chance of recovery. 8. That 'sex' has no material influence on it. 9. That it can arise *de novo*, and that all insanitary conditions, particularly polluted water, are often intimately associated with its origin and dissemination. 10. That it is *most infectious* and should be so treated from the first; further, that it can be transmitted by a person who has not had the disease, and clings to some dwellings with great pertinacity. 11. That 'schools' very frequently distribute the disease in a wholesale manner. 12. That the disease, in my experience, has not been caused or distributed by unwholesome milk. I have mentioned the preceding facts (admittedly in an imperfect manner) because I feel that all observations on outbreaks of diphtheria should be recorded, as the etiology of the disease is shrouded in obscurity."

FEVER IN IRELAND.

Two Parliamentary papers have been published relating to the subject of "fever" in the distressed districts in Ireland, one being a report by Dr. Nixon, temporary medical inspector to the Local Government Board (Ireland), on an outbreak of fever in the Swinford Union, County Mayo; the other two reports by Dr. Stewart Woodhouse, temporary medical inspector to the same Board, on outbreaks of "fever" in Kilglass and Castleconnor, both in the county of Sligo. In the Swinford Union Dr. Nixon found typical maculated typhus. From the 3rd June to the 1st July fifty-five cases had been admitted into the fever hospital, the greatest number (twenty-five) during the week beginning the 24th June. Dr. Nixon visited four districts and found there four cases of typhus, but it does not appear that any active extension of the disease was going on among the population. Of 142 cases of fever which had occurred in the parish of Kilglass, Dr. Woodhouse reports that five only were typhus, the remainder being either enteric fever or simple febricula; of thirty-two cases at Castleconnor, all had been either enteric fever or febricula, not one being typhus. Neither Dr. Nixon nor Dr. Woodhouse found any indications of relapsing fever. Dr. Woodhouse lays considerable stress upon the continued use of Indian meal in the districts he visited, unvaried with any other article of food, as a predisposing cause of fever; but although this would appear to have been the staple food in some places for eight months no word is said of *scurvy*. The present reports have been, however, called for in haste to satisfy the public anxiety as to fever specially. We shall look with interest for further more detailed reports, and not without uneasiness in regard to *scurvy*.

Dr. Sigerson and Dr. J. E. Kenny have also reported to the Dublin Mansion House Committee on the fever prevalent in the distressed districts in County Mayo visited by them. They describe the fever as maculated typhus, confined to the distressed families, and have no hesitation in attributing its prevalence to the distress.

ANNUAL REPORT OF THE LOCAL GOVERNMENT BOARD FOR IRELAND.

We learn from this report, which is of considerable interest at the present time, that the average daily number of persons receiving relief in workhouses during the year was 51,946, being an increase of 3952 over that of the previous year; and out-door relief 36,629, or an increase of 3355. During the year 58,583 persons were under treatment in the workhouses for various affections, including 8285 cases of

fever or other contagious disease, with a mortality of 13,127. Last year 471,277 new cases were attended by dispensary medical officers at the various dispensaries throughout the country, and 200,979 were treated at their own homes, forming a total of 672,256; while 126,911 people were vaccinated or revaccinated during the same period. The total cost of the dispensary districts for the year ending September 29th, 1879, was £146,030, which includes cost of medicines and medical appliances, salaries of medical officers, apothecaries and midwives, rent of dispensary buildings, vaccination fees, &c. The total expenditure of poor-rates for all purposes—viz., relief, medical relief, burial-grounds, registration of births, deaths, and marriages, sanitary measures, &c., was £1,119,755, being a decrease in the total expenditure of £4466 as compared with the previous year. During the year ending January 24th last 661 deaths from small-pox were recorded, of which number 112 took place in workhouses, against 254 in the preceding twelve months. The Board point out the advantage of having recourse to the section of the Public Health Act authorising the removal of persons to hospital where there is not sufficient home accommodation for the patient; and the section of the Act which prohibits the practice of holding "wakes" under a penalty of £5. There was an increase of 54 in the number of cases of fever attended by dispensary medical officers for the year ending September. Scarlet fever prevailed, there being 3008 cases treated by medical officers of dispensaries in 1879 as compared with 2118 in the preceding year; while 103 fatal cases took place in workhouses against 39 in 1878. The report refers to the provisions which were made for the requirements of the destitute poor, and states that although there has been much suffering and exceptional distress in many parts of Ireland, yet after careful inquiry the Commissioners found that privation did not reach starvation in any union, the alleged cases from this cause being on examination found to result from other causes.

ARTISANS' DWELLINGS ACT.

This Act is legally applicable to only six places in Ireland—namely, Dublin, Belfast, Cork, Limerick, Londonderry, and Waterford. During the past year an Improvement Scheme has been carried out in Belfast, and the street authorised thereby opened up for public traffic. With respect to the two unhealthy areas in Dublin with which the Corporation are dealing, the arbitrator has, in one case, that of the Coombe area, made his final award, and titles are being investigated; while in the Boyne-street area no steps have been taken to acquire the interests therein, but some of the dilapidated houses have been closed under the provisions of the Public Health Act as uninhabitable. In Cork there were seven areas, with respect to which representations were made. Maps, plans, and schedules have been prepared for taking compulsory possession of No. 1 area, and the arbitrator was to hold his first meeting last April. The sanitary authority have thought it more prudent to finish No. 1 before taking up the others, as there may be some difficulty in providing accommodation for persons who may be disturbed. No attempt has been made by the Corporations of Limerick or Londonderry to make use of the powers given by the Act; and although in Waterford the Act has not been applied as yet, the Corporation have erected labourers' dwellings under the provisions of the Act 29 and 30 Vict., cap. 44.

THE VACCINATION ACTS AMENDMENT BILL.

Lord R. Churchill, amidst the laughter of the House of Commons, put a question to the Government on Monday evening relative to the Vaccination Amendment Bill. Mr. Dodson, the President of the Local Government Board, having been unseated, his lordship asked if the Bill would be persevered with. Mr. Gladstone answered that he had not yet considered the question! This is probably the beginning of the end as regards this movement. It is much to be regretted that a question of such magnitude and importance to the public health should be repeatedly stirred and unsettled.

A member of the Poplar Board of Works, at a recent meeting of the Board, drew attention to the fact that among the crowd of applicants for out-relief gathered at the relief office on Monday, there were a husband and wife with two children, who had come direct from the room where another child was lying ill of scarlet fever. He thought that

arrangements should be made for preventing such risks of propagating disease, but does not appear to have given any indication of the sort of arrangements which would meet the difficulty—a difficulty felt not only in relief offices, but wherever people congregate together.

Mr. Watkin Williams has given notice in the House of Commons that he shall ask the Secretary to the Local Government Board whether any regulations exist defining the duties of relieving officers and medical officers of Poor-law Unions in relation to orders for the supply of medical necessities to the sick poor, and whether it is competent for relieving officers to disregard or overrule at their discretion the orders of the medical officers, and if so, whether the Local Government Board will consider the propriety of altering the regulation in question.

A Parliamentary Return has been published showing the number of notices served by the Conservators of the river Thames, under the Thames Conservancy Acts, for the discontinuance of the passage of sewage, or other offensive or injurious matter into the river above the intakes of the water companies supplying the metropolis, and the result of these notices.

The Chesterfield Rural Sanitary Authority, in view of the dissemination of scarlet fever from the careless exposure of convalescent children by their parents, decided to prosecute in one case, as a warning to others.

VITAL STATISTICS.

HEALTH OF LARGE ENGLISH TOWNS.

Notwithstanding a marked increase in the fatality of infantile diarrhoea the rate of mortality in our largest towns continues considerably below the average. In twenty of the largest English towns, estimated to contain in the middle of this year seven and a half millions of persons, or nearly one-third of the entire population of England and Wales, 4748 births and 2892 deaths were registered last week. The births were 237, and the deaths 383, below the average weekly numbers during 1879. The deaths, however, showed a further increase of 232 upon the exceptionally low numbers returned in recent weeks. The annual death-rate per 1000, which had been equal to 18.9 and 19.2 in the two preceding weeks, further rose last week to 20.1. During the thirteen weeks of last quarter the death-rate in these twenty towns averaged only 20.4 per 1000, against 23.3, 22.7, and 22.2 in the corresponding periods of the three years 1877–8–9. The lowest death-rates in the twenty towns last week were 15.6 in Portsmouth, 15.7 in Leicester, 15.9 in Bristol, 16.6 in Salford, and 16.7 in Hull. The rates in the other towns ranged upwards to 23.0 in Plymouth, 23.7 in Sunderland, 24.9 in Oldham, 25.8 in Liverpool, and 27.4 in Norwich. The high rates in the three last-mentioned towns were mainly due to excessive zymotic fatality.

The deaths referred to the seven principal zymotic diseases in the twenty towns, which had steadily increased from 406 to 522 in the five preceding weeks, further rose to 567 last week; these included 258 from diarrhoea, 117 from scarlet fever, 86 from whooping-cough, and 53 from measles. The annual death-rate from these seven diseases averaged 3.7 per 1000 in the twenty towns; while it was but 0.7 and 1.7 in Plymouth and Bristol, it ranged upwards in the other towns to 6.3 in Oldham, and 9.7 in Norwich. Scarlet fever showed the largest proportional fatality in Norwich, Oldham, and Bradford; measles in Sunderland, and whooping-cough in Liverpool. Eleven deaths were referred to diphtheria in London, 3 in Birmingham, and 2 in Leeds. Small-pox caused only 3 deaths in London, and not one in any of the nineteen large provincial towns. The number of small-pox patients in the Metropolitan Asylum Hospitals, which in the two preceding weeks had declined from 237 to 191, had increased again to 200 on Saturday last; 30 new cases of small-pox were admitted to these hospitals during last week, against numbers declining from 50 to 17 in the four preceding weeks. The Highgate Small-pox Hospital contained 9 patients on Saturday last.

Last week's returns afford evidence of the commencement of the usual summer fatality of infantile diarrhoea. The deaths referred to diarrhoea in the twenty towns, which in the four preceding weeks had steadily increased from 51 to 183, further rose last week to 258, including 165 in London. The annual death-rate from diarrhoea last week was equal to 2.3 per 1000 in London, but did not average more than 1.3

in the nineteen provincial towns; among these nineteen towns the highest death-rates from diarrhoea were 2.0 in Leicester, 2.1 in Hull, 2.3 in Oldham, and 3.6 in Norwich.

The deaths referred to diseases of the respiratory organs in London, which had steadily declined in the five preceding weeks from 230 to 171, were 173 last week; they exceeded, however, the corrected weekly average by 13. The annual death-rate from diseases of this class did not exceed 2.5 per 1000 in London; it was equal to 4.9 in Liverpool, and to 2.5 in Salford.

HEALTH OF SCOTCH TOWNS.

In eight of the largest Scotch towns, having an estimated population of rather more than a million and a quarter persons, the annual death-rate last week averaged 18.6 per 1000, against 20.9 and 20.4 in the two preceding weeks; this rate was 1.5 per 1000 below the average rate in the twenty large English towns. The rates in the eight Scotch towns ranged from 12.5 and 13.6 in Greenock and Perth, to 24.4 and 30.2 in Paisley and Leith. The 109 deaths referred to the seven principal zymotic diseases in the eight towns, showed an increase of 12 upon those in the previous week, and included 38 from diarrhoea, 21 from scarlet fever, 21 from whooping-cough, and 18 from measles, while but five deaths were referred to fever, showing a marked decline from recent weekly numbers. The annual death-rate from these seven diseases averaged 4.4 per 1000 in the eight towns, against 3.9 in the twenty English towns; this zymotic rate ranged from 0.0 and 0.7 in Perth and Greenock, to 8.0 and 9.6 in Leith and Paisley. The fatal cases of diarrhoea in these eight Scotch towns further rose from 25 and 36 in the two preceding weeks to 38, and were equal to an annual rate of 1.5 per 1000, against 1.8 in the English towns; the largest proportional fatality occurred in Leith and Glasgow. The deaths from whooping-cough showed an increase, which was marked in Paisley; those from scarlet fever were also more numerous in Edinburgh and Leith. Sixteen of the fatal cases of measles were recorded in Glasgow. The deaths referred to acute diseases of the respiratory organs (bronchitis, pneumonia, and pleurisy) in the eight Scotch towns, which had been 91 and 90 in the two previous weeks, dropped to 58 last week, which was equal to an annual rate of 1.9 per 1000. The rate from the same diseases in London was equal to 2.3. The annual death-rate in the eight Scotch towns during last quarter averaged 23.3 per 1000, exceeding by 2.9, or 14 per cent., the rate in the twenty English towns during the same period.

THE HEALTH OF DUBLIN.

The rate of mortality in the City of Dublin, which had ranged in the five preceding weeks from 42.5 to 31.2, further declined last week to 30.3, a lower rate than has prevailed in that city in any week since the beginning of November last. The unsatisfactory sanitary condition of Dublin may, however, be inferred from the fact that during the thirteen weeks of last quarter the annual death-rate averaged 36.6 per 1000, against 19.4 in London, and 22.4 in Edinburgh. The 183 deaths in Dublin last week included 45, or 25 per cent., which were referred to the seven principal zymotic diseases, against 53 and 47 in the two preceding weeks; 10 resulted from small-pox, 11 from whooping-cough, 8 from scarlet fever, 6 from fever (including typhus and typhoid), and 6 from measles. The annual death-rate from these seven diseases was equal to 7.5 per 1000 in Dublin, against 4.5 in London and 4.1 in Edinburgh. The fatal cases of small-pox have shown a decline during the past three weeks, but no less than 135 were recorded in the thirteen weeks of last quarter, against 79 and 61 in the two preceding quarters.

HEALTH MATTERS GENERALLY AT HOME AND ABROAD.

THE OUTBREAK OF ENTERIC FEVER AT POSSILPARK, GLASGOW.

Dr. James Christie's report to the local authority of Barony on the outbreak of enteric fever at Possilpark, one of the suburbs of Glasgow, in April and May of the present year, has now been published. This outbreak was a part of the series of outbreaks which occurred in Glasgow at the same time, traced to infected milk, and of which a detailed account has been published by Dr. J. B. Russell, the medical officer of health for Glasgow. The Barony authorities re-

quested Dr. Christie to report to them on the particular prevalence of enteric fever affecting their parish, and from the beginning of the inquiry Dr. Christie was in communication with Dr. Russell on the relations of this prevalence to the occurrences of fever within the municipal boundaries of Glasgow. A comparison of notes made it evident that the outbreak in Barony parish was closely connected with the outbreaks in Glasgow, and that there was probably a common cause of the several outbreaks which was to be sought in an infected milk-supply. This part of the investigation was left to be followed out by Dr. Russell, and his report shows how admirably this was done, and how completely the line of research indicated by the preliminary inquiries of the two reporters was justified in the result. Dr. Christie, in this report, does not go over the ground already traversed by Dr. Russell, which goes to prove the infection of the milk with enteric-fever poison, but contents himself with showing how the occurrences in Barony parish confirm from point to point the conclusions suggested by the occurrences in Glasgow. Dr. Christie's report completes the story in part told by Dr. Russell, and completes it well; and the two reports form one of the most interesting and instructive accounts we possess of a series of circumscribed outbreaks of enteric fever caused by infected milk.

THE POTATO.

The Select Committee on the potato crop have closed their inquiry and completed their report. They accept the opinions of the scientific witnesses examined by them, that the potato disease consists in the growth of a fungus (*Peronospora infestans*) in the plant, which spreads during the summer by means of spores, a single fungus producing millions of spores. They attribute the persistence of the disease to the degeneration of the older varieties of the plant, and look chiefly to the cultivation of new varieties as the chief mode of escape from future losses from it, or of diminishing its ravages. To this end they suggest the careful cultivation of new varieties by the larger potato growers and the agricultural societies, but having regard to the fact that little has as yet been obtained in this direction by these agencies, they hold that the time has come for Government to give assistance, and establish experimental farms in England, Scotland, and Ireland, for the cultivation of new varieties of potato.

INDIAN MEDICO-SANITARY NEWS.

We gather from our contemporary the *Indian Medical Gazette* that the profession in Calcutta are by no means unanimous in the conclusion that "The New Disease" in that city is beri-beri.—The Madras Sanitary Commissioner describes a peculiar and intractable form of ulcer as "universally prevalent in the districts lately subjected to famine."—A general census of India is to be taken in February, 1881.—It would appear that the mortality among seamen in the port of Calcutta is more than double that of the general population on shore. This excessive mortality is attributed to the influence of the foul water on which they live and exposure to night air. It is noted also that the fatality from cholera amongst sailors in the port is much greater than among the shore population. Efforts are being made to improve the sanitary condition of the foreshore on both sides of the river, and the practice of discharging the Fort sewage into the river is to be stopped. 105 human bodies and 2543 carcasses of animals were stopped and sunk by the river police during 1879, against 128 and 2528 in 1878.

THE SEWAGE OF PARIS.

The municipality of Paris are so satisfied with the results obtained by irrigation in the disposal of the sewage of the city, that they have determined to ask the Government for permission to increase largely the area of ground to be submitted to irrigation, and in other ways to facilitate the distribution of sewage to farms on the line of the outfall sewers.

At a recent meeting of the Whitechurch Local Board, the surveyor stated that Dr. Thursfield, the medical officer of health for the district, had said that none of the water in the town was fit to be used. The board thought the matter was of the greatest importance, and directed the clerk to write to Dr. Thursfield for him to make an analysis and report immediately.

Dr. Kay's report on the outbreak of fever at Waterberg, Transvaal, attributes it to the unhealthiness of the site, bad sanitary arrangements, and the exceptionally dry summer.

It has been decided by a majority of 96 votes to establish a Local Board in Dorking.

THE DISPUTE AT GUY'S HOSPITAL.

WE hope there may be ground for the anticipation that the unhappy disagreement between the Treasurer and the Medical Staff of Guy's Hospital is at an end. The Committee of Governors, which was appointed to inquire into the whole question of nursing, has made its report, after holding fourteen sittings, and after having examined the chief executive officers of the institution. This Report is fairly judicial in tone, and may, perhaps, prove conciliatory to those who have been aggrieved by the autocratic action of the Treasurer, especially as it is evident that if the suggestions of the Committee be acted upon the Guy's autocracy is dead, and its place will be taken by a properly-constituted Committee.

The Report states that the Committee is satisfied as to the *bona fides* of all who have taken part in this dispute; that a reform in the nursing of the hospital had become necessary, and that the supply of efficient nurses had become unequal to the demand, although "it may be admitted that many of the sisters and nurses heretofore attached to the hospital were capable persons, and attended to the sick with kindness, intelligence, and sympathy." That the new *régime* instituted in November, 1879, whereby the work, recreation, and supervision of the nurses were made conformable to certain rules and regulations, proved distasteful to many of the old nursing staff, "of whom many left the hospital rather than agree to them," and among them were "some persons highly valued by the Medical Staff." That the new arrangements are working fairly well, and that "in about two-thirds of the wards there is now no dissatisfaction." That "there is no valid reason for believing that in any case is interference with the orders of the Medical Staff either sanctioned or connived at by the Matron," and that "there is no reason to think that the present nursing arrangements put any real hindrance in the way of medical observation or practice on the part of the students."

With regard to the manner in which the recent changes were introduced the Committee is of opinion that this was done "without sufficient consultation and preparation, that some details were unduly insisted upon, and that much misapprehension ensued."

"The Matron was not personally introduced to the Staff. She was apparently authorised to frame rules, on which the Staff were not consulted, but which, in their opinion, affected the medical treatment of the patients. The Matron herself understood that no further authority than that of the Treasurer was required; and he, on his part, was under the impression that the changes contemplated would be acceptable to the Medical Staff. The Committee cannot feel surprised that the Staff resented the publication of the article on the crisis at Guy's Hospital in the April number of the *Nineteenth Century*, which they deemed to be an attack from within the walls of the hospital, on their professional honour, but the Committee have no evidence that anyone now in the hospital was responsible for the article, or had any knowledge of its contents before it was printed. The Committee are firmly convinced that the Treasurer, the Medical Staff, and the Matron have had the same object in view—viz., to promote the good of the hospital and the comfort of the patients. It is, however, essential that there should be no bar to frank personal communication between those who are practically engaged in arduous duties involving complicated arrangements, and provision for sudden emergencies. The Committee cannot find sufficient justification for the difficulties which have existed between the Medical Staff and the Matron almost from the date of her

entrance into the hospital, nor can they see, in the present state of feeling, any just ground for calling upon her to abandon the duties of a post which she did not seek, but which she was specially invited to undertake."

The Report finally deals with the question of remedies for the state of things which has arisen, and the proposals made seem to us to be suitable and adequate for the attainment of the ends proposed. The final clauses of the Report proceed as follows:—

"They understand that the Staff desire that no rules affecting their patients should be issued without their previous knowledge, that no one person should be supreme in the removal or dismissal of nurses without some appeal; and that the Staff should have some recognised right and a simple way of bringing their requirements before the Governors. The Committee, therefore, recommend that the Court should make such arrangements as may be necessary to render the attendance of the Governors at the Taking-in Committee more regular; and they would suggest that the best way to effect this purpose would be to abolish the old plan of two Governors coming on duty in rotation once a week, and to substitute instead the following arrangement. That each year not less than ten Governors be nominated as the Taking-in Committee for the twelve succeeding months, and that they be requested to make such arrangements between themselves and the Treasurer as will procure the attendance of at least two members at every Taking-in Committee. That once a month, or oftener if necessary, two members of the Medical Staff, appointed by that body, be invited to attend the Committee with the view of deliberating on any matters relating to the medical and nursing arrangements. That regular Minutes be kept of the proceedings of the Taking-in Committee, and that such Minutes be brought for confirmation before the next Court of Committees as the sole executive body authorised by Act of Parliament. That in any difference of opinion the views of the Medical Staff, as well as those of the Governors, be recorded on the Minutes. The Committee consider that the full reports at present laid before the Taking-in Committee might with advantage be supplemented, so as to embrace every matter of importance. The Committee believe that the above arrangement, while materially assisting the Treasurer, would enable the Governors to become more intimately conversant with the internal working of the Hospital, and at the same time it would afford the Medical Staff an opportunity (the want of which they have felt) of personally coming in contact with the Governors."

The Report is signed by Henry H. Gibbs, Charles Barclay, Trevor Lawrence, Richard M. Harvey, J. A. Shaw Stewart, Thomas Dyke Acland, Samuel Hoare (Chairman).

It is very easy to see that the Committee is of opinion that in the present day autocracy is an anachronism, and that the best intentions, coupled with a "plentiful lack of wit," are of all things the most likely to bring ruin upon ancient and valuable institutions. Guy's has passed through a period of great danger during the last few months, and has now, we find, emerged from it not altogether unscathed, but with the advantage of some guarantee against the recurrence of similar troubles. Possibly the question may now be allowed to rest, and the Medical Staff will consent to accept the decision of the Committee. While, on many grounds, it would have been well had the views of the Medical Staff received greater support, yet it would be gracious to lend a cordial support towards removing all friction that may interfere with the working of the newly constituted nursing machinery. If after a really fair trial it is found not to work satisfactorily, the new "Nursing Committee" will take cognisance of any shortcomings, and should this Committee do its work fairly and honourably, the necessity will not again arise for "washing dirty linen" in public, or for writing sharp articles in the pages of magazines.

MR. THOMAS JAMES SCHOLLOCK, M.R.C.S. Eng., L.S.A., has been elected Coroner for Guildford, Mr. T. Russell, solicitor, having resigned.

THE SERVICES.

SIR DONALD STEWART'S DESPATCHES.

THE *Gazette of India* has just published the despatches of Lieutenant-General Sir D. M. Stewart, K.C.B., reporting the success of his troops at the action of Ahmed Khol on April 19th, and in the neighbourhood of Ghuzni on the 23rd. After describing minutely the operations and dispositions, and bringing to notice the military officers who he considers did good service on these occasions, General Stewart adds, Paragraph 15: "The arrangements for the immediate care of the wounded reflect the highest credit on Deputy Surgeon-General A. Smith, C.B., the Principal Medical Officer with the force; and the exertions of the subordinate medical staff deserve my warmest acknowledgments." The casualties during the engagement amounted to—killed, 17; wounded, 124, of whom 9 are officers. More than 1000 dead bodies of the enemy were counted on the field, and their loss is estimated at from 2000 to 3000.

The Kandahar paper reports that fresh vegetables are very scarce, the supply for the troops being so small that the medical authorities are dreading an outbreak of scurvy.

DEATH OF BRIGADE-SURGEON HANNAN, A.M.D.

We regret to record the death at Simla, on the 12th June, from heat apoplexy, of Brigade-surgeon J. Hannan, Army Medical Department. Mr. Hannan served for many years in the 49th Regiment and in the Royal Artillery; and by his death the Army loses the services of a hard-working, painstaking medical officer. Mr. Hannan was unmarried.

ARMY MEDICAL DEPARTMENT.—Temporary Surg.-General Sir Anthony Dickson Home, V.C., K.C.B., to be Surgeon-General, vice Hampden Hugh Massy, M.D., C.B., granted retired pay; dated April 4th, 1880. Brigade Surgeon John Lyster Jameson to be Deputy Surgeon-General, vice Sir A. D. Home, V.C., K.C.B.; dated April 4th, 1880. Brigade Surgeon John Phillips Cunningham, M.D., to be Deputy Surgeon-General, vice G. Pain, granted retired pay; dated April 17th, 1880. The local rank of Surgeon-General conferred upon Deputy Surgeon-General John Andrew Woolfryes, M.D., C.B., C.M.G., in *Gazette* of Jan. 28th, 1879, is converted into temporary rank, but without pay or allowances; dated April 10th, 1880. Surgeon-Major John Meane to be Brigade Surgeon, vice Augustus Patrick Meyers Corbett, M.D., deceased; dated March 26th, 1880. Surgeon-Major Charles Carroll Dempster to be Brigade Surgeon, vice H. T. Reade, V.C., promoted; dated March 27th, 1880. Surgeon-Major William Henry Corbett, M.D., to be Brigade Surgeon, vice E. Y. Kellett, whose promotion has been cancelled; dated March 28th, 1880. Surgeon-Major Richard John William Orton, from half-pay, to be Surgeon-Major; dated June 18th, 1880. Surgeon-Major George Simon, M.D., has been granted retired pay, with the honorary rank of Brigade Surgeon; dated May 21st, 1880. Surgeon-Major William Langworthy Baker has been granted retired pay, with the honorary rank of Brigade Surgeon; dated June 10th, 1880. Surgeon-Major Alexander Campbell McTavish is granted retired pay, with the honorary rank of Brigade Surgeon; dated July 7th, 1880. Surgeon-Major Edward Denham Tomlinson is granted retired pay, with the honorary rank of Brigade Surgeon; dated July 7th, 1880. Surgeon-Major James Barry, M.D., retires from the Service, receiving a gratuity; dated June 1st, 1880. Brigade-Surgeon W. Macnamara, M.D., is granted retired pay, with the honorary rank of Deputy Surgeon-General; Surgeon-Majors George Alexander Moorhead, William Jay, and Henry Harrison are granted retired pay, with the honorary rank of Brigade Surgeon.

Deputy Surgeon-General Cunningham, Army Medical Department, proceeds to Hong Kong on promotion, and relieves Deputy Surgeon-General W. A. Mackinnon, C.B., as Principal Medical Officer of the China command.

ADMIRALTY.—Staff-Surgeon James Devonshire has been promoted to the rank of Fleet-Surgeon in Her Majesty's Fleet, with seniority of the 6th inst. Fleet Surgeon William Loudon Gordon, M.D., has been promoted to the rank of Deputy Inspector-General of Hospitals and Fleets in Her Majesty's Fleet, with seniority of the 16th inst.

Correspondence.

"Audi alteram partem."

COLOUR-BLINDNESS.

To the Editor of THE LANCET.

SIR,—In your issue of July 3rd, Dr. Joy Jeffries gives reasons for doubting the accuracy of my views as to the prevalence of colour-blindness. It is true that my examinations bear but an infinitesimal proportion in number to those of Dr. Jeffries, and that they have been made solely upon candidates for employment on the London and North-Western Railway. In the paper which he criticises I stated that one colour-blind was found amongst two hundred men consecutively examined by twenty-two coloured cards, aided by Stilling's coloured letters and squares. The discovery of so small a number, if colour-blindness be really so much more common, must have been due either to the insufficiency of the test, or to the fact that men with a knowledge of their own colour-blindness refrained from presenting themselves for examination and employment. This appears to me the more reasonable explanation, for I do not doubt the adequacy of the test, especially as the method of using it was precisely that on which Professor Holmgren lays stress—that, avoiding all names, the hand shall, by watching the colours, bear witness of the impression which the colours are making on the eye. That three-quarters of an hour were spent over one man is no evidence that the test is imperfect; nor do I gather from Professor Holmgren's writings that, even with his test—by far the best which has been yet devised—both time and patience are not occasionally required for the elucidation of the particular kind of colour-blindness, although the defective sense of colour may have been revealed almost as soon as the test has been begun.

The point of difference, however, between those who hold that every twentieth or twenty-fifth man is colour-blind, and those who find a difficulty in believing that this defect is so common, is a small one in comparison with the importance of a due recognition of colour-blindness in the examination of those who seek employment either by land or sea, where colours are the necessary signals of danger or otherwise.

The proposal to hold an examination at Cambridge has received the favourable consideration of the Executive, and it is hoped that no obstacles will arise in the way of carrying it out. An examination thus conducted must be of considerable value in arriving at an estimate of the prevalence of colour-blindness amongst an educated section of the community, and be the means of drawing greater attention to the subject than it has hitherto received in this country.

I am, Sir, your obedient servant,
New Cavendish-street, July 19th, 1880. HERBERT W. PAGE.

CHIAN TURPENTINE IN CANCER.

To the Editor of THE LANCET.

SIR,—On March 29th last I commenced the treatment of an ulcerated cancer of the breast with Chian turpentine in solution, the drug I used corresponding closely with Professor Clay's description of the pure kind.

After about twenty doses the patient was relieved from the lancinating pains which she had endured for many months, and these have not returned, though she sometimes complains of aching about the lower margin of the sore. The discharge, at first very profuse, is much diminished. When the case came into my hands, March 29th, the infiltration was threatening the axillary glands, but it certainly has been arrested in that direction, for they are perfectly free from disease, and the lines of tenderness and hardness which could be traced towards the axilla are no longer perceptible. The ulcer is considerably smaller than it was; the cancerous mass appears to be disintegrating and sloughing out from the centre, while along the upper border there is a firm cicatrix. The general health is decidedly improved, and the patient usually sleeps well. The only external applications have been Condy's fluid or sanitas, with occasionally a little tincture of opium to allay superficial smarting.

I should not have sought to publish this case at present, as it is too incomplete to justify any very definite conclusions,

but I think there would be cause for regret if the instances of failure recorded in THE LANCET should dishearten any who are trying a remedy with which Professor Clay has achieved such gratifying results, and I therefore offer my experience, as far as it goes, hoping that it may be accepted for as much as it is worth in support of a prolonged and thorough test.—I am, Sir, yours, &c.,

JOHN GILL, M.D.,
Surgeon to the Infirmary, Stratford-on-Avon.

June 29th, 1880.

THE DISPUTE AT GUY'S HOSPITAL.

To the Editor of THE LANCET.

SIR,—A writer in *Fraser's Magazine* has given to the public some valuable hints as to the causes of the existing state of things at Guy's. My object now is, while agreeing with him on the whole, to point out that, while mistaken in one case at least, he has also overlooked one strong argument against the system which it is now endeavoured to force upon the medical staff at Guy's. As an old student of King's, I look back with pleasure and satisfaction to the relationship which then existed between the medical and the nursing staffs. I hold that in a small hospital with a relatively large number of students a nursing sisterhood such as that of St. John's House is invaluable, both to protect the patients and help to maintain discipline.

On the other hand, in large hospitals such as Guy's, where students are sent that they may have practically the run of the wards, such a system would be both useless and injurious.

If women nurses are to be educated in strapping, dressing, bandaging, &c., as the writer in *Fraser* says is expected, let us all understand this, and room may no doubt be found for both nurses and students; but Guy's has not hitherto been used for such a purpose. I trust it never will be, for I now come to an important omission in the article already mentioned—viz., if a number of imperfectly (I put this mildly) educated women are to be allowed to practise upon hospital patients without either theoretical knowledge or even a determination to follow their so-called education to its legitimate end, what will be the result? I reply a large accession to the ranks of female quacks. Some of your readers, Sir, will laugh at this; but if so, they know not Manchester and similar manufacturing towns. Female quacks of all sorts and specialties abound here, and these have in the majority of cases been hospital nurses of the kind described, or at least mentioned above.

In conclusion, is it not time that the medical and surgical staff of other hospitals should express their opinion upon this matter? I venture to hope that neither my old teachers, fellow students, nor lady sisters would accuse me of any discourtesy to ladies, least of all to those who give their time, and often their money, to soothe the sufferings of the sick poor; but it is simply monstrous that one man should be permitted even to attempt to force a nursing system on the medical staff of Guy's against its will.

I am, Sir, yours truly,
Manchester, July 13th, 1880. H. STANLEY GALE.

To the Editor of THE LANCET.

SIR,—With reference to the letter from Guy's students to Mr. Brudenell Carter, which you kindly inserted in your issue of July 10th, will you allow me a line to state that it was signed by all the full surgeons, dressers, and by all the clinical assistants, in addition to the eight residents whose names you published. This will, I think, show that the sentiments expressed in the letter are felt by men throughout Guy's.—Your obedient servant,

W. HALE WHITE, M.B. Lond.
Guy's Hospital, July 14th, 1880.

THE CASE OF SALEWSKAL.

To the Editor of THE LANCET.

SIR,—In reference to the case of Salewskal you say, "on the whole this is the prettiest sample of crowner's quest law which we have encountered for many a long day." Allow me to add, that you are not alone in your opinion. Apart from the grounds on which you base the above statement, I hold that the ruling of the coroner was incorrect, and indeed illegal. The verdict was "wilful

murder" against Salewskal, and "gross neglect" against Dr. Buncombe. The latter part of the verdict was decided by the coroner to amount to manslaughter, and we therefore have presented to us this fact—that the unfortunate deceased must have been twice killed—viz., by murder and by manslaughter.

It is new to me, in a long experience, that there can be conviction for two separate forms of homicide, and that the death of one person can be caused by the two crimes of murder and manslaughter.

If Dr. Buncombe was amenable to the law for the death of deceased he could, in my opinion, have only been committed as accessory to the murder committed by Salewskal—*quod absurdum est*. If this was not the intention of the jury their verdict as affecting the doctor should have been treated as a censure, and sent by the Coroner to the Guardians for their investigation.—I am, Sir, yours, &c.,

A MEDICAL CORONER.

TEACHING AND EXAMINATIONS AT THE UNIVERSITY OF EDINBURGH.

To the Editor of THE LANCET.

SIR,—The case of the candidate at Edinburgh whose examination was arrested by the Professor of Practice of Physic must have been a very peculiar one. I know most of those who have recently passed that examination, and have heard of no such case as you speak of.

My own oral examination was conducted by the Professor of Clinical Medicine; and so far from avoiding subjects not discussed in the course I had attended, he questioned me chiefly on one of those very diseases; while the other two diseases about which questions were asked me had only been lightly touched upon.

I know that my own case has been by no means singular, and I think it only fair to the Professor that this should be known.

I am, Sir, yours truly,

July 13th, 1880.

CANDIDATE.

THE INTERNATIONAL MEDICAL ASSOCIATION.

To the Editor of THE LANCET.

SIR,—May I inquire who are the wire-pullers in the arrangements for the meeting of the International Medical Association for next year in London. As a teacher and physician in one of the leading London schools, and lately a president of one of the medical societies, I should have thought that I should have been asked to assist, with others of like standing, in the general arrangements. But I can glean no information from others. Yet, on the supposition that I am still President, I receive in virtue of that position a proof-list of the officers in the various sections, already out and dried.

It is also true that I was asked to subscribe to the reception fund; but names were already down for sums, and those are down as officers.

I protest, in the name of the various teachers and medical societies, against the cliquism thus shown. I ask why the general leaders of the profession are excluded from a voice in the matter?—I am, Sir, yours truly,

NEMO.

PARIS.

(From our own Correspondent.)

IN another column of THE LANCET will be found a biographical sketch of the late Paul Broca. Here I need only say that his premature death has been the chief topic of conversation in scientific circles, and that there are few without a kindly remembrance of the medical senator.

By Broca's death a number of official positions become vacant, and the most important of these is the professorship of clinical surgery at the Faculty of Medicine. For this chair several competitors are already mentioned, those having the best chances of success being MM. Tillaux and Bouchard. Another much desired, although less lucrative, appointment is that of Member of the Academy of Medicine, and for this M. Cusco is considered as the most likely candidate.

The readers of THE LANCET will be glad to learn that one of its most eminent contributors, Professor Brown-Séquard, has recently been made a *chevalier* of the Legion of Honour. Upon the same day Professor Ball, another physician of English origin, also received the red ribbon. The *Journal Officiel* sets forth that the reward has been given in both cases for exceptional services, but it is generally thought that the authorities have been exceptionally late in recognising their value.

The annual meeting of the Academy of Medicine took place yesterday, when the perpetual secretary, M. Béclard, pronounced a panegyric upon Andral. The proceedings terminated by the publication of the names of the laureates, prizemen, and medal lists for the preceding year. It is worthy of note that many of the prizes, which are often of considerable value, were not awarded, in consequence of there being no competitors.

M. Marey has been making some observations with the pneumograph, upon the effect of training, which are worth relating. In the state of repose the respiratory curve has a certain amplitude, which in a raw recruit is increased by exercise. After a month's training the respiration in repose acquires an amplitude which it formerly only presented after a long run. After six months the curve is four times as full, but the rhythm only half as quick, and these are no longer modified by exercise, but remain the same even when the soldier, burthened with his knapsack, is made to go through some very arduous drill.

A special grant of 50,000 francs has been made to M. Pasteur by the Chamber of Deputies, to enable him to continue, at the laboratory of the École Normale, his researches upon the contagious diseases of animals. It is anticipated that some very important results will shortly be made known.

July 21th, 1880.

Obituary.

PROFESSOR PAUL BROCA.

THE following biographical sketch of Broca has been forwarded to us by Professor B. Ball, one of his friends and pupils:—

A great existence has passed away. Paul Broca suddenly expired on Thursday, the 8th inst., at midnight. The surprise and deep regret which this unexpected event created, not only in the medical but in the general public, can only be appreciated by those who knew how deep an influence the celebrated Professor had obtained over the minds of those who in France lead an intellectual life.

Broca was born in 1824 at Sainte-Foy (Gironde). His friend, the illustrious naturalist Gratiolet, was born in the same place ten years before, so that by a singular coincidence the two men whose labours (in France at least) have chiefly contributed to our knowledge of the anatomy and physiology of the brain, sprang from the same soil, and were undoubtedly children of the same race. That race, with all its characteristics, its brilliancy, its many-sided capacities, its mental and physical activity, found its fit and proper representative in Broca. He was most emphatically what is termed in Northern France a "*Méridional*,"—a man of the South. The defects of the type, its occasionally unpleasant peculiarities, had totally disappeared in Broca. He retained, however, the extraordinary activity which is the leading feature of the Southern Frenchman, and which, in his case, was most undoubtedly the ruling impulse.

The son of a physician, Broca, at the age of sixteen, had concluded his collegiate studies: he came at once to Paris, where he immediately embraced that course of labour which during forty years he pursued without a moment's interruption, till the hand of death was laid upon him.

Although surgery was at the beginning the object which he seemed to have chosen, anatomy may be said to have been the Alpha and Omega of his intellectual career. In 1846 he became prosector of the Faculty, and gained in rapid succession the honours of the profession—a place as surgeon in the Paris hospitals, and the title of *agrégé* at the Medical Faculty. In 1866 he became a member of the Academy of Medicine, and shortly afterwards (in 1867) was promoted to a chair at the Faculty, where, as a teacher of

clinical surgery, he was highly successful. But the mere enumeration of his scientific dignities would convey an inadequate notion of the man, of his moral type, and of his intellectual powers.

The mental activity of most men is circumscribed by nature within narrow limits. Those who at an early age have begun a severe course of cerebral exertion, although in later years they may retain that soundness of judgment which is the true characteristic of superior minds, are seldom able towards the decline of life to labour as they did in the springtide of their youthful energy. Nature in this respect was liberal to Broca, and during the unusually long space of time which he was allowed to devote to the cultivation of science, he issued a succession of original papers upon the most different subjects, the number of which is almost incredible, and upon each of these he put the mark of a master mind. Some of his works have become classical, and amongst them we must be content to quote his book on Aneurism, his treatise on Tumours, and his memoirs on Diseases of Cartilage, on Rickets, on Vertebral Arthritis, on Strangulated Hernia, on the Surgical Applications of the Galvanic Cautery, &c. Fertility and originality were, in fact, the most prominent features of Broca's intellect, and not one of his productions can be charged with insignificance or mediocrity, nor with that ponderous erudition which laboriously evolves new books out of old ones. His learning was most extensive, but he bore lightly the weight; it never crushed his own independent powers of thought.

But although his clinical teaching and practice were entirely devoted to surgery, his powers of observation enabled him to make one of the leading discoveries in cerebral physiology—to wit, the connexion of that singular mental disturbance described under the name of aphasia, with injuries affecting that limited point of the cerebral surface which is now universally known as Broca's convolution. The most striking point which results from his researches is that the *left* side of the brain seems exclusively to possess (speaking in a general sense) that functional power the loss of which is indicated by the suppression of language—a fact of momentous importance, the consequences of which are too well known to require any comment here. The researches of later physiologists upon cerebral localisations have undoubtedly started from these primordial data; and whatever may be thought of the exaggeration to which the doctrine has been pushed by systematic minds, the fact established by Broca has long since taken its rank among the indisputable truths of science.

The natural bent of Broca's mind received an additional impulse by the foundation (in 1860) of the Anthropological Society, in which he met his old friend Gratiolet. From that moment the activity of Broca's intellect seemed to have found its proper channel. Anthropology is a compound of so many other sciences, in which anatomy, natural history, ethnology, archaeology, and philology take an equal part, that the intervention of a grasping and encyclopædic mind, like Broca's, is almost invaluable to form the connecting link between so many different branches of human knowledge, which at first sight would seem to lie widely apart. An excellent mathematician, a first-rate anatomist, a good Greek scholar, Broca combined in himself that diversified knowledge which the subject requires, with the synthetical tendencies which condense these disseminated forces and make them converge upon a single point. As Secretary-General of the Anthropological Society his services may truly be said to have been invaluable; he was indisputably the right man in the right place.

The excitement, irritability, and fatigue which almost invariably result from severe and protracted brain-work have spoiled many a man's temper, and made him as repulsive to those who live near him as he is attractive to those who see him only from a distance. The cheerfulness, good-nature, and benevolence of Broca were proverbial, and the man who night after night sat up to carry out the labours of the day, was always prepared to join in pleasant intercourse, and the brilliancy of his wit made his conversation as pleasant as it was profitable.

But a higher feeling than mere benevolence was the ruling passion of his moral nature. In all things he aimed at justice, and the claims of friendship were, it might almost be said, sternly put aside when they clashed with his notions of right. On the numerous occasions in which he was called upon to exert his professional influence he never allowed his personal interest or private affections to interfere

with his judgment—a golden rule, but one which it is often difficult to carry out in practice. In short, Broca was an upright judge, and his reputation as such was so thoroughly established that no one ever attempted to exert an unfair pressure upon his conscience.

Like many other independent and earnest men, Broca, from his earliest youth, had belonged to the Republican party; but devoting his entire energy to scientific pursuits, he had never taken an active part in political struggles, when his friends cast their eyes upon him for a seat in the Senate. His election was a signal triumph for the profession, of which he was so eminent an advocate, and his thorough knowledge of all subjects connected with the higher branches of public education would no doubt have made him an invaluable acquisition to the French legislative assembly, if his career, after reaching its culminating point, had not been suddenly cut short. On Tuesday, the 6th inst., he fainted in the Senate House; on the ensuing Wednesday he felt sufficiently recovered to resume his labours; but towards midnight on Thursday he was suddenly seized with a fit of dyspnoea, rose from his bed, and expired in ten minutes. Strange to say, the post-mortem examination gave no clue to the mystery of his unexpected death, all the organs being apparently sound. We shall probably not be far from the truth in attributing the catastrophe to cerebral exhaustion, arising from too protracted a course of severe intellectual exertion.

At the banquet which his friends offered him on the occasion of his election to the senatorial dignity, Broca observed, in returning thanks, that if he believed in ancient superstitions he ought to expect some great misfortune as the penalty for too complete and long-continued prosperity. That misfortune came in the form of sudden death; but in the very bitterness of their grief his friends can scarcely regret that he should have been spared the protracted sufferings of chronic disease, and that he should have disappeared from sight in the fulness of his glory.

STEPHEN H. WARD, M.D.

DR. STEPHEN H. WARD, who died at his residence, 28, Finsbury-circus, of disease of the heart and liver, on the 10th of this month, first commenced practice as a general practitioner. He afterwards became a member of the Royal College of Physicians, and was shortly after appointed Physician to the Dreadnought Seamen's Hospital. In 1870 he was elected a Fellow of the Royal College of Physicians, and in 1872 he published a monograph on some affections of the liver and intestinal canal, with remarks on ague and its sequelæ, scurvy, purpura, &c. He was also for several years Physician to the Hospital for Diseases of the Chest, Victoria Park, and held that appointment at the time of his death.

Dr. Ward was an able and accomplished physician, and was greatly esteemed, and will be much regretted, by a large circle of friends.

MEDICAL NOTES IN PARLIAMENT.

In the House of Lords on Tuesday the County Court Jurisdiction in Lunacy (Ireland) Bill was read a second time.

In the House of Commons on Thursday, 15th inst., the second reading of the Vaccination Acts Amendment Bill was again deferred—this time to Monday, the 26th. A petition against the Bill was presented from Greenwich Union. The completion of the appointment of the Select Committee on the Contagious Diseases Acts was reached at two o'clock in the morning, when Mr. Childers moved, and it was agreed, to add Mr. Massey to the Committee in place of Mr. Brassey. The War Secretary stated that he would have been glad to add Dr. Farquharson, whose name had been put upon the paper by Mr. Puleston, but that he was unable further to extend the number of the Committee.

On Friday, Mr. Sexton called attention to Dr. Woodhouse's report on the fever districts in county Mayo, and specially referred to the statement that the people were predisposed to fever by scanty food, and want of variety in food, their principal means of subsistence for the past eight months having been Indian meal. Mr. Forster replied that he was doing all he could to improve that state of things,

but he would postpone a detailed answer until Monday. Mr. Labouchere asked the Secretary of State for the Home Department, whether he had received a complaint from the solicitors of a Mrs. Hughes that her daughter, Mary Ann Tooke, an inmate for the last six years at the Colney Hatch Lunatic Asylum, had, whilst under restraint in the asylum, been delivered of a male child. Whether he had made any inquiries to satisfy himself that the statement was true. Whether from such inquiries he had reason to believe that not only Mary Ann Tooke, but some other female lunatic, an inmate of the asylum, has been recently delivered of a child. Whether he intended to take any, and, if so, what proceedings, by indictment or otherwise, for the punishment of the guilty persons, and for the protection of the other female lunatics from outrages leading to similar consequences. And whether he would lay upon the table all correspondence between the solicitors of Mrs. Hughes, Mrs. Hughes, the authorities of the Colney Hatch Asylum, and his own Department, upon the subject. Mr. A. Peel replied: In answer to the hon. gentleman, I have to say a complaint was received by the Secretary of State for the Home Department of the nature indicated in the question, and an official inquiry was immediately ordered, and a report made by two Commissioners in Lunacy. Unhappily there is too much truth in the statement which is made in the question, although I am happy to say there is no reason to think other cases of a similar nature have occurred in Colney Hatch Asylum. The facts are now under consideration by my right hon. friend, with a view to further proceedings, and I think the hon. gentleman will see it is not desirable at the present state of the case to furnish the correspondence, but the Home Secretary will be happy to confer with the hon. member on what is admitted to be a very serious matter.

On Monday, a petition was presented from medical officers of the Baltinglass Union, for an alteration of the Irish Poor-law and Medical Charities Act. Petitions against the Vaccination Acts Amendment Bill were presented from the Manchester Medico-Ethical Association and the Council of the West Somerset Branch of the British Medical Association.—Notice was given of the following questions for Thursday: Mr. Watkin Williams, to ask the Secretary to the Local Government Board, whether any regulations exist defining the duties of relieving officers and medical officers of Poor-law Unions in relation to orders for the supply of medical necessities to the sick poor; and whether it is competent to relieving officers to disregard or over-rule at their discretion the orders of the medical officers; and, if so, whether the Local Government Board will consider the propriety of altering the regulations in question. Mr. O'Connor Power, to ask the Chief Secretary to the Lord-Lieutenant of Ireland, if his attention has been called to the Report of Dr. Sigerson and Dr. Kenny on the fever-stricken districts of Mayo, presented to the Mansion House Relief Committee, and to their suggestions for checking the progress of the fever; and, if so, whether he will take steps to have those suggestions acted upon. Mr. Macdonald, to ask the Secretary of State for the Home Department if his attention has been called to an inquest held on Wednesday, the 14th inst., at the White Horse Tavern, St. Matthew's, touching the death of a youth named William Ball. If it be correct that he died from the effects of poison inhaled when following his employment as a copper bronze printer. Whether there be any provisions in the Factory and Workshops Act to prevent youths from being employed in such an atmosphere as will cause the death of those that may be employed where such work is carried on. And, if there be no provision now in existence, will he cause the suggestions made by Dr. Tidy to be carried out, which are as follows: "The free use of milk or other albuminous fluid by the workpeople employed; the wearing whilst engaged at the work a cotton-wool respirator of sufficient size to cover efficiently both mouth and nostrils; that the bronzing should be carried out in a separate compartment or room, and not in the general workshop, in order as far as practicable to limit the evil; that a dress of glazed calico or like material tied round the neck and waist should be worn by those engaged at the work, and that this dress should be removed before leaving the compartment where the process is conducted; that strict cleanliness should be enforced."—Sir S. Northcote inquired whether the Government would insert some provision in the Supplementary Budget Bill to prevent the use of deleterious materials in brewing. Mr. Gladstone replied, that he thought the Adulteration Acts

afforded ample security against the use of injurious ingredients. If damaged grain were used the beer would lose its value, and therefore they must rely on the self-interest of brewers to guard the public from that danger. Sir W. Harcourt stated to Mr. Wodehouse that arrangements had been made for the independent inspection of convict prisons; and, in answer to Mr. Storer, defended the recent decision of the Bedale (Yorkshire) magistrates, by which the Duke of Leeds' steward and other persons were fined £9 in the aggregate, for cruelty in ear-marking cattle. Amongst the witnesses was Professor Ritchie, of the Royal Veterinary College of London, who considered that cutting or slitting the ears of animals was a most cruel custom, causing great pain, and sometimes leaving festering wounds, which remained unhealed for some time. In the present case it was proved that the sores were open for several days; and the magistrates considered the practice was unnecessary, as cattle might be marked in other ways. Mr. Storer said the decision was alarming to agriculturists who had been in the habit from time immemorial of ear-marking cattle. It also affected masters of hounds, who had been accustomed to mark their hounds in the same manner. He gave notice that he would call the attention of the House to the subject. Mr. Forster, replying to two or three Irish members, said the accounts from the fever districts were encouraging, and, considering the bad sanitary state of the places affected, which might justly be described as fever-beds, he was surprised that the disease had not spread more readily.—Lord R. Churchill inquired whether Mr. Dodson's loss of his seat for Chester would involve the withdrawal of the Vaccination Acts Amendment Bill. Mr. Gladstone replied, amidst cheers and laughter, that he had not given much attention to the Bill, but he would consult with the gentleman—presumably the unfortunate Mr. Dodson—who is responsible for it.

On Thursday, Mr. Forster stated that the latest reports of fever in Ireland showed that it was abating, and the local authorities were doing what they could to improve the condition of the cabins.—Mr. Childers said he would give the question of compensation for injuries on torpedo service his best consideration, but it raised some questions of serious importance.—The other two questions of which notice had been given for to-day were postponed.—In the course of the debate on the report of amendments to the Disturbance Bill, Mr. Mitchell Henry stated that a large number of people on the West coast of Ireland were subsisting on food that was hardly good enough for dogs. They had nothing for two or three months in the year but wheeks and seaweed, sprinkled with a little Indian meal.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen having passed the required examination for the diploma, were duly admitted Members of the College at a meeting of the Court of Examiners on the 19th inst.:

Ashdown, G. W. Whetton, M.B. Edin., Ramsay, Isle of Man.
Bentham, Newton, L.S.A., Hackney.
Bendall, Howard, M.B. Edin., Perth.
Bott, Henry Septimus, L.S.A., Bury, Lancashire.
Brown, Charles, Dudley.
Chadwick, Wm. Fitton, Royton, Lancashire.
Cohen, Algernon Aaron, M.B. Aberd., New South Wales.
Colbourn, Thomas Walter, Woodsetton, near Ludlow.
Hall, Thomas Lambert, L.S.A., Ashford, near Ludlow.
Johnston, Edward Cocks, Birmingham.
Jones, Griffith Job, L.R.C.P. Edin., Liverpool.
Pickersgill, Edwin Puleine, Leeds.
Routh, A. J. McConnel, L.S.A., Montagu-square.
Spencer, Bertram, M.B. Toronto, Toronto.
Thomson, Arthur, M.B. Edin., Edinburgh.

The following gentlemen were admitted Members on the 20th inst.:

Bredin, Richard, Liverpool.
Carter, Godfrey, Leeds.
Dexter, William Parker, Clifton, Bristol.
Fraser, James William, M.B. Edin., Hull.
Godson, Edwin, Chipping Campden.
Harris, David, Leeds.
Maigne, Robert, Salford.
Maish, T. A. Perry, Bristol.
Moore, Stephen Henry, L.R.C.P. Edin., Peckham.
Morgan, Charles Jeffrey, L.R.C.P. Edin., Barnsbury-park.
Neatby, Edwin Awdas, Barnsley, Yorks.
Pope, William Wippell, L.R.C.P. Edin., Exeter.
Roocroft, William Mitchell, Wigan.

Searancke, Nicoll Frederick, Rhyl, North Wales.
Shettle, Harry Wynter, L.R.C.P. Edin., Wimborne.
Thomas, David John, Rhyl, North Wales.
Twynam, George Edward, Blandford-square.
Wills, J. P. Budgett, M.B. Durham, St. Mary's-terrace.
Wilson, John, L.R.C.P. Lond., Wrexham, North Wales.
Winstanley, Robert Wyndham, Crowborough, Sussex.

The following gentlemen were admitted Members on the 21st inst. :—

Barron, Alexander, Southport.
Barrow, Roger William, Liverpool.
Bull, G. G. Robins, Stafford.
Crane, Charles Robinson, Guildford.
Donovan, D. William, Caledonian-road.
Garey, John, Glasgow.
Honeyburne, Richard, Liverpool.
Hutchinson, Jonathan, Cavendish-square.
Laxton, Thomas Lowe, Bedford.
Nodding, Thomas Edward, Trinidad, West Indies.
Parke, Charles James, L.S.A., Hougham.
Parker, C. Barnsdall, M.D. Ohio, Cleveland, Ohio.
Payne, A. Bruce, Deal.
Proffitt, A. Henry, Rugeley.
Potts, J. Ashford, M.B. Edin., Broseley.
Renshaw, Israel J. E., Sale, Cheshire.
Stoneham, Thomas George, Rye, Sussex.
Wagstaff, E. Hamilton, Leighton Buzzard.
Wolstenholme, R. Hanson, Manchester.

The following gentlemen passed the Primary Examination in Anatomy and Physiology at a meeting of the Board of Examiners on the 15th inst. :—

John F. Molineux and William J. Murray, Charing-cross Hospital;
Arthur N. Clarke, St. Bartholomew's Hospital; Henry J. Pringley,
St. Thomas's Hospital; Herber H. Williamson and Frederick E.
Pearse, University College; Ernest W. Benson and Sidney E.
Craddock, King's College; John J. D. Vernon, Manchester; and
James J. Prendergast, Melbourne and Guy's Hospital.

Of the 192 candidates examined during the past fortnight, 78 failed to satisfy the Board, and were referred for three and 12 candidates for six months' further anatomical and physiological study.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on July 15th :—

Benoly, Nathaniel, Grove-road, Victoria-park.
Bray, Ernest Edward, Darlington, Bognor.
Campe, Charles Frederick, Stratford, Essex.
Foster, William, Horton-lane, Bradford.
Holton, Francis Wm. Parke, York-crescent, Woolwich.

The following gentlemen also on the same day passed their Primary Professional Examination :—

John Chas. Davies, London Hospital; George Francis Symons, Guy's Hospital; Henry Gervase Watson, Sheffield School of Medicine.

The Library of the Obstetrical Society will be closed during the month of August.

DR. J. H. GLADSTONE has presented £100 to the Research Fund of the Chemical Society.

A TENDER has been accepted for the erection of an abattoir in Dublin, at an estimated cost of £13,135.

THE NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC.—The foundation-stone of a new wing to this hospital was laid on Wednesday by the Duke of Westminster. The wing will add eighteen beds to the 110 formerly provided in the institution, besides supplying a complete out-patients' department. The cost of the addition is estimated at £9000, of which £6300 has been subscribed.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.—At the annual meeting held on the 13th instant, the following officers were elected for the year ensuing :—President: Dr. J. S. Bristowe. Vice-Presidents: Dr. G. Buchanan, Dr. Thomas Stevenson, Dr. C. O. Baylis, Dr. W. H. Corfield. Treasurer: Dr. J. W. Tripe. Secretaries: Dr. J. N. Vinen, Mr. S. F. Murphy. Council: Dr. G. P. Bate, Dr. A. T. Brett, Mr. F. M. Corner, Dr. J. Dixon, Dr. T. O. Duffield, Dr. A. Hill, Mr. E. L. Jacob, Mr. S. R. Lovett, Dr. E. C. Seaton, Dr. J. Stevenson, Dr. R. P. B. Taaffe, Dr. J. F. W. Tatham.

THE FACTORY AND WORKSHOP ACT.—The Home Secretary, under the provisions of sections 43 of the Factory and Workshop Act, 1878, has granted to workrooms in connexion with drapers' retail establishments, and to workshops in which the curing of fish is carried on, a special exception "that the period of employment for young persons and women, if so fixed by the occupier and specified in the notice, may, except on Saturday, begin at 9 a.m. and end at 9 p.m., and in such case the period of employment for a child in a morning set is to begin at 9 a.m., and the period of employment for a child in the afternoon set is to end at 8 p.m."

EARLSWOOD IDIOT ASYLUM.—The usual annual festival of this useful institution was held last week, and passed off with its wonted *éclat*. Dr. Grabham, the superintendent, reports that during the year ending in March there was a fair proportion of improved cases among the inmates, while two were stated to be cured. The death-rate was 4.4 per cent. calculated on the total number treated. It is satisfactory to learn that the asylum is out of debt, but a sum of £300 is required to complete the infirmary.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.—The directors of this society held their usual quarterly Court on the 14th inst., the President, Sir George Burrows, Bart., in the chair. Fresh applications were made from one widow and three orphans, and relief granted to them. The amount to be distributed for the half-year among the sixty widows and sixteen orphans now on the list of recipients was £1317 10s. The expenses of the quarter amounted to £44 9s. Only one new member was elected. The directors take this opportunity of announcing that, under the new bye-law, all registered medical practitioners living within a radius of twenty miles from Charing-cross are eligible for election as members.

THE PARKES MUSEUM OF HYGIENE.—The first annual public meeting of the Parkes Museum is to be held on Tuesday, the 27th inst., at 3 P.M., in the Egyptian Hall of the Mansion House, under the presidency of the Lord Mayor. We understand that the Executive Committee are finding the present rooms occupied by the museum hardly equal to its requirements, and that an effort is to be made to establish the collection in some central position, and one more accessible than that which it at present occupies. Many persons of eminence in political and social circles have promised to attend, and we doubt not that those City companies which have proved already that technical education is a matter dear to them, will be represented on the occasion, and will tender a generous support to an institution which has already done good work in spreading a knowledge of sanitary technology among the artisan and other sections of the public.

ARMY MEDICAL SCHOOL ATHLETIC SPORTS.—An athletic meeting in connexion with the Army Medical School, Netley, was held on Thursday, July 8th, in the presence of a large number of spectators. The events, in most cases, were very closely contested. I. Throwing the cricket-ball (six competed) : 1, J. R. Ronayne, 96 yds.; 2, C. Henderson, 94 yds. II. Hundred yards race (six ran) : 1, A. Peterkin; 2, E. R. Cree. III. Long jump : 1, J. R. Ronayne, 20 ft. 3 in.; 2, W. Heffernan, 19 ft. 7 in. IV. Quarter-mile race (five ran) : 1, A. Peterkin; 2, C. Henderson. V. Hundred yards soldiers' race (six ran) : 1, Blake, A.H.C.; 2, Quibble, A.H.C. VI. Putting the weight (four competed) : 1, A. Peterkin, 32 ft. 7 in. VII. Half-mile race (six ran) : 1, C. Henderson; 2, H. P. Dimmock. VIII. High jump (four competed) : 1, A. Peterkin, 5ft. 1½ in.; 2, C. S. Rundle, 4ft. 10 in. IX. Quarter-mile soldiers' race (five ran) : 1, Quibble, A.H.C.; 2, Warman, A.H.C. X. Tug of war—Indian v. Home Service, ten a-side: The Home Service being considerably heavier than their opponents won somewhat easily. XI. Hurdle race, 120 yds., over ten flights : 1, A. Peterkin; 2, W. Heffernan. XII. One mile race (five ran) : 1, C. Woods; 2, H. P. Dimmock. XIII. Consolation race, 200 yds. (four ran) : 1, M. W. Kerin; 2, J. H. Harran.

Medical Appointments.

Intimations for this column must be sent DIRECT to the Office of THE LANCET before 9 o'clock on Thursday Morning, at the latest.

ANDERSON, R. B., F.R.C.S.E., has been appointed Public Medical Officer of Tobago.
BAKER, Mr. J. B., has been appointed Assistant Surgical Officer to Charing-cross Hospital.
BENNETT, W. H., F.R.C.S.E., has been appointed Assistant-Surgeon to St. George's Hospital, vice Stirling, resigned.
BOND, J. W., M.B., has been appointed Resident Medical Officer to University College Hospital.
CLARKE, W. J., L.S.A.L., has been appointed Assistant Medical Officer to Charing-cross Hospital.
CORRY, H., A.B., M.D., M.Ch., has been appointed Assistant-Surgeon to the North Charitable Infirmary, Cork, vice O'Sullivan.
FAIRLAND, Mr. S. T., has been elected Medical Officer and Public Vaccinator of the Fovant District of the Wilton Union.

FARRANT, S., M.R.C.S.E., L.S.A.L., has been reappointed Medical Officer to the Taunton Sanitary Hospital.

FOLEY, S., L.R.C.P.L., M.R.C.S.E., has been appointed Medical Officer to the St. David's District of the Haverfordwest Union.

FOTHERGILL, E., L.D.S., has been appointed Dental Surgeon to the Newcastle-on-Tyne Infirmary.

FOY, F., M.R.C.S.E., has been appointed Dental Surgeon to the Infant Orphan Asylum, Wanstead, and to the Royal Hospital for Incurables, Putney, vice Tracey, resigned.

GOYDER, C. M., L.R.C.P.Ed., M.R.C.S.E., has been appointed Senior House-Surgeon to the Newcastle-on-Tyne Infirmary, vice Dixon, resigned.

HEWETT, F. C. C., M.R.C.S.E., L.S.A.L., has been appointed Assistant Medical Officer and Dispenser to the Cleveland-street Sick Asylum, vice Hopkins, resigned.

HILL, A. B., M.D., has been appointed Public Analyst for the Borough of Leamington for one year.

LLOYD, D., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer to the Kenarth District and the Workhouse of the Newcastle-on-Emlyn Union, vice Thomas, resigned.

MILBURN, F. Le F., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for the Fourth District of the Holborn Union, vice Betts, resigned.

O'SULLIVAN, S., M.D., M.Ch., has been appointed Surgeon to the North Charitable Infirmary, Cork.

PEARSE, T. F., M.D., has been appointed Medical Officer and Public Vaccinator to the Bramsholt District of the Petersfield Union.

POWELL, H. A., M.A., M.R.C.S.E., L.R.C.P.Ed., L.M., L.S.A.L., has been appointed Resident House-Surgeon to the Western General Dispensary, Marylebone-road, vice J. E. Bullock, M.D., resigned.

STODDART, Mr. F. W., has been appointed Public Analyst for the City of Bristol, vice W. W. Stoddart, deceased.

SWEETING, R. D. R., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer to the Fulham Small-pox Hospital.

TREVES, F., F.R.C.S.E., has been appointed Senior Demonstrator of Anatomy at the London Hospital Medical College, vice Dr. H. S. Wilson, resigned.

WALKER, W., L.S.A.L., has been appointed Resident Obstetrical Officer to Charing-cross Hospital.

WATSON, F. S., M.R.C.S.E., has been appointed Resident Surgical Officer to Charing-cross Hospital.

WILLIAMS, J., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer to the Workhouse of the Brecknock Union, vice J. C. North, resigned.

Births, Marriages, and Deaths.

BIRTHS.

ANDREWS.—On the 15th inst., at Everleigh, Green-hill, Hampstead, the wife of James Andrews, M.D., of a daughter.

DEAKIN.—On the 4th inst., at Eastbury Manor, Worcester, the wife of Surgeon C. W. Shirley Deakin, F.R.C.S.E., H.M.'s Bengal Army, of a daughter.

EDIS.—On the 13th inst., at 22, Wimpole-street, the wife of Arthur W. Edis, M.D., F.R.C.P., of twins (both girls).

FRANKLIN.—On the 14th inst., at Welford-manor, Leicester, the wife of G. C. Franklin, F.R.C.S.E., of a son.

HOPKINS.—On the 19th inst., at 4, Gay-street, Bath, the wife of H. Culford Hopkins, M.R.C.S.E. &c., of a son.

HOPWOOD.—On the 14th inst., at Exeter, the wife of Surgeon-Major Hopwood, of a daughter.

LEWIS.—On the 16th inst., at Albert-street, Regent's-park, the wife of Louis Lewis, M.D., of a son.

MEREDITH.—On the 14th inst., at Week-street, Maidstone, the wife of John E. Meredith, M.D., of a daughter.

THURSFIELD.—On the 11th inst., at High-street, Bridgnorth, the wife of William Thursfield, M.D., of a son.

MARRIAGES.

ADAMS—SCHOLFIELD.—On the 17th inst., at St. Helen's Church, Bishopsgate, London, James E. Adams, F.R.C.S., to Ellen Holgate, third daughter of the late John Scholfield, Esq., of Faxfleet Hall, Howden, Yorkshire.

KAY—FOWLER.—On the 17th inst., Alfred Kay, L.R.C.P., of Green-street, Victoria-park, E., to Emily, younger daughter of the late Stephen Marshall Fowler, Esq., of Ranby-hill, Wragby, Lincolnshire.

WALKER—ORIEL.—On the 15th inst., at St. Mary's, West Kensington, Horace Walker, L.R.C.P.L., of The Cedars, West Kensington, to Maria Louisa, third daughter of the late Dr. Oriel, of Alfred-place, W.C., and of Mrs. Oriel, of Elms House, West Kensington.

DEATHS.

FORSYTH.—On the 30th May, at Laura, South Australia, Alexander Forsyth, M.D., aged 30.

THOMAS.—On the 16th inst., at Wells-street, W., Edward Stevenson Thomas, M.R.C.S.E., aged 47.

THOMPSON.—On the 13th inst., at Manningtree, Essex, Anne, relict of William Thompson, M.R.C.S.E. (late of Manningtree), in her 90th year.

WILSON.—On the 8th inst., at Aberdour House, Fife, N.B., Sarah Liddell, wife of Robert Wilson, M.D., and daughter of the late John Liddell, Esq., of Manchester-square, London.

N.B.—A fee of 6s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8 a.m. by Steward's Instruments.)

THE LANCET OFFICE, July 22nd, 1880.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radiation in Vacuo.	Max. Temp. in Shade.	Min. Temp.	Rain fall.	Remarks at 8.30 A.M.
July 16	30.06	N.	63	61	95	76	57	0.02	Overcast
" 17	30.05	N.E.	60	59	109	75	57	..	Overcast
" 18	29.94	W.	54	54	108	75	50	0.17	Cloudy
" 19	30.01	W.	63	60	108	74	56	..	Overcast
" 20	30.08	W.	64	59	112	77	55	..	Fine
" 21	30.09	S.W.	64	60	110	77	57	..	Hazy
" 22	30.01	S.E.	60	58	97	70	58	0.17	Raining

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Local papers containing reports or news-paragraphs should be marked.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

Lectures, original articles, and reports should be written on one side only of the paper.

We cannot prescribe, or recommend practitioners.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET to be addressed "To the Publisher."

AN EPIDEMIC OF DEMONOMANIA.

OUTBREAKS of demonomania are so rare in the present age that the subject has almost fallen outside the consideration of writers on public health. We note with considerable interest an account of an epidemic of demonomania reported by Professor Léon Collin in the last (July) number of the *Annales d'Hygiène Publique*. The epidemic occurred in an isolated, remote spot of the district of Tolmezzo, Udine, Northern Italy, at the beginning of 1878, and the characteristics of the outbreak of earlier period were repeated in every respect. The starting-point was a case of simple hysteria in a female, dealt with by ignorant priests as a case of "demoniacal possession," and in the end, 18 cases, 15 of ages varying from 16 to 26 years, and 3 of the respective ages of 45, 55, and 63 years, were cultivated. The intervention of the authorities and of a proper medical staff, when the news of the outbreak reached Udine, quickly put a stop to the extension of the malady, and brought it to an end.

THE MEDICAL BENEVOLENT COLLEGE.

To the Editor of THE LANCET.

SIR,—We shall be much obliged if you will spare us space for a short explanation of the present position of a subscription which was inaugurated by the late Dr. William Carr shortly before his death, with the object of having a portrait of Mr. Erasmus Wilson painted and placed in the Royal Medical Benevolent College at Epsom, which owes so much to his liberality. The amount subscribed proved to be insufficient for the object proposed, and, in the uncertainty what to do with it, the money has remained in our hands, as joint treasurers with the late Dr. Carr.

Having ascertained that Mr. Wilson, to whom it was intended to do honour, would much prefer the appropriation of the fund to a prize of some kind for the benefit of the Epsom boys, rather than to a portrait of himself, the amount now in hand (£65) has been invested in Consols in the names of trustees, with a view to the foundation at some future period of a prize bearing his name at the College.

We are, Sir, your obedient servants,

GEO. C. JONSON.

J. LUMSDEN PROPERT.

Soho-square, July 12th, 1880.

CYPRUS.

DRS. G. C. SCHIRAS and E. L. GILIZIAS, says the *Chemists' Journal*, have recently reported very favourably on Cyprus as a drug-producing island. They state that nearly all the aromatic herbs and medicinal plants thrive well; that mint, rosemary, lavender, &c., attain great perfection, yielding essential oils second in quality to none imported into this country.

Mr. G. Buckston Browne.—Our space will not allow of the publication of any further correspondence on the subject.

RESTORATION OF THE HAND AFTER COMPLETE SEPARATION FROM THE ARM.

DR. L. L. STATON, of Tarboro, N.C., relates, in the *North Carolina Medical Journal*, a case in which a useful hand was preserved after separation from the arm, excepting a small portion of skin, below the articulation with the ulna. The injury was accidentally effected by an axe, by which the limb was severed from the styloid process diagonally across the trapezium, dividing all the muscles, bones, and bloodvessels. After an unavoidable delay of nearly an hour, Dr. Staton proceeded to replace the hand, which was held securely in position with silver sutures and adhesive plaster, and bound, together with the arm, on a broad splint. On the third day pulsation could plainly be felt in the hand. The sutures were removed on the fourteenth day. Finally, the patient was able to extend the fingers of the wounded limb, and to grasp with nearly her wonted strength.

Mr. Hugh Adcock.—Our correspondent's view of the facts is the right one; but the letter of Mr. Howell contains such a proper expression of regret, with explanation, that we do not see the necessity to publish the correspondence.

L. A. X.—For South Australia. 8, Victoria-chambers, Westminster, S.W.

TREATMENT OF SCALP WOUNDS.

To the Editor of THE LANCET.

SIR,—In the "Mirror of Hospital Practice" Mr. Spencer Watson records a case of severe scalp wound, with very rapid recovery, which he attributes partly to the *antiseptic dressings used*; but he does not tell us how long the poultices ordered Feb. 10th were continued, or what the antiseptic dressings were. Was the application of *carbolic oil* [the antiseptic treatment?—and is it not probable that the poultices were more concerned in the favourable issue? Such, at least, my experience of three or four similar cases at the West London Hospital would lead me to believe; and I think that in severe cases of scalp wound, especially where bone is exposed and the covering torn away, we have no agent so powerful as good hot poultices to induce the growth of granulations and obviate the swelling of surrounding parts, which most certainly you will get if the wound does not heal at once. So satisfactory have I found this treatment, that now I never hesitate to order poultices in severe scalp wounds, and even in ordinary ones if closure by first intention is not effected.

I have no experience of the treatment of scalp wounds under a rigid Listerian method, and I should like to have the opinion of some of your readers upon the subject of the treatment of scalp wounds where thorough antiseptic precautions are impossible.

I remain, Sir, yours faithfully,

Torquay, July, 1880. G. W. HAMILTON CUMMING.

SCURF AFTER RINGWORM.

MR. ALDER SMITH, the resident medical officer, Christ's Hospital, London, writes:—"With regard to scurf patches left after inveterate ringworm of the scalp, I would advise your correspondent to examine the scalp very carefully with a lens to see if there are not one or two short stumps to be seen, or a few black dots. I usually find the scurf patches disappear when the disease is absolutely well, especially if glycerine with a small quantity of carbolic acid be used. Citrine ointment, diluted with seven parts of lard, is the best application I know of to remove any scurf spot that is left."

MR. G. M. A. RUDKIN, of Teignmouth, observes:—"If your correspondent 'M.D.' will use a lotion made of equal parts of carbolic acid and glycerine, to be well rubbed into the affected spots every night, he will find the scurf to have entirely and permanently disappeared in the course of two or three weeks. I have used the above in most inveterate cases, and have never found it to fail."

DR. W. H. LAMBART, of Liverpool, states:—"The following has proved so successful in my practice that I would, with confidence, recommend it to your correspondent 'M.D.'—Nitric oxide of mercury ointment, benzoic ointment, of each half an ounce; rub in a little night and morning, at the same time give the following:—Sulphate of quinine, twenty grains; dilute nitric acid, one drachm; tincture of oranges and tincture of calumba, of each one drachm and a half; simple syrup, 1½ an ounce; water to eight ounces: one tablespoonful three times daily, twenty minutes before meals."

MR. JAS. STARTIN, of Sackville-street, writes:—"Your correspondent M.D., calls attention to a by no means unimportant element in the treatment of ringworm, and one which is often overlooked, that of obstinate dandruff remaining behind, the true disease being to all appearance cured. A little vaseline, with three or four grains of nitric oxide of mercury to the ounce, and five minims of creasote, well rubbed into the skin, after washing, night and morning, I think he will find the most effectual remedy."

Therapeutist.—An experiment with the *Cynoglossum officinale* as a remedy in hydrophobia has, we believe, been made at the Hospital for Incurables, Naples. Some amelioration in the symptoms was effected, but the patient died.

Mr. Leeming (Kendal).—We have no recollection of the paper.

TREATMENT OF HÆMORRHOIDS BY "CRUSHING."

To the Editor of THE LANCET.

SIR,—As inventor of the clamp for the treatment of hæmorrhoids by crushing under Mr. Pollock's theory, I trust you will permit me to offer a few remarks in your valuable columns by way of reply to the letter of your correspondent Mr. Barrow, inserted in your number of the 10th instant.

As I consider that Mr. Pollock has not given himself as much credit as he deserves with respect to the operation under his theory, I think I cannot do better than give a brief outline of the four cases which have come under my notice since this clamp has been used.

In the first case there was certainly a slight oozing, which Mr. Pollock arrested by means of three ligatures. This I attribute to the following causes—first, the clamp was not sufficiently screwed up; and secondly, it was removed immediately it was applied, whereas the grasp ought not to have been released, as I shall presently show, for about two minutes. The patient did not complain of the slightest pain, but only of a sensation of sickness due to the effects of the ether, but which soon disappeared, and on the following morning expressed astonishment that he should have been asked if he experienced any pain. I may add that an anodyne was not administered. With a view of satisfying myself that all sensation was absent from the part to which the clamp had been applied, I pierced, three hours after the operation, the thin shred (or fringed remnant) with a needle, but this the patient could not feel!

In the second case, two independent growths were operated on with the clamp. In the first there was a very slight oozing, which was secured by a ligature at the point at which it occurred. In the second there was not the slightest bleeding, and I attribute this to the fact that the clamp was allowed to grasp the pile for about half a minute. This patient, who some years ago received an injury to his coccyx, and from which he has experienced pain more or less ever since, expressed himself as entirely free from pain, as far as the operation was concerned, three hours afterwards.

The third operation was performed in private by Mr. Pollock, who informs me that he allowed the clamp to grasp the pile for about a minute, and that on its being removed there was not the slightest oozing, nor did the patient experience any pain.

The fourth case was also treated in private by Mr. Rouse, who informs me the patient underwent an operation for piles about ten years ago by one of our most eminent and skilful surgeons, and experienced so much pain and inconvenience for some considerable time that she expressed her extreme reluctance to submit to another operation. Mr. Rouse, however, operated on a large internal pile, allowing the clamp to grasp it for about four minutes, and on removing it there was not the slightest oozing. The patient complained merely of a feeling of soreness for a few hours afterwards, which was, no doubt, due to the dragging of the pile with the pronged fork.

It may thus be seen that if the clamp, after being firmly applied, be allowed to grasp the pile for about two minutes, all oozing may be avoided, and even if it should occur (which I feel confident would not be the case), the application of the torsion forceps would sufficiently control any bleeding. When the thin shred (or fringed remnant) which the clamp leaves, and which is extremely dense, and no thicker than a stout piece of paper, drops off, the surface of the part operated on is on the same plane as the surrounding parts (unlike cases where other clamps have been used). In all the cases mentioned by me above, the patients have virtually recovered from the operation as soon as the effects of the ether have disappeared.

Now it is needless, and, perhaps, not within my province, to enter into details with regard to other methods of operating, as, although I have had some acquaintance with them during my course of study, doubtless the great majority of your readers have had more extensive experience on the subject than I have had; but I venture to assert that those who argue that the after-effects of the operation under Mr. Pollock's theory are the same as in other methods, are wrong, as the facts stated by me are incontrovertible; besides, the former is simpler and certainly more scientific, for by means of one crush the whole operation is at an end, whereas by ligature or with other clamps and actual cautery great care and very skilful treatment are absolutely necessary; for if in the former case the mucous membrane be not sufficiently snipped, the patient will experience acute and almost indescribable suffering, many instances of which have come under my notice. The bleeding very often conceals the parts to be snipped before the ligature is applied. I have very frequently noticed that when in cases where the clamp and actual cautery have been used, the heated iron or benzoline cautery were not in working order—a dereliction of duty no doubt on the part of the assistant, but such is the case, occurring more often in private than in hospital practice. I confess, of course, that this is a mere matter of detail, but not to be overlooked.

While dwelling upon this subject, may I be permitted to suggest that in favourable cases, as a substitute for an anæsthetic, the part to be operated on might be frozen by means of the ether spray; for the interval between the application of the clamp and the closing of its jaws is momentary, and all sensation of pain avoided. I make these remarks by way of suggestion, as I have had no practical experience on this point. I may also suggest that it would, perhaps, be better to cut off the pile, while it is in the grasp of the clamp, with an ordinary scalpel instead of with scissors curved on the flat. This, again, is a mere matter of detail.

I am, Sir, your obedient servant,

R. F. BENHAM,

July, 1880.

Ophthalmic Assistant, St. George's Hospital.

NORTH DUBLIN UNION: A CONVALESCENT HOME.

THE Board of this union having advertised for a site for a convalescent home and small-pox hospital, Dr. MacCabe, Local Government Board inspector, has suggested that they should build sheds, and not encumber themselves with any stone building. In every union with which he was acquainted, except the North and South Dublin Unions, they had a fever and small-pox hospital, and a place for the agricultural instruction of children in the same area. He advised the guardians to take a piece of ground not less than twenty acres, and he believed the health of the inmates of the building would deteriorate unless vegetables were grown, and the dietary improved by their use, or a large sum of money expended in their purchase.

Delta.—Our correspondent's letter is too long and too diffuse, and we do not think any good would result from its publication. We have already strongly advocated a revision of the scale of pensions granted to the medical officers of the Indian service.

M.D. Edin.—Yes. The Hearts of Oak Benefit Society, for instance.

THE USE OF THE HOT VAGINAL DOUCHE.

To the Editor of THE LANCET.

SIR,—If Dr. Murray will refer to a paper of mine, on "A new form of Vaginal Douche," which appeared in THE LANCET early in the present year, or write to Maw and Co. for one of the instruments, he will find a very simple but thoroughly efficient remedy for the discomforts he complains of. I used it lately for the application of the hot douche for over two hours, and not a drop of water escaped between the vulva and the tube, the patient lying comfortably on her side and without the slightest exposure the whole of the time. I am about to have it improved by being made entirely of india-rubber; for, although the simple 1½ in. tube answers perfectly as a canal for the entrance and exit of the water, I find that by making it slightly bulbous it is automatically retained, and both hands of the operator are then at liberty, whilst the vulcanic cone is dispensed with—a further advantage; for, by pinching the end of the tube flat between the finger and thumb, it can be slipped into the vagina without the slightest pain to the patient, and any chance of septic matter lodging between it and the cone is avoided.—Yours &c.,

Ixworth, Suffolk, July, 1880. G. F. MASTERMAN, L.K.Q.C.P.

GLANDERS.

A GERMAN military Surgeon, writing to the *Militär-Wochenblatt*, directs attention to the danger arising from the thoughtless use of the pocket-handkerchief in removing foam which may have been cast upon clothes from the mouth or nose of the horse. A case is cited, in which an officer, the owner of a glandered horse that had been shot, was attacked with what at first appeared a catarrh, but which, resisting all the usual remedies, eventually proved fatal. The whole of the circumstances of the case led to the conclusion that the unfortunate gentleman had been guilty of the indiscretion referred to, and thus contracted glanders.

W. G. M.—Two eggs of the Great Auk, discovered in an old private collection in Edinburgh, were sold by Messrs. Stevens on the 2nd inst., and realised £100 and 102 guineas respectively. The College of Surgeons was not so fortunate, when the same auctioneers sold some time ago three for only £90; still retaining, we believe, six of these rare and valuable eggs.

L. M. M.—Flowers at night absorb oxygen and exhale carbonic acid. Therefore they do to a certain extent injure the atmosphere.

Dr. W. Curran's paper shall appear in an early number.

Enemy should consult a qualified medical practitioner, and avoid advertising quacks.

ANIMAL VACCINATION IN HOLLAND.

A CORRESPONDENT send us the following information:—

"An account of animal vaccination in Holland may be interesting, especially at this time when the subject is being brought so prominently before the profession and the public.

"Bull and cow calves are selected about three months old. By means of a contrivance, the animal is fixed on to a table, so that its abdomen is fully exposed. The lower abdomen is then shaved, this part being selected for the vaccination. The lymph is taken from calves vaccinated the previous week, or from sealed tubes. About fifty to seventy punctures are made with an instrument resembling that used for paracentesis corneæ. As soon as the vaccination is finished, the animal is removed to a cow-house. It is fed on ten pints of milk a day. They sometimes have diarrhoea during the maturation of the vesicles, but never have any fever, and often get much stouter. In five or six days the vesicles are ready for use. At Rotterdam the calves are vaccinated on the Wednesday, and the public attend the following Monday at the establishment, and are vaccinated direct from the calves. The whole vesicle is scraped out, the lymph epithelium and other debris being used, as it has been found by experience that the pure lymph is uncertain in its action on the child, although calves are inoculated by it with good effect. If a surgeon wishes to vaccinate anyone away from the establishment, he is obliged to carry the contents of the vesicle between two flat pieces of glass. The lymph must, of course, be used the same day as it is removed from the calf. The calves are returned to the cattle-dealer as soon as they are finished with."

MEDICAL PRACTICE IN TEXAS.

A WRITER in the *Chicago Medical Times* gives a most lugubrious account of medical practice in Texas, to which State he was induced to repair for the benefit of his health. Though "a graduate of one of the first medical universities of the North, with a civil and military medical experience of thirty years," he was compelled to undergo an examination before being allowed to practise. After recounting instances of injustice and loss to which he was subjected, he gives the following as a bit of experience of a brother practitioner in Texas:—

"There recently lived at Round Mount, on account of his health, a plucky old army surgeon, whose personal safety was more than once in jeopardy for his fearlessness as a citizen and as a physician. The doctor was liberal and benevolent to all that needed his services; but his retired and aristocratic status gave the natives offence, and by a process of slow torture, they got rid of him. They stole his property, killed and mutilated his stock, polluted his well, defrauded him of his just claim, and, as the execution of the law was in their own polluted hands, he had no redress for any of these Vandal and Visigothic doings. In one case he attended a woman who passed through a difficult and dangerous labour. By the most consummate skill he saved her life. It happened that the husband had a small claim against the doctor as purchase money—an amount less than the doctor's bill. The man instituted suit against the doctor, and this 'granny bill' became the dirty public property of the courts for two years. The doctor not only lost his fee, but had the costs to pay. One item of this cost was \$25 from a lawyer, who brought suit against the doctor for saying 'I would' to his employed lawyer. It is ridiculous to suppose that such a claim could be established even in the most corrupt of tribunals. Still the case went against the doctor on this unique basis. The court believed the claim a fraud; but, as the account was legally substantiated, the verdict was rendered in favour of the plaintiff. A wealthy cattle man broke his wrist. The doctor treated the case with the pistol-shaped splints. The man took off these splints, and applied lateral pressure, of course with unfavourable results. He not only refused to pay his surgical bill, but assailed the doctor for a fault he committed himself. The doctor brought suit against him; but, as might have been expected, he lost his bill, and gained no credit professionally. Another case: At one time he performed, with fine success, an operation on a child for club-foot, and took a bill of sale for six cows for the operation. When the doctor sent for the cows, the father secretly drove them out of the country beyond the doctor's reach, and, what was most singular, in order to ruin the effects of the operation, the mother took the club-foot shoe from the child's foot."

Dr. Williams.—The Secretary, Mr. Freeman, 37, Soho-square, will doubtless give all information. There are fifty pensioners who receive annuities of twenty guineas each; twenty-four of them have, in addition, furnished rooms in the College at Epsom, and an allowance of three and a half tons of coal each. Their yearly income must not exceed £60.

R. R. H.—The name mentioned is not to be found in the Medical Register.

Dr. J. A. Campbell.—In an early number.

FEES FOR SCHOOL BOARD CERTIFICATES.

To the Editor of THE LANCET.

SIR,—In your issue of to-day you insert an extract from the *Catholic Times* of July 2nd, referring to payment for School Board certificates. In connexion with this, allow me to suggest that a fee should be paid to medical men, who, as frequently occurs in London, are requested to fill up the medical questions on the School Board form for sending a child to an industrial school by order of a magistrate, before whom the child has been brought by the School Board. Underneath the medical certificate are one or two lines for "Remarks," and a medical friend of mine gave vent to his feelings on the matter on which I write by filling up the "Remarks" with these words: "I am of opinion that a fee should be paid for the above."

I enclose my card, and remain yours faithfully,

July 17th, 1880.

A MEDICAL OFFICER.

Dr. Foster, (Leeds).—Several good filters are sold, and we do not care to give the preference to one. No filter will remove all organic matter.

A. H.—Holmes's or Bryant's Surgery; Bellamy's Surgical Anatomy; Billroth's Surgical Pathology.

Dr. Louis Lewinson.—The qualification named is a surgical one only, and does not carry the right of charging for services in medical cases.

Mr. J. H. Durrah.—We think we may safely say the quotation is fabulous.

PHYSICIANS' ATTIRE.

To the Editor of THE LANCET.

SIR,—Many have, doubtless, observed the recent and admirable action of the Mayor of Derby, who, with the consent of the Lord Chancellor, has ordered all solicitors when practising in Court to appear in robes. As then the clergy have a distinctive dress, and the legal profession theirs, would it not be well for the Councils of the several Royal Colleges of Physicians to consider and decide upon a distinctive attire for their fellows and members to appear in on special occasions, and thus to designate the learned profession to which they belong? Hoping that this suggestion will be taken up by others, I am, Sir, yours obediently,

July, 1880.

M.R.C.P. Ed.

ADULTERATED MEDICINES.

DR. C. A. CAMERON, public analyst for the county Monaghan, reported to the recent meeting of the Grand Jury of that county that nine medicines which he had examined for a Poor-law union were all adulterated. "Sulphate of quinine" was composed wholly of an article one-tenth the price of the former—namely, sulphate of chinchonine. The "tinctures" were deficient in spirit (one containing none at all) and other ingredients, and wanting altogether in others. Methylated ether was used in preparing tincture of lobelia.

P. H. R.—We regard the charge as inadequate. It ought to have been twice as much.

H. had better apply to the editor of a sporting paper.

DOG-BITE AND HYDROPHOBIA.

To the Editor of THE LANCET.

SIR,—Owing to some remarks upon this subject in a late number of your journal, I venture to make a statement as regards the necessary health of the dog.

A case came under my care some years ago, the notes of which, with post-mortem examination, I gave the late Mr. V. de Méric, and were inserted *verbatim* in a medical paper. The state of the dog may be of interest to some of your non-professional readers. I had the dog brought to me the same afternoon, that I might see his state before he was killed. Having had much experience of dogs in distemper, with snapping and excess of saliva, I wished to see if he was so suffering. This animal was healthy in appearance, lively and attentive, and drank water directly I gave it to him, and during the two or three days I had him in my rooms no dog could have behaved better. He was brought to me by the owner and the mother of the patient.

Bearing upon the subject of the immediate treatment of the bite, it is curious to note that the outer wound had nitrate of silver applied almost immediately; but an inner wound escaped notice, and there the pain began a month after the occurrence, and commenced the illness, from which the patient died in about thirty hours.

I am, Sir, yours faithfully,

Brixton, July 12th, 1880.

WARREN H. DIAMOND.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Barnes, London; Dr. Southey, London; Dr. MacLagan, London; Dr. Gill, Canterbury; Dr. N. Allen, Lowell, Mass.; Dr. Tripe; Dr. Alliot, St. John's; Dr. Ranking, Dublin; Mr. Alder Smith; Dr. Rollins, Boston, U.S.A.; Mr. S. Snell; Dr. Davison; Mr. Leeming, Kendal; Mr. B. Browne, London; Dr. Jas. Irving, Edinburgh; Mr. Ormerod, Workington; Dr. Whiteford; Mr. Masterman, Ixworth; Dr. Beard; Mons. I. Frua, Milan; Dr. Shorthouse; Mr. Woodhouse, Fulham; Mr. H. Page, London; Dr. Archer Farr, London; Mr. H. N. Custance, London; Dr. Hassall, London; Dr. Struthers, Aberdeen; Mr. Adams, Netley; Dr. Campbell, Carlisle; Dr. Barnardo; Mr. E. P. Gutteridge, Maldon; Mr. Durrah; Mr. Rudkin, Teignmouth; Dr. Lambert, Liverpool; Dr. Eklund, Stockholm; Mr. Morris, Swansea; Mr. Thompson, Omagh; Mr. Blease, Altrincham; Mr. Jackson, Leeds; Mr. Wilson, Salisbury; Dr. Foster, Leeds; Mrs. Wilkins, London; Dr. Sheen, Cardiff; Mr. Weston, Pinchbeck; Messrs. Hatchman and Co., London; Dr. Curwen, Dublin; Messrs. Tod and Bishop, London; Mr. Routledge, Lintz Green; Mr. Teevan; Mr. Blackett; Mr. Lindeman; Mr. Mildren; Mr. R. H. Horne, Birmingham; Mr. Niven, Newcross; Mr. Frowde, London; Mr. J. Shillito, Bath; Mr. Wilkinson, Sunderland; Dr. Dukes; Dr. Bulkeley, New York; Mr. Foote; Mr. Bowman; Lieut.-Colonel Bolton; Dr. J. Smith, Finchley; Dr. Finch, Salisbury; Mr. Woodburn, Broughton; Mr. Price, Wolverhampton; Mr. Calder, Liverpool; Messrs. Gale and Co., London; Mr. Maceock, Leamington; Dr. Moffat, Rothersey; Messrs. Smith and Son, Dublin; Mr. Sinclair, Taynult; Mr. Lacy, Clapham; Mr. Taff, Bradford; Mr. De Fraine, Aylesbury; Messrs. Harrison and Sons, London; Mr. Mosse, London; Dr. Holden, Preston; Messrs. Merritt and Co., London; Dr. Giulio, M.R.C.P. Ed.; F. W.; A Medical Coroner; A Medical Officer; A. H.; Venienti occurrere morbo; Nemo; L. M. M.; &c. &c.

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Medical Diary for the ensuing Week.

Monday, July 26.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS. — Operations, 10½ A.M. each day, and at the same hour.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

ST. MARK'S HOSPITAL.—Operations, 2 P.M.; on Tuesday, 9 A.M.

Tuesday, July 27.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 3 P.M.

Wednesday, July 28.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL. — Operations, 1½ P.M., and on Saturday at the same hour.

ST. THOMAS'S HOSPITAL. — Operations, 1½ P.M., and on Saturday at the same hour.

ST. MARY'S HOSPITAL.—Operations, 1½ P.M.

KING'S COLLEGE HOSPITAL. — Operations, 2 P.M., and on Saturday at 1 P.M.

LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.

GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL. — Operations, 2 P.M., and on Saturday at the same hour.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN. — Operations, 2½ P.M.

Thursday, July 29.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.

CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL. — Operations, 2 P.M., and on Friday at the same hour.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M.

Friday, July 30.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, July 31.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

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Clinical Retrospect

OF A

HALF-YEAR'S HOSPITAL WORK.

By MATTHEW CHARTERIS, M.D.,

PROFESSOR OF MATERIA MEDICA AT THE GLASGOW UNIVERSITY, AND
PHYSICIAN TO THE GLASGOW ROYAL INFIRMARY.

[In his concluding lecture to his class at Anderson College, Dr. Charteris gave a summary of the work at the Royal Infirmary during the winter session of 1879-80. The accompanying report, as revised by Dr. Charteris, is supplied from the notes taken by Mr. G. W. Till, resident surgeon to the Kidderminster Infirmary.]

Commencing with the subject of fever, Dr. Charteris said he had had one example of simple febricula, in which, after a couple of days of high temperature of 103°, and without any chest complications, a crisis occurred, followed by a copious perspiration and a normal temperature.

One case was admitted simply with fever, frontal headache, and a history of a distinct rigor. The patient, a woman aged thirty, was under observation for two days. The morning and evening temperature was respectively 103° and 103·6°. There was no diarrhoea, no tenderness over the iliac region. Two days after her admission, presumably on the fifth day from the rigor, the characteristic dark-mottled eruption of typhus appeared on the body; and after it had been observed by the clinical clerks and others the patient was removed to Belvedere, and made a good recovery.

Two cases of typhoid fever were treated during the winter, both being males. The characteristic rose-coloured spots were apparent about the tenth day of the fever, lasting for the normal period of three days, to be succeeded by others. The clinical clerk in charge of the case marked them round with ink, so that the class might have an opportunity of observing the features and duration of the eruption. The treatment was based on the pathology of the disease, and consisted of a careful attention to diet. Milk was the only thing given until the temperature became normal in the morning, when it was supplemented by beef-tea and toast and water. The highest temperature marked was 104°. Hobson's charts, lately published, were found very beneficial in giving an accurate estimate of the progress of the fever, and they can be cordially recommended to all hospital physicians. Both cases made a satisfactory recovery.

One case of scarlet fever came under observation. It was admitted as a case of bronchitis, but on the appearance of the eruption on the second day the girl was at once removed to the Fever Hospital, such cases never being retained in our public infirmary.

There were sixteen cases of dropsy, which were classified under cardiac, renal, and hepatic, according to the organ chiefly implicated. Of these, one cardiac case, two hepatic, and one renal, died. The others so far improved as to be able to leave the hospital. Three of the renal cases being, if the expression may be used, cured. One of the renal cases was complicated with renal convulsions, and it was found that the injection of digitaline was attended with great benefit. In all the renal cases the quantity of urea was measured daily by means of the ureameter, and it was found that the injection was attended with an increased quantity of urea in a very short time. Dr. Charteris said he considered the knowledge obtained by this easily-worked instrument invaluable, more so than even the daily estimate of the albumen. The general treatment of the renal cases consisted in hot-air or modified Turkish baths, according to an apparatus constructed by Dr. Whittaker, and at the same time the administration of compound jalap powder on alternate nights. Dialysed iron was found very serviceable, and did not appear to cause headache—a result often apparent when iron is given in its usual form of the perchloride.

No. 2970.

The treatment in the cardiac and hepatic cases was entirely symptomatic. Southey's needles were in these cases inserted. In one they occasioned erysipelas of the leg. This was attributed to the needles being inserted without their previously puncturing boracic lint.

A case of syphilis, the only one admitted during the winter, was treated by a mixture of the perchloride of mercury, iodide of potassium, and chloride of ammonium. The chief advantage of this treatment in well-marked secondary eruptions is the length of time the mercury can be administered beneficially without causing salivation.

Eight cases of acute rheumatic fever came under observation, and six of chronic. The acute cases were all treated with salicin in twenty-grain doses every two hours, with invariably satisfactory results. In all the cases the patient was free from pain in twenty-four hours, and the temperature was normal in forty-eight. When this result had been attained the salicin was given in smaller doses, by twenty-grains every four hours for the first day, and afterwards the same quantity every six hours for two days, when it was stopped and a tonic administered. Dr. Charteris mentioned that he had invariably followed this line of practice for the last four years, and said he could not speak too highly of the remedy. He said he had never known it to cause delirium, or weakening of the heart's action. On the contrary, the relief was marvellous, and the recovery materially hastened. On an average the patient was able to leave the bed within seven days after admission, and no other treatment he had tried could give any result at all to be compared with this. In former years he had tried for comparison the salicylate of soda, but it caused temporary deafness, headache, and insomnia, and he had latterly entirely abandoned it, being more than satisfied with the action of salicin.

Six cases of chronic rheumatism were treated variously. Salicin was found, however, to have no beneficial effect in these.

One case of purpura in its hæmorrhagic form died, but no post-mortem was obtained.

A case of scurvy in a sailor, after a long and arduous voyage, made a good recovery. The hard, board-like induration of the legs and the looseness of the teeth, with the spongy condition of the gums, rendered the diagnosis easy. This man stated that lime-juice was, in the merchant service, carelessly administered, and frequently never taken. He said that there was a common impression among sailors that lime-juice destroyed virility, and he attributed much of Jack's antipathy to it to this idea.

A case of chlorosis and another of anæmia made good recoveries under iron and a nourishing diet.

Only one case of idiopathic erysipelas was admitted, and the perchloride of iron was given in large doses, with the usual satisfactory result.

Diphtheria in a man aged thirty was watched with interest. The fauces were found to be sloughy, the pulse feeble, and the prostration great. The man was placed in a side ward, and inhaled steam constantly from a kettle placed on the hob of a fireplace. Poultices were also applied externally, and iron given with quinine. He made a good recovery, but subsequently was attacked with dropsy, commencing in the abdomen and latterly extending to the extremities. No remedy seemed of any use, and he died three months after admission. At the post-mortem the liver was found to be hobnailed and contracted. The spleen weighed as much as the liver. The kidneys were healthy.

One patient died from laryngitis. Another made a satisfactory recovery. This latter case was interesting, as the symptoms were so grave, the dyspnoea so excessive, and the mal-aeration of the blood so intense, that it was deemed advisable to perform tracheotomy. Acting, however, on the advice of Dr. Eben. Watson, this was postponed, and palliative remedies, notably the inhalation of steam, were put in force. The case progressed favourably, although the dyspnoea was at times very alarming. The patient had an ulcerated sore-throat, and the laryngitis seemed to have originated simply from exposure to cold.

Seven cases of acute bronchitis were treated successfully by antimonial wine for the first twenty-four hours in large doses. This medicine had, as in former years, the effect of promoting expectoration, lowering the fever, and causing profuse diaphoresis. At the same time stimulants were

given as required to meet the attendant weakness, their use being regulated by their action on the circulation. Hot linseed poultices were also applied. At the expiration of the term mentioned, and provided other circumstances warranted it, the antimony was given at an extended interval of time, simply as an expectorant, combined with ipecacuanha wine or carbonate of ammonia.

Twenty-six cases of chronic bronchitis and emphysema were relieved by the usual methods of treatment.

Stramonium cigarettes did good after other means failed in the only case of asthma admitted into the wards.

Of fifteen cases of acute pneumonia, two died in the first twenty-four hours after admission, one on the ninth day, the others made a satisfactory recovery. A similar line of treatment was adopted to that mentioned in acute bronchitis, and Dr. Charteris said he believed that in the main the most favourable result would accrue from its adoption. In four of the cases marked benefit followed the application of twelve leeches to the side affected. There could be no doubt the lividity and other alarming symptoms disappeared *pari passu* with the loss of blood. The bleeding on the removal of the leeches was promoted by hot cloths and poultices.

There were seven cases of pleurisy. In two of these empyema was well marked on admission, and it was singular and instructive to note the methods by which the pus was evacuated. In one case, a man aged twenty-four, there was distinct fluctuation and pointing at the junction of the third rib with the sternum. It was resolved to give the man a day's rest and then aspirate. On the visit the following morning he stated "that during the night he felt something give way in his inside, and this was followed by a choking sensation in his throat, and subsequently by the expectoration of a large quantity of purulent matter." On examination it was found that the skin was much less tense over the site mentioned, and it was deemed advisable not to interfere with nature's processes, but to assist these. Pressure by means of a broad elastic band was used over the side, with the view of preventing the lodging of pus in the sac, and at the same time strict rest and nourishing diet were enjoined. Notwithstanding this, on three different occasions at varying intervals the pus reaccumulated, and was expectorated in a similar manner. The man made a good recovery, and is now following his employment as a nurseryman.

The second case had been aspirated twice by the medical man in attendance, and the patient, a young lad of sixteen, was sent to the hospital as a *dernier ressort*. The patient was very exhausted. The right pleura seemed full of fluid. The liver was pushed down, the intercostal spaces bulged out, and the difference of measurement on the two sides was nearly an inch. As death seemed imminent, a free incision with a bistoury was made in the axillary line, where the skin seemed tensest. There was a copious spouting out of pus at first, succeeded by a more steady flow, to the extent of three pints and a half. The operation was performed under strict antiseptic precautions. A drainage-tube was inserted into the wound and a bandage applied over carbolic-acid gauze dressing. Considerable cough and irritation followed the operation, and the pulse was remarkably feeble. Brandy was given in large quantities, the patient taking nearly a bottle per diem, along with three pints of strong beef-tea. For the first fortnight a carbolic-acid solution was syringed into the wound, and the patient by a series of coughs expelled this through the tube. At the expiration of the fortnight the syringing was only done on alternate days. A satisfactory recovery was completed three months after the operation by the removal of the tube, and the patient is now able to move about freely. Hypophosphite of lime and malt extract were the only medicines given. Large quantities of stimulants were administered during the progress of the case, and without these no recovery could by any possibility have taken place.

Thirty-seven cases of phthisis were admitted in various stages of the disease. Of these five died, and in the others some improvement was manifested, or the disease seemed to remain *in statu quo*. Dr. Charteris said he considered a hospital ward the worst place possible for a phthisical patient in the winter, as the whole surroundings were depressing, and one essential part of the treatment—viz., going out of doors—almost impossible. Dr. Charteris said he had increasing confidence in the hypophosphites as the best remedial measures for phthisis in its early stages.

(To be continued.)

Nettsonian Lectures

ON

THE TREATMENT OF STRICTURE OF THE URETHRA, ENLARGED PROSTATE, AND STONE IN THE BLADDER,

WITH SPECIAL REFERENCE TO RECENT PROGRESS.

Delivered at the Medical Society of London, February, 1880.

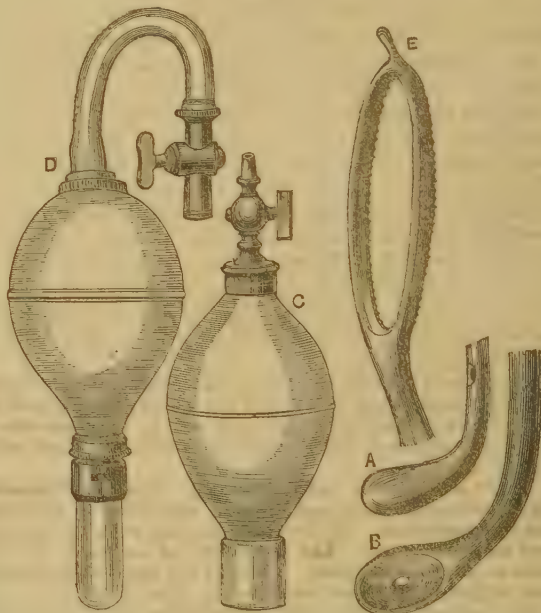
By W. F. TEEVAN, B.A., F.R.C.S.,

SURGEON TO THE WEST LONDON AND ST. PETER'S HOSPITALS.

LECTURE III.—PART II.

THE symptoms of stone in the bladder are often very slight and entirely masked by the existence of some chronic irritation with an enlarged prostate, so that on several occasions I have detected calculi in patients who had been treated for cystitis for months and even years. If the act of micturition is associated with pain and blood, and if both be increased by exercise, *there must be a stone*. On the other hand, a calculus may give no evidence of its presence beyond a slight smarting in the urethra. There is no difficulty in finding a large stone, but small calculi are often missed by badly-shaped sounds. The shorter the beak of a sound and the more it approximates to a right angle with the shaft, the more efficient will it be. I consider Mercier's sound (Fig. 11, A), with Sir H. Thompson's cylindrical handle, to be

FIG. 11.



the very best. When the instrument touches a small stone, the two bodies are in contact at points only, for they are both convex, hence the click is very faint, and there is always a tendency for the sound to push away the little calculus. For obviating this and more easily detecting small stones, Mercier devised a hollow sound with a flattened spoon-shaped beak (Fig. 11, B), the concavity of which overlaps the convex surface of the calculus, and as the two opposing bodies have surfaces in contact instead of points only, a louder note is elicited. I prefer to examine a patient when his bladder is quite empty, for there is no trouble in finding a large stone, whether the viscus be full or not; but if the calculus be small and the vesical cavity full, the surgeon may make a prolonged examination and yet fail to strike the particular spot where the stone lies. When, however, the bladder is empty, a small calculus is brought to its

very neck, and is struck by the sound as it enters. Text-books omit to point out that things *extravesical* as well as *intravesical* may be felt with a sound—the sacrum can always be touched, and very often the spine of each ischium. For a want of this knowledge the bladder has been cut into on several occasions, and, to the great mortification of the operator, no calculus found.

When a stone is found, what is to be done with it? In the present state of our knowledge and experience I regard the use of solvents as so much valuable time wasted. Unfortunately, a calculus is too often treated as such, whether it originated in the kidney or bladder, and stones of equal dimensions, whether renal or vesical, are dealt with in a similar manner. I look upon the treatment of a stone which has formed in the bladder to be different from one which originated in the kidney and descended into the bladder, and the want of discrimination on this point has led to many disappointing results after operation. In one case the calculus is the *cause* of all the trouble; in the other it is merely a *result*. Take a man with a lithic-acid stone which is giving him much pain. What are the facts of the case? The calculus descended from the kidney, and until it entered the bladder that organ was healthy and quiet; the bladder, however, finds that it has a very unpleasant guest, and becomes irritated. Get rid of the intruder and the bladder will quickly resume the even tenour of its way. Not so, however, is the case with the phosphatic stone formed in it. Long before the calculus existed the bladder was in a state of chronic inflammation, the urine was mucopurulent, and the patient could probably only empty his bladder with a catheter. In such a case the stone formed as a matter of course, but it was entirely secondary to the vesical condition, and if removed leaves the patient but little better off, for the aches and pains will persist, the urine will not clear up, and a fresh concretion will rapidly form. If the calculus be of renal origin it ought always to be crushed in the adult, if not too large. In the present state of our knowledge and experience, enlarged and improved as it is by the introduction of Bigelow's operation, it may be said that any stone up to two inches in diameter may be crushed, Bigelow's operation has entirely revolutionised the treatment of stone in the bladder: it is a *new* operation. The principles upon which it is founded are as widely opposed to those upon which ordinary lithotomy was established as are the two poles to each other. The old method was sometimes spread over a period of months, the new one is the work of a certain number of minutes; and in this respect resembles lithotomy, the advocates of which operation used to urge that one of its great advantages was that, unlike lithotomy, it rid the patient at once of his trouble. Now this is exactly what Bigelow's operation does. The bladder frets for a few hours at the great liberties taken with it, but not finding any enemy to fight with it rapidly resumes its former wonted quiet. The rule hitherto has been to do as little as possible at the first sitting—feel your way, see how much interference the bladder will tolerate, and, above all, do not let your lithotrite remain in longer than a couple of minutes; leave the fragments to nature to get rid of—unless indeed she cannot do so, in which case you must wash them out, a process "which is quite as irritating as a crushing with the lithotrite." Bigelow says exactly the opposite—do everything at once and for all, however long it may take you to do—leave nothing to nature to expel; remove it all. But it may be said that surgeons performed lithotomy at one sitting and removed fragments before Bigelow's time. Most certainly they did, but they operated on the same principle whether they removed a calculus in one sitting or twenty; and all cases of lithotomy at one sitting were so performed because, as Curtis has pointed out, "a second sitting was an impossibility."

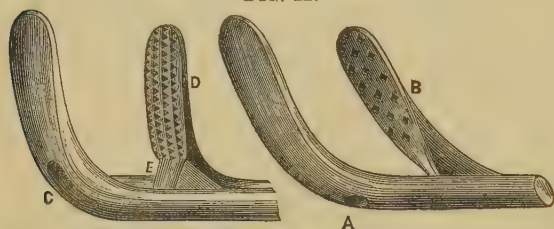
Then, again, the means the older lithotritists adopted to remove fragments or débris were looked upon as more objectionable than the evil they sought to obviate, of leaving the pieces of stone behind. In 1846 Heurteloup wrote a work on "Lithotripsie sans fragments au moyen de deux procédés de l'extraction immédiate, ou de la pulvérisation immédiate des pierres vésicales par les voies naturelles." He named his process "Lithocœnosis" (stone evacuation). Of 124 cases of lithotomy, 69 were performed by him at one sitting.

In 1853 Amussat published a "Mémoire sur la Lithotritie en une seule Séance," and in our own time Sir W. Ferguson was a great advocate for removing fragments with the lithotrite. That these great surgeons did all this detracts nothing from the value of Bigelow's dis-

covery. Cornay of Rochfort was the first to introduce aspiration into practice in 1843, and he originated the truncated catheter. Next came Sir Philip Crampton, then Mercier, then Clover, and lastly Bigelow. It is only just to say that Dr. E. M. Moore, an American, very nearly anticipated Bigelow in his discovery. Up to Bigelow's time aspiration was only partially successful, for two reasons—the small calibre of the evacuating catheter, which only permitted little particles to escape, and the weakness of the india-rubber bottle. Bigelow has made aspiration perfect, but he probably would not have succeeded had it not been for Otis, who demonstrated what large catheters could be introduced into the bladder. *But even if we had possessed Bigelow's perfect instruments, we should not have dared to perform his operation if he had not shown us the great amount of instrumental interference the bladder will tolerate if we only take care to remove all the fragments at once.* This is the grand point, and to Bigelow solely belongs the great merit of the discovery. I consider that his operation will prove an inestimable boon to mankind; it will save life by bringing within the fold of lithotomy a large number of cases which otherwise would have been submitted to the knife with a correspondingly increased risk; it will rob lithotomy of its peril to life in old men who formerly were often worn out by the cystitis set up by the frequent crushings, and it will take from lithotomy the opprobrium that it often removed the stone, but failed to cure the patient. All the aspirators now in use, Clover's excepted, are unconscious copies of Mercier's, whose aspirator (see Fig. 11, C) consisted of an india-rubber bottle, fitted with a brass tube and stopcock to fix on to the evacuating catheter, and a glass receiver for the fragments to fall into. The original one made by Charrière upwards of twenty years ago is now in the possession of Gouley, who has recently recorded a case in which he used it successfully. Bigelow's aspirator, with the stopcock restored to it by me, is seen at Fig. 11, D. Let us see what are the differences between the two. When Bigelow's aspirator arrived in this country it had no stopcock like Mercier's, which was, I think, a great mistake, for air entered the bladder, got churned up with the water, and caused much annoyance. At first I used to put a cork into the india-rubber tube after filling it to the very brim, but in spite of this I found that air would always enter the evacuating catheter during the process of adjusting the two tubes. I accordingly restored Mercier's stopcock, and have experienced no further annoyance. The great improvement in Bigelow's aspirator above all others consists in placing a long piece of india-rubber tubing between the bottle and the evacuating tube. Everywhere we see art imitating nature in placing pads, springs, or buffers between bodies which would otherwise be brought into rude contact, and to fix an aspirator directly on to a rigid tube without an intervening medium to damp the concussion is contrary to all the laws of mechanics, for the shock which takes place each time the bottle is squeezed is transmitted unimpaired to the metal catheter. Then, again, the india-rubber tube acts as a syphon when the aspirator is at work, so that there are two forces in operation. An objection has been made to it that its length diminishes the power of the aspirator; it is, however, purely theoretical, for evacuation, as performed by Bigelow's aspirator, is simply perfect. The glass-receiver, which in Mercier's is fixed, takes off and on in Bigelow's, which is another improvement, and as it is made longer and narrower the fragments cannot escape when once they have dropped in. To English surgeons Bigelow's lithotrite seems somewhat cumbersome, except for breaking up large stones. Until six years ago Civiale's lithotrite was almost universally employed here. Sir H. Thompson improved it by adding to it his cylindrical handle and particular mechanism for fixing the blades. The three special points in Civiale's instrument were—(1) the jaws were placed at a very oblique angle to the shaft; (2) the male blade had no spur; (3) the female blade had only a small pinhole for the ejection of débris. Mercier condemned Civiale's lithotrite, and said it was "l'un de plus mauvais," and his verdict has been fully justified by the accidents which have occurred to lithotrites made on Civiale's principles. These were due to the vicious lines on which they were built. As the jaws were placed so obliquely to the shaft there was much loss of crushing power, for the body of the male blade could not be brought well home to the stone which it crushed with its tip, and as it had no spur it sometimes broke at its weakest part—the angle. Then, again, the female blade had only a

pinhole for the escape of débris, so that the instrument was liable to become "packed" and incarcerated in the bladder. Six years ago, in THE LANCET, I introduced Mercier's lithotrite to the notice of the profession, with a special mechanism of my own for fixing the blades. The three great points on which it is constructed are—(1) the male blade is fixed as nearly as possible at a right angle to its shaft, thus obtaining great crushing power; (2) the male blade is strengthened at its angle by a spur or prow, which also drives out the débris and prevents "packing"; (3) there is a large opening in the female blade for the escape of débris and the reception of the spur. All these principles have been adopted by Sir H. Thompson in the construction of what he calls his "new lithotrite." Figures C and A in woodcut 12 respectively represent Mercier's and Civiale's

FIG. 12.



lithotrites. Compare the oblique angle at which Civiale's male blade (B) is set to its shaft with the almost right angle of Mercier's (D). Compare the spur (E) at the base of Mercier's male blade with its absence in Civiale's. Compare the pinhole in the female blade (A) of Civiale's with the large opening (C) in that of Mercier's. Bigelow prefers his straight evacuating catheter to the curved one. To obviate the difficulty there sometimes is in introducing the former Gouley has fixed a Mercier's beak to it. It appears to me that the curved tube has one advantage which has been overlooked—viz., that the beak keeps the mucous membrane from falling over the hole and obstructing the ingress of the fragments. The old operation of lithotrity will now only be required for small calculi, which can be pulverised in a few minutes, and for which aspiration would be unnecessary. Lithotomy will only be demanded for very large, hard stones; big, soft calculi can be most safely disposed of by lithotrity and external urethrotomy at one sitting.

What are the conditions which bar lithotrity, enlarged as it now is, in its scope by Bigelow's operation? Boys will continue as heretofore to be submitted to lithotomy, for their parts are much too undeveloped to allow of the application of Bigelow's procedure, even if it were desirable; but women are admirably adapted for his operation, for in them the urethra is short, straight, and capacious. In men the only condition to preclude crushing is that contracted condition of the bladder which occasionally exists and interferes with the manipulation of the lithotrite. A strictured urethra can be restored to its normal calibre, and an enlarged prostate can usually be surmounted. No kind or amount of renal disease forbids Bigelow's operation if the patient be physically fit for it. In those cases where the diseased bladder is the cause, and not the result of the stone, I am afraid that his method will no more prove a success than did ordinary lithotrity. In the four instances of lithic-acid calculi in which I performed Bigelow's operation the results were admirable, but in the case of a phosphatic stone of local formation, entirely secondary to a diseased bladder, requiring the use of a catheter, it removed the calculus, but failed to cure the patient. In a recent clinical lecture at the Bellevue Hospital, Gouley has pointed out that surgeons will be mistaken if they suppose anaesthesia and aspiration have rendered lithotrity easier to perform, and that it will, on the contrary, now more than ever demand the utmost care and delicate skill. Very recently Keyes of New York has collected the results of 107 cases of Bigelow's operation performed by English and American surgeons with but six deaths. Nothing could be more satisfactory, and the success achieved far surpasses the results obtained by any other method.

Lithotomy will now only be required in adults for very large hard calculi. For stones up to three ounces in weight lateral lithotomy is an admirable operation, and although much larger calculi have been removed by it, the rectum was usually cut or torn. I consider that the introduction of Bigelow's operation will bring to the front those other forms

of lithotomy which have rarely been practised of recent years. I have a personal experience of everyone of them save the supra-pubic. The bilateral is specially adapted for those stones which are rather too large for the lateral method, for it gives as much room as two laterals. The recto-vesical is well devised for enormous calculi or debilitated subjects, for it can be performed with the minimum amount of cutting and loss of blood, and it affords the greatest amount of space. The extraction of a calculus by it closely resembles the removal of a child with the forceps, for in each instance the presenting body passes through the centre, where there is the most room. Two objections are urged against this operation. It is said the peritoneum may be wounded and that a urethro-rectal fistula may remain. The former may be avoided by making lateral incisions through the prostate instead of a vertical one, and a fistula is not necessarily incurable. According to Dulles' statistics the results of the suprapubic operation for stones above two ounces in weight were far more favourable than those of lateral lithotomy. The operation is specially indicated for large calculi in men who, on account of their enlarged prostates, are obliged to use the catheter, for a small aperture might be kept permanently open for the instrument. Median lithotomy will only be required for large hard calculi which have been "fragmented." In extracting a calculus in lithotomy the surgeon has the choice of removing it by cutting or laceration, for there is no such thing as dilatation of the prostate, as was long ago proved by Professor Ellis. Many years ago I carried out a series of investigations on this point and submitted the results to the Pathological Society, which proved that the normal calibre of the prostatic urethra was much larger than had been supposed, but that it could no more be exceeded than the calibre of any other portion of the canal. I further ascertained from my experiments and from an examination of all specimens of parts after lithotomy in the London museums, that a stone not more than 60 mm. in circumference could be extracted through a non-incised prostatic urethra without laceration. The extreme normal calibre of the prostatic urethra may be regarded as from 50 mm. to 60 mm., and in old men it is often greater. This is an important anatomical fact, for it enables us to take advantage of it and utilise it for breaking up large soft stones and extracting the fragments by external urethrotomy, and so avoiding the severer operation of lithotomy. The examinations made on twelve fatal cases of lithotomy occurring in the practice of one of the most distinguished British surgeons deceased, who professed to extract calculi by a limited incision and dilatation, showed that in every instance the prostate had been ruptured. To prove that the division of the prostate and its capsule is not followed by a fatal result, I need only refer to the twenty-two boys whom I have cut by the lateral method, everyone of whom recovered, notwithstanding the fact that the breadth of my knife exceeded the diameter of the lateral half of the prostate in each instance. The most successful lithotomists were probably Brett, Martineau, and Gutteridge, and the peculiarity in their method was that they used no force when extracting calculi, preferring to enlarge the incision if necessary rather than tear out the stone through an insufficient opening. The fewer the instruments used in lithotomy the better. For boys I employ, as a rule, only a staff and a knife, extracting the calculus with my finger. If, on account of the enlargement of the prostate, the depth of the perineum, or the shortness of his finger, the surgeon is unable to reach the bladder, he uses a gorget. Now, if the probe point on the gorget be transferred to one of the blades of the forceps, as seen at Fig. 11, E, the surgeon can slide the instrument along the groove of the staff into the bladder with unerring certainty. This slight modification of mine renders the gorget unnecessary, and so one less instrument is required. I have given up using the sharp-pointed knife for making the internal incision in men since Mr. Gutteridge convinced me of the risk attending its employment, for if it should slip from the staff, the posterior wall of the bladder will most likely be pierced, and the patient killed by peritonitis. Had the deaths which have occurred after operations through the above accident been published, the sharp-pointed knife would long ago have received its *congé*. In boys it is a choice of evils, for if the surgeon change his knife, he may not be able to introduce the probe-pointed one, and if he fail, he may push the yielding tissues before him, and rupture the urethra. I consequently still use a sharp-pointed knife for them, with a short broad blade, and, by holding it short, lessen the chance of doing mischief if it

should slip. I prefer Mr. Jonathan Hutchinson's rectangular catheter staff to any other. It has two great advantages. The surgeon can determine if the instrument is in the bladder or not, whether he strike the stone or not, for a short-beaked sound may touch a stone when a staff cannot. Then, again, it gives a straight road into the bladder instead of a crooked one, and so the chances of the knife slipping are reduced to *nil*. No tube or plug of any kind ought, I think, if possible, to be retained in the bladder after the operation, for however large a tube may be, it will not allow clots to escape, and if they cannot, they give rise to straining and cause bleeding or prevent its arrest. By leaving the wound open the surgeon sees what hæmorrhage may take place, for cases have occurred of fatal bleeding into the bladder when the wound was plugged. Then, again, the retention of clots which are rapidly decomposed by the urine in a few hours is a likely source of blood-poisoning. If hæmorrhage should occur, the best way to arrest it is to apply an ice-bag above the pubes, and insert pieces of ice in the wound and rectum.

In the treatment of stone in the bladder when it occurs as a local formation secondary to the diseased bladder, of which it was not the *cause*, but the *result*, the following pathological facts must be borne in mind:—Firstly, the condition of the bladder is such that, even if the calculus be completely removed by crushing and aspiration, some local irritation will remain, the alkalinity of the urine will persist, and a speedy recurrence of stone take place; secondly, the condition of the prostate in these cases not only does not improve, but gradually becomes more troublesome as age advances, and auto-catheterism is rendered increasingly difficult. The following indications have to be carried out:—1. Remove the stone. 2. Cure the cystitis. 3. Give the patient a short and ready route to his bladder for the catheter. A case such as the above is in this country too often relegated to lateral lithotomy, which is unnecessary and uncalled-for, for directly the surgeon has grasped the stone with his forceps it crumbles to pieces, and the operation, instead of being a speedy one, becomes a prolonged one, for he has to extract some twenty or thirty pieces, during all which time the man's engorged prostatic plexus of veins pours out blood like water. In devising an operation for such a case, we must take cognisance of the following facts. The stone is soft, and can on the slightest pressure be reduced to fragments small enough to pass along the normal urethra. An incision into the bladder is therefore unnecessary; but we want to cure the cystitis which caused the calculus, and this can only be done by allowing the urine to run out as fast as it enters the bladder, and so give it a physiological rest. We require further a short route for the catheter to go into the bladder. External urethrotomy fulfils all these conditions. All we have to do is to reduce the stone to fragments with the lithotrite, extract them through the perineal puncture, and wash out the bladder, leaving in a tube for drainage: the small puncture being kept permanently open for catheterism. It will at once be seen that whereas lateral lithotomy was a dangerous operation, and the wound could not be utilised for future catheterism, this combination of mine is attended by but little risk, comparatively speaking, and the aperture can be made useful for catheterism. What is it that makes lithotomy a perilous operation whilst external urethrotomy is not? It is because the former is an *intra-pelvic* operation, whilst the latter is an *extra-pelvic* one. Thus, therefore, by reducing the lateral lithotomy to a mere external urethrotomy, we shall diminish the rate of mortality correspondingly. I believe I was the first to introduce this combination, and in the unpromising cases in which I performed it, it was followed by the best results. But it may be asked, Is not this the perineal lithotomy of Dolbeau? It is not. There are two objections to this operation. In the process of dilating the urethra with instruments the urine always escapes, and the canal is very likely to be injured. The stone has consequently to be broken up in an empty bladder, which is a difficult and dangerous procedure if it be large, and during the long and tedious process the patient is bleeding, and no means can be taken for its arrest. Dolbeau cut first and then crushed the calculus through the perineal wound. I, on the contrary, crush first through the penis, and then cut. The operation of breaking up a large stone during lithotomy into several small ones is of ancient date, and is called "fragmentation" by the Americans, to distinguish it from lithotripsy, which it is not. I consider therefore that

the combination of a perfect lithotripsy at one sitting, followed immediately by external urethrotomy, is the proper treatment for large phosphatic calculi in men who are the subjects of chronic cystitis, and who are obliged to use the catheter; for we remove the stone at a minimum risk, we give the bladder the physiological rest it requires, and we convert penile catheterism, which in these cases is often a painful, bloody, and difficult process, into perineal instrumentation, which is free from all these annoyances. Last August I published the results of my first series of one hundred consecutive cases of operation for stone in the bladder; it is not, therefore, now necessary for me to trouble you with statistics.

In bringing these lectures to a close, I would express my regret that time has only permitted me to glance very cursorily at some of the more salient points of my subject; and I desire to thank you very sincerely, Mr. President and gentlemen, for the kind and cordial reception you have given me.

ON THE ANTI-MALARIAL ACTION OF THE CHINCHONA COMPOUNDS.

By T. J. MACLAGAN, M.D.

THAT quinine cures ague is one of the best established facts in practical therapeutics. How it does so we do not know. And it is impossible that we can know until we have some idea of the nature and mode of action of the ague poison. The existence of this poison is known to us only by its effects. These effects are the various forms of malarial fever.

Malarial fevers are most prevalent in marshy localities, in which there is much decomposing vegetable matter. Whatever puts a stop to this decomposition seems to arrest the development of the miasmatic poison. Cold weather, the complete drying up of the marsh, its drainage, even its submergence under water during a wet season, seems to have the effect of checking the spread of malarial fevers. These are exactly the circumstances which would check vegetable decomposition.

Marshes situate near the sea, and liable to inundation by it, are, *ceteris paribus*, more malarious than those which have no admixture of salt water. Salt water kills freshwater plants. Marshes liable to such inundation thus contain more decaying vegetable matter than those whose water is always fresh.

Malarial fevers are most common in autumn, when the vegetable matter formed during the summer begins to decay, and while the heat necessary to its rapid decomposition still prevails.

The association of malarial fever with vegetable decay is undoubted. What is the nature of the association?

Finding it all but invariable, the conclusion was not unnaturally drawn that the malarial poison was a product of vegetable decomposition; and various gaseous products of such decomposition have been suggested as possibly constituting the toxic agency. It has been found, however, that not one of these produces malarial disease.

Many marshes, too, contain much decomposing vegetable matter, and present all the conditions indicated as requisite to the development of malaria, without being a source of malarial disease. Where malaria prevails vegetable decomposition is generally abundant and active. But the converse does not hold good; for vegetable decomposition may be abundant and active in a locality which is not malarious.

No product of vegetable decomposition has been proved to be competent to cause intermittent and remittent fevers, and no causal connexion has been established between vegetable decay and the occurrence of these maladies. But there is another view of the matter, another possible explanation of this association.

Malarial fevers are most common in autumn, when vegetable decay is most active. But decay is a mere sequence of death, and death simply the cessation of vital activity. Autumn marks the time at which the annually-recurring active growth of plants comes to an end. The increased prevalence of malarial disease in autumn is thus associated with the cessation of the growth of living as much as with the decay of dead vegetable matter. It is possible that the association may be with the former rather than with the

latter, and that the arrest of the processes which constitute vegetable activity may have more to do with the development of malarial diseases than has the occurrence of the changes incident to vegetable decay.

Malaria exists in the ground, emanates from it, and infects the atmosphere in its neighbourhood. Of this there is ample evidence:—

1. The diseases to which it gives rise are associated with certain conditions of the soil.

2. Such disturbance of the ground as cultivation implies often leads to the development of these diseases.

3. The poison does not operate at more than a certain height above the sea-level.

4. Those who sleep near the ground are more apt to suffer than those who are more elevated.

A poison which is in the ground, and which infects only that part of the atmosphere which is near the ground, has its seat in what may be called the vegetable tract. The chief area of malarial infection is the area of vegetable influence—the ground in which the roots are, and the atmosphere immediately around the leaves.

Now, supposing the malarial poison to be (as it almost certainly is) something which may be taken up and absorbed by plants during their growth, it is evident that less of the poison would be spread abroad and be available for the production of disease during spring and summer, when vegetation is active, than in autumn, when the cessation of growth would leave much of it free; while the cold of winter might check the development of malaria as well as of vegetation. Thus the autumnal development of malarial fever may be causally associated with the autumnal cessation of vegetable growth.

Evidence in support of this view is found in the purifying effect of vegetation on a malarial atmosphere, as testified to by some facts noted in a study of the natural history of malarial fevers.

The marsh poison is carried about in air currents, and may thus give rise to malarial disease at some distance from its home. These malaria-laden breezes may be robbed of much of their deleterious properties, and rendered comparatively innocuous, by having to pass through a belt of trees. On the other hand, the cutting down of trees has been followed by the development of malarial fever in localities which have thus been opened up and exposed to direct currents from a malarious district.

It is claimed for some trees and plants, and not without some show of reason, that they possess the property of removing malaria, and rendering a district more healthy. The one quality common to the trees and plants which have been so commended is rapidity of growth, implying great activity of the nutritive process. We know that malaria may be taken into the system of man either through the lungs, or in drinking-water through the digestive organs. There is no reason why it may not in like manner be absorbed by plants, either from the atmosphere by the leaves, or with water by the roots, or by both channels. There is no other mode in which vegetation as such could produce a purifying effect on a malarial atmosphere.

The cessation of vegetable growth in autumn would thus explain the autumnal prevalence of malarial fever. The poison which produces that fever may be as abundant in summer, but the active state of vegetation at that season leads to the absorption of much of it by the leaves and roots of plants, and to the consequent removal of much of the poison from the soil and atmosphere. In other words, malaria seems to be developed during the hot season, but it is chiefly at the latter part of that season, when ordinary vegetation ceases to be active, that it has full scope for its disease-producing powers.

Again, malarial atmospheres are more deadly during the night than during the day. The literature of the subject abounds with instances in which the members of a ship's crew who went ashore in a malarial district only during the day escaped, while those who remained all night suffered from malarial fever. This deleterious effect of night air is well known to dwellers in malarial districts, who during the day go freely and with impunity into places which they would not think of visiting at night. No satisfactory explanation has ever been given of this. It has been supposed to be due to chilling of the body by night air, but the night may be oppressively hot, and the result is the same. It has been attributed to the lowering of vitality during sleep; but sleep may be indulged in during the day with impunity, and being awake at night does not protect from danger. Dr.

Mitchell of Philadelphia thought that malarial poisons^s were allied in nature to the fungi, and that, like mushrooms, they grew during the night. It has been supposed, too, that vapours which are dissipated abroad during the day, and are again condensed near the ground at night, may contain the malarial poison, and that it may be dissipated, and again condensed, with the vapour.

But none of these views would explain the purifying effect of vegetation on a malarial atmosphere. Another factor is almost certainly at work. If the view which has been advanced as to the mode in which trees act as purifying agents be correct, it necessarily follows that this action must be less during the night than during the day, for night is the time at which leaves cease to perform their absorbent function, and at which, therefore, they would cease to exercise a purifying influence on a malarial atmosphere.

The view that the malarial poison is absorbed by plants and trees is the one which best fits into and explains the facts with which we have to deal.

But still the question remains, "What is the nature of this poison?"

The opinion most generally entertained nowadays is that the malarial poison consists of minute organisms. "I have no hesitation," says Niemeyer, "in saying decidedly that marsh miasm—malaria must consist of low vegetable organisms." Though the evidence is scarcely sufficient to warrant so strong a statement, there can be no doubt that this is the view which best accords with the phenomena noted in connexion with the origin and spread of malarial disease. The usual objection to this view is that, if such were the nature of the poison, its existence could be demonstrated by the microscope. But that by no means follows. The microscope can demonstrate the existence of very minute organisms; but beyond a certain point it cannot go. And it has to be borne in mind that the limit to microscopic demonstration of such minute objects is not the mechanical power of the microscope, but the visual power of our eyes. An object may be magnified 30,000 times and be visible, and yet disappear from the field of our vision when magnified 60,000 times. The object is there, but its image is so attenuated by the increased power of the microscope that our eyes can no longer detect it. Professor Tyndall has demonstrated that the atmosphere habitually teems with particles so minute that they cannot be detected by the highest powers of the microscope, and that many of these particles are organised. With the knowledge that organised particles so minute do exist, we cannot fail to see that our inability to demonstrate that malaria is particulate and organised is no proof that such may not be its nature.

Certain it is that this view is the one which best explains the phenomena with which we have to deal. Adopting it, we can at once see (1) why a damp locality favours the development of malarial fever; for moisture is favourable to the development of organised life; (2) why the drying up of the soil and the onset of cold weather lead to an opposite result; for such conditions check the growth of organisms; (3) why complete flooding of a marsh has the same effect; for such an event puts a stop to direct communication between the soil and the atmosphere. (4) This view gives also an adequate explanation of the purifying effect of growing plants and trees on a malarial atmosphere. If malaria consists of organisms so excessively minute that their size can be no obstacle to their absorption by the roots and leaves of plants.

The recent researches of Lanzi and Terrigi,¹ and the still more recent ones of Professor Klebs and Signor Tommasi-Crudeli,² made in the malarial district of the Agro-Romano, near Rome, point to the conclusion that the malarial poison is an organism which may be obtained from the soil, and may be cultivated in the bodies of animals. This organism, say the last two observers, belongs to the genus *Bacillus*, and exists in the soil of malarial districts in the form of shining ovoid spores: to it they propose to give the name of *Bacillus malarie*. By inoculating rabbits with liquids taken directly from malarial soil, and containing this bacillus, there was produced fever, often of an intermittent type. Another result of such inoculation was enlargement of the spleen.

It is apparent that authority and evidence favour the view that malarial poisons are minute organisms. Such being the case, we shall assume that they are so, and shall proceed to investigate the probable mode of action of such organisms

¹ Centralblatt f. Med. Wiss., 1875.

² Allg. Wien. Med. Zeit., No. 28, 1879; and London Med. Record, Oct. 15, 1879.

on the system. For if this view of their nature be correct, the phenomena to which they give rise in the system must be such as an organism would produce; and a detailed consideration of these phenomena will tend to throw light on the true nature of the poison which causes them.

Malarial poisons may act like ordinary medicinal and poisonous agencies; they may act after the manner of contagia, and have their action intimately connected with their organic development; or their mode of action may be altogether peculiar. To say that malarial poisons act like ordinary medicinal and poisonous agencies is not to explain their mode of action, for of the manner in which many of these produce their effects we know little or nothing. Malaria differs, too, so widely from such agencies, both in its nature and in the effects to which it gives rise, that it is likely also to differ from them in its mode of action.

That contagia are organisms, and that their morbid action is intimately associated with and dependent on their organic growth are propositions which I have elsewhere³ considered and maintained in some detail. The evidence in support of this view may be briefly summed up as follows:—

1. The effects produced in the system by a given contagium bear no relation to the quantity administered—a small dose acting, if it act at all, as vigorously as a large one.

2. During its action the poison is largely reproduced in the system.

3. The quantity eliminated from the system is always greatly in excess of that received into it.

4. The locality in which its action is most marked—the seat of the local lesion in the eruptive fevers, for instance—is also that in which the poison exists in largest quantity.

5. The action of the poison ceases while the system still contains a much larger quantity of it than sufficed to cause the disease to which it gives rise.

6. The maladies produced by the contagia are communicable from the sick to the healthy.

The existence of such peculiarities creates a broad line of demarcation between contagia and ordinary medicinal agencies. They also separate them from malaria: for in malarial disease there is not the same evidence of organic reproduction; there is no evidence of elimination of the poison; and malarial fevers are not communicable from the sick to the healthy.

The question of the mode of action of malaria is, indeed, beset with peculiar difficulty; for, unless possibly in the experiments of Klebs and Tommasi-Crudeli, already referred to, the poison has never been separated and experimented with.

If malarial poisons are organisms—and the evidence all favours the view that that they are so—they are more likely in their mode of action to resemble contagia than ordinary medicinal agencies. It is to be noted as evidence in support of such a view that the phenomena to which they give rise in the system are more analogous to those resulting from the action of contagia than to any effects ever produced by ordinary poisons and medicines.

Both contagia and malaria are intangible agencies introduced into the system from without. Both are associated with bad hygienic conditions. Both have for the most striking of their effects on the system the occurrence of idiopathic fever. In each of them the fever is specific in nature, and in each it has a more or less distinctive course.

The existence of such analogies constitutes a reasonable foundation for the view, not only that malarial poisons are allied in nature to the contagia, but that they are also likely to resemble them in their mode of action. If they act after the manner of contagia, and owe their effects to their organic development within the system, we shall find evidence in support of this view in a detailed consideration of the phenomena to which they give rise.

The essential characteristics of the form of fever which is universally regarded as of malarial origin are its intermitting or irregular course and its occurrence independently of a local inflammatory cause. The question which we have to consider is the competence of an organism to produce such a result.

That the reproduction of an organism in the system is capable of producing the essential phenomena of the febrile state, I have in the case of the continued fevers shown in some detail.⁴

An organism has for its most distinctive characteristics: (1) the power of organic reproduction and development, and (2) a certain action on its environment. This latter is dependent on the former, and consists mainly in the consumption of nitrogen and water. But nitrogen and water are the very materials required by the tissues of the body. The propagation in the system of millions of organisms having such wants, must lead to an enormous increase in the consumption of these materials. This means simply the development of fever, for such an increase must give rise to quickening of the circulation, increased tissue-waste, increased consumption of water, rise of temperature, and increased elimination of urea. This aggregate of phenomena constitutes the febrile state. The propagation in the system of such organisms as I believe malarial poisons to be is, therefore, competent to the production of the most prominent and essential feature of the maladies to which these poisons give rise—idiopathic fever.

(To be concluded.)

ON THE TREATMENT OF CHRONIC INFLAMMATORY AFFECTIONS OF THE JOINTS IN CHILDHOOD, WITH ESPECIAL REFERENCE TO EXCISION.

(PART OF A CLINICAL LECTURE.)

By HOWARD MARSH, F.R.C.S.,

SURGEON TO THE HOSPITAL FOR SICK CHILDREN AND TO THE HOSPITAL FOR HIP DISEASE; ASSISTANT-SURGEON TO ST. BARTHOLOMEW'S HOSPITAL.

AFTER discussing the nature of chronic inflammatory affections of the bones and joints in childhood, and arriving at the conclusion that, although they often follow an injury, they are generally something more than traumatic, and depend on the presence of the tubercular diathesis—which however is often so far modified in transmission, by admixture with other constitutions, or with a healthy stock, as to lose what are usually regarded as its characteristic features,—and after referring to Sir James Paget's views on the minor signs of constitutional diseases,¹ the speaker continued:—The belief that they are modifications of tuberculosis may seem to stamp these diseases as highly intractable, or even, as many regard them, little better than incurable. Happily, however, experience leads to quite an opposite conclusion, and proves that a large majority of these cases may be cured without any remaining impairment of the functions of the limb.² This is a matter of great practical importance, for chronic affections of the joints constitute a very large part of the more grave surgical diseases of childhood. Every year hundreds of children are crippled by them, and the misery they entail is deplorable.

The method of treatment by which these cases may be cured has long been before the profession. It consists in keeping the affected parts at complete rest, and in good position, by means of leather splints or some similar appliance, so that deformity is prevented; and in the use of remedies against the tubercular diathesis. It would be needless to insist on the value of what may seem to you so well known and commonplace a scheme of treatment, were it not that there are many who appear not to believe in its efficiency; for almost every week cases are brought to the hospital which have been treated merely with tonics and blisters or with mercurial ointment, or tincture of iodine, while the affected joint has been steadily growing worse, and more and more distorted. In many of these cases, especially of knee disease, nothing remains to be done but excision or amputation, or to advise the patient to make the best he can of a distorted and crippled limb, for we possess no means by which, when the tibia is once displaced in relation to the

¹ Clinical Lectures and Essays, second edition.

² Observation shows that the intensity or virulence of tubercle differs in different structures and in different individuals; while it flourishes in some tissues, there are some in which it is rare, and others in which it is never found. Even in the lungs it is not always inveterate, but is often found retrogressive, or already obsolete; and it may be that bone and synovial membrane are structures in which it is prone to be immature, or, under favourable circumstances, even to abort.

³ The Germ Theory applied to the Explanation of the Phenomena of Disease. By T. J. MacLagan, M.D. (Macmillan and Co., 1876.)

⁴ MacLagan, op. cit.

condyles of the femur, this distortion can be corrected. In the following remarks the hip is excluded. The diseases of this joint require special appliances, the details of which I have already ventured to describe.³

Although there are several methods by which rest may be more or less satisfactorily secured for diseased joints, the most convenient, as I have already mentioned, consists in the use of well-made leather splints. They must be long enough in the axis of the limb to give thoroughly efficient support. This is especially important for the knee and the elbow. For these joints the splints should extend as high as the upper fourth of the thigh or upper arm, and as low as nearly to the ankle or wrist. The elbow should be put up just within a right angle; the knee as nearly straight as it can easily be brought; the wrist slightly flexed, and the ankle very carefully at a right angle with the leg. Should the ankle be fixed with the heel at all raised towards equinus, the calf muscles are prone, by shortening themselves, to lead to troublesome contraction of the tendo Achillis. The parents are directed to take off the splints once a day, to readjust them, and see that the skin is sound; but with this exception they are worn constantly day and night. They are cut away over any sinus there may be, and wherever threatening suppuration produces local tenderness. If when first seen a knee is found to be contracted, it is put up without any attempt to alter its position. The surrounding muscles under the influence of rest soon relax, and then the joint will gradually become extended, so that the original splints no longer fit. These must now be exchanged for a straighter pair; and these again, in their turn, must give place to a pair adapted to the limb when it has reached the straight position. This spontaneous extension of a limb may be regarded as a sure sign that the state of the joint is steadily improving. These remarks refer only to simple flexion. If there is dislocation, splints can do little, as I have said above, to remove it.

The leather of which the splints are made must be carefully selected. Their credit is often damaged by the use of the wrong material. Common sole leather contains a good deal of grease, and has been compressed in the process of manufacture. This kind remains stiff and clumsy, even after prolonged soaking. You must use leather from which all grease has been removed and which has not been compressed. Such leather, when soaked for five or ten minutes in water at a temperature of about 120°, to which a little vinegar has been added, becomes perfectly flexible and limp, and will either stretch or close like wet flannel, so as to adapt itself to the uneven surfaces of a limb as accurately as a plaster-of-Paris mould. To make the splints take patterns of the two aspects of the limb in brown paper; cut out two pieces of leather according to these, but a little larger in all directions, and, when they are soaked, apply them closely and smoothly to the joint, letting them overlap at their borders; then fix them with a flannel bandage, and leave them for twelve hours to dry and harden upon the limb. Now trim them so that they just meet around the limb without overlapping; cut them away over the front of the patella and bevel their edges, and, with the help of thick paste, line them with chamois-leather; and furnish them with wide webbing straps fastening with buckles.

I know there are many to whom the idea of keeping joints so long at rest does not commend itself. But, in the first place, the repair of diseases so tenacious as these affections are cannot but be otherwise than slow; and, after all, we encounter here only the same difficulties as we meet with in cases of enlarged glands, of ophthalmia, otorrhoea, or ozæna. All these affections demand a large amount of patience. And is it not incumbent on those who reject this method to say what alternative can be adopted? How do they cure these cases? One objection accepted by many as weighty against the principle of long-continued rest is that the joint may become ankylosed. I am convinced this fear is groundless. Experience shows that ankylosis does not occur. A child with well-marked synovitis of both knees of ten months' duration wore splints for upwards of two years, yet her joints, which are now quite sound, preserve their full normal range of movement. Many similar cases might be reported. I have never seen ankylosis occur except in cases in which there has been either acute or long-continued suppuration. Indeed, even if suppuration has lasted for many months ankylosis, whether bony or fibrous, is by no means always the result. I have notes of many

cases of repaired hip disease in which, though suppuration existed for periods varying from six to twelve months or even longer, considerable movement remains in the joint. But besides their beneficial effect on the course of the disease itself, the leather splints serve another purpose. They entirely *prevent deformity*. This is a point of the very first importance. As long as you keep these diseased joints in children free from distortion there is—except in all but very rare examples of acute suppuration or where the articular ends of the bones are widely involved—good ground for hope that their cure may be effected. But who has not seen cases in which, though extensive disease of the knee has been completely repaired, the limb is rendered useless by the amount of distortion which has taken place; or others in which, though the disease has never been more than slight in itself, so much deformity has gradually supervened that the joint is irreparably spoilt? But you will ask, Is surgery unequal to the treatment of these distorted joints—are not these just the cases for excision? I grant these, if any, are the cases for which excision is appropriate; cases, that is, in which there is little or no disease, but much distortion. But the point is that you excise a joint not because it is the seat of incurable disease, but because it has been allowed to get out of shape. Prevent the deformity and the necessity for excision vanishes.

As I have mentioned excision, let me review the position which this operation seems at present to hold in the treatment of diseases of the joints.

There was a time when these diseases were "touched" or treated by some charm or quack nostrum. Next came the amputation period, in which diseases thought to be incurable were got rid of by the simple expedient of cutting off the limb. Numbers of limbs in those days were cut off not only for advanced disease of a large joint, but for abscess in the articular ends of the bones, and even for neuralgia and hysteria. The age of amputation was followed by the age of excision. Some thirty years ago Sir William Fergusson attacked the too prevalent fashion of amputation, and, holding that however admirable a wooden leg might be a limb of flesh and blood was better, proposed to save the limb by cutting out the affected joint, and thus was founded a school that became the most popular of its day under the seductive title of conservative surgery. But conservative as excision undoubtedly was as compared with amputation, it embodied no final result; it was only a link in the chain of progress; and where Fergusson left the work it has been the duty of those who have followed him to take it up. Nor have they failed to do so, for whereas excision was performed some twenty years ago for a variety of conditions, it is now, by nearly common consent, resorted to in only a comparatively few carefully selected cases. This change of opinion respecting excision, especially in childhood, has no doubt been due in part to an increased experience of its dangers and its drawbacks in regard to the future condition of the limb. But it has also been largely owing to the same conservative spirit which led Fergusson to the happy expedient of excision as a substitute for amputation. Many surgeons have found that by treating these joint diseases in their early stages, so severe a measure as excision can, in the great majority of cases, be avoided, and that, even in their later stages, they may be successfully dealt with by aspiration, drainage, or free incision, under the safeguard of due precautions.

I know that I am not expressing a unanimous opinion. Some operators still frequently resort to excision, even for incipient disease, and point in triumph to the admirable results they obtain. The proceeding has, it is said, hitherto so often failed because it has been performed too late. Only perform the operation early enough, and the cure is safe and rapid. We learn from the cases that are published that excision, done under the agis of the antiseptic method, is shorn of all its dangers: there is no surgical fever, the wound heals quickly, and the patient is up and walking about not in so many months, but in so many weeks—nay, almost in so many days. These are, no doubt, important facts, yet they do not suffice to prove that excision is the proper treatment for these cases. The rapid healing of a wound is one thing: the future of a limb out of which the knee-joint has been cut is another. It must be remembered what excision is. It is not the cure of disease, but the cutting out of the diseased part. It is not reformation, but capital punishment. It is like the practice of a dental surgeon, who, instead of stopping a tooth, beginning to be carious, should at once extract it; or like that of an ophthalmic surgeon, who, instead of trying

³ Brit. Med. Jour., 1877.

to cure an eye, should forthwith proceed to remove it. No doubt amputation itself is still the readiest method of relieving patients of many forms of disease. The wound heals rapidly enough; but the objection to this short cut to a cure is that the patient finds himself minus a leg. In the same way, after an excision, the patient's wound may heal without a check (though it does not always do so); but, then, he has lost his knee-joint, and this is surely not a light matter. The limb after excision of the knee in childhood, so far as present experience goes, is always stiff, short, and atrophied, and, not rarely, it is deformed; and until different results can be shown—not, of course, in a few exceptional instances, but as constituting the rule—I must rank myself with those who believe that real progress lies, not in the encouragement of an earlier and more general resort to excision, but in the demonstration of the fact that if these cases are kept at rest and in good position their cure is, in the great majority of instances, simply a question of time; and that if they are so treated while they are incipient they may be cured without any, or with very slight, impairment either of the structure or the function of the limb, and much more speedily than perhaps many have supposed.

May not a substantial argument against the frequent use of excision be drawn from the fact that the operation is next to never performed in private practice? If it is so excellent a method, why is it not recommended by the leaders of surgery to their rich patients? Why are not the rich to avail themselves of it as they do of ovariectomy, of lithotomy, of operations for strangulated hernia or the removal of tumours? But it will be said that the circumstances of the well-to-do are so different from those of the poor, that what is possible in the one class is impossible in the other. This is an argument which may fairly be used in respect to the past, and, though with diminished force (for circumstances have much changed for the better), to the present. But what has been, and to some extent still is unavoidable, through the want of hospital accommodation and a system of home nursing, that such important parts of the body as the large joints should be cut out when in a state of scarcely more than incipient disease, on the plea of saving time—that disease, that is to say, should be treated not upon its merits, but according to the external circumstances of the patient; that there should, in other words, be one rule for the rich and another for the poor; that while the rich child is cured by three, six, or nine months' rest, the poor child, to whom a sound limb is one of the necessities of life, shall submit to all the risks of what must always remain one of the most formidable operations in the surgery of childhood, and be subjected to, I had almost said, a mutilation, but at all events a loss, which leaves him a cripple, however sturdy and however resigned—this is a state of things which will certainly not be allowed to continue. We constantly see that what is the exclusive and costly privilege of the rich in one generation, becomes, in the next, the unchallenged possession of the poor, and I cannot doubt that, with the reconstruction of our hospital system, which is so much required, and which we are promised in the near future, means will be provided for the efficient treatment of these joint affections in childhood—treatment which, being applied while cases are incipient, and being carefully carried out, will render excision as rare among the poor as it now is among the rich.

BEQUESTS ETC. TO MEDICAL CHARITIES.—The Clothworkers' Company have given thirty guineas to the National Hospital for Consumption, &c., at Ventnor, twenty-five guineas to the Seaside Convalescent Home at Seaford, twenty guineas to the North Eastern Hospital for Children, twenty guineas to Queen Charlotte's Lying-in Hospital, and twenty guineas to the Cancer Hospital. Mr. R. K. Hodgson has given £50 to the Charing-cross Hospital. The National Hospital for Consumption, &c., at Ventnor, has received £50 in memory of J. A. S. Freeland. The Mercers' Company have given £25 to the Royal Kent Dispensary, Greenwich, out of the funds of the Earl of Northampton's Charity. The General Hospital, the Queen's Hospital, the Children's Hospital, and the General Dispensary, all at Birmingham, have received £100 each under the will of Mr. J. R. Mott. Mr. Robert Few has given £100 additional to the Charing-cross Hospital. The Grocers' Company have given £100 to St. George's Hospital. Addenbrooke's Hospital, Cambridge, has received £50 under the will of Miss Matilda Abbott.

A NOTE ON AN OUTBREAK OF RUBEOLA (RÖTHELN).

By W. R. GOWERS, M.D., F.R.C.P.

DR. DYCE DUCKWORTH's remark, in a recent paper, that our knowledge of "rubeola," or "German measles," is still so imperfect that all cases of the affection deserve description, induces me to place on record a brief note of a series of cases which I had an opportunity of closely watching about two years ago. A nursemaid, exactly a fortnight after entering a household, presented a rash on her face, chest, and arms. She had been suffering from cold and slight sore-throat (apparently a simple catarrh) for four or five days. There was slight elevation of temperature (about two degrees). The eruption on the chest closely resembled that of scarlatina, the spots being confluent; on the arms it was nearly like measles, but rather brighter in tint. It was, in fact, thought probable that it was measles, and she was sent to the Fever Hospital. When she reached the hospital the rash had almost disappeared (as I was afterwards informed by Dr. Murphy), and she was quickly well. The eruption had lasted about thirty-six hours. It was not noticed until fully out, and she was then attending to two children—one aged two and a half, and the other three months—and she undressed them both and put them to bed whilst the rash was out. An hour or two afterwards it was discovered, she was separated, and did not again see the children or their mother. Exactly fourteen days subsequently the latter (who had had true measles), after a day of malaise, presented a rash which was at once recognised as "German measles." It was "measly" in distribution, but brighter in tint, and commenced on the backs of the forearms. In the evening slightly elevated spots were seen, on which, by gaslight, no abnormal tint was visible; but next morning arms, face, and chest were covered with an unmistakable rash. She was at the time suckling the youngest child, and did so during that night. In the morning the child was separated and weaned. Two days later the mother's rash had entirely disappeared. She remained secluded from the children for two days more, and then returned to them, but did not again suckle the baby. Just a fortnight later both the children presented a rash exactly like that of the mother, but slighter. It lasted about twenty-four hours, and then disappeared. Their indisposition was trifling.

In this case the period of incubation certainly in the mother, and probably in the nursemaid, was just a fortnight. The fact that the children were more exposed to the contagion than the mother, and yet did not contract the disease from the nursemaid, is remarkable, and corroborates the fact observed before that adults are as liable to the disease as children, if not more liable. The period of incubation in the children was either eighteen days (if contracted before their separation) or fourteen days (if contracted after the mother rejoined them). The latter seems much the more probable. So long an incubative period as eighteen days has not, I believe, been observed, and fourteen days was distinctly the period in the mother. If so, it would seem that the contagion was much stronger two days after the disappearance of the rash than it was when the rash was at its height—a very important practical fact.

I would ask those who may have an opportunity of observing the rash in the early stage to note whether it is common for the elevation to precede the blush, and whether it is common for the eruption to commence on the backs of the forearms. Of course, it is only in cases, as in this, in which the most careful look-out is kept for the earliest symptoms that these points can be noted. If corroborated they would possess diagnostic importance.

It seems highly probable that a large number, perhaps all cases, of sporadic rash, in which doubt is felt as to whether the case is one of scarlet fever or of measles, are cases of this disease.

In none of the cases of this series was there any enlargement of the lymphatic glands. It is possible that there may be more than one distinct disease to which we apply the terms rubeola and rötheln.

Queen Anne-street, W.

NOTE ON THE USE OF LARGE PROBES IN THE TREATMENT OF LACHRYMAL OBSTRUCTION.¹

By SIMEON SNELL,

OPHTHALMIC SURGEON TO THE SHEFFIELD GENERAL INFIRMARY AND TO THE SCHOOL FOR THE BLIND.

THE plan of treatment in the class of cases indicated by my title, at present most generally adopted and introduced by Mr. Bowman, has undoubtedly rendered immense services. Successful, however, as it is in many instances, experience shows, I think, that there are a good number which appear little benefited by it, and after the probes have been passed several times in succession there is still a recurrence of the obstruction.

For some time I have been under the impression that the probes commonly used were not large enough for the purpose for which they were intended—viz., to restore the narrowed duct to its normal calibre. The analogy of the introduction of large urethral sounds by Otis, interested me somewhat in this direction, and I was, moreover, chiefly influenced by the utter disproportion that the probes showed to the size of the duct as represented in the anatomical subject.

Authorities, strange to say, while all describe accurately the length of the nasal duct, with few exceptions are silent as to its width. The calibre would, however, appear to vary somewhat. According to one authority it would measure from just three millimetres to four millimetres; and to another from three millimetres to four and a half. I have, moreover, satisfied myself in the dry skull that often the passage of a four-millimetre probe is very easy, whilst in other ducts, even in the same skull, it is difficult.

The disproportion between these measurements and those of the probes will be at once apparent, when it is stated that the largest of the set of probes in general use is a millimetre or little more. The bulbous probes used by Mr. Teale are larger, and the biggest of the set I possess is about two millimetres, and I should add that I fancy I remember seeing Mr. Bowman employ a larger probe at Moorfields some years ago.

The large probes which I now use I was induced to have made after reading an article in Knapp's "Archives of Ophthalmology" (vol. vi.), by Dr. Theobald of Baltimore on the use of large probes in strictures of the nasal duct. The probes are made after his scale. There are sixteen; the smallest is $\frac{1}{2}$ mm., the second $\frac{3}{4}$ mm., third $\frac{1}{2}$ mm., and so on; the twelfth being 3 mm., thirteenth $3\frac{1}{2}$ mm., fourteenth $3\frac{3}{4}$ mm., fifteenth $3\frac{1}{2}$ mm., sixteenth 4 mm. The smallest are intended merely for exploring the canaliculi. The probes are conically ended to facilitate introduction. In any case of stricture it has been my custom to use, in the first place, one of the smaller probes—a millimetre or a millimetre and a half, or less—according to the tightness of the stricture, following it immediately by a larger one. At the visit the next day, or following one, another probe still further increased in size is introduced, and so on.

During the past year (1879) I have used these probes in about twenty cases, and as yet have not seen the necessity for the four-millimetre one, but have found those ranging from about 3 mm. to $3\frac{1}{2}$ mm. the most useful. Dr. Theobald, however, stated that he had frequently employed the largest size even in young persons.

Judging from the cases in which thus far I have adopted this method, I certainly incline to the opinion that it is superior to that with the smaller probes, that the results have been better and more rapid, and that it is worthy of extended use.

Since the above was written, six months ago, I have continued the employment of this method, and have treated several additional cases by it. I have no reason to think less favourably of it, but perhaps more so. Weiss is at present engaged in making another set of the probes for me. The number of the small probes will be reduced, the larger ones will be of a different size at either end, and bent to avoid the prominence of the forehead. A reduction in the number will be thus effected, without interfering with the utility of the gradual gradations in size.

Sheffield.

¹ Read before the Leeds and West Riding Medico-Chirurgical Society, Feb., 1880.

CASE OF EXTRA-UTERINE FCETATION, SIMULATING OBSTRUCTION OF THE BOWELS.

By JOHN WHEELER, M.D., CH.M., L.M.

MRS. S—, aged forty-four years, of sallow complexion, has borne one child twenty-three years ago, since which time she has not been pregnant. Was married to her second husband ten years since. Was seized with violent abdominal pains and vomiting on Saturday evening, March 6th, immediately after partaking of some oysters. She sought medical aid in the night, but was unable to procure it. I saw her for the first time about 1 o'clock on Sunday afternoon, the 7th inst., when her condition was as follows:—She was lying on her back with knees drawn up; countenance anxious; extremities cold; teeth chattering; pulse 140; quite conscious; tenderness all over abdomen; no action of bowels or bladder; obstinate and almost incessant vomiting, or rather regurgitation of thin grumous matter; extreme thirst. She attributed her painful condition, &c., to the oysters she had partaken of the day before. I found upon inquiry that, though the menses had ceased about the end of December last, and having noticed an enlargement of her breasts, she consulted a medical man as to her condition, who introduced the sound, and informed her that she was not pregnant.

Looking upon the case as an aggravated one of gastric disturbance with constipation, I, after injecting a sixth of a grain of morphia subcutaneously, with the object of alleviating the pain and vomiting, ordered turpentine stupes to abdomen, and prescribed five grains of subchloride of mercury to be taken immediately, and to be repeated in six hours if the bowels were not relieved, and to have iced soda-water, with milk and beef-tea. At 6 P.M. there was no improvement in her condition. Ordered an enema, composed of turpentine and castor oil. 9 P.M.: Same condition. Passed catheter, and drew off about one pint of urine. Repeated enema, which had no effect. Pulse now small, weak, and irregular, 150.

March 8th. — 10 A.M.: Spent a restless night; had no sleep; pain over abdomen increased; still vomiting; no action of bowels or bladder. Ordered effervescing soda draught with tincture of orange, to be repeated every two hours. — 2 P.M.: No change in symptoms. Ordered to suck ice. — 6 P.M.: Same condition as at 2 P.M. To have twenty grains of subnitrate of bismuth every two hours. Met Dr. Ryan, of Ladbroke-grove, in consultation between 11 and 12 P.M. Vomiting still persistent. Administered enema of sulphate of magnesia; and upon proceeding to draw off urine, found a sanguineous discharge flowing from vagina having the menstrual character. We now decided to give her two grains of calomel with a quarter of a grain of opium, to be repeated every two hours.

9th. — 10 A.M.: No improvement; no action of bowels; no urine passed. — 2 P.M.: To have an enema with long tube of sulphate of magnesia, which returned slightly coloured. — 4 P.M.: Injection repeated, which had the effect of bringing away a small quantity of liquid faecal matter. — 8 P.M.: Sickness the same; abdominal pain and tympanitis increased. She objected to the enema being repeated.

10th. — 11 A.M.: Had no rest during the night; no sleep; everything administered by the mouth returned at once; abdomen more tympanitic and exquisitely painful. Ordered an enema containing two drachms of tincture of opium, part of which only was retained. — 6 P.M.: Injected subcutaneously one-third of a grain of morphia, which alleviated pain and vomiting temporarily. — 10.30 P.M.: On my asking her if she wished the morphia injection to be repeated, she was sufficiently conscious to make me understand that she did. I accordingly injected a quarter of a grain subcutaneously.

11th. — Died at 3 A.M.

Autopsy, twelve hours after death (Dr. Ryan and Mr. E. T. Ensor being present). Body well nourished and still warm. The abdomen was laid open by a vertical incision through the integument from the ensiform cartilage to the pubes, and a second incision commencing midway between the umbilicus and pubes transversely outwards to the anterior superior spinous process of the ilium; the muscles were also divided in the same direction. The flaps were then re-

flected outwards, thus exposing the contents of the abdominal cavity.

My attention was immediately arrested by two large black clots lying in the folds of the ileum, which were removed. The stomach was next removed and examined; it contained about a pint of fluid, which was found to be chiefly beef-tea and milk. It was quite healthy, and presented no appearance of inflammation. The small intestines were next carefully removed. They were also healthy. Large intestine also healthy. Special attention was paid to vermiform appendix, which was healthy. The large and small intestines were empty; bladder contained about half a pint of urine; kidneys, liver, and spleen were healthy; also peritoneum; no adhesions. In the left inguinal region a tumour somewhat ovoid in form, larger than the uterus (which was natural in size), of a dark red colour, was found imbedded in clots. This proved to be an abnormal development of the left ovary. The clots with surrounding blood were removed, when a male embryo (about eight weeks), three inches long, came into view. I thereupon removed tumour, uterus, and appendages *en masse*. Upon examination of the tumour a rent was perceptible behind and at right side, from which evidently the hæmorrhage took place. The fimbriated extremity of the Fallopian tube was attached to the ovary, all trace of the fimbriae being lost. The right ovary and Fallopian tube were normal, the former presenting several Graafian vesicles in every stage of development, and one well-marked corpus luteum.

Remarks.—1st. As to treatment. I wish to lay stress upon the value of the subcutaneous injection of morphia, which was the only remedy that seemed to give relief. 2nd. As to duration of life. It was remarkable that the patient should live so long—nearly four days and a half—seeing the amount of effusion and her inability to retain food of any kind on the stomach.

Pembridge-gardens, W.

TRAUMATIC TETANUS TREATED BY CHLOROFORM INHALATION; RECOVERY.

By FREDERICK A. GRAY, L.R.C.P. LOND., &c.

RECOVERY from traumatic tetanus is sufficiently rare to make it worth while recording any case in which treatment seems to have assisted in bringing about such an issue. In the case of which notes are here given chloroform inhalation was attended with the happiest results, relieving completely the spasms, which were severe and increasing in severity, and threatening suffocation every few minutes.

James Y—, aged ten years, was admitted to Cottage Hospital March 29th, 1879. Fourteen days before admission he caught his left hand in a turnip-cutter, which crushed the middle finger. It had been attended to by a surgeon at the time, but does not seem to have been dressed again till the 25th, he having left the neighbourhood. On the 25th he went to another surgeon, where he had his hand dressed; he then complained of some stiffness and pain of the jaws, and afterwards of pain and stiffness in his back and severe pain in the pit of his stomach, which was of an intermittent character. These pains got worse and more frequent up to the time of his admission.

On admission, March 29th, the middle finger of the left hand was in a very unhealthy condition, the soft parts sloughy, and the bones comminuted up to the second joint, the end of the finger hanging by tendons, and gangrenous. The jaws were almost fixed, and the teeth could not be separated more than a quarter of an inch. Fluids could be swallowed with great difficulty, any attempt producing severe spasm. Opisthotonos well marked, returning every two or three minutes, when pain in the epigastrium was most severe, and the muscles of the abdomen became hard as a board with each recurrence of the spasm. The facial muscles were affected also, and the "risus sardonius" was well marked. The spasms were most severe, causing the patient to be jerked up in the bed, bent back, with teeth clenched and breathing suspended, till he seemed in imminent danger of suffocation, his complexion assuming an almost black hue at times.

Having been placed under chloroform, the mutilated finger was amputated at the metacarpal joint. During the time he was under chloroform there were no spasms, but

they soon began to return on the effects passing off. Hydrate of chloral and bromide of potassium ordered, ten grains of each; this at first relieved the spasm, but soon lost its effect, though the dose was increased.

March 30th.—Determined to keep him under the influence of chloroform, and chloroform inhalation was substituted. This had the effect of preventing spasms altogether if thoroughly under its influence, and he would remain almost free for a couple of hours after, when the inhalation would have to be commenced again. Strong beef-tea and milk were given at regular intervals, when he was allowed to come from under the influence of the anæsthetic. The bowels, which were very costive, were kept open by castor-oil enemata. These proceedings were continued up to the 6th of April, during which time the spasms maintained the same intensity and frequency when the influence of the chloroform was removed. After this the spasms began to abate, and in a few days gave place to twitchings. The chloroform was gradually lessened and then discontinued. The twitchings continued for some days, and were perhaps kept up by some ascarides, of which a dose of santonin relieved him. The wound had in the meantime healed almost by first intention, and the boy was discharged, apparently none the worse for his dangerous illness, on the 15th of April. The total quantity of chloroform inhaled was 3 lb.

Ottery St. Mary.

A Mirror

OF

HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. THOMAS'S HOSPITAL.

(Cases under the care of Mr. FRANCIS MASON.)

MR. MASON has at the present time, or recently had, under care several cases of more than usual interest.

Large Fungating Cystic Adenoma of Breast; Removal; Recovery.—In the women's ward there is a patient, aged twenty-nine, who for the past twelve years has suffered from disease of the right breast. The tumour, which was removed on Saturday, the 17th inst., was about the size of an adult head. It commenced in a small nodule, and steadily increased in size. About one month before admission the skin on the outer side gave way, so that a fungating mass protruded. The tumour had never been painful, and caused no inconvenience whatever, excepting from its size and from the skin wound. There was no glandular enlargement in the axilla, and the patient was in every other respect perfectly healthy. The removal of the tumour was readily effected by a single straight incision, and no skin was taken away excepting a ring around the fungating mass. Mr. Mason remarked on the importance of not taking away the skin in such cases, for it was only stretched over, and was not in any way implicated by the morbid growth, and in this instance, as is usual, immediately after the operation, it so contracted that there was no redundancy. The antiseptic spray was not used, and dry lint was applied as a dressing. On the second day after the operation, the temperature having reached 101°, a fresh dressing of wet lint was employed. On the following day the temperature was about normal, and the case is now making satisfactory progress.

An examination of the tumour showed it to be a cystic adenoma, which, had it been left, might have undergone a spontaneous cure by sloughing of the skin and enucleation of the growth. It was really simple in character, but just the kind of tumour that fifty years ago would have been styled malignant, soft cancer, or fungus hæmatodes.

Hip Disease, Excision.—In the adjacent bed is a little girl, eleven years old, who was admitted about six weeks ago in a most deplorable state of emaciation from disease of the hip-joint. It was determined to operate without delay, as the little patient was evidently being worn out with the discharge, and there were frequent and painful startings at

night. No better proof could be adduced of the advantage of surgical measures in such cases. There were three or four sinuses leading up to the joint, but they were so placed that they could not be utilised at this operation. The usual incision was therefore made over the great trochanter, and the head, which was much absorbed, and the femur were removed at the line of the trochanters. The acetabulum was examined, and found to be free from disease. Beyond having a few hypodermic injections little else was required in the shape of treatment. The child is now convalescent, and looks remarkably fat and well, the wounds being quite superficial.

Genu Valgum.—In the next bed is a case of genu valgum. About a month ago Mr. Mason divided the lower end of the left femur of a girl, aged ten years, transversely, using the antiseptic spray during the operation. The dressings were kept on for three weeks without the least rise in the patient's temperature. Then they were removed, and the wound was quite healed; but as there was a want of firmness in the part the splint was reapplied, the antiseptic dressings being discontinued. The osteotomy was performed from within outwards. In another patient, a girl aged six years, a similar operation was performed, and the antiseptic dressings were not touched for a fortnight. At the end of six weeks the child was discharged with a straight and very useful limb.

Cases of Fracture.—Whilst there are several cases of compound fracture which are progressing most favourably under the antiseptic dressings, there are two cases of simple fracture of more than ordinary interest—one occurring in a woman, aged fifty-eight, who broke her right femur at the junction of the upper and middle third. On examining the bone it was found enormously thickened, and at first gave the idea that there was some growth investing the bony structure and thus weakening it. But, as showing the value of comparing the limbs, the left femur was found to have exactly the same appearance. The woman has a sallow aspect, and says that although she has generally enjoyed fair health, yet she has never been what may be termed strong. The case is being treated with a long outside splint with extension. The other patient is a man, about forty-five years old, who has a simple fracture of the right femur, just below the trochanter, and he states that he has broken the bone in the same place twice before—five years ago and two years ago respectively. In this case there seems nothing about the patient to account for the fragility of the bone.

Suppuration of the Antrum.—In Leopold ward there is a lad, aged seventeen, with suppuration of the antrum. He was quite well until January last, when he noticed a swelling under his right eye, which burst, giving exit to an ounce or two of pus. On his admission there was a fistulous opening, very small indeed, in the situation referred to, and there was also an aperture on the outer side of the first upper molar tooth, the stump of which was left. Under ether Mr. Mason removed the stump, and its removal was immediately followed by the discharge of about two ounces of offensive pus. The bone in the neighbourhood was freely gouged, so as to enable the point of the little finger to be introduced into the antral cavity. A piece of lint was passed into the antrum, and within a fortnight a complete cure has been effected. The small sinus under the right eye has quite healed; but as there is a depressed cicatrix, it will be desirable at some time to divide the adhesion subcutaneously. Had there been any difficulty in removing the stump it was intended to open the antrum with an ordinary joiner's gimlet, as we believe was suggested by Mr. Samuel Smith, of Leeds. (See THE LANCET, Feb. 14th, 1857, p. 160.) A peculiar circumstance in this case was the entire absence of fetor in the discharge. In many of these instances the antrum is filled with a more or less solid material resembling putty, and giving off an intolerable stench.

Plastic Operation.—Two interesting cases are under treatment. The first is a patient, aged twenty-six, who, about eighteen months ago, lost the greater part of her nose from sloughing after the application of strong nitric acid for a small ulcer. Three months ago Mr. Mason formed a columna from the upper lip and fixed it to a surface made raw over the nasal bones. Unfortunately, the patient was attacked with erysipelas, and a portion of the flap sloughed, but the lower part remained as a good basis of support. About three weeks ago two bridges of skin were raised from the cheek on each side of the nose, and lint placed under them. In ten days the under surface was granulating freely, and the lower end of each bridge was divided, and the two

flaps approximated in the median line and fastened together with silk stitches. At the present time the nose is very presentable, and with another small operation a very good result is anticipated. This method of procedure seems preferable to taking a flap of skin from the forehead, which necessarily leaves a somewhat ugly scar.

The other case is of a poor boy, aged four, with extroversion of the bladder. This, too, is as yet incomplete, but the first step has been successfully accomplished by raising a bridge of skin from the scrotum and bringing it over the penis. The prepuce was brought down and fastened to the lower raw edge of the remainder of the scrotum. In this way about the lower third of the exposed mucous membrane of the bladder is covered. The next procedure will be to take other flaps or bridges of skin from the abdomen after Professor Thiersch's method. We hope to supply a more complete account of these interesting cases at some future time.

ROYAL INFIRMARY, LIVERPOOL.

CASE OF DIABETES PRESENTING PECULIAR FEATURES.

(Under the care of Dr. GLYNN.)

FOR the following notes we are indebted to Mr. Bredin:—Peter E—, collier, aged fifty-four, was admitted to ward 12 on Feb. 24th. Eleven months before he found that he was passing water rather oftener and in larger quantity than previously. He rapidly lost weight, suffered from extreme thirst, and voracious appetite. For six months previous to admission he felt too weak to do any work and passed as much as sixteen quarts of urine in twenty-four hours.

On admission he was much emaciated (weight had fallen from 11 st. 3 lb. to 8 st. 7 lb.), the skin was dry, and the left angle of the mouth was excoriated. The tongue was very dry and rough. Pulse 75; arteries rather hard and tortuous; pulse tracing showed rounded summit; percussion note impaired over right base; breath sounds slightly enfeebled; vocal resonance diminished. Both crystalline lenses were hazy. Urine 94 oz., light yellow, acid; sp. gr. 1032.

Ordered a diet consisting of 4 oz. of bread, well toasted, three times a day, two pints of milk, chop, tea; to take one drachm of dilute phosphoric acid in a pint of water as a drink. Feb. 26th. — Urine 104 oz.; sp. gr. 1040; urea 195.87 gr.; glucose 3590.9 gr. Temperature, morning 97.8°, evening 98°. — 28th: Urine 110 oz.; sp. gr. 1041. Temperature, morning 97.8°, evening 97.4°.

March 3rd. — Patient felt much stronger, thirst was much less, and he had gained 4 lb. in weight. Urine 50 oz. Temperature, morning 97.8°, evening 98°. — 5th: Urine 48 oz.; sp. gr. 1034. Temperature, morning 99°, evening 99°. — 8th: Urine 52 oz.; sp. gr. 1037. Temperature, morning 97.8°, evening 98°. — 9th: Urine 48 oz.; sp. gr. 1033; urea 525 gr.; glucose 1371.37 gr. — 10th: Temperature, morning 99°, evening 98°. Urine 52 oz. — 11th: Temperature, morning 99°, evening 97.4°. Urine 54 oz. — 12th: Temperature, morning 99°, evening 98°. Urine 56 oz. — 16th: Temperature, morning 99.6°, evening 98°. Urine 50 oz.

On the morning of the 17th the temperature was 99.4°. The respiratory movements were equal on both sides; vocal fremitus was greater over right than left apex and base. The percussion resonance was impaired over right lung in front from second to fourth ribs; apex hyper-resonant. Breath-sounds were feebler over the right apex. There was crepitation between second and fourth ribs on right side; audible in right interscapular region, not over apex. Respiratory murmur was louder over right than left base. Vocal fremitus was greater over right apex and base. No cough. Evening temperature 98°.

18th: Temperature, morning 97.8°, evening 98.5°. Urine 46 oz. — 19th: Temperature 98°; pulse 72. Urine 60 oz.; acid; sp. gr. 1034; no albumen; urea 91.98 gr. (.35 grm. in 100 cc.); glucose 1979.9 gr. No headache; pupils normal. — 20th: Temperature 98.8°. Urine 50 oz.; acid; sp. gr. 1033; no albumen; urea 109.5 gr.; glucose 1690.9. Patient refused to remain in hospital.

The urea was estimated by Russell and West's method, the hypobromide-of-soda solution being always freshly prepared immediately before use. On March 19th and 20th, when only 91.98 gr. and 109.5 gr. of urea were passed during twenty-four hours, the analysis was performed twice, with identical results. Glucose was estimated by means of Fehling's solution.

Remarks by Dr. GLYNN.—In this case the ordinary ratio between the glucose and urea excreted was not only maintained, but the amount of urea was absolutely and very greatly diminished. This did not arise apparently from any intercurrent renal disease, as there was not a trace of albumen in the water, and though there was some increased arterial tension there was no cardiac hypertrophy, no displacement of heart's apex, &c. Neither was there any error, I believe, in the analyses, as they were most carefully performed by my clinical clerk Mr. Bredin.

The pulmonary complications were, as they often are I think in diabetes, latent, with the physical signs of marked disease of the right lung. There was neither cough nor any elevation of temperature.

LUXOR HOUSE OF HEALTH.

LARGE TUMOUR IN THE RIGHT TEMPORAL REGION ;
REMOVAL ; RECOVERY ; REMARKS.

(Under the care of Mr. MACLEAN, M.B.)

THE following case, besides its surgical interest, like others which have been recorded in our columns, gives a glimpse of some of the peculiarities of the Egyptian Fellaheen. The name of this institution has curious associations. The natives of Egypt object to enter "hospitals" on account of the bad reputation that the rude surgery of the ignorant native doctors has given them. Instead of being called a hospital, the institution of Luxor is called a House of Health (*Beyt Lissahah*). This useful hospital, consisting of five beds, was started by Mr. Maclean, and is supported by the voluntary contributions of travellers on the Nile.

Hassan M—, aged thirty, agricultural labourer, Mahomedan faith, from the village of Carnak, near Luxor, applied for assistance in the winter of 1877-78; but for some reason never returned, nor did he present himself during the winter 1878-79. In the month of February, 1880, he again applied for relief, and on being asked why he had not come before, replied that he had dreamt that the "doctor" had removed his tumour successfully.

The patient was a very healthy specimen of a Fellah with no other ailment than a large tumour opposite the right temporal region. This tumour was freely movable, hard,



and the skin over it was loose; three lobes could be made out, the two lower being much the smallest and of a hardness approaching that of cartilage. The scalp was greatly hypertrophied and thickened, and lay in folds. The tumour lay over the temporal muscle and had been growing for ten years. The patient was admitted on February 13th, 1880.

On Saturday, February 14th, with the assistance of the secretary of the hotel and a young German gentleman

staying there, the tumour was removed by an oval circular incision. The superficial temporal artery and anastomosing branches of the occipital, posterior auricular, and supra-orbital were divided, together with a number of large veins. Thirteen hemp ligatures were applied, and the edges of the wound brought together with silk stitches, except in the middle, where there was a deficiency of skin. The patient lost a good deal of blood, vomited his breakfast, and felt a little faint at times during the operation, when he took a little brandy, the total quantity amounting to about an ounce. The wound was dressed with pads of dry lint and cotton-wool, kept in position with a firmly applied roller. After the dressing the patient felt no pain, and when put to bed complained of hunger. The tumour weighed four pounds, and measured eight inches by six inches. It was composed of three lobes, each lobe being contained in a distinct capsule. On section the upper and largest lobe was seen to be yellow, and composed of fibrous and fatty tissue, with patches of caseous degeneration, and small cysts containing serum scattered here and there. The middle lobe was only about one-fourth the size of the upper lobe, much darker in colour, approaching that of muscle. The lowest lobe was of about the same size as the middle one, and of a paler tint. At 5 P.M., about six hours after the operation, patient's pulse was 92, and he was free from pain. He slept well; there was no bleeding, and no pain. Pulse 104.

On the 16th the dressing was removed, and a slight swelling, due to the presence of blood and serum, was found. The bandage was replaced. He had great pain during the night.

On the 17th, at 4 P.M., the wound was dressed, and all the stitches were removed on account of the great tension. There was a good deal of oozing. Pads of lint soaked in carbolic oil (1 to 10), cotton-wool and firm bandage were applied.

On the 19th, at 4 A.M., Mr. Maclean was called by the infirmarian man because patient had lost a great deal of blood, and had fainted. The patient was insensible, almost pulseless, and the bed and floor were covered with blood. The wound was opened up, and a large quantity of firm clot turned out. It was then found that the bleeding was for the most part parenchymatous. In the process of turning out the clots several ligatures were torn away, and in one case, on account of the soft pulpy state of the tissues, an armed needle had to be passed in deeply, so as to surround the bleeding point. The wound was then dried piece by piece with lint, the drying of each piece being immediately followed by the application of a strong solution of perchloride of iron. There were now fifteen ligatures. The wound was dressed with lint dipped in carbolic oil, and a light bandage was applied. During the day the pulse ranged over 120, and the patient was constantly sick after the smallest quantity of food till the afternoon. On questioning the infirmarian man, it came out that Hassan was very proud of his strength, and from the very day of the operation had been in the habit of getting out of bed and sitting up, and in this way, no doubt, had succeeded in preventing the proper closure of the bloodvessels.

On the 20th the pulse was 134. The patient was very pale, complained of bad smell from the wound; fresh carbolic oil was applied. Patient had been thoroughly frightened, and now kept very quiet. Next day he was better, and pus ran freely from the wound.

On the 27th the wound was granulating healthily. Pulse 88.

On March 1st patient was looking well. Sweated at night, but felt strong. Pulse 96.

On the 15th patient was in very good health, and was discharged, as the hospital had to be closed in consequence of the termination of the season. The wound was a healthy, superficial, granulating sore of oval shape, measuring in length eleven centimetres, in width at the middle seven centimetres, and four centimetres in width at the junction of the middle with the upper and lower thirds. There was still some deformity about the right eye due to the loose and relaxed condition of the connective tissue under the orbicular muscle, and the position of the pinna was a little faulty. This, however, will probably be corrected by the cicatricial changes, and so far from the deficiency of skin covering at the time when the tumour was removed being a loss, it is a positive advantage, helping to restore the symmetry of the patient's face.

Remarks.—The points of interest about the above case are: 1. The large size of the tumour. 2. The performance

of the operation without anæsthetic. Apropos of this, it is worth mentioning the fact that, as a rule, the Egyptian Arab is endowed with great passive courage. This has perhaps partly resulted from the lavish use through many generations of the kurbág or hippopotamus-hide whip in collecting the taxes. The reward of him who bears his lashes manfully being his escape from the payment of money. Moreover, the women value a man according to his power of bearing blows. Another remarkable circumstance in Egypt is the comparative absence of squalling and crying children. In playing amongst themselves children often submit to things that would certainly cause an English child of the same age to utter an expression of pain. These facts show that the sense of pain in the Egyptian Arab is much less than it is amongst Europeans. An exception has to be made in the case of hasheesh or opium smokers, both of whom bear pain very badly. 3. The occurrence of intermediary hæmorrhage. That this hæmorrhage, though so severe, came from no single bleeding point and was completely controlled by the application of perchloride of iron. 4. The occurrence of vomiting during the operation although no anæsthetic was used. This was due to a syncopal condition, and suggests that some of the cases of vomiting put down to chloroform may be due to the shock inflicted by loss of blood. 5. The vomiting recurred on taking food into the stomach after the patient suffered from intermediary hæmorrhage. Can some of this vomiting have been due to the absorption of perchloride of iron by the wound, or was it all due to the syncopal condition?

Reviews and Notices of Books.

De la Méthode Sanglante dans les Rétrécissements de l'Urèthre. Par le Dr. W. GRÉGORY, Ancien Interne de l'Hôpital Saint-André, Professeur de la Faculté de Médecine de Bordeaux. Paris: Adrien Delahaye et Cie. 1879.

Précis Clinique des Affections des Voies Urinaires chez l'Homme. Par le Dr. CHRISTIAN SMITH, Bruxelles. Tome premier: Anatomie, Urologie, Affections de l'Urèthre. Paris: A. Delahaye et Cie. 1880.

The Pathology and Treatment of Venereal Diseases. By FREEMAN J. BUMSTEAD, M.D., LL.D. New York. Fourth Edition, revised, enlarged, and in great part rewritten by the Author, and by ROBERT W. TAYLOR, A.M., M.D., Professor of Skin Diseases in the University of Vermont. With 130 Woodcuts. Philadelphia: Henry C. Lea. 1879.

THE three works at the head of this notice differ very much in their plan and scope, and yet in the ground they cover so overlap that it is convenient to group them together for the purposes of reviewing.

Dr. Grégory's essay commences with a long and full account of the history of urethrotomy, in which he traces its origin, the way it then fell into disfavour, and its ultimate re-establishment as a sound operation. A number of cases occurring in the Saint André Hospital at Bordeaux are then detailed, and cases and statistics published by British, Continental, and American authors are added, and from these the author draws a comparison between internal and external urethrotomy. The entire purport of the essay is to show that the perineal operation should replace the intra-urethral one in all strictures requiring incision which are not in the penile portion. Dr. Grégory has been at great pains to obtain all the statistics calculated to facilitate the comparison between the two operations in their results, and although we cannot but be struck with his evident bias in favour of the external operation, the facts he gives enable his readers to form their own conclusions, and they are a formidable indictment against internal urethrotomy. In 915 cases of internal urethrotomy there were 46 deaths, or about 5 per cent., and of 992 cases of external urethrotomy there were 88 deaths, or nearly 9 per cent., but Grégory maintains that the operation is only responsible for a mortality of 3 per cent., while the internal section, when similar deductions are

made, has a fatality of 4½ per cent. But further than this, we are assured that Listerism will deprive the perineal section of all its terrors, and render it quite innocuous, by guarding the patient from his chief danger—blood-poisoning. When the question of mortality is put aside it is an easy task to show that the complications of the internal operation are both formidable and frequent; we drew attention to this subject some few years back as illustrated by the University College Hospital statistics. The French cases afford numerous instances of urinary fever, profuse hæmorrhage, urinary infiltration and abscess. As to the ultimate benefit conferred, it is maintained that while recontraction is the exception after external, it is and must be the rule after internal urethrotomy, even when the section of the stricture is complete. We doubt if either operation need be praised by condemning the other. Is it not more just to state that each is useful in its own peculiar field, and that it is by combining them in our practice that we shall best be able to appreciate their value? We hold, for example, that Syme's operation can never replace the intra-urethral section in strictures in the penile urethra, and we must refuse to assent to the proposition that would teach us that because internal urethrotomy is well suited to strictures in that portion, it must be the best method of attacking those in and near the bulb. Unfortunately internal urethrotomy at present is practised too exclusively by specialists, who are often prone to follow out some special line of practice, and are less able than general surgeons to estimate rival (?) treatments at their proper worth. We must wait longer before in this country we can discuss Dr. Grégory's proposition without prejudice, but his brochure will do good service in drawing attention to the merits of the external and the risks of the internal operation.

Dr. Smith's *précis* is a careful readable *résumé* of our knowledge of the diseases of the urethra. As an Englishman he has, of course, made himself well acquainted with the work of British authors, and throughout his pages constant reference is made to their writings. Like other modern authors—and amongst them Bumstead and Taylor—he is at pains to combat the time-honoured notion of the specific nature of gonorrhœa. The evidence adducible on this point is convincing. The history of the establishment of this apparently simple fact is very instructive, for it shows how long it takes to counteract the mischief done when a great man makes a mistake. Hunter wrote of gonorrhœa as a variety of syphilis, and it was long before it was clearly and conclusively separated from it, and it is only lately that this error has been quite dispelled, and the disease declared to be a simple local affection.

Bumstead's work is already classic and hardly requires reviewing. This edition is well up to date, and everywhere bears marks of careful and erudite preparation. Not only is gonorrhœa claimed to be a "simple" affection, but evidence is adduced to show that "chancreoid is distinct from syphilis," that "it does not depend upon a specific virus of its own, incapable of being generated *de novo*," and that, although commonly produced by inoculation of discharge "from another chancreoid, it may arise, especially in persons debilitated from any cause, from inoculation of the products of inflammation either simple or syphilitic, and subsequently perpetuate itself from one individual to another as a chancreoid." The confusion of chancreoid with syphilis has been so widespread and disastrous that we are glad to draw attention to Bumstead's very clear statements and evidence on this point. In this connexion, too, we may note that the specific nature of gonorrhœal rheumatism is rejected by our authors. They refuse credence to Otis's statements about the frequency of spasmodic stricture of the urethra, for they do not believe in spasm lasting through years. The chapters on syphilis are very good, and are the

most valuable part of the work, which altogether must take first rank among the works in the English language on venereal diseases.

Bristol Royal Infirmary Reports. Vol. I. 1878-79. Bristol: J. W. Arrowsmith.

WHILST it is a pleasant duty to welcome every new effort at extension of medical and surgical research, it is none the less incumbent upon the critic to temper his congratulations with a word of warning. It may not always be an easy matter to collate essays of the style and character contained in this first volume, and with every good wish for the successful issue of the enterprise, it is impossible not to feel a little misgiving at the prospect of its maintaining the high standard of excellence assumed. The volume, it may be gathered from these forebodings, is an ambitious one. It is based on the plan so familiar to us in Guy's, St. Bartholomew's, St. George's, and those Reports that used to issue from the London hospitals, the very excellence of which made one feel their extinction all the more deeply. We have numerous essays, many of great interest, from the pens of members of the infirmary staff, a few records of interesting cases, and a much condensed statistical summary of the cases under treatment during the years 1878 and 1879. There are two separate papers on diseases of the spinal cord. Dr. Long Fox contributes an able summary of the present state of knowledge on the subject of Acute Myelitis; and Dr. Shingleton Smith, in an excellent essay, discusses Spinal Sclerosis, which he illustrates with the careful and elaborate notes of cases observed by him in the infirmary. Then follows an original and painstaking paper on Chronic Osteo-Arthritis, by Mr. Greig Smith, full of careful histological details, abundantly illustrated by drawings. The subject is one about which so much obscurity rests, that this contribution to its minute pathology will be welcomed. The same writer also contributes a paper on the Mode of Growth of Spicular Osteophytes, and in these two essays he shows himself to be a careful student in the difficult path of osteal pathology. A pleasantly-written paper, by Dr. Beddoe, on the Progress of Public Health, and a somewhat discursive but most ingenious essay on Fever as a connecting link between Scrofula and Tuberculosis, is contributed by Dr. W. H. Spencer. A melancholy interest attaches to the two papers which follow; they are the records of the rare diseases which deprived Bristol of two of its most able workers—Mr. Crosby Leonard and Dr. R. W. Tibbits,—the former, contributed by Drs. Fox and Shingleton Smith, being a case of Myelitis, the latter, by Dr. Brittan, one of Thrombosis of both Middle Cerebral Arteries. The medical superintendent, Mr. Lee Macintire, gives a report upon Ethidene Dichloride as an anæsthetic, from which it would appear that the administration of this compound, although productive of less cardiac depression than chloroform, was attended by more vomiting and other distressing sequelæ that somewhat detract from its advantages. Several surgical and medical cases of interest are given in full, and obituary notices of Crosby Leonard and William Budd close the literary matter of a volume, upon the excellence of which the Bristol Infirmary is to be congratulated.

Martin's Atlas of Obstetrics and Gynecology. Translated by FANCOURT BARNES, M.D. London: H. King Lewis.

MARTIN'S Atlas consists of a series of lithographic plates with letterpress, which is not descriptive but explanatory. The plates are in great part selections from the works of various authors in England and on the Continent, while a certain number are original to the author. The value of such a work will depend upon two things—the judgment used in the selection and the clearness and accuracy of the drawings. On the whole we think the author has exercised a sound

judgment in the selections he has made; but he has fallen into one error at least—namely, the introduction of diagrams. Diagrams may be and often are of the greatest value in illustrating and making clear views and opinions, but they may be true or not true, and in a work of this kind nothing should be introduced but what had been copied from nature. The editor has perpetuated this error, and has moreover fallen into a second—namely, the introduction of copies of photographs. Photography has been employed for the production of illustrations in several departments of medicine, but in so far as we know without much success. Winckel's photographs of pathological conditions of the female pelvic organs form no exception, and the plates of these photographs introduced into the second edition of this work want clearness and definition, and convey no accurate idea of the subjects represented. The translator has added four plates of wood engravings. Some of these are diagrams, and consequently of little value; others, again, are from nature: all are poor specimens of the art of wood engraving. Why the drawings of instruments at the end should have been added we fail to understand. The translator has done his work fairly well on the whole. His chief fault has been a too close adherence to the original.

The Quarterly Journal of Microscopical Science. April and July, 1880. Nos. LXXVIII. and LXXIX. Edited by E. RAY LANKESTER. London: J. & A. Churchill.

THE seventy-eighth number of this journal contains the following memoirs:—1. The Coffee-leaf Disease of Ceylon, by Thiselton Dyer. 2. On Shephardella—a new Rhizopod, by J. Siddall. 3. The Development of the Kidney in relation to the Wolffian body in the Chick, by Adam Sedgwick. 4. The Development of the Araneina, by F. M. Balfour. 5. The Biology of Bacteria, by Waldstein. 6. Some Teachings of Development, by E. Schäfer. 7. The Histology of Hydra fusca, by T. Parker. 8. The Orthonectidæ, by Alfred Giard.

The seventy-ninth number contains—1. A Chapter on the Structure and Homologies of the Germinal Layers of the Embryo, by F. M. Balfour. 2. Hubrecht's Researches on the Nervous System of Nemertines. 3. The Structure of the Nephridia of the Leech, by G. Bourne. 4. On Intra-epithelial Capillaries in the Integument of the Leech, by Ray Lankester; and by the same author a Memoir on the Connective and Vasifactive Tissues of the Leech. 5. On the Use of the Wenham Binocular, by Heneage Green; and by the same author a paper on the Structure of the Human Spermatozoon. 6. Some points in the Morphology of Echinoderms, by Herbert Carpenter. 7. On the Origin of the Red Blood-corpuscles, by Pouchet. And, lastly, a paper on the Limnocoedium Sowerbii, by Ray Lankester.

The economic importance of Mr. Thiselton Dyer's observations is considerable. The parasitic fungus which has devastated the coffee plantations of Ceylon and Southern India is now slowly spreading eastward through the coffee-growing countries of the Old World, and any inquiries which may lead to the discovery of the means of arresting its progress are deserving of encouragement. The pest proves to be a fungus, named by the Rev. M. J. Berkeley *Hemileia vastatrix*, the mycelium of which spreads over the leaf, destroying its vitality, and impairing consequently the productivity of the tree. The mycelium can be destroyed, and the tree saved, by the application of sulphur at an early period of the growth of the fungus. Prof. Ray Lankester's paper describes in considerable detail the singular medusa that has been found in the Victoria Regia tank of the Botanical Society's Garden, Regent's-park. It is a most active and energetic little creature, whose vigorous movements rivet attention, and it proves to be a fresh-water form, hitherto unknown, of the trachomedusæ—creatures having the genital sacs or gonads placed in the course of the radial canals.

RECENT INVESTIGATIONS ON THE ACTION OF DRUGS.

AN interesting contribution to the facts relating to the antagonism between the actions of drugs has been supplied by Pantelejeff with regard to two drugs in common use—quinine and atropine. The salts employed were the chloride of quinine and the sulphate of atropine, and the experiments were made upon dogs, rabbits, and frogs. An injection of quinine beneath the skin of a frog in summer arrests the heart in diastole; but a subsequent subcutaneous injection of atropine causes it at once to resume its pulsations. The appearance of the heart, when its action is arrested by quinine, is as if the blood-pressure on the heart was greater than the cardiac walls could contract upon. If atropine was injected first, so as to cause an acceleration, this was arrested by the quinine. With winter frogs the effect of the quinine was more frequently to cause a gradual retardation in the action of the heart, which was only arrested, after a time, with loss of reflex action, and death. The injection of atropine did not prevent this, but retarded the heart still more. Microscopic examination of the vessels of the web of the foot showed that the quinine caused a narrowing of the small arteries to one-half of their previous calibre, while atropine dilated the vessels. In rabbits it was found that when the heart's action was arrested by quinine, atropine caused it again to beat, and the auricles began to contract before the ventricles. In both dogs and rabbits the blood-pressure in the carotid rose after the injection of quinine, when the pulse was rendered less frequent. It was found that immediately after the injection the blood-pressure suddenly falls, but after a few seconds it rises to a higher degree than before the injection. In small doses the pulse is often accelerated during the increased pressure, but with large doses the pulse is retarded from the beginning. If repeated injections are made, every injection causes first a sudden fall of pressure, with retardation of the pulse; then the pressure rises, to fall again after a new injection. This initial fall in the blood-pressure is probably due to a sudden contraction of the vessels of the lungs, hindering the passage of the blood into the left ventricle and the aorta. The cardiac contractions become at the same time less frequent, but stronger. The arteries of the aortic system then contract, and cause an increase in the blood-pressure, and at the same time an acceleration of the pulse. Larger doses have a direct influence on the heart, so that, later, the cardiac action becomes retarded, and the blood-pressure falls. The pneumogastrics remain excitable by electricity, but their division exercises no marked influence upon the pulse, especially when the respiration is retarded by the action of quinine. Subsequent injection of atropine accelerates the pulse, even when the pneumogastrics have been divided. In only one observation upon dogs was an arrest of the heart by quinine prevented by atropine. The increase of pressure caused by quinine was disturbed and retarded by the preceding injection of atropine. Direct application to the heart of frogs showed that not only can quinine arrest the action of the heart, but that it can also, under certain circumstances, act as a stimulant to excite it to action, and the effect depends upon the condition in which it is.

The acute effects produced by large doses of atropine have often been studied, but the symptoms which are produced by such doses as are toxic only when long-continued have been little investigated. They have, however, lately occupied the attention of Dr. von Anrep in the physiological laboratory at Würzburg. If a dose of one to three milligrammes is administered to a dog by hypodermic injection, the slight symptoms which it causes—mydriasis, &c.—soon pass away. If the injection, however, is repeated, the effects gradually become less intense. After the fifth injection the slight modifications of the cutaneous sensibility, and the slight muscular tremors which are caused by the first doses cease to occur, the slight acceleration of the action of the heart is less marked, and the animal maintains its usual health in spite of the continued doses. Chronic poisoning with larger doses gives more persistent results. A single dose of one-twentieth of a gramme causes symptoms of acute poisoning—muscular spasm, vomiting, thirst and loss of appetite, transient acceleration of the pulse, ex-

treme dilatation of the pupil, quickened respiration, and a slight elevation of temperature. If this dose is repeated on six or ten successive days the symptoms become slighter after each injection, with the exception of the dilatation of the pupil, the acceleration of the action of the heart, and the diminution in the saliva. There is no trace of muscular spasm or tremor. After a long time the heart becomes weakened, its contractions are less frequent, being only one-half of the normal, and the effect of each new dose is to cause only a slight acceleration. From these experiments it appears that a remarkable tolerance is established to the alkaloid, even in considerable doses, so that, after a time the animals are unaffected by doses which would have been fatal at the outset of the experiments; but this tolerance is least in the case of those organs and structures which are normally the most impressionable—namely, the pupil and the pneumogastric nerve. If, after several weeks' poisoning, the administration is stopped, the heart returns to the normal condition in from three to five days. It is suggested that the *modus operandi* of atropine on the heart is as follows: The first doses act exclusively upon the pneumogastrics; the excito-motor ganglia and the muscular tissue of the heart resist the action of the poison, and are only affected by repeated doses: hence the persistence of the retardation which succeeds the initial acceleration.

The same investigator has studied the action of cocaine, the active principle of the coca-leaves. He draws the conclusion that cold-blooded animals are more sensitive to its action than warm-blooded animals. Its chief action appears to be upon the nerve-centres. In frogs, it first paralyses the terminations of the sensitive nerves, and afterwards abolishes reflex action. In the mammalia, it first stimulates all the nerve-centres, and especially the psycho-motor centres. This general excitation is followed by a slight enfeeblement. Small doses increase reflex action; large doses do not paralyse it entirely, as in the case of the frog. Respiration is quickened, except by fatal doses. In frogs the power of the heart is lessened so as to lead to arrest in diastole. In mammalia the heart's action is accelerated, and strong doses are necessary to cause a retardation. The blood-pressure is increased by the stimulation of the vaso-motor centres; large doses should naturally have the opposite action, and lower the blood-pressure. The inhibitory nerves of the heart are readily paralysed by medium doses. The striated muscles are not directly influenced by cocaine. The pupil is dilated by it, and as powerfully by the internal use of the drug as by its instillation into the eye. The peristaltic movements of the intestine are accelerated. Acute poisoning by cocaine causes muscular spasms, and, in consequence, an elevation of the rectal temperature; when there are no convulsions the rectal temperature falls. The secretion of the several mucous membranes is lessened. Certain motor disturbances can only be explained by the assumption that cocaine has an action upon the semicircular canals; the symptoms suggest that the drug modifies the pressure of the endolymph in the internal ear, and thus effects a stimulation of the terminal filaments of the auditory nerve. Death appears to result from asphyxia, caused by respiratory paralysis, the heart continuing to beat for some minutes after apparent death.

The action of cyanogen has been the subject of an experimental study by R. Bunge, at Dorpat, with frogs. He was unable to observe any convulsive phenomena, and the paralyzing effect was produced slowly, even with large doses. If the animals were examined after a few minutes' exposure to the action of the gas, the cutaneous sensibility was found to be lessened or abolished, and their movements were considerably lessened. During the first few minutes of the exposure the animals were restless from the local irritation, their movements then became slower and less frequent, the respiratory and cardiac action ceased, and rigor mortis set in with great rapidity. The latter, indeed, sometimes commenced in the hind legs while respiration was still going on. Post-mortem examination showed the heart to be dilated and filled with pale blood, in which the spectroscopic revealed the absorption bands of oxyhæmoglobin. If the blood-supply to a limb was cut off, the rigor mortis appeared in those muscles somewhat later than elsewhere. If, however, a limb was entirely separated and exposed to the action of cyanogen gas, the cadaveric rigidity rapidly appeared in it. If the heart was exposed, the ventricular contractions were seen to become less frequent and more feeble, and the irritability of the cardiac muscle to mechanical stimuli was soon lost. This was, however, preceded by a transient

acceleration of the frequency of the heart's action, which the experimenter refers to stimulation of the cardiac ganglia, or muscle substance. That it is not due to any action on the vagi is shown by the fact that, if muscarin is first applied so as to arrest the action of the heart, the stimulating effect of the cyanogen can still be observed. The chief difference between the action of cyanogen and hydrocyanic acid consists in the persistence of the respiratory movements after the heart's action has ceased, and in the early occurrence of the rigor mortis. In the mammalia, cats, rabbits, and mice, the cyanogen gas, whether inhaled or injected in watery solution into the blood, causes dyspnoea, and the animals die from respiratory paralysis, just as after poisoning with hydrocyanic acid. The blood-pressure falls, and the heart's contractions are at first rendered more frequent, but in the later stage are retarded. They continue after respiration has ceased. The toxic effect of cyanogen is less violent than that of hydrocyanic acid, .02 grm. being required to produce the same effect as .004 grm. of the latter.

THE VETERINARY DEPARTMENT OF THE PRIVY COUNCIL.

THE Annual Report of the Veterinary Department of the Privy Council, lately issued, must be pronounced, on the whole, satisfactory; in some matters unsatisfactory. It shows that, notwithstanding the opinions which at one time dominated this department, the severe scourges which have done such damage to our agriculture, and were allowed to ravage the pasture and farmstead for so many years unchecked, can be exterminated without injury or inconvenience to the general public. Since our ports were thrown open to the unrestricted importation of foreign animals, some forty years ago, exotic contagious diseases of the most destructive character have been permitted to run riot over the country, and the loss to the farmers, which means also a national loss, must have amounted to several millions of pounds annually. Much ignorance seems to have prevailed with regard to these diseases, and Government of late years appear to have only become slowly enlightened with regard to them. Their history, geographical distribution, nature, and even their transmissibility, seem to have been but little known. Hence the neglect of repressive and sanitary measures until the cattle plague visited the country, and caused such havoc in 1865. The awakening was a rude and a costly one, and a kind of system of checking that, and one or two of the other contagious diseases, was forthwith inaugurated. But it must be confessed that the Government has moved slowly, and has often indeed been a long way behind public opinion; it has had to be urged to adopt the simplest and most elementary measures, and only too often it has shown itself strangely ignorant of the prevalence and mode of combating diseases regarding which there should have been no doubt or hesitation. This was the case until 1877, when another invasion of cattle plague—quite unexpected, and therefore unprovided for—visited England. It was then somewhat roused out of its torpidity and driven into more vigorous action by the report of a Select Committee of the House of Commons, and in 1878 the Contagious Diseases (Animals) Act was passed. Since then the chief pests which had for so long wrought incalculable mischief have been gradually extinguished, though not nearly so rapidly as would have happened had the Act been properly framed and the measures energetically carried out. However, at last foot-and-mouth disease has been nearly got rid of, and contagious pleuropneumonia is greatly diminished, though far from being extinguished. It is somewhat singular that, in view of the persistency of the last-mentioned disease, the Government should ignore the benefits to be derived from protective inoculation. It is painful to read of the destruction of entire herds of cattle, only one or two of which are diseased, without this measure, the benefits of which are now placed beyond doubt, being at least tried. There is yet much torpidity, incredulity, and apathy exhibited, and we trust that the new Government may contrive to effect the removal of these barriers to improvement in this matter of contagious diseases among animals. The Act now in force is faulty in several particulars, and we shall probably have to suffer yet for many years from these disorders, unless more enlightened and efficient action is adopted.

Glanders among horses is on the increase, and the returns evidently do not represent a tithe of the cases occurring. Everything appears to be left to chance with regard to this dangerous disease; there is no compulsion in the matter of reporting the existence of the malady, nor yet any attempt to trace the source of those cases which are reported. Considering the risk human beings incur, and the loathsome and incurable character of the disorder, surely the public have a right to expect better protection from it.

From the report before us we observe it is stated that foot-and-mouth disease was detected among sheep imported from the United States; yet, strange to say, from all we can learn the disease is now unknown there. Surely a mistake has been committed.

American swine are largely infested with trichinae, yet nothing is done to protect the pork-eating public from this source of danger.

Though the report is satisfactory to some extent, yet it bears on the face of it signs of lassitude, and a tendency to allow things to go as they may. No account is taken of that terrifying and far from rare disease, rabies; nor is any mention made of anthrax—a malady of rather rare occurrence—but very fatal in different parts of the country, and being transmissible to various species of animals and man, it should, we think, secure some share of attention from the authorities. Tuberculosis of cattle, also, is unmentioned, though the disorder is rather rife, and is apparently on the increase. We wonder if the Government has heard of it, and of the recent startling disclosures made with regard to its communicability, not only by inoculation, but by ingestion of the milk and flesh of diseased cows, as well as its infectiousness through the respiratory organs! It is indeed high time something was done to keep the Government up to the level of sanitary requirements; it should lead, not follow public opinion.

STATISTICS OF FATAL CHOREA.

To the Editor of THE LANCET.

SIR,—I can add six to the eighty fatal cases of chorea brought together by Dr. Sturges in his interesting paper published in THE LANCET, July 17th. No single observer can contribute many. All my patients died of chorea, not merely with it. The cases came under my notice when I was resident physician in the Queen's Hospital. I watched them closely during life, and I examined all the bodies post mortem.

CASE 1.—Selina W—, aged fourteen years, died Nov. 30th, 1866. Death by asthenia. *Tænia mediocanellata* in small intestine.

CASE 2.—Sarah J—, aged eighteen years, died April 2nd, 1867. Death by syncope. Suffering from gonorrhoea. She was much perturbed about the venereal disease, and was very anxious to conceal it from her mother.

CASE 3.—Emily C—, aged fifteen years, died May 19th, 1868. Death by asthenia, after illness of seven days. Malady attributed to dread of destitution; she had neither relatives nor friends, and had been about to lose her situation.

CASE 4.—James N—, aged sixteen years. Died March 11th, 1870. Death by asthenia. Chorea lasted six weeks, and followed acute rheumatism. *Tænia solium* in small intestine.

CASE 5.—Emma H—, aged twelve years. Died Dec. 27th, 1870, ten days after the onset of chorea. Her illness began as acute rheumatism; when the joint affections and pyrexia were subsiding the choreic movements began. Endocardium normal.

CASE 6.—Sarah P—, aged twenty-five years. Died March 7th, 1871, by asthenia. Was delivered of a dead six-months' foetus, forty-eight hours before death; her second pregnancy. She attributed the chorea to fright and bad food.

These cases, so far as they go, support in the main Dr. Sturges' conclusions. The points worthy of note in my cases are—(1) the ages of the patients (twelve, fourteen, fifteen, sixteen, eighteen, and twenty-five years respectively); (2) the sex of the patients (five females, but only one male); (3) the association of acute rheumatism, emotional disturbance, intestinal worms, and pregnancy, with chorea.

I am, Sir, your obedient servant,

Birmingham, July 15th, 1880.

JAMES SAWYER, M.D.

THE LANCET.

LONDON: SATURDAY, JULY 31, 1880.

ANOTHER deputation has interviewed the President of the Local Government Board on the subject of the Vaccination Acts Amendment Bill, and the arguments repeatedly and ably urged against the measure have been again propounded. The novel feature of the appeal was the reading of a letter from Sir WILLIAM JENNER, which must be characterised as a singularly perfect and persuasive specimen of the *reductio ad absurdum*. After expressing an opinion that the Bill is so absurd that it is scarcely possible to conceive it will become law, Sir WILLIAM JENNER suggested:—"Instead of a fine of 20s., if Mr. DODSON determines to carry his measure would it not be better that anyone should have a licence from the Inland Revenue officer to go unvaccinated? Then one would get a licence at the same time that one got a licence for dogs, horses, &c. This certainly would be more simple, and would in time yield a revenue to the State. Licences also might be granted, for a suitable sum, for drunkenness, &c., and then people would not be fined as often as they now are 5s., I think. If a man paid 20s. at the beginning of the year he would have a season ticket for drunkenness, and a season ticket for spreading small-pox." The merit of applying this line of argument to the question may be claimed by our contemporary the *St. James's Gazette*, which adopted as a title for one of its earliest articles on the subject, "Small-pox for Forty Shillings"—in view of some recent magisterial decisions, the overture might now be made at the insignificant sum of sixpence,—but Sir WILLIAM JENNER'S use of the same weapon is more complete and convincing. If anything can kill the Bill this description of onslaught is certainly likely to be successful. The President of the Local Government Board was palpably hit, and winced. It is scarcely possible that the measure can survive, and few will mourn its decease.

Meanwhile it must not be forgotten that precisely the same confusion of thought was occasioned, and the same fears were stirred, by the proposal to reduce the penalty for stealing below the magnitude of capital punishment. It was alleged that the promoters of the relief were favouring the offence, and that by diminishing the penalty they would increase the crime. Events have not justified that anticipation. Nor do we think the erasure from the statute book of a punishment which is seldom inflicted, and never with good results, would have the effect of discouraging vaccination. If we had the smallest misgiving on that point we should join the outcry against the Bill. We yield to none in our support of vaccination. If anyone will bring in a Bill to make the Vaccination Act *directly* compulsory, it shall have our warmest support. We have gone, and still go, further than the most ardent promoters of these repeated deputations to the President of the Local Government Board, and assert the need of an Act of Parliament making *revaccination* compulsory! Nevertheless, we fail to

see the practical use—while the evil is self-evident—of maintaining a law which cannot be put into execution, for the extraction of multiple fines from the pockets of the obstinate few who decline to obey the law and to have their children vaccinated, seeing that even when the fines are enforced the children remain unvaccinated.

The Acts making vaccination compulsory have been in operation now for a considerable number of years. The machinery has been inadequate and works with a great deal of friction. The local officials in charge of the detailed application of the system have in many instances done little to assure its success. For example, it is scarcely less than a scandal that animal vaccination has been so long delayed, and it is now simply provoking to hear the President of the Local Government Board tamely stating that he has "undertaken, on behalf of the department, to give facilities for obtaining animal lymph in the same way as humanised lymph is now obtained"! When will the official mind be brought to see that sitting calmly in a chair and "giving facilities," whatever that may mean, is a miserable burlesque of business unworthy an intelligent administration, even in connexion with a "department"? It is the simple duty of the authorities acting under the supervision of the Local Government Board to *supply* the lymph, not to give "facilities" for obtaining it. If they cannot or will not do this, then it is the public and official duty of Mr. DODSON to see that it is done by some power and in some way instantly! It will be no answer to this remonstrance to say that calf lymph cannot be obtained. It *has* been possible to obtain calf lymph, and it is possible, if the "department" will act, instead of giving "facilities." Money is needed of course, but the President of the Local Government Board is now bound by the use he has made of this pledge with regard to calf lymph, in reply to the deputation, to go boldly to the Treasury and ask for the sum necessary to enable him to carry out his intentions and give the "facilities" he has promised; and the Treasury stands pledged to the country to supply the funds required. It is by the combined action of "red tape" and this policy of letting matters drift, good laws are allowed to fall into abeyance, and agencies well adapted to render excellent service in the public interest are permitted to lie idle. It is impossible to avoid a feeling of irritation as we read the feeble reply of the President of the Local Government Board to the powerful arguments brought to bear against him. He succumbed with the childish complaint that the opposition he has encountered was unexpected. If this be really the fact, it argues little for the prescience of the "department." Nothing but opposition could be encountered by such a measure. If those who framed it had been gifted with only a very moderate share of the statesmanly instinct, they would have introduced *direct* compulsion with one hand, while with the other they wiped out the blot of an impotent penalty.

The need of the moment is the substitution of an Act of Parliament making vaccination compulsory for one which practically only makes non-vaccination grievous. The policy of the latter form of enactment is not wise or far-sighted. It tends to the making of martyrs rather than enforcing the practice it enjoins. Those who respect the

law obey it for its own sake, and will obey it still; while those who assume a defiant attitude now do so with the *éclat* which results from the high price of the luxury of disobedience. We are of course speaking of the working of the law in districts where it is honestly administered, not in localities where it is levelled down to the views of the "anti-vaccinationists" by a feeble or prejudiced magistracy! If the law-breaking of the anti-vaccinationists is shorn of its financial glory as an expensive form of crime, and allowed to fall into the ranks of the contemptible offences for which the impecunious may be mulcted, we do not think the law will lose in dignity by the change. Meanwhile the questions in which we are interested, and upon which neither the arguments adduced by these deputations to the President of the Local Government Board, nor the utterances of that Minister—who, it should be remembered, is a member of the Cabinet, and in a special sense speaks and acts for the Government,—throw any light, are: What steps is it proposed to take with a view to make the observance of vaccination absolutely compulsory—an obligation of good citizenship, which can neither be avoided nor allowed to remain unfulfilled? The arguments urged against compulsory vaccination would of course have applied with equally cogent force against the law enjoining circumcision. What is good for a nation must be enforced on all its members. And what is to be done about *revaccination* and the use of lymph obtained direct from the calf? When yet another deputation waits on Mr. DODSON, perhaps these practical queries may be deemed worthy of the attention they seem to us to demand.

A MEMOIR by POUCHET which has recently appeared in the *Revue Scientifique*, and which has been translated in the current number of the *Quarterly Journal of Microscopical Science*, discusses the interesting subject of the mode of production of the red blood-corpuscles. It is not a little remarkable that the origin of the formed elements of the blood should still continue to be a matter of hypothesis, and that physiology is incapable of replying to the question, How after large losses of blood is its restoration effected? The present generation of practitioners are hardly aware of the quantity of blood that was taken from patients in acute disease by the physicians and surgeons of the past age. If works written in the early part of the present century are referred to, some surprising facts of this nature will be found. At the time when Sir W. LAWRENCE's treatise on the Venereal Diseases of the Eye was published—that is, in 1830—bleeding was the approved method of treating gonorrhœal ophthalmia; and amongst other cases he records in that work there is one of a pugilist, who was no doubt an athletic, freely-living man, but who, having contracted gonorrhœal ophthalmia, was admitted into St. Bartholomew's Hospital, and from whom the surprising quantity of one hundred and fifty-two ounces, or nearly eight pints, reckoning twenty ounces to the pint, were abstracted by venesection, besides the application of thirty-two leeches, in the short space of one week. Nor was this a solitary case, for several others are recorded in which nearly equal amounts were taken. It is worth noting that the pugilist recovered with perfect vision. In the case of women, again, enormous losses of blood are often sustained in menorrhagia,

which are yet quickly restored under favourable circumstances. RINDFLEISCH has made an estimate of the rapidity with which the reproduction of new corpuscles must take place in ordinary intermenstrual periods, and calculates that half a centigramme of blood is produced every minute, which means that about one hundred and seventy-five millions of red blood-corpuscles are produced every minute. When thus reduced to figures, it seems extraordinary that no answer can be given to the questions how and where this enormous proliferation is effected.

Is the process of renewal performed in some obscure organ whose function has been overlooked—the suprarenal capsules or thymus or thyroid gland, for example,—or is it that the corpuscles, similar as they may all appear to our methods of investigation, are derived from many different sources, each set having its own special and definite functions, and differing in structure, purpose, and destination from all the rest? The results of modern physiological research seem to point in the latter direction. Not many years ago the corpuscles were believed to be exclusively derived from the chyle, and HEWSON's observations, to which Mr. GULLIVER did good service in calling attention, were essentially in favour of the mesenteric glands being the bed for the production of the lymph corpuscles, the nuclei of which acquired colour and became the red corpuscles. More recently, however, the claims of many other parts of the body to be hæmatopoietic organs have been with more or less probability advanced, and the share of the spleen, the liver, the muscles, the cancellous tissue of the bones, and the peritoneum, in the process of blood formation, has been urged by different experimenters. Objections may, however, be raised to nearly every hypothesis that attributes the origin of the hæmatids to a single source. Even in the case of the lymphatic glands it may fairly be urged that they cannot be exclusively concerned in the generation of the red corpuscles, since such glands are wholly absent in fishes; and the same objection may be taken to the view of NEUMANN and BIZZOZERO in favour of the cancellous tissue of the bones. And granting even that they are formed here, by what means do they traverse the walls of the capillaries, and how are they impelled into the current of the circulation? The fact that the spleen is absent in some animals, as the lamprey, and may be removed even in the higher animals and man without rendering them anæmic, disposes of the idea that it does more than aid in the genesis of blood-corpuscles, and, as POUCHET remarks, little weight can be attached to the statements that a new function can be vicariously performed by other organs of a totally different structure.

In regard to the derivation of hæmatids from the lymphoid patches of the mesentery, these regions can evidently play but a small part in the production of new corpuscles. RANVIER has indeed observed hæmatids originating in the midst of vessel-forming tissue. But if this view be correct, the repair of lost blood would be necessarily associated with the production of new capillaries, which has not been demonstrated. The view which is held by M. POUCHET himself, that the real origin of the blood-corpuscles is to be looked for in the hæmatoblasts or minuter form of globules, has been described by HAYEM, and long before him by DONNÉ, under the name of globulins. These bodies pro-

bably originate in the blood plasma, being primarily formed of albumen, to which subsequently the crystalline substance hæmoglobin is added, causing a great increase in the volume of the globulets. In the blood of animals undergoing repair after large hæmorrhages, an extraordinary number of hæmatoblasts or globulets may be observed. These rapidly enlarge in all directions, lose their granular aspect, and become hyaline, and finally assume the discoid form and the yellowish tint of the full-formed corpuscle. The hæmatids are on this view neither cells nor the descendants of cells, but may, like TOPSY, be said to have simply "grewed." It would seem that the generation of the red corpuscles is still a dark corner in physiology, and some further observations are still requisite. Is not this a fit subject to be given for the Jacksonian Triennial Prize by the College of Surgeons?

THE unprecedented success of the Metropolitan Hospital Sunday Fund this year is a matter for great congratulation. Exclusive of the balance from last year, the sum raised slightly exceeds £30,000. The excess over last year's collection is nearly £5000. The Lord Mayor, Sir F. WYATT TRUSCOTT, was very properly congratulated on such a result. The entire explanation of it was not very deeply gone into at Monday's meeting. THE LANCET may fairly claim some share of credit for the result obtained. Prejudices have been broken down and information supplied. The clergy had been better supplied with facts on which to base their appeal than on any former occasion, a circumstance which should encourage the Council to a little more effort to procure and to publish information in a clear and intelligible form. Great further good would be done if the principle of distribution could be, if not simplified, classified and made more intelligible to ordinary minds. In a previous year, when there was nearly as much to distribute, the Dispensaries got nearly five hundred pounds more than they are getting under the present awards. Regarding a grant to the Eastbourne Convalescent Hospital, an institution which has never before this year applied for a grant, Dr. GLOVER inquired if the hospital were managed by a committee, as the rules of the Fund require, and was answered in the affirmative, though the committee is not mentioned in the report. Dr. GLOVER then gave the particulars of an astonishing instance in which the Sisters advised a Wesleyan patient to go to the confessional, to connect herself with a "high church" in London, and if necessary leave her family. On the motion of Sir FRANCIS LYCETT, it was unanimously agreed to postpone the grant till the above statements could be investigated. The great glory of the Hospital Sunday Fund is its catholicity—that it is raised by a combined effort of all churches, forgetful, for this high purpose, of all differences of creed. It would be a monstrous thing if, as the churches rise above all petty questions of this sort, the hospitals are to become the arenas of theological dispute and partiality. But there are not wanting indications that hospitals will be converted to this use if care be not taken.

THE death of a patient at Guy's Hospital under circumstances which have led to the committal of a nurse under a charge of manslaughter cannot but be regarded as illustrating the evils of the system of management which pre-

vails at that institution. It is not, of course, for us to say that this patient might not have died under other conditions. "Accidental," involuntary, or unconscious defecation in the recumbent posture is a well-known symptom of meningitis, especially the form known as tubercular, and it may be that the deceased died of a disease which existed *before* she was immersed in a cold bath; but that does not lessen the enormity of a system which permits a nurse to give any patient a bath on the authority of a "sister"—that palpable misnomer for a head-nurse—and without the permission of the physician in charge! The whole system of management at Guy's Hospital bristles with faults of the most astounding character. Can anything, for instance, be more ridiculous than the presumption of a lay Treasurer sitting in judgment on the conduct of a nurse, and affecting to be able to decide whether or not a particular act committed by her was "an error of judgment" or an offence? What can a layman know of the practical rules of treatment in a hospital? Again, how should a "sister" know anything of the fitness of a patient to be bathed? These women sorely need to be taught the limits of their duty, which is to *carry out the instructions of the doctors*. A trained nurse should know how to bathe a patient, but it is not for her to decide whether a bath is required or expedient. There is something radically wrong in the whole scheme carried out at Guy's and, we fear, at other hospitals. If they are to be regarded as institutions where trained nurses are allowed to "treat" cases, this should be understood. It is not tolerable that the sick poor should be induced, under a misapprehension, to entrust their lives to presumptuous and ignorant nursing "sisters," when they think they are placing themselves under the care of skilled and qualified medical practitioners. The issue raised is a very grave one. We are glad to know that it has been brought under the notice of Parliament, and we trust the consideration now bestowed on this matter will put an end to a system of hospital management and nursing, which has sprung up at too many of the hospitals in London and elsewhere, and which, apart from "cases" like this at Guy's, is nothing short of a scandal. Matters have reached a crisis, and the solution of a grave and growing question must not be deferred.

Annotations.

"No quid nimis."

THE INTERNATIONAL MEDICAL CONGRESS.

THE necessary arrangements in preparation for the seventh session of the International Medical Congress, to be held in London in August, 1881, are progressing. The committee have discussed the question of the admission of women to the meetings of the Congress, and by a decided majority have determined to issue invitations to male practitioners only. This is the decision we were confident would be arrived at, for knowing the names of the committee we felt that on this, as on other points, they fairly represented the profession, and would not take any step distasteful to the majority of their fellows. The Congress is a voluntary association, and none can claim any "right" to be asked, and the fact that on some former occasions women have, unwisely, been permitted to be present, can in no way hamper the action of the British Committee. As regards the practitioners of this

country the decision is, happily, theoretical rather than practically important.

It is now definitely announced that Her Majesty and His Royal Highness the Prince of Wales have both been graciously pleased to extend their patronage to the Congress. Some few additions have been made to the list of officers printed by us a fortnight ago. Dr. Risdon Bennett and Dr. Bucknill have been added to the list of vice-presidents, Dr. Alfred Carpenter, Mr. Erichsen, Sir H. Thompson, and Mr. G. Pollock, have been placed on the Executive Committee, and Dr. Chepmell, Mr. Mitchell Henry, M.P., and Dr. Grigg, have consented to serve on the Reception Committee. Dr. Braxton Hicks is appointed a vice-president in the Obstetric section, and Professor Curnow is a secretary of the Anatomy section. The general secretary is already able to state that many well-known and illustrious foreigners intend to be present, among others Langenbeck, Virchow, Liebreich, and Waldenburg, and there is every prospect that this meeting will be a very notable gathering of professional celebrities. It must be the aim of all British practitioners to make this session worthy of the metropolis of the world, and of the great school of British medicine and surgery. But it can only be this, if all will heartily and generously co-operate and support the Executive Committee with thorough confidence. We repeat that the composition of that committee must be accepted as satisfactory; it is not a committee of a clique, but of the whole profession, and these gentlemen certainly deserve to be treated with entire confidence in the somewhat difficult task they have undertaken. We would strongly deprecate the raising of difficulties and objections which can only have for their object the discomfiture of the committee and the impairment of the success of the Congress. No doubt it is possible to criticise adversely the selection of the committee, and the presence of some names excites surprise equalled only by that caused by the absence of others. But could we hope for a perfect list? Is it not fair to recognise the difficulty of the choice where every selection entailed a rejection of at least one equally eligible man? From those whose names do not appear at all another complete list of officers could be selected well worthy of the posts to be filled. And where there are so many to choose from, the efforts of the committee should be supported by mutual confidence and forbearance. If personal or local jealousies are to be thrust forward and the visit of the Congress is to be made the occasion for the display of party feeling, the profession in this country will be disgraced in the eyes of the whole world, and it would be well not to hold the meeting at all. We appeal with confidence to the profession to support their representatives on the Executive, and to allow them fairly and deliberately to make all arrangements free from the outside pressure that petty jealousies and party spirit, however unworthy, can always exert. Thus alone can the success of this meeting, which all must desire, be attained.

THE PARKES MUSEUM OF HYGIENE.

THE first annual meeting in connexion with this museum was held on the 27th inst., in the Egyptian Hall of the Mansion House, under the presidency of the Lord Mayor. The meeting was largely and influentially attended, and the chief magistrate was supported by Earl Fortescue, Mr. George Palmer, M.P.; Mr. Edwin Chadwick, C.B., Sir W. Jenner, K.C.B., the President of the Royal College of Surgeons, Sir Joseph Fayrer, K.C.S.I., Professor Erasmus Wilson, Mr. George Godwin, F.R.S., Mr. Rogers Field, C.E., Mr. Berkeley Hill, Mr. Gisholm Gooden, Dr. Wilson Fox, and many others.

The report, which was read by Dr. Poore, the honorary secretary, was of a decidedly encouraging character. Since

the 1st of January (the museum being open on the mornings of three days in the week) considerably over 2000 casual visitors have been registered. The demonstrations given to artisans and others during the winter were largely attended, and a letter was read from Mr. Hodgson Pratt, the chairman of the Working Men's Club and Institute Union, expressive of the great service which had been rendered to members of the institute by the practical instructions which they had received in the museum. A letter was also read from Mr. Whichcord, the president of the Institute of British Architects, stating that, though prevented by unavoidable circumstances from being present, he and his colleagues in the institute were deeply sensible of the importance of the museum. The museum is much in need of money, and the report concluded with an appeal for funds.

The first resolution, expressive of approval of the objects of the museum, was proposed by Earl Fortescue, and seconded by Mr. George Palmer, M.P. In speaking to the resolution Mr. Erichsen dwelt upon the importance of hygiene as the helpmate of the surgeon, and assured the audience that the chances of recovery of a wounded man depended more upon his sanitary or insanitary circumstances than upon the skill of the surgeon. Mr. Erasmus Wilson showed with much happiness and force (and his remarks took obviously a great hold upon the ladies present) that the much-dreaded scourge of childhood, the disease which often stopped a child's education and blighted its prospects—viz., ringworm—depended entirely upon the hygienic surroundings of the child.

Sir William Jenner, in proposing a vote of thanks to the chairman, delivered an address of singular force and interest, and Mr. George Godwin and Sir Joseph Fayrer both eloquently insisted upon the importance of sanitary knowledge to high and low, rich and poor. The meeting will, we trust, have done much to disseminate a knowledge of the importance of the Parkes Museum as a means of instruction, and there ought to be no difficulty in raising a sufficient sum to carry out the wishes of the Executive Committee—viz., "The establishment of the museum in a position more independent and more accessible than that which it at present occupies."

SICK PAUPERS.

IT is now rather more than ten years since the late Dr. Antieat our request undertook to visit the workhouses of the metropolis and report on their condition. It is therefore gratifying to us to find that the suggestions which arose out of that inquiry are gradually bearing practical fruit. The sick, the infirm, and the able-bodied paupers are, in the majority of the Metropolitan Unions, no longer huddled together in the same close confined building, situate in some filthy back-slum; but the sick are tended separately in what may be described as almost palatial infirmaries. In these, as the recent reports of our Commissioners on the Workhouse Infirmaries show, the patients are tended by trained nurses—a vast improvement on the state of affairs a few years ago. The only fault our Commissioners have as yet pointed out is that the supply of these nurses is not sufficiently liberal, and that more work is thrown on them than they can possibly perform in times of great sickness. It must not be forgotten, however, that though many of the Unions have entered on the path of reformation, many still are laggard in carrying out, or even entering upon, the much-needed reform. And here we may remark parenthetically, that it is a disgrace for a rich and wealthy parish like Marylebone to allow districts such as Stepney, Lambeth, Holborn, Westminster, and St. Giles, to pass them in the race. These parishes have for some time past provided their poor with ample accommodation in excellently-constructed sick asylums, whilst the overcrowded condition of the infirmary wards of the Maryle-

bone Workhouse during last winter and early spring can only be characterised as disgraceful. So overflowing were the wards that the guardians had to arrange with the Stepney authorities to take in patients that could not be stowed away on their own premises. It is to be hoped that the Marylebone authorities will be able to open their new buildings at Notting-hill before the commencement of next winter, so that a repetition of such overcrowding may not be experienced. Our sick paupers may congratulate themselves that the attention of the outside public is now fairly directed to them, and that the days of harsh management and neglect are rapidly passing away to be replaced by a more humane and enlightened treatment. The Association for Providing Trained Nursing in Workhouse Infirmaries, originated only a year ago by the Marchioness of Lothian, is already beginning to yield beneficial results. It is no slight thing to find that private charity is at length about to co-operate with the Poor-law machinery in relieving and sympathising with the unfortunate inmates of our parochial hospitals.

TRAIN-CATCHING.

PATERFAMILIAS, who having located his family at some "watering-place" within two or three hours of London, intends to take his holiday by "running up and down," should be warned that the practice of hurrying to catch a train is attended with many serious risks. The exertion may not be of long duration, and, except on very rare occasions, when it "seems to upset" him a little, the effort may be rapidly over and soon forgotten, but the strain on the heart and bloodvessels is violent while it lasts, and although unnoticed at the time it may work mischief. We have in our recollection cases of grave disease set up in this way, without the cognisance of the sufferer. There is, however, a class of cases, which does not appear to be generally recognised, and to which it may be well to direct attention. Not only may injury be done to the heart and great vessels by this exceptional straining, but the delicate structure of the nervous centres may be injured. It is a common experience with persons who are labouring under certain forms of incipient or subacute nervous disease, that violent exertion excites them mentally, in some instances producing almost homicidal impulses. There are several hypotheses on which this disturbance may be explained, but the point we are at the moment chiefly interested to bring out is the fact that not only may the rapid flow of blood stir the brain to impulsive action, it may even rouse dormant animal propensities to excitement. The impulse felt by a hurrying pedestrian to push or knock persons in his path is not wholly *impatience*; it is, in fact, a physically-induced irritability which, being often repeated, may become persistent. Train-catching does not improve the temper, and in some instances it may do remote and very serious mental mischief.

DEATHS IN PRISON.

THERE can be little doubt that the death of William Grant, prisoner in Walton Gaol, Lancashire, who expired suddenly from rupture of an aneurism whilst on the treadmill, will be made the subject of a searching investigation. It is to be hoped, however, that the inquiry will be conducted with fairness towards the medical officer, and that unless a case of gross carelessness can be proved against him he will not be sacrificed as a scapegoat to appease the public conscience.

Internal aneurisms are often extremely difficult to diagnose with certainty, and eminent physicians and surgeons, with all the necessary clinical appliances and opportunities of watching a case, are sometimes uncertain whether the symptoms are due to aneurism or some other cause. Again, internal aneurism may exist without giving rise to symptoms of

gravity sufficient to cause suspicion of its existence, and it is not till after the death of the patient that its presence may be detected. If, therefore, the aneurism which caused the death of the prisoner Grant belonged to this category of obscure cases no blame can possibly be attached to the medical man for overlooking its existence on the admission of the deceased. The onus of the disaster lies, as we have so frequently pointed out, in the faulty arrangements of our prison system. A man apparently healthy is passed by the medical officer, after a single examination, as fit either to undergo a period of severe starvation on bread-and-water, or to perform severe mechanical labour. He is then taken charge of by the prison officials, and his punishment commences. If the man becomes ill, he is referred to the medical officer, but there seems no provision made for watching the effect of severe punishment on the various constitutions of prisoners till the effects manifest themselves pathologically. It is probable that had the medical officer been afforded an opportunity of watching Grant at his work on the treadmill the first day of his incarceration, he might have noticed something in the respiration or action of the heart that would have roused his suspicion, and have given him some clue to the existence of the disease which was not manifest when the man was in a quiescent state. As matters at present stand, it cannot be expected that the overworked and underpaid medical officers of our gaols should be ubiquitous, nor do we fancy that too much zeal in the direction we have indicated would be received with favour by the lay officials of prisons. We are of opinion, however, that short-termed prisoners on bread-and-water diet ought to be visited at least three times daily, and the temperature taken at least once daily, so as to detect the supervention of any acute form of disease, especially that form of pneumonia which seems to be the chief cause of death among short-termed prisoners. Moreover, the medical officer should carefully watch the effect of severe mechanical work when a man is first put on the treadmill. For this purpose the existing medical staff should be considerably increased. It is right that offenders should be punished, but there we must stop. A surgeon was always present to watch the effect of the torture on prisoners in days gone by, and who cried "Hold, enough!" when the limits of physical endurance were reached. Less wise, we leave the supervision of our experimental punishments to the unskilled turnkey. The prison system has already caused some sensational deaths; but nothing is heard of those prisoners who are discharged with their health hopelessly ruined by the severe and ill-supervised discipline they have been subjected to. A committee of inquiry is urgently called for to settle this question, and we hope the investigation, when undertaken, will be thorough and impartial.

ARTICULAR CARTILAGE.

WHILE the structure and general uses of articular cartilage are easily observed and well understood, it is curious to note that one fact about it has for long puzzled anatomists. Knox wrote many years ago that the cartilage "adheres by one of its surfaces to the bony tissue in a manner as yet little understood, but extremely firm;" and the latest English author—Mr. Morris—in his recent work on the joints, says, "it is connected with bone so firmly as to seem like a continuous structure," and thus stops just short of what would appear to be the fact. Articular cartilage and the subjacent bone not only "seem like," but are "one continuous structure." Originally the whole skeleton, with but few exceptions, is cartilaginous, and the articular surfaces of bone are in most instances formed from centres of ossification deposited in masses of cartilage, which enlarge centrifugally until the whole of the cartilage, except one thin

surface, is ossified, and this remnant remains permanently as the articular cartilage. It is not, then, a union between two diverse structures, but merely that a part of a single structure has undergone a special change. The bone and cartilage are one continuous tissue, and no uniting medium can be found or expected. Similar conditions are met with in other organs and tissues; thus there is no special "union" between the general skin and the nails; nor in partial fatty degeneration of the liver do we find the fatty cells "united" in any particular fashion to the healthy ones. It is right to add that Knox objected to this view, that after removal of the lime salts from a recent bone by means of acids no intimate connexion between the tissues can be seen, and the cartilage then separates spontaneously. The explanation of this separation lies in the fact that the thin articular lamella between the cancelli and cartilage differs in many respects from ordinary bone, and especially in containing a larger proportion of earthy salts, so that when these are separated by an acid the slender animal residuum is insufficient to maintain the union of the cartilage and softened cancellous bone.

It is also worthy of note that the arrangement of the soft and firm parts of the cartilage resembles that existing in the articular ends of bones. The cells of cartilage are the soft compressible part like the medulla of bone, and the hyaline matrix is the firm resistant part analogous to the bony spicules and lamellæ. It is the custom to emphasise the arrangement of the cells in the cartilage; it is more useful and physiological to speak of the arrangement of the matrix, just as we describe the lamellæ of bone rather than the configuration of the cancelli. The matrix forms a thin pellicle on the surface of the cartilage, parallel with it, like the articular lamella of bone; this gives smoothness to the surface and welds together the deeper part, which is composed of columns arranged at right angles to the joint surface, parallel with the radiating lamellæ of the bone; between these vertical columns are the groups of soft cells. Thus the columns of matrix are arranged in the line of pressure in precisely the same way as are the lamellæ of bone. We have in this another example of the fact that articular cartilage is, if we may be excused the expression, unossified bone; and it is an error to speak of it as separate from the bone, or as something superadded to bones at their joint surfaces. By being unossified it allows the movements of bones to be noiseless, frictionless, and even, and it forms an efficient elastic spring or buffer to deaden shocks transmitted up the rigid bones.

MANCHESTER ROYAL INFIRMARY.

THE report of the Board of Management of the Manchester Royal Infirmary, presented at the annual meeting of the trustees and subscribers of the institution on the 29th inst., gives, on the whole, a satisfactory account of the work done or commenced during the past year. Sanitary defects in the building have been or are in course of being removed, and the nursing staff are to be provided with permanent accommodation in the grounds. The increase in the number of patients treated has not, it would appear from the balance-sheet, been attended with an augmented expenditure, the disbursements having been less, indeed, than in the previous year, and this economy has not, the Board state, been effected at the expense of efficiency. Whilst the Convalescent Hospital at Cheadle has been worked to its full capacity, the hospital at Monsall has, considering the extent of its accommodation, and owing to the general absence of infectious disease, been comparatively empty, the number of beds occupied during the year having averaged only twenty-one. The yearly expenditure at the three institutions is estimated at about £27,000; the income last year was £20,803, and the legacies amounted to £715.

COLOUR-BLINDNESS AND RAILWAY EMPLOYEES.

THE State of Connecticut has set an example in the matter of colour-blindness among railway employes which is worthy of imitation. An Act has there recently been passed which imposes the duty upon every railway company to have each person in their employ as "locomotive engineer or fireman, train conductor or brakeman, station agent, switchman, flagman, gate-tender, or signalman," examined, on or before the first day of October next, by one of the examiners to be appointed by the Governor of the State, as to colour-blindness and visual power. It is further enacted that every railway employing a person in any of the specified capacities who does not possess a certificate of freedom from colour-blindness, and possession of visual power, duly issued in accordance with the provisions of the Act, shall be punished by a fine of not less than 200, and not more than 1000, dollars. The duty and responsibility of carrying out the provisions of this Act have been delegated to the State Board of Health. Rules and regulations in accordance with the Act have been drawn up, and have doubtless been placed in the hands of every company owning or working a railway within the State. It is provided that this Board shall annually, in the month of May, recommend to the Governor, for appointment as examiners, two or more medical experts; such examiners to issue certificates in accordance with the Rules of the Board of Health, and to report to the Board. The State of Connecticut is the first of the American States to pass a law requiring the examination of all persons employed in moving railway trains, and it is reported that the standards adopted for the examinations are, for the most part, those agreed upon at the International Medical Congress at Amsterdam, in September, 1879. The extensive prevalence of colour-blindness, which has recently attracted considerable attention, and the almost universal use of colour-signals on railways, make the adoption of some such legislative action on our home railways almost a necessity.

HYDROPHOBIA.

FROM Lancashire, Cheshire, and Wales accounts reach us of renewed attacks of hydrophobia. A man, aged twenty-one, has died of the disease in the Manchester Infirmary, who had been bitten by a dog fourteen months ago. The animal was "running" some sheep, and the man pursued it to a hole, in which it took refuge. In trying to pull it out the dog bit him on the hand. At Prestwich several cases of rabies have occurred. One of the dogs has bitten three children, and, it is said, has not been destroyed. We learn from the *Bristol Mercury* that the village of Bodlinog, in the Rhymney Valley, was lately thrown into a state of great excitement by the appearance of a rabid hound which tore through the streets, biting everything that came in its way in the most savage manner. On being chased from the village, the animal flew across the mountain to Deri, and flew at some children, and savagely attacked a dog and a cat. Farther on it bit a boy in the ear, and a man in the calf, and then so injured a little boy that his life is in a precarious condition. At least twenty dogs known to have been bitten were destroyed. Several persons have been warned to watch other animals which it is feared have been bitten, and steps have been taken at other villages, through which the dog passed, to guard against other tainted or suspected animals being at large. Had a similar precaution been taken in the case of the affected hound this disastrous outbreak would not have occurred. The dog belonged to a farmer in the neighbourhood, and is known to have been bitten three months ago. Surely the owner of a dog, under such circumstances, should be held responsible for the results of not destroying it, and, still worse, of allowing it to be at large.

PROPOSED TESTIMONIAL TO PROFESSOR SPENCE.

ABOUT six weeks ago some professional friends of Professor Spence proposed that, in consideration of the distinguished services he had rendered to surgical science, the profession should present him with his portrait, and also that a replica should be placed in the hall of the Royal College of Surgeons, Edinburgh. This proposal has been so cordially supported that with a few additional subscriptions the Committee hope to be able to present each subscriber with an etching of the portrait by Durand of Paris. The list will remain open for another month, in order to give to those who may not have heard of the movement an opportunity of contributing. The subscriptions are limited to one guinea, and are payable to Dr. P. H. Maclaren, the Honorary Secretary and Treasurer.

DR. TANNER.

DR. TANNER continues his voluntary fast at New York. Opinions are much divided as to the absolute integrity of the fast, but, if the reports are true, there can be no question that the nearest limit to actual starvation is attained. When the case is complete we shall see whether any physiological lessons have been learned; at present we have no reason to congratulate ourselves on any important gain to science through this fool-hardy experiment.

THE members of our profession, whose names are published in connexion with the sad affair at Candahar, are as follows:—Dr. Harvey, who brought news of the battery; Surgeon-Major C. J. F. McDowall, 3rd Bombay Cavalry; Surgeon G. E. E. Burroughs, 3rd Scinde Horse; Surgeon-Major C. J. Sylvester, and Surgeon A. K. Stewart, 1st Bombay N. I.; Surgeon E. Toftell, 30th Bombay N. I.; Brigade-Surgeon J. O'Nial, Principal Medical Officer with General Primrose's force.

WE are requested to announce that the full-sized clay model of the statue of Harvey, which is to be erected at Folkestone, has nearly approached completion, and that the sculptor, Mr. A. B. Joy, invites the subscribers to the Harvey Tercentenary Memorial Fund to a private view of the model (upon presentation of address cards) on Wednesday next, the 4th of August, from 11 to 5.30 P.M., at his studio, No. 8, The Avenue, 76, Fulham-road, S.W.

THE election to the surgeoncy of the Cumberland Infirmary, recently held by Dr. Macdonnell, appears to be exciting considerable interest in the northern county. The names of two gentlemen are mentioned as candidates for this appointment—Dr. H. A. Lediard, F.R.C.S. Eng., and Mr. W. Brown, M.R.C.S. Eng., L.R.C.P. Edin.

THE General Committee of the Chelmsford Dispensary and Infirmary are contemplating the purchase of a site on which to erect a more commodious building for the accommodation of the patients of the institutions, and are making arrangements for the collection of funds for the purpose.

ACCORDING to the *Times of India* of last mail, the European troops stationed at Mhow, in the Bombay Presidency, are suffering from malarial and sun fevers of a very severe type. The heat of the weather had been for some months unusually severe.

WE are asked to announce that the annual meeting of the Irish Medical Graduates' Association will be held in the Section room at Cambridge on Wednesday, August 11th, at 5.30 P.M. The annual dinner will take place at the Lion Hotel, at 6.30.

It is feared that Dr. Haller, a physician of Burgdorf, who, with guides, left Grindelwald on July 14th for the Bergh Hut, and has not since been heard of, has perished in his attempted ascent of the Matterhorn.

MR. ARTHUR STANLEY BUTLER, of Exeter College, Oxford, has been chosen to fill the chair of Natural Philosophy in St. Andrews University, recently vacated by Dr. William Swan.

DR. MATTHEWS DUNCAN has accepted the invitation of the Council of the Midland Medical Society to deliver the inaugural address for the ensuing session.

A SUM of £80,000 has been ensured for the purpose of promoting the movement for establishing a University College in Liverpool.

THE approaching meeting of the Social Science Congress in Edinburgh will be presided over by Lord Reay.

The Lancet Commission ON WORKHOUSE INFIRMARIES.

LIVERPOOL.

BEFORE entering into a detailed description of sick asylums as distinct from the workhouse proper, we think for the sake of contrast it will be advisable to present our readers with a picture of a large workhouse in which the sick, the infirm, and able-bodied are still treated in the same establishment. And for this purpose the Liverpool Workhouse affords a striking illustration. For whilst it exhibits markedly the disadvantages of the combined system, it shows how careful management can lessen the difficulties and evils inseparable from such an arrangement.

The Liverpool Workhouse stands on an elevated piece of ground centrally situated in one of the best quarters of Liverpool, closely adjacent to the School of Medicine and the Royal Infirmary, and consists of three main blocks of buildings. A central block which contains the principal offices of the establishment, the receiving rooms for new inmates and urgent cases, clerks' offices, dining-hall for the able-bodied inmates, kitchen, bakery, stores, dispensary, &c. Persons wishing to become acquainted with the details of management connected with such large establishments could not do better than pay a visit to this department. The house governor, Mr. Anderson, evidently prides himself on his arrangements, and certainly he deserves considerable praise for the scrupulous order and cleanliness that are everywhere manifest in this part of the building. The stores, too, seem to have been selected with considerable judgment, and the meat, flour, coffee, cocoa, &c., which we examined, were of excellent quality. The dining-hall was filled with inmates at the time of our visit, who were just finishing dinner, which that day consisted of "scouse," a dish the composition of which will be best described to the uninitiated as a kind of Irish stew rubbed down to a mash. It tasted to us appetising, and its constituents were certainly eminently nutritious, and it seemed, to judge from the polished empty basins, to find favour with the diners, many of whom looked, like Oliver Twist, ready to ask "for more." The vast assemblage of worn, expressionless, aged faces in this hall, struck us most painfully. A representation of some of them would form a fitting companion to Herkomer's picture, "The Last Muster," only in this case the veterans depicted would be those who had always fought in a battle that had always been against them.

The central block may be said to be flanked by two lateral blocks, one consisting of the buildings set aside for the male inmates and a separate building for fever cases; the other

for female inmates; and for the purpose of description, the chapel may be considered to belong to this block. These lateral blocks being (with the exception of the detached building devoted to fever cases, and the chapel) old ones, they therefore lack much of the convenience and suitability for hospital purposes which obtain in the admirably planned modern infirmaries which have been, and are being, established in the metropolis. The total number of inmates the workhouse is capable of containing is 3500. On the day of our visit they numbered 2840—of whom 1412, or about one-half, were in hospital. The average daily number in the sick wards is 936, about one-third being acute cases; whilst the daily average in the infirm wards is 430—"all of them chronic and mostly helpless cases, requiring constant nursing with but little medical treatment." The number of admissions into the hospital wards during the year is about 10,000; and last year there were 1178 deaths. The medical staff consists of three non-resident officers—viz., Drs. Gee, Alexander, and Robertson, who make daily visits; and a resident staff of three medical officers—a number generally increased to four in the winter, when the stress of work is greatest. The nursing department is under the control of a lady-superintendent, and is conducted on the Nightingale system. The nursing staff comprises 59 day and 16 night-nurses all told, inclusive of 10 nurses attached to the fever block, and 27 probationer nurses. The resources of the institution are wisely devoted to the training of nurses, many of whom leave the infirmary highly qualified to take up work in hospitals and elsewhere.

The wards vary much in size and disposition. The male wards occupy one side of the quadrangle, the female another side. Some of the wards are much better adapted for their purpose than others; are commodious and well lighted; others are shut off on one side by a corridor, with wards opening on each landing. The wards on the female side are less commodious than those on the male side of the house. The number of beds in each ward varies from twenty-six to fourteen, but some few of the wards are double. We were struck by the manner in which every available space was occupied by the wards; on some floors they opened directly one into another, and in this respect the building is at a great disadvantage. As to the disposition of the wards and their assignment to particular classes of cases, we can only speak in very general terms; for although we had the advantage of being shown over the whole of the buildings by the medical staff and Mr. Anderson, the governor, the number and variety of the wards make it impossible for us here to do more than speak in very general terms upon their disposition. In the basement are the lunatic wards, suitably provided with padded rooms. The insane have only a temporary lodgment in the workhouse pending their removal to the county asylum. The wards are disposed on three floors. Of these the first is devoted mainly to medical cases, the second to surgical, and the third to infirm and dirty cases. Of these latter there were no fewer than 179 on the male side, and 249 on the female, on the day of our visit. A decided improvement in these infirm wards is the substitution of iron bedsteads, one side of which can be let down, and furnished with mattresses made in two segments, in place of the old wooden, trough-shaped bed, sloping to a central aperture. Many of these old beds are still in use; but the governor hopes in time to get them all changed for the improved bedstead. The cases of ulcer are collected into one ward, and many different methods are from time to time tried in this treatment. Lately Dr. Alexander has been using hydrochloric acid dressings with good results. The eye-wards contained several cases of ophthalmia, but by no means an excessive amount. There is a special ward for erysipelas cases; but we are informed that no cases of erysipelas have arisen in the hospital in the last three years; nor has there been any pyæmia to speak of, an immunity which is attributed to the free use of disinfectants. Then there are special Lock wards, and cleansing wards for the reception of cases of scabies. These latter are generally very full of inmates, and it is found to be a matter of difficulty to get the bedding thoroughly looked after. The lying-in wards are fairly well arranged, and during last year received about three hundred inmates. Patients coming for admission are, if urgent cases, seen at once; but other cases are kept at the receiving ward until 5 P.M. There are large baths, and also provision made for disinfecting and destroying clothes. The majority of cases admitted are, as may be expected, chronic in nature—bronchitis, phthisis, heart disease, rheumatism, and paralysis. We cannot give any

statistics on this point, no published medical report being issued, so far as we are aware. Still there is, of course, a fair sprinkling of acute diseases—pneumonia, acute rheumatism, &c.—whilst all fever cases are admitted into the separate building set aside for their reception. It may be convenient if we now at this time record our impression of the nature and variety of disease included in these walls. We fully admit that it is rich in most valuable clinical material, which has frequently been set to good advantage by the medical officers. We were shown several cases of paralysis agitans—of different degrees—one of the most striking being that of an old-looking, semi-imbecile man, forty years of age, who has been in the infirmary for twenty-two years, and who is now quite unable to move about. Two well-marked cases of progressive muscular atrophy—one in a man of sixty-two—were pointed out as being good examples of this affection, and in the infirm wards of both sexes there is congregated a large number of hemiplegics, paraplegics, and ataxics. An excellent example of molluscum fibrosum, another of ichthyosis hystrix, and one of elephantiasis Græcorum, were also to be found in the male wards. The leprosy case was especially interesting. The patient was forty-two years of age, and had suffered from the disease for about two years. He presented the well-marked leonine type of features, and we were informed that very great improvement had taken place in him under the use of chaulmoogra oil. Amongst the surgical cases was one of amputation of the hip for disease in a boy. The case was doing very well. Another case was one in which Dr. Alexander had performed two operations for epithelioma of the lip. These are only a very few out of the many cases of interest contained in the infirmary; there enumeration will suffice to show that there is no lack of material for clinical observation or surgical operation. The means at the disposal of the staff for keeping records of the cases did not appear to us to be very complete. There do not seem to be any case-papers distinct from those employed for entering the prescriptions. The temperatures are taken by the nurses, who are provided with thermometers for the purpose; in acute cases such records are made twice a day, but no special charts are provided. The testing of the urine also falls to the nurses; in every case this is done on admission, but apparently not subsequently unless the urine is then shown to be abnormal. In the nurse's room attached to the wards are stored such medical appliances as cupping instruments, croup-kettles, ophthalmoscopes, and urine-testing apparatus; whilst in the same room are stocked a considerable number of drugs supplied from the dispensary. The medicines of each patient are all stored in one cupboard in the ward, and not placed by the bedside. The poisons are kept apart—a wise and necessary precaution. The fever hospital, which is wholly detached from the rest of the buildings, contains 160 beds, and it is interesting to recall that it stands on the site of the old fever buildings where Currie practised his treatment of fever by cold bathing—a treatment which, after falling into unmerited oblivion in this country, has at length been widely revived. Many of the cases admitted into these fever wards came from the ships of the port, and on the day of our visit we saw a Swedish woman with her child suffering from varicella in one of the wards on the ground-floor, these two wards being devoted usually to pyrexial cases of an indefinite character. In one of the upper wards were some members of a family suffering from typhus. But of late years fever has diminished very much in Liverpool, and beyond the cases mentioned the fever block was empty. The resident officers take it in turn to look after this department, which has a nursing staff distinct from the rest of the building. There are two institutions affiliated to the workhouse which should not be passed over. One is a convalescent hospital at Maghill for about forty cases, mostly children; the other an imbecile asylum at Dingle Mount for about ninety harmless imbeciles, idiots, and epileptics. Each of these institutions is visited daily by a specially-appointed medical officer, one of the local practitioners of the district. They are in charge of female officers, but are in every way, as regards administration, worked from the workhouse. The mortuary arrangements struck us as being unsatisfactory. The dead-house and post-mortem room are decidedly cramped, and situated too near the general buildings either for health or decency. This and the crowded condition of the sick wards struck us as the most objectionable features noticed in our round of inspection.

The general impression our visit made upon us was that

this infirmary is decidedly well managed, and, in spite of disadvantages arising from its primary faults of construction, is well worthy of the high position it takes amongst these institutions in the provinces. It abounds in much valuable clinical material, and is fortunate in possessing a staff who largely avail themselves of the opportunities afforded them, and who work zealously in the spirit of the age. At the same time we believe that these gentlemen would be the first to welcome any suggestions whereby the study and observation of these cases could be made available to others. If it were possible to institute minor officials to record the cases, all this valuable material would be put to good purpose. It would be even worth the while of advanced students to spend some months within the wards of such an institution as this, containing as they do so varied a group of examples of disease,—especially rich in the diseases of old age. But if there be one direction more than another in which the Liverpool Workhouse Infirmary should be commended, it is in its nursing system. We are far from saying that even yet is its nursing staff sufficient to cope with the vast amount of labour entailed on it, especially in the crowded infirm wards. Still it is always possible to increase a staff, the great thing is to have a sound and good working system. The revolution effected in workhouse nursing, since Agnes Jones was appointed the first superintendent to establish a system of trained nursing, was one which began in Liverpool, to spread thence over the land. The experiment proved to be a success, a result in a large measure no doubt owing to the indefatigable labours of that excellent lady, whose "Memorials" contrast in their simplicity with one other biography of a similar kind, recently published and far more widely read. Those who knew Miss Jones have testified in no measured language to her worth, and her premature death from typhus, contracted in the discharge of her duties, was deeply deplored. In the few years of responsible position at the Liverpool Infirmary she succeeded in establishing a system of nursing which has never been called in question, and which it would be well for some present-day reformers to imitate instead of creating impracticable systems of their own.

The separation of the sick from the ordinary infirm and able-bodied pauper would greatly facilitate and ensure the proper treatment of the sick. And it seems to us a question well worth the serious consideration of the guardians whether the construction of the buildings on another site in some other quarter might not be possible to obtain this advantage. The present site must be of considerable value, and the sale of it might enable the guardians to erect a more commodious building on cheaper land in the suburbs. The majority of cases could then be housed and treated in better buildings and purer air than is at present the case; whilst it would be only necessary to retain a comparatively small building in the city for the reception of casual inmates and acute cases of illness arising among the outside population. The ratepayers of Liverpool, are not only shrewd men of business, but have shown considerable liberality in many matters concerning the welfare of the poor of their town, so that the consideration of slight temporary increase in the rates caused by the removal would probably not deter them if they felt convinced it was the right thing to do. Of that we have no doubt, and believe the question of removal of some of the inmates to more spacious quarters to be one only of time. The Liverpool guardians have earned the credit of being the first to introduce the system of trained nursing in our workhouse infirmaries, one of their number, Mr. Rathbone, guaranteeing a large sum, £5000 we believe, to cover expenses in case the experiment failed. With such an instance of Liverpool munificence and liberality before us, we shall be surprised if the guardians of that city will long remain content with their present crowded and unsuitable building, but will ere long vie with London and their neighbour, Manchester, in erecting a new workhouse and sick asylum adequate to the increasing requirements of the city, and worthy of themselves.

A GOLD CUP and an appreciative address were in the early part of last month presented, at the hall of the Medical Society of Victoria, to Dr. J. E. Neild, who for many years has occupied the posts of editor of the *Australian Medical Journal* and secretary to the Society. The meeting at which the presentation took place was attended by a large number of the leading medical men of Victoria, and appears to have been of a very gratifying character to all present.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL INSPECTORS OF THE LOCAL GOVERNMENT BOARD.

Southend.—Our readers will probably remember that at the close of the past year and the beginning of the present rumours of a serious prevalence of enteric fever in the pleasant seaside resort of Southend, situated on the northern shore of the estuary of the Thames, became current. The rumours appeared to derive confirmation when it became known that Dr. Thorne Thorne, of the medical department of the Local Government Board, had been despatched to the spot with instructions to make inquiry as to the rumoured fever, and generally to examine the sanitary condition of Southend. Dr. Thorne Thorne's report of this investigation is now before us, and we may say at once that while the rumours of fever proved to be well-founded, the locality in which the disease appeared was not the town of Southend—the health-resort of that name—but a detached hamlet, named Prittlewell, within the urban sanitary district of Southend. The town, in fact, escaped the outbreak of fever, and does not appear to have suffered from the contiguity of the infected locality. "Indeed," writes Dr. Thorne, "the two places (Prittlewell and Southend) are, from a sanitary point of view, quite distinct; they are situated about a mile apart; they have different water supplies and distinct methods of drainage; and there appear to be no direct means by which such a disease as enteric fever could spread from one to the other." The sanitary condition of the town of Southend seems to be fairly attended to by the local authority. There is an excellent public water-supply, but this is not yet generally distributed; and a system of sewerage, which needs some details before it will be completed. But if the local authority think fit to be guided by Dr. Thorne's recommendations, it may readily place the sanitary reputation of Southend beyond reproach.

Prittlewell, the scene of the outbreak of fever, is an ancient detached village within the Southend urban sanitary district, and at the time of Dr. Thorne's inquiry seems to have been wholly neglected by the sanitary authority. Here during the six months, September, 1879, and February, 1880, among a population estimated at 600, no less than 100 cases of enteric fever occurred. Wells, cesspools, and privy-pits are hollowed promiscuously in the same porous stratum of subsoil. The wells are at all times liable to pollution by percolation of the contents of the cesspools and privy-pits through the intervening soil; but this liability is much greater at some times than others. Thus, for instance, when the level of the subsoil water becomes exceptionally raised after heavy rainfall, and encroaches upon the cesspools and privy-pits, the water in the wells and the filth in the cesspools and privy-pits are put in direct communication. This condition of things, it appears, happened in Prittlewell in the autumn of 1878; it was not general over the whole of the village, but from a topographical peculiarity was confined to a particular portion of it. It was to this portion that the outbreak of enteric fever was almost wholly confined; and there can be little doubt that the disease was then determined by an exceptionally polluted state of the water-supply of the particular locality. The prosperity of Southend town must run risk of being seriously damaged by a continuance of the state of things, both as to water-supply and drainage, which Dr. Thorne describes he found in Prittlewell; and as the village, by extension of buildings in that direction, appears to be about to become a part of the town, it behoves the local authority to amend as quickly as possible the sanitary condition of the village, and remove a reproach from their district.

Edmonton.—A report has been issued by the Local Government Board, containing the results of an inquiry made by Dr. H. F. Parsons, one of their medical inspectors, on the results of an inquiry into the endemic prevalence of enteric fever and the general sanitary condition of the urban sanitary district of Edmonton, in the northern suburbs of London. The report presents a remarkable picture of the

sanitary and structural conditions of buildings which too commonly obtain in the rapidly-extending suburbs of London, where apathetic and short-sighted local authorities and imperfect bye-laws contribute to reproduce year after year the evils which it has been the aim of the sanitary Acts to obviate. "The cottages recently erected in Edmonton proper," writes Dr. Parsons, "are many of them of the flimsiest style of jerry-building. The mortar which was being used at the time of the inquiry in some cottages in course of erection mainly consisted of road scrapings—black fetid sludge. The sanitary authority had, however, legal proceedings pending against a builder for using improper materials for mortar. There was no damp-course in many instances. In one case there were no ridge-tiles to the roof to exclude rain, the slates at the angle of the roof being merely nailed by their edge to the ridge piece." This being an example of the state of matters above-ground with regard to the most numerous class of buildings, the sort of care given to those matters which are hidden from sight below ground may readily be conceived. Edmonton has a system of sewers, but these appear to have been constructed after the manner of the cottages described, and it seems questionable whether they are more mischievous or useful. Of house drainage (the public sewers being as hinted), it may be said that its main aim seems to be not to facilitate the passage of drainage into the sewers, but to facilitate its leakage into the subsoil. Cesspools and privies are still common, the system of sewerage notwithstanding. Add that almost all the water supply is derived from shallow wells, and the mind is at no loss to conceive the conditions which make enteric fever endemic in the place. Indeed, the insanitary arrangements of Edmonton appear to be especially designed for facilitating the pollution of the soil, the water, and the air with the excremental matter. Dr. Parsons mentions a curious indication of fouling of the soil which we have not found noted before. In certain cottages, especially on Sundays, an offensive effluvia pervades the house, coming from the coal-cellars. In these cases the floor of the cellar proved to be the natural soil, unfloored with wood or other material. On Sundays pumping at the outlet of the sewers, for the purpose of distributing the sewage on to land for irrigation ceases, and the sewage backs up in the sewers, and consequently, having regard to their leakiness, in the subsoil. This effluvia is chiefly observed coincidentally with this backing-up of the sewage, and Dr. Parsons is no doubt right in looking upon it as an indication of the weekly surcharging of the subsoil with offensive matters.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Leicester.—Dr. W. Johnston's report on the health and sanitary condition of the borough of Leicester for the year 1879 is, like previous reports of this gentleman, a document of the highest interest. Although dealing with strictly local subjects, it treats them in a fashion which gives them general value, and makes the report one of permanent importance. It is not an insignificant consideration that the report is published with a careful consideration to typography and diagrammatic illustration, which add to its interest and befit its worth. The subjects which will chiefly arrest attention in this report relate to the working of the local Act requiring the giving immediate information to the sanitary authority of the occurrence of certain diseases, the observations on diarrhoea, the immunity of Leicester from "fever," and the infant mortality of the place. The local Act referred to came into operation on Sept. 13th, 1879. Nevertheless, short as the period was within which the Act had been in force, Dr. Johnston reports very favourably of the advantages in the limitation of infectious disease which had been derived from it. A larger number of cases had been removed to hospital; it had been possible to maintain a greater control over children from infected houses or convalescent from infectious disease frequenting school, as well as over the making up of goods for commercial purposes in infected houses, and more detailed care in helping families as to processes of disinfection had become practicable. The Act, notwithstanding predictions to the contrary, has worked without friction, and Dr. Johnston is obviously hopeful that the antagonism to the Act displayed in the first instance by the medical profession in the borough will subside. The marked success of operation of the Leicester Act no doubt rests largely on the fact that the borough possessed at the time the Act came into force an excellent infectious-disease hospital. The possession of such a hospital ought to be made

a condition precedent to the granting of powers to any sanitary authority for the compulsory communication of information as to infectious disease. The death-rate from diarrhoea in Leicester in 1879 was the lowest that had been recorded in that town. Dr. Johnston comments on this concurrence of a low death-rate with the low average of mean temperature of the air, the absence of sunshine, and the great rainfall, and shows how the facts tend to confirm the conclusions he has formed on the influence of ferments derived from the putrefaction of animal refuse collected in cesspools and sewers in provoking diarrhoea. He again points out from last year's records that the diarrhoea was not limited to any particular age, although chiefly fatal in infants and young children—a distribution inconsistent with the view that diarrhoea was the result of maternal neglect and bad nursing. The immunity from fever in Leicester is assigned to the general plan of avoiding direct connexion between the house-drains and the sewer, the rarity of cesspools, the absence of "slums," and the good supply of pure water. Dr. Johnston discusses at some length the causes of the excessive infant mortality of Leicester, and shows that this mortality is especially a phenomenon of the third quarter of the year, and particularly relates to diarrhoea, tubercular diseases, atrophic affections, and premature birth. A theory of maternal neglect is wholly insufficient to account for the phenomenon, and to whatever extent such neglect may concur in helping to the result, other and more efficient causes must be sought for an explanation. These causes, in so far as diarrhoea is concerned, must, according to Dr. Johnston, be looked for in peculiar local conditions.

Bolton.—Mr. Edward Sergeant has had the good fortune of having to prepare for his sanitary authority a quite uneventful report of the health and sanitary condition of his district for the year 1879. The borough in that year had a birth-rate of 37·0 per 1000 proper and a death-rate of 21·2 per 1000. The infant mortality was unusually low, and zymotic diseases "were accredited with fewer deaths than in any year yet recorded." Nevertheless, Mr. Sergeant has sought to attach a special interest to his present report by giving (after the manner of Mr. T. P. Teale) plates illustrative of the dangers arising from sundry defective drainage arrangements. The report has some observations on the second year's operation of the Local Act for the notification of infectious diseases to the Sanitary Authority. The Act, in the first instance, worked with so much friction that it was found necessary last year to obtain a Provisional Order for amending it in several details. We fail to gather from the present report a clear idea of the working of the Act as amended by the Provisional Order, but it seems doubtful whether friction has still been satisfactorily removed. The amount of infectious sickness reported to the Sanitary Authority last year (651 cases) was less than in the previous year, but, happily, this is to be attributed to the exceptional freedom of the town from infectious diseases.

REPORT OF THE MEDICAL SUPERINTENDENT OF THE DEPTFORD HOSPITAL.

The report of the Medical Superintendent of the Deptford Hospital (Dr. John McCombie) for 1879 shows that, in the course of the year, 1634 acute cases of small-pox were admitted, 1325 discharged recovered, and 282 died. Of these cases 1148 were vaccinated, of 228 the vaccination was doubtful, and 258 unvaccinated. Of the vaccinated 83 died, of the doubtfully vaccinated 78, and of the unvaccinated 121, showing a death-rate of 7·2 per cent. in the vaccinated, 34·6 per cent. in the doubtfully vaccinated, and 47·2 per cent. for the unvaccinated. The statistics Dr. McCombie gives suggest to him that sex appears to have an important influence on the mortality from small-pox in vaccinated persons after puberty. They show that in cases with imperfect marks two deaths occur in females as early as seven years, while in males no death occurs before twelve; and in cases with good marks deaths occur in females at eleven years of age, and there are five deaths under puberty (sixteen years); but in males no death occurs under nineteen years. He thinks that these data indicate the necessity for earlier revaccination in the case of females than in the case of males.

Dr. McCombie records not less than ten cases of small-pox after revaccination; but on these cases he observes—"It would appear from this that cases of small-pox do occasionally occur after apparently successful revaccination; but I

would remark that in nearly all the cases the primary vaccination was imperfect, and I would suggest that the revaccination was in some way imperfect, since no case of small-pox has occurred here among the staff, who were successfully revaccinated before entering on their duties. Up to Dec. 31st, 1879, 148 staff have been employed in the hospital. Of these, 141 have been in more or less direct contact with patients suffering from small-pox. All were revaccinated before entering on their duties; only one took small-pox. This was the case of a ward servant, who developed small-pox after entering the service, and eight days after revaccination had been performed. She had evidently received the infection of small-pox before she was revaccinated."

THE HEREFORD SANITARY COMBINATION.

We learn from the *Hereford Times* that the authorities of the Hereford Combined Sanitary District have decided to maintain their combination, at least for a further period of three years, and to retain Dr. Vavasour Sandford in the appointment of Medical Officer of Health, an appointment which he has now held for six years. The right-mindedness of this action is, however, stultified by a resolution of the authorities to reduce the salary of the medical officer of health from £550 to £400! It is admitted by the authorities, without exception, that Dr. Vavasour Sandford has done the duties of his difficult office well, and with infinite advantage to the sanitary condition of the combined districts; moreover, that at least £100 of the proposed salary must be devoted to travelling expenses. Fortunately, the resolution of the authorities cannot be carried into effect without the consent of the Local Government Board, and we can scarcely conceive of that Board lending itself to a procedure which is calculated to degrade the functions of a medical officer of health, and to deter men of good standing and with the requisite qualifications from holding the post. It is high time that some measures were taken to put an end to these vagaries of local sanitary authorities. They betray on the part of the perpetrators an indifference to public-health requirements of communities under their care, and a disposition to behave unjustly to medical officers of health, in the highest degree disheartening, and it behoves the Local Government Board to see that the designs of the Legislature shall not be frustrated in this pitiful fashion.

THE WATER-SUPPLY OF CROMER.

A seaside town, with waterclosets and a system of drainage into the sea, and no regular water-supply, must be regarded as in a very unsafe sanitary condition. These are the conditions which obtain in the charming little Norfolk resort—Cromer. A project for establishing an adequate water-supply has been for some time in progress, but it has lately hung fire, and there is some fear that it may be relinquished. At present the chief source of water for ordinary purpose is the rain. There are a few wells in the town, water from which can be purchased, but for the watercloset-supply, cleanliness, and even in many cases for drinking purposes, rain-water is used, collected in large tanks. No doubt, in a wet season, such as the present, the supply is adequate, but in a dry season the supply may fail, and the state of affairs would then be perilous in the extreme. Perfect waterclosets, an abundant water-supply, and free ventilation of the sewers are absolutely essential for the safety of a system of drainage into the sea, and if anyone of these conditions is imperfect the sanitary system becomes insanitary, and the provision for health, a source of disease. It behoves those who are interested in the town to persevere in their efforts to establish a good water-supply, or public confidence in the salubrity of the place will scarcely be maintained.

REGISTRATION OF INFECTIOUS DISEASES.

At a meeting of the Executive Committee of the Dublin Sanitary Association, held recently, a resolution was adopted in reference to this subject. The committee approved generally of the principle involved in the proposal to establish a system of early and compulsory notification of infectious diseases to the Sanitary Authority, and of subsequent official registration of the same, as they believe that the information so obtained as to the origin and spread of epidemic diseases cannot fail to be of great value in aid of the efforts to improve public health.

THE RIVERS POLLUTION PREVENTION ACT.

A deputation from the Fisheries Preservation and other Associations had an interview with the President of the Local Government Board on Tuesday, the 27th, for the purpose of representing to him the necessity which, from their point of view, existed for giving greater facilities for putting the Rivers Pollution Prevention Act, 1876, in operation, and for making its provisions more stringent. Mr. Dodson, in reply, stated in effect that the observations of the deputation furnished another illustration of the difficulties surrounding the subject of purifying our rivers. Government was called upon to reconcile in the best way they could the commercial, fishery, and sanitary interests involved in the question, each clashing with the others. The subject was one on which he could not give an answer on the part of the Government on that occasion, but the observations of the deputation would receive his most careful attention.

SANITARY CONDITION OF THE NORTH DUBLIN UNION.

Dr. MacCabe, Local Government Board Inspector, recently inspected this workhouse, and reports in reference to its sanitary condition that the increased numbers resident during the past six months have led to overcrowding in some of the departments, and as a result there has been an unusually large number of cases of fever and other infectious diseases transferred to Cork-street and Hardwicke Fever Hospitals. By a recent arrangement observation wards have been provided in the workhouse, a provision which will tend to prevent the spread of infectious diseases in future; and the guardians are considering the necessity of providing shed accommodation within the Union, but outside the city, for the reception and treatment of infectious diseases.

An order has been issued by the Local Government Board which will remove a serious grievance which has been felt by district medical officers in various parts of the metropolis. This order provides that, subject to the approval of the Local Government Board, it shall no longer be requisite that a metropolitan district medical officer shall be called upon in every case to reside within his district. There are parts of London where it has been found impracticable for a medical officer to secure a suitable residence within his district, and other parts where a substantial injustice has been done to the medical officer by a strict adherence to the rule of residence, without advantage to the working of the district. It will now be practicable to remove those difficulties on sufficient cause being shown to the Local Government Board.

Dr. Archer Farr, the medical officer of health for Lambeth, having been called upon by the Sewers and Sanitary Committee of his Sanitary Authority to prepare a special report on the number of beds Lambeth should contract for, under the Poor-law Amendment Act of 1879, in the Metropolitan Asylums Board Hospitals, has reported that he is unable to express an opinion on the subject until he can obtain some clearer knowledge of the mode in which pauper and non-pauper cases will be discriminated by the Asylums Board.

Mr. Clare Sewell Read has written a letter to *The Times*, expressing his regret that he was unable to take a part in the deputation of the British Medical Association to the President of the Local Government Board on the 26th, to protest against the Vaccination Acts Amendment Bill. He had been influential in causing a similar provision to that now proposed being thrown out of the Amending Bill of 1871, and had he known of the proposed deputation he should have volunteered to be a member of it.

Metropolitans who are desirous to study the pig- nuisance may do so, it appears, very conveniently in Arthur-street, Chelsea, which rejoices (or rejoiced a few days ago) in 115 of these interesting and useful inmates. A proposition submitted to the Vestry for prohibiting the keeping of pigs in thickly populated neighbourhoods, and doing away with this particular relic of rural Chelsea, was, notwithstanding that it was supported by piteous complaints of "dreadful smells," rejected by a majority of one.

It is proposed by the Metropolitan Asylum Board to make additions to their Deptford Hospital, so that cases of fever as well as of small-pox may be received and treated there.

Mr. Hawkins, the Inspector of Anatomy for the Home Office, attended a meeting of the Sanitary Authority for St. Pancras on the 24th inst. with reference to the alleged nuisance from the private dissecting-room in the disused burial-ground of St. George-the-Martyr. Mr. Hawkins expressed the opinion that the complaints were not justified either by the situation or the management of the building, and the Sanitary Authority passed a resolution in accordance with this view of the question.

The Medical Officer of Health for Greenock (Dr. James Wallace) reports a mortality for the five weeks ending 3rd July equal to an annual rate of 16·2 per 1000 population, compared with 18·7, 17·7, and 21·2 for the period of the years 1877, 1878, and 1879 respectively. The returns of infectious sickness included six cases of typhus (and probably four other cases), all, with one exception, connected with cases noted in previous reports.

A batch of twenty persons were recently summoned before the Bedford Borough Bench of magistrates for refusing to have their children vaccinated. In each instance the defence of "conscientious scruples" was urged, and apparently accepted, for the Bench inflicted, it is reported, a nominal fine of sixpence in every case, remitting the costs altogether! This lenient course in cases of this class has been followed by the Bedford Bench, it is asserted, for some time back.

Clapham, it appears, objects to having an apparatus for the disinfection of clothes within its precincts. Things that require disinfection, according to the local magnates, should be destroyed by fire. Besides, an apparatus would cost £100. Of course, destruction of infected things is not to be effected without cost, as proprietors have to be indemnified. Obviously the way out of this economical difficulty is neither to destroy nor disinfect!

The Metropolitan Asylum Board, at the request of its solicitors, drew a cheque the other day for £1989 16s. 10d., the taxed costs of the plaintiffs at the last hearing of the Hampstead Hospital case. It was stated that it was extremely doubtful whether the pending further proceedings in this case would be heard before the adjournment of Parliament.

The Local Government Board have approved of the scheme proposed by the Cavan Town Commissioners for supplying this town with water. The Commissioners have selected Beaghy Lake as the source of supply, and from it a sufficient amount can be obtained for all necessary purposes.

VITAL STATISTICS.

HEALTH OF LARGE ENGLISH TOWNS.

THE fatality of infantile summer diarrhoea showed a further increase last week, but the total mortality was again considerably below the average. In twenty of the largest English towns, estimated to contain in the middle of this year seven and a half millions of persons, or nearly one-third of the entire population of England and Wales, 5217 births and 2955 deaths were registered last week. The births exceeded by 32, whereas the deaths were no less than 320 below, the average weekly numbers during 1879. The deaths showed, however, a further increase of 63 upon the exceptionally low numbers returned in recent weeks. The annual death-rate per 1000, which had been but 18·9, 19·2, and 20·1 in the three preceding weeks, further rose last week to 20·6. During the past three weeks of the current quarter the death-rate in these twenty towns has averaged 20·0 per 1000, against 23·0 and 17·5 in the corresponding periods of 1878 and 1879. The lowest death-rates in the twenty towns last week were 13·8 in Nottingham, 13·9 in Plymouth, 14·0 in Newcastle-upon-Tyne, and 16·0 in Hull. The rates in the other towns ranged upwards to 22·7 in Salford, 22·8 in Sunderland, 23·7 in Leicester, 24·7 in Wolverhampton, and 26·0 in Liverpool. The high death-rates in Salford and Leicester were mainly due to excessive zymotic fatality.

The deaths referred to the seven principal zymotic diseases in the twenty towns, which had steadily increased from 406 to 567 in the six preceding weeks, further rose to 636 last week; these included 337 from diarrhoea, 108 from scarlet fever, 74 from whooping-cough, and 63 from

measles. The annual death-rate from these seven diseases averaged 4·4 per 1000 in the twenty towns; whereas it was but 0·7 in Plymouth, it ranged upwards to 7·3 and 7·6 in Brighton and Leicester. Scarlet fever showed the largest proportional fatality in Sheffield, Norwich, Salford, and Bradford; and measles in Leicester. Two deaths were referred to diphtheria in Leicester. Small-pox again caused but three deaths in London, and not one in any of the nineteen large provincial towns. The number of small-pox patients in the Metropolitan Asylum Hospitals, which had been 191 and 200 at the end of the two preceding weeks, were 198 on Saturday last; 22 new cases of small-pox were admitted to these hospitals during the week, against 17 and 13 in the two previous weeks. The Highgate Small-pox Hospital contained 9 patients on Saturday last.

The deaths referred to diarrhoea in the twenty towns, which in the five preceding weeks had steadily increased from 51 to 258, further rose last week to 337, and included 202 which occurred in London. The annual death-rate from diarrhoea averaged 2·3 per 1000 in the twenty towns; it was equal to 2·8 in London, while it did not exceed 1·8 in the nineteen provincial towns. The highest death-rates from diarrhoea among these towns were 4·9 in Brighton, 3·6 in Leicester, and 3·1 in Salford.

The deaths referred to diseases of the respiratory organs in London, which had been 171 and 176 in the two preceding weeks, fell to 161 last week, and were 2 below the corrected average in the corresponding week of the last ten years. The annual death-rate from diseases of this class did not exceed 2·3 per 1000 in London; it was equal to 4·9 in Liverpool, and 3·4 in Salford.

HEALTH OF SCOTCH TOWNS.

In eight of the largest Scotch towns, having an estimated population of rather more than a million and a quarter persons, the annual death-rate, which had been 20·9, 20·4, and 18·6, in the three preceding weeks, rose again to 20·6 last week, and was identical with the average rate in the twenty large English towns. The rates in the eight Scotch towns ranged from 11·6 and 13·6 in Aberdeen and Perth, to 22·9 and 29·7 in Glasgow and Paisley. The fatal cases of the seven principal zymotic diseases in the eight towns were 107, against 97 and 109 in the two previous weeks; they included 39 from diarrhoea, 21 from whooping-cough, 16 from scarlet fever, 13 from measles, 12 from diphtheria, and 6 from fever. The annual death-rate from these seven diseases averaged 4·3 per 1000 in the eight towns, against 4·4 in the large English towns. No zymotic death was registered in Perth; whereas the rate from these seven diseases ranged upwards to 4·4 in Leith, and 6·0 in Glasgow. The fatal cases of diarrhoea in these eight towns further rose last week to 39, which were, however, not equal to a higher rate than 1·6 per 1000; whereas the death-rate from this disease averaged 2·3 in the large English towns. In Glasgow 27 of the 39 deaths from diarrhoea were recorded, showing a rate of 2·4 per 1000. Twelve of the 13 fatal cases of measles, and 10 of the 21 deaths from whooping-cough, also occurred in Glasgow. The 12 deaths referred to diphtheria included 5 in Glasgow, and 5 in Edinburgh; and of the 6 deaths referred to fever, 5 occurred in Glasgow. The deaths referred to acute diseases of the respiratory organs (bronchitis, pneumonia, and pleurisy) in the eight Scotch towns were 69 last week, against 90 and 58 in the two preceding weeks; the annual death-rate from these diseases was equal to 2·9 per 1000, against 2·0 in London. The causes of no less than 23 per cent. of the deaths registered in these Scotch towns last week were uncertified; while in the English towns the proportion did not exceed 2·5 per cent.

THE HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had declined in the six preceding weeks from 42·5 to 30·3, further fell last week to 30·2, a lower rate than has prevailed in that city since the end of October last. The average death-rate during the past three weeks has, however, been 30·6 per 1000, against 20·2 in London and 18·3 in Edinburgh. The 182 deaths in Dublin last week included 42, or 23 per cent., which were referred to the seven principal zymotic diseases, against 53, 47, and 45 in the three preceding weeks; 9 resulted from small-pox, 11 from scarlet fever, 7 from fever (including typhus and typhoid), 7 from whooping-cough, 4 from diarrhoea, 3 from measles, and 1 from diphtheria. The annual death-rate from these seven diseases was

equal to 7.0 per 1000 in Dublin, against 5.0 in London, and 3.4 in Edinburgh. The 9 fatal cases of small-pox showed a further slight decline from recent weekly numbers; whereas those of scarlet fever and fever were somewhat more numerous. The deaths from measles were fewer than they have been in any week since the middle of May. The fatality of diarrhoea was considerably smaller in Dublin last week than in most of the large English towns.

OFFICIAL MORTALITY STATISTICS IN QUEENSLAND.

A supplement to the *Queensland Government Gazette*, which has recently come to hand, contains a report on the vital statistics of Brisbane and its suburbs for the month of March issued by the Registrar-General. The population of the city and suburbs is estimated at 32,012, and 43 deaths are reported as having occurred during the month. Instead, however, of giving, as is now done in nearly all parts of the civilised world, the equivalent annual rate of mortality per 1000 persons living, the Registrar-General of Queensland gives the percentage of the deaths in the month to the total population, which is valueless for comparative purposes. It is stated that the deaths in the month in Brisbane were equal to 0.13 per cent. of the estimated population. This gives no clue to the annual rate of mortality, which we calculate to have been not higher than 15.8 per 1000 of the population. We will venture to suggest to Mr. Jordan, the Registrar-General, that, as his figures are published in the official *Gazette* for general information, their utility would be much enhanced by the publication of the equivalent annual rate of mortality. It is noticeable that the death-rate in the suburban portion of Brisbane appears to be considerably higher than it is within the municipality.

HEALTH MATTERS GENERALLY AT HOME AND ABROAD.

WOOLSORTER'S DISEASE AT BRADFORD.

Another death from the woolsorter's disease has occurred in the neighbourhood of Bradford, and has been the subject of a coroner's inquest. The deceased, a man forty-nine years of age, named James Greenwood, was engaged in sorting "inferior mohair" at the works of Messrs. John Foster and Son, at Queensbury. From the evidence it appeared that the wool is washed before sorting. The deceased complained of pain in the limbs on the 17th inst., but continued at work until the 22nd, when he was obliged to desist. He was restless and sleepless during the night; and when seen by a medical man next morning was in a state of collapse, his other symptoms simulating bronchitis. He died at noon, twenty-four hours after leaving work. A post-mortem, made by Dr. Brittan together with Mr. Spear, the Medical Inspector of the Local Government Board, showed that the cause of death was anthrax.

As we mentioned two or three weeks ago, some cattle died of splenic fever at a farm at Harden, upon which the washings of Van mohair were distributed. An interval of time has elapsed since these cases, this interval coinciding with the cessation of work at the Harden Mills. We now learn that another animal, this time a sheep, pastured in the same fields, has died of the same disease, and there is some evidence that this occurred coincidentally with a resumption of the washing at the mill. The carcase was examined by Dr. Roberts, Medical Officer of Health for Keighley, and microscopic examination showed conclusively that the disease was splenic fever.

The interest excited by the inquiry into the disease does not seem at all to have abated. We learn from the *Bradford Observer* that the manufacturers are taking measures for concerted action in the washing of all noxious wool. At a recent meeting they passed a series of resolutions, based in some degree upon the recommendations of the coroner's jury in a former case, which we have already given (*vide* THE LANCET, June 19th, p. 977).

The following is the text of the resolutions of the employers, which have been submitted to the Sanitary Committee of the Corporation:—

1st. That all Van mohair, camels' hair, and Persian wool, and all damaged wools, are noxious, and must be dealt with before sorting.

2nd. That all average mohair, Cape hair, Peleton and alpaca, are to be sorted as usual (damaged excepted).

3rd. That, in dealing with noxious wools, before a bale is opened it shall be steeped in hot or cold water for a period of not less than ten hours. In case the covering does not freely admit the water it shall be opened so as to do so.

4th. That, after the bale has been in the water the necessary time, the hair or wool shall be placed in a sud of hot water, and washed, then passed through rollers, partly dried, and sorted whilst still damp, as early as possible after washing. The heat of the water to be 100 to 120 degrees.

5th. That sorting-rooms shall be well ventilated, the floors swept daily, the walls and ceilings swept once in three months and thoroughly cleansed, and the walls lime-washed with lime mixed with carbolic acid once in twelve months.

6th. That no bale-wool shall be stored in the sorting-room, and no wool, hair, or other material shall be kept in the said room so as to interfere with the proper ventilation thereof.

7th. That no meals shall be taken in the sorting-room, or food kept there. Also, that proper provision be made for the sorters to wash in or near the sorting-room.

It is suggested that these regulations should be submitted to the Local Government Board for their sanction, and that, if necessary, steps should be taken to obtain a legal enactment. But it is clear that, pending the issue of the inquiry now being carried on by the Medical Department of the Board, no such regulations can be adopted; and it may very probably be found that the suggested regulations are insufficient to meet the requirements of the case.

THE WELBECK POISONING CASE.

As the case of poisoning at Welbeck now stands, it seems probable that the cause of the numerous instances of sickness following upon the consumption of beef and ham sandwiches at the sale, is to be assigned to a peculiar state of change in the meat, short of putridity, after its exposure to sewer air. It would appear that in the intervals of the sale the meat was stored in a room in which was the untrapped inlet of a drain which communicated directly with the system of sewers of the mansion, and there is evidence to show that it lay there in an atmosphere highly charged with sewer air. Dr. Edward Seaton, the medical officer of health for Nottingham, gave evidence at the adjourned inquest on the fatal case of William Wilkinson very much to the point. He stated that nine cases of individuals suffering from symptoms similar to those the deceased had suffered from, and all of whom had been at the Welbeck sale, had come under his observation at Nottingham. His opinion, after what he heard, was that it was extremely probable that the state of the meat being slightly putrid from poisonous air from drains, was such as would cause the symptoms. He had met with like cases arising from the consumption of meat which had undergone some change. He had in his recollection a group of six persons, in two families, in which the symptoms were somewhat similar, though not in all respects, but which were unquestionably due to the eating of meat short of putridity. Dr. Ballard, of the Medical Department of the Local Government Board, was present at the inquest, and gave assistance to the Coroner in questioning the witness on the medical and hygienic aspects of the inquiry. The jury returned the following verdict in the particular case under their consideration: "That the cause of death was English cholera induced by eating unwholesome meat at Welbeck, but how it became contaminated there is no positive evidence."

POONA POWDRETTE.

The *Gazette of India* for the 19th ult. contains an important memorandum by the Superintending Engineer for Irrigation on the manufacture of pouquette at Poona, and a report on the same subject by Mr. Narso Ramchandra, the Secretary of the Poona Municipal Committee. It would appear that by a mixture of night-soil and of ashes, resulting from the burning of the street refuse, house-sweepings, and dust-bin refuse, a pouquette is formed of the greatest value in garden cultivation, and which is in increasing demand. The night-soil, spread between thin layers of the ashes described, and first sifted, is dried in the open air, under the sun in the fine season, under sheds in the rainy season. When the requi-

site degree of dryness is reached, the night-soil and ashes are then thoroughly mixed together, and more sifted ashes added. The material is then ready for distribution. At first the native gardeners hesitated to take the poudrette; now the manufacture does not meet the demand, and it is frequent for payment to be made from four to six months in advance, in order to secure a supply. The nuisance experienced in the process of manufacture appears to be comparatively slight, stink not being experienced at a distance of more than fifty yards to windward, and of 150 yards to leeward of the drying tanks. The financial results are regarded, even in the present state of the experiment, as highly satisfactory, the profit from the sale of the poudrette during the first year having reduced the scavenging expenses of the municipality 5000 rupees. The sale of the poudrette, which in 1874-5 realised 766 rupees, in the nine months April to December, 1879, realised 7438 rupees.

THE "FEVER" IN IRELAND.

Dr. Nixon's further reports on the state of fever in the Swinford Union, County Mayo, confirms the impression derived from his previous reports that maculated typhus is widely disseminated there, even in the remoter districts. The incidental descriptions he gives us of the conditions under which he found the disease make the reader almost despair of the sanitary future of the localities to which the descriptions refer. Any way his sanitary prescriptions seem almost a mockery in face of severe dearth, and what to the English reader has the aspect of hopeless impoverishment and degradation. Writing of the small village of Faheens, three miles from Swinford, he says, "The condition of the people here is, however, extremely wretched. In most of the cabins cattle and pigs are kept in the room that is occupied. The sewage matter is partly carried off by an open drain which runs through the centre of the floor, whilst stagnant pools, containing all sorts of offensive matter, lie in front of the cabins. In this village there is no sewerage of any kind, and no road for a car within more than a mile's march. The food of the people here consists almost exclusively of Indian meal without milk." Of a village in another part of the Swinford district he writes:—"Nothing could exceed the complete absence of sanitary arrangements in this village. There was fully eight inches of manure in one cabin in the room where seven persons lived, and the woman of the house explained that she could not clear it out, as then she would have no manure." Again, writing of a house in the village of Ballintadder, he says, "Five members of the family had been ill for some weeks, and at the time of my visit three were still confined to bed; all appeared to have suffered from typhoid fever. The cabin in which these persons lived was extremely offensive, and on entering it the smell from the excessive amount of organic matter in the air was almost overpowering. In the small single-roomed cabin in which the three patients—the mother and two children—lived, I counted at the time of my visit three cows, a number of chickens, three cats, and a large dog."

Mr. W. E. Forster, referring in the House of Commons to certain suggestions of Dr. Sigerson and Dr. Kenny relating to districts in Mayo, observed that the Local Government Board (Ireland) were doing their utmost in the matter, but it should be remembered that the sanitary condition of the cabins in those districts had been very bad for generations, and it was a matter which could not be remedied in a day.

SICKNESS AT SIMLA.

The Indian papers report a severe and troublesome epidemic of diarrhoea at Simla, which had attacked Europeans of all classes during the month of June. In addition to the usual "hill diarrhoea," from which new arrivals in the Himalayan Sanitaria are extremely prone to suffer, this present sickness was remarkable for its persistence, its constant relapses, accompanied by languor and great debility; vomiting of a bilious character was present more or less in the early stage, with, in some cases, a degree of lassitude and prostration that almost amounted to collapse. No case had terminated fatally. The weather during May and June had been unusually hot and muggy, and the epidemic was regarded by the medical officers on duty at Simla as probably due to atmospheric causes. The setting in of the monsoon at the end of June would, it was hoped, clear the atmosphere and wash away the disturbing elements.

DAIRY FARMING IN SWITZERLAND.

The *Journal de St. Pétersbourg*, quoting from the Russian journal *Béreg*, states that the milk industry of Finland is not only the largest in the Russian Empire, but in Europe generally. Under the fostering care of the Government this industry has of late years undergone great development. There are now seventeen schools in Finland for the training of persons in the management of milk. The course of study occupies two years. During the first year the student is taught the physiology of the cow, the discrimination and treatment of the diseases to which it is subject, the mode of rearing calves, and the general management and treatment of kine. In the second year the course of treatment embraces a knowledge of the constituents of milk, the influence of temperature upon them, and the use of the thermometer in the management of the fluid, the different methods of manipulating milk and preparing butter and cheese, and book-keeping. In order to encourage the cultivation of this industry the students leaving the schools receive subsidies of from 500 to 1000 Finland marks, to help in the organisation of farms. The results obtained by this mode of procedure are said to have been most brilliant.

YELLOW FEVER.

The Royal Mail Company's cargo-steamer *Derwent* has arrived at Havre infected with yellow fever. In the course of the homeward voyage eighteen cases of the disease occurred on board, and the chief officer and two of the crew died of it. The cases which recovered are all reported convalescent, and the ship will be released from quarantine if after three days' detention no other cases of sickness manifest themselves. The importation of yellow fever into New York Harbour is also reported by a steamship, the *Colon*, from Aspinwall, which arrived there on the 15th ult. A case occurred on board the day after the ship left Aspinwall, and two cases were removed from the ship into the quarantine hospital on Swinburne Island, New York Harbour.

DIPHTHERIA IN RUSSIA.

A considerable diminution in the prevalence and mortality of diphtheria is reported in the Government of Poltava. This is attributed to the measures of disinfection which have been adopted; but, it is added, both the peasant and the clergy object to these measures. There has been an outbreak of the disease in the districts of Tchéboksary and Kazan; but by the prompt despatch of a medical staff of nurses to the localities, destroying infected material by fire (the proprietors being indemnified), forbidding the exposure of the corpses in churches, and covering them when placed in the grave with quicklime, the disease has been arrested in its progress.

FAMINE IN INDIA.

The first part of the Report of the Indian Famine Commission has been issued; it relates to famine relief, and is a most comprehensive document. After some preliminary sections, it discusses the rainfall of India, the history of past famines (freely illustrated with maps), the general considerations affecting the administration of State relief, and then enters upon the consideration at large of practical recommendations.

NOXIOUS VAPOURS.

Among the measures destined to be abandoned in Parliament during the present session is unfortunately that of Noxious Vapours. Lord Enfield, however, speaking for the President of the Local Government Board, has stated from his place in the House that he earnestly hopes early next session to introduce a measure to carry out the recommendation of the Royal Commission.

This week at the Dublin Police-court two men were fined forty shillings each for having obstructed a sanitary officer who wished to remove a child suffering from scarlatina to hospital, there being several healthy people occupying the same room as the sick child.

The hospital for infectious diseases at Cuningharhills, Aberdeen, says the *Weekly Free Press*, was opened on the 19th and closed on the 26th of June, two patients having been successfully treated for small-pox in the interval.

The erection of a hospital for infectious diseases at Uxbridge is decided upon.

THE SERVICES.

WIMBLEDON MEETING.

The camp at Wimbledon was, as in previous years, under the medical charge of Surgeon-Major Elkington of the Grenadier Guards, and Acting-Surgeon Pocklington, 11th Surrey Rifle Volunteers. The meeting passed off without any accident, and, with the exception of considerable prevalence of slight diarrhoea at first, the health of the camp is reported to have been good.

ADMIRALTY.—Staff-Surgeon R. L. Bett has been promoted to the rank of Fleet Surgeon, with seniority of Feb. 15th, 1880. Fleet Surgeon R. R. Beaumont, 1869, to Haulbowline Hospital. Surgeon M. M. R. Mackenzie, 1879, has been appointed to the *Boadicea*, vice Dr. Gordon, promoted to the rank of Deputy Inspector-General. Surgeon Alexander Blood Trousdell, M.D., has been promoted to the rank of Staff-Surgeon in Her Majesty's Fleet, with seniority of 24th inst.

ARMY MEDICAL DEPARTMENT.—Surgeon-General William Munro, C.B., has been appointed to succeed Surgeon-General Huntley Gordon as Principal Medical Officer at Gibraltar. Dr. Munro has for several years conducted the duties of Head of the Medical Branch of the War Office, Whitehall Yard. Surgeon-Major A. Guthrie has been appointed Principal Medical Officer of the Reserve Division Afghan Field Force, vice Deputy Surgeon-General Hanbury, transferred to the Khyber Division.

Correspondence.

"Audi alteram partem."

"SALICIN AND THE SALICYLATES IN RHEUMATIC FEVER."

To the Editor of THE LANCET.

SIR,—I have been much interested by the excellent annotation in THE LANCET of June 5th, headed "Salicin and the Salicylates in Rheumatic Fever." It falls to my lot to see but few cases of rheumatic fever. My experience, of course, has been much greater as to cases of chronic and articular rheumatism, sent to Buxton for relief from the use of its mineral water, and as to cases of gout. In these cases I have very frequently made use of both salicin and the salicylates, and at times with much, and at times with signal benefit. I am of opinion that they are sometimes of at least as much value in chronic as they can be in acute cases, exercising probably in some degree a restorative action, and aiding the system in the elimination of morbid material. To some extent the same value attaches to the use of quinine, arsenic, or the other well known and trusted antiperiodic tonics, sustaining or ministering to the general tone, and thus tiding over the struggle between the system and the disease, and perhaps helping to secure or promote the elimination of the hampering and irritating morbid products. What, however, I would seek to suggest is, that the treatment of acute rheumatism may not consist only in the lessening of the inflammatory and febrile struggle, which may be done by many other means, such as alkalies, salines, diaphoretics, aperients, or by colchicum, &c., or in the use of such remedies as will lower the febrile condition, as evidenced by the reduction of abnormal temperature, such as quinine, salicin, or even alcohol in carefully regulated doses, but may demand, as the primary consideration, the avoidance of any means by which elimination can be interfered with, and the use of any means by which it may be promoted, either by restorative or emulgent treatment. It need not be said that the relief of gout pains, and of the violent paroxysms of acute gout, may be commonly secured by the use of colchicum; but that the relief may have to be paid for by the supervention of an indolent form of the disease, diminished elimination of gouty material, increase of chalky deposit, and greater general malaise and debility. Every means of relief to gouty conditions, no matter whether acute or chronic, must

embrace the conservation of the general strength as much as may be, and a constant use of all the means that will help to secure the fullest elimination of the morbid products. I cannot but feel that all this may have a considerable bearing upon the moot question of the use, or relative use, of salicin or the salicylates in acute rheumatism. There can be no doubt that a morbid product is the necessary outcome of the disease. Febrifuge treatment on the one hand, or restorative treatment on the other, will not necessarily aid the elimination of this product. In cases where the febrifuge effect of salicin is indicated, or its possibly restorative value is needed, it might be aided as to eliminating power by judicious salines, diaphoretics, diuretics, or aperients, and the utmost advantage be thus obtained from its exhibition. In cases where neither its power of lowering temperature nor its restorative value is needed it might be wisely withheld, and a more simple regard be given to action upon some of the emulgent organs or tissues. There can be no doubt that rest in bed, with what diaphoresis can be secured by bed-clothes, warm-water compresses, and tepid or cool drinks, with or without the aid of alkaline or diaphoretic medicines, will often prove to be the best treatment for any of the acute forms of disease primarily requiring relief by elimination of morbid material; and that in either acute or chronic cases of this character the best treatment may consist in the free application of cotton-wool to the parts affected, and a careful regulation of the ingesta, avoiding if possible the use of stimulants altogether.

I think the profession is much indebted to Dr. Greenhow for his careful report upon these comparatively new remedies; but I should be sorry to think that they may not retain a position of much value in the treatment of certain cases and conditions of both rheumatism and gout; while I feel that we are not likely to have specifics for any disease that would be suitable to all its instances, that there are no two cases alike, that one case demands one primary consideration, another requires some other help. The febrile heat, or the weakness, or the congestive engorgement, or defective elimination, may be the principal indication for treatment; but any treatment that does not include the elimination of morbid products in such a disease as rheumatism must be imperfect, and be attended with consequences that must be disappointing.

I am, Sir, most faithfully yours,

WM. H. ROBERTSON, M.D., F.R.C.P.,

Consulting Physician to the Devonshire Hospital and Buxton Bath Charity.

Buxton.

COPPER TEST CAPSULES FOR SUGAR.

To the Editor of THE LANCET.

SIR,—The thanks of the profession, I am sure, are due to Dr. Pavy for the suggestion which has rendered the application of the copper test for sugar more convenient and its constituents more stable.

The substitution of the glass stopper for the sealing-wax cork will, no doubt, in great measure prevent the damp from acting on his "test pellet"—the only objection that has been hitherto brought against it. At the same time it must not be overlooked, that it may happen that the stopper will not be always replaced immediately. Moreover, a glass-stoppered bottle is not a very convenient article to carry about with one.

I have, therefore, ventured to suggest an improvement on Dr. Pavy's "pellet," by enclosing a small quantity of Fehling's solution in hermetically-sealed glass capsules, each containing about one cubic centimetre of the test solution. Air being thus excluded, the solution will keep almost an indefinite time. The size of the capsules being small, two or three can be conveniently carried wrapped in a bit of cotton-wool either in the ordinary pocket-case or waistcoat-pocket, without fear of breaking. They are made by Mr. Martindale, of 10, New Cavendish-street.

The test capsules are an improvement on the fine tubes that have been used for the same purpose for some years, because from their size and shape they are less likely to break, and are therefore more portable.

I am, Sir, yours truly,

CHARLES HENRY RALFE.

11, Anne Street, W., July, 1880.

FOREIGN BODIES SWALLOWED BY CHILDREN.

To the Editor of THE LANCET.

SIR,—We are often consulted by mothers as to what is best to do in cases where children have swallowed foreign bodies; and such things as coins, buttons, marbles, &c., are common enough, and are generally passed without causing any disturbance whatever. The following case appears to me unique, from the peculiarity of the body swallowed.

On the afternoon of April 10th last I was consulted by a lady as to what was advisable to do with her child, a girl aged about three years, who had swallowed the tongue of a hand-bell with the chain attached. The child was playing on the floor with the bell, and was seen by an elder sister suddenly to struggle in a suffocative paroxysm. With praiseworthy promptitude, she held the child head downwards and thumped her well on the back. In a few seconds the child got relief, the obstruction passing down; and on the mother hastening to the room she appeared all right.

Knowing that before the tongue could be separated from the bell some of the links must be open, I considered it a very dangerous thing, as the open link might catch in any part of the intestine; I accordingly ordered the child to be fed for the next few days on porridge, hard-boiled eggs, cheese and bread, with very little fluid, in the hope that the chain would become embedded in thick stool, and so protect the alimentary canal from injury. On the following day a small motion was passed, and about noon of the second day (forty-eight hours after swallowing it) the tongue, with links attached, was passed *alone*, followed in a few minutes by a copious motion. The annexed sketch is the exact size, and will give some idea of the thing. The tongue is of brass, and weighs rather more than two drachms.



This case seems interesting from the fact that although the child was fed on constipating food, the foreign body was passed *alone*, and that, such being the case, there was not a single bad symptom then or since.

Yours faithfully,

WM. CAIRNS WICKS, M.B. Edin.,
Physician to the Hospital for Sick Children,
Newcastle-on-Tyne.

PAGET'S DISEASE OF THE NIPPLE.

To the Editor of THE LANCET.

SIR,—As I believe it to be important that the fatal effects of the disease of the nipple, to which Sir James Paget has directed attention, should be widely recognised, I venture to send you a few notes regarding a case which has been reported to me by my friend, Dr. Johnston, of Shanghai. Dr. Johnston, following the examples of previous observers, writes of the disease as an eczema, a term that on practical as well as on theoretical grounds, I think it very desirable should cease to be applied to this affection.

Mrs. E— was sent from Peking to Shanghai to be under Dr. Johnston's care on account of a tumour which had formed in the breast, and told him that the nipple had been affected with superficial disease for more than a year before she was aware of the existence of a tumour. Dr. Johnston operated, but the disease recurred within six months, and the patient died.

Before going to China she had been under the care of Mr. Lockhart, of Blackheath, to whose kindness I am indebted for the following note. Writing to me on February 3rd of this year, Mr. Lockhart remarks:—"When Mrs. E— was in London, about three years and a half ago, I saw her several times. She had eczema round the nipple, extending from the nipple as the centre one inch and a half all round. This proved wholly impracticable so far as curing it went. I tried all that I could suggest—lead, zinc, arsenic internally, barley water, gruel, and much else, but the eczema remained. There was no tumour in the mamma of any kind, but I feared, as the eruption was so inveterate, that there might be something malignant about it, although I hoped on to the last

of her stay in England that this would pass away. The next I heard of her was from Dr. Dudgeon, of Peking, that she had cancer of the mamma."

In order that sufficient data may be obtained for the construction of trustworthy rules for the differential diagnosis between what, with Mr. Erichsen, I prefer to call Paget's disease and simple eczema of the nipple, there are some points regarding which in any given case information is especially desirable, and I risk the suggestion that in recording other cases reporters would do well to state whether the affection began on one small localised point of the nipple and remained so localised for any length of time, and how long it was before the whole surface of the nipple became affected; whether the affection of the skin of the areola was from the first sharply demarcated towards the healthy skin, and whether, as the disease spread, the sharp line of demarcation was never lost; whether the border of the diseased skin was elevated; whether it felt hard when compressed from the margin between the fingers; the nature of the discharge; the presence or absence of pain and itching; and whether before there were any signs of disease there had been a "weeping" from the nipple. By comparing the symptoms in a sufficient number of cases with those present in the obstinate eczemas of which the nipple is occasionally the seat, the early diagnosis of Paget's disease, on which the safety of the patient so much depends, will become easier than it is at present.

I am, Sir, yours, &c.,

Queen Anne-street, W.

GEORGE THIN, M.D.

THE DISPUTE AT GUY'S HOSPITAL.

To the Editor of THE LANCET.

SIR,—The suggestion of Dr. Harding of Whittlesea is, I am afraid, not capable of being put into practice, since a committee of "old Guyites" would have no *locus standi* with the Governors.

As far as that is of any use to them the staff have all the sympathy which we all old Guyites can give them, but that will avail them little. I would, however, make another suggestion: whether the committee now sitting, or the Board of Governors, should not take into consideration the desirability that the internal management of the hospital should be left entirely to the staff—the treasurer having nothing to do with that. The principle is the one you have consistently advocated in the case of military hospitals, where you have repeatedly pointed out that laymen (old colonels) are ridiculously out of place in the management of hospitals, such as Haslar Hospital.

This unfortunate affair, which must have grieved every Guy's man, is the outcome of certain notions floating in the brain of a well-meaning, possibly somewhat imperious, gentleman, who certainly must have a very considerable amount of self-confidence to pit his experience against a whole staff.

I have been dresser, obstetric resident house-surgeon, and house-physician at Guy's ten years ago, and consequently was at that time well acquainted with the whole management of the wards. And, on the whole, I believe the nursing and the comfort of the wards were excellent.

I think there was too much laxity as to stimulants. Many a sister has told me that she wished she did not have the care of them. But this and other details are things with which the staff could deal much better than the treasurer. Let the committee now sitting remember that "Behind the horseman rides black care." Behind them is public opinion, which will not suffer Guy's to come to harm. Let them be intent not upon adjudicating the dispute, but upon finding a remedy.

I am, Sir, your obedient servant,

T. D. L. TEMPLE, M.D. Lond., F.R.C.S. Eng.,

Old House-Surgeon and House-Physician.

St. James's-road, Hatcham, New Cross, July 12th, 1880.

To the Editor of THE LANCET.

SIR,—In a letter with the above heading which appears in to-day's LANCET, Mr. Stanley Gale, when referring to my paper on Hospital Nursing in the July number of *Fraser's Magazine*, does me an unintentional injustice. He makes it appear that I am, in some sense, an advocate for the training or employment of a number of unqualified female

practitioners, or, as he calls them, "female quacks," who are in reality imperfectly educated women, who have received some elementary instruction, when probationer nurses, in strapping, dressing, bandaging, &c. It is surely not necessary for me to deny this soft impeachment? Any one who has read my paper will bear me out in saying that it can be made to yield no such argument from first to last.

I lay down as the first principle of successful nursing that everyone who is responsible for the conduct of this department of hospital work must be guided by common sense views. I show that there are hospitals and hospitals—viz., those with medical schools and those without. At the former class there will be a large body of students who will require for their instruction all the raw material which the wards can provide. At such hospitals no dressing or other minor medical or surgical work will be required from sisters or nurses. On the other hand, at the country and other non-clinical hospitals, all this is changed. Here a nurse is of little use unless she can undertake much of the dressing, the taking of temperatures, the testing of various matters, and a fair share of the minor medical work, which elsewhere devolves upon the student. It happens, therefore, that a nurse trained wholly at a clinical hospital, where she has few opportunities of learning dressing, &c., is of little use in an institution where there are no students and few skilled assistants. This very week I have met with a King's College nurse who had never seen a breast removed, and who was quite at sea during the operation and of little use. Here lies the kernel of the nursing dispute at Guy's. Miss Burt, the matron, thinks she can adopt one particular system to every hospital; she might just as well try to fly.

I am, Sir, your obedient servant,

HENRY C. BURDETT.

Seamen's Hospital, Greenwich, S.E., July 24th, 1880.

ENTERIC FEVER IN INDIA.

To the Editor of THE LANCET.

SIR,—As I am much interested in the subject which has lately been occupying the attention of the Epidemiological Society I cannot refrain from offering a few remarks on the subject of enteric fever as observed in India. That *enteric* fever properly so-called does exist in India, and that as a definite disease always recognisable after death in fatal cases by the pathological changes proper to it, no one will, I apprehend, attempt to deny. The question at issue seems to me to be briefly this, Is enteric fever in India due to the insanitary conditions similar to those to which it is attributed in temperate climates, or is it merely a form of the "malarial fevers"? I have always held that enteric fever in India is thoroughly distinguishable from all other forms of fever, which, more or less, simulate it at various stages, with one proviso, that the patient is seen early in the disease, and that the temperature is taken then, and regularly watched throughout the disease. Without this precaution it will be found almost impossible after the fifth day to say whether a given case is one of "enteric" (pythogenic) fever or "remittent" (malarial), and only too often nothing but the result of the "post-mortem" examination will enable us to diagnose the case with accuracy. If, however, we can take the temperature early in the disease, and in most cases if "remittent" we can do this the very first day, the course of the temperature will afford us an almost certain means of diagnosing "enteric" from malarial fever. For suppose we find the temperature 104° or 105° F on the first day, we can predict with absolute certainty that the disease will not prove to be enteric; whereas if we have a case as to the nature of which we are in doubt—e.g., given a patient in the second week with all the symptoms of remittent fever, which differs very slightly in its clinical aspect from enteric fever in the same stage—we have only to consider the temperatures of the first day or two to find ourselves able to state with a very considerable degree of certainty whether it is a case of "enteric" or "malarial" fever, whether, that is to say, we shall in the event of a fatal issue find the post-mortem appearances pathognomonic of enteric fever or not.

Taking it then for granted that enteric differs in *toto* from malarial fevers in its mode of access, I think there is no valid reason for saying that "enteric" fever is due to the

same causes which induce "malarial" fevers. I admit that it is very hard to obtain positive evidence as to the "pythogenic" nature of enteric fever in India; but when we consider the following points, we may, I think, regard it fairly well proved that enteric fever in India depends upon local insanitary conditions quite as much as elsewhere.

1. Natives suffer from the disease to a considerable extent, far more so than Europeans, at least more than those who adopt the precautionary measures of filtration of drinking-water after boiling, and avoid all possible sources of faecal contamination.

2. There is no station in India, however carefully its sanitary condition may be attended to, where the conditions for faecal contamination of water easily accessible for drinking, though not intended for that purpose, do not exist in profusion.

3. These very conditions are those which affect the native community, who are notoriously careless about their drinking and cooking water.

Seeing, then, that insanitary conditions sufficient in themselves to cause enteric fever always exist in India—that these insanitary conditions affect the native portion of the community almost exclusively, and that this native community suffers from enteric fever in a far larger proportion than the European residents who are not so affected—it is hard to resist the natural conclusion that enteric fever in India is due to those same insanitary conditions which, when they exist in temperate climates, are recognised by the highest authorities as efficient causes of the disease in question.

I am, dear Sir, faithfully yours,

GEORGE RANKING, M.D. Cantab.,

Surgeon 6th Bengal Cavalry.

Phoenix-park, Dublin, July 15th, 1880.

CHIAN TURPENTINE IN CANCER.

To the Editor of THE LANCET.

SIR,—It is satisfactory to hear from Mr. Clay that Chian turpentine is still producing satisfactory results "in cancer of various organs." Others are not so successful as himself in their trials; and as he still holds to his former opinion, one is almost obliged to conclude that they have not been using "the true remedy." We have to depend on the honesty of those who supply our drugs, and it is difficult to believe that they take advantage of us when we ask for a supply of the genuine article. Not only would such treatment be unfair to their customers, but it would be *cruel and unkind* to their customers' patients. What are we to conclude, however, when, after trial, we find the disease still progressing? Is the remedy only a myth, or have we been deceived in the nature of the drug by the chemist? Mr. Clay still writes of success, and consequently it is difficult to doubt his word. Under these circumstances would it not be a kindness for Mr. Clay to mention publicly where he obtains his Chian turpentine? His repeated assertion gives one a hope of doing good; but when, after trial, no improvement succeeds, despair takes its place, and we feel that we have cruelly raised "false hopes" in the minds of our patients.

I enclose my card, and am, Sir, yours faithfully,

COUNTRY PRACTITIONER.

THE NAVAL MEDICAL SERVICE.

To the Editor of THE LANCET.

SIR,—Notwithstanding the flagrant disabilities under which the naval medical service at present labours, the authorities still continue to advertise for candidates to fill its attenuated ranks. You, on the other hand, render good service not only to those of the profession, who presumably are aimed at—the wavering ones—but to those at present in the service, by bringing to public notice the injustice under which they suffer in comparison with the more liberal treatment accorded to the army. As you truly remark, "we find a difficulty in believing that such a difference of action should arise under the same circumstance affecting two bodies of our profession serving the same Government in a military or combatant capacity," and it is to be hoped that forthcoming candidates for the August examinations will well weigh your advice, and "appreciate at the commence-

ment of their career what are the possible harvests to be reaped at its end." You might with justice have added, *to contrast the difference existing during their whole career.* One could understand the action of the authorities in quietly ignoring the well-known grievances of the department if it was in contemplation to allow it, like the navigating branch, to die a natural death; but it seems this is not their wish. Judging from the persistency of their advertisements, it is, as of old, a question to be determined by the profession. Are we to be ignored? I have no doubt the answer will be given by our brethren in no uncertain tone. Three men came forward to compete for eighty vacancies last examination; let there be *none* for the next.

I am, Sir, yours, &c.,

OMEGA.

PARIS.

(From our own Correspondent.)

FOR some time the atmosphere of Paris has been anything but agreeable. Towards the evening an unpleasant smell—or, rather, a more unpleasant smell than usual—has been noticeable; so much so, indeed, that it has at last become offensive even to the republican nostrils of the Municipal Council. This odour has been supposed by some to emanate from the sewers, whilst others have attributed it to putrefaction in the numerous *kiosques* which adorn (or disfigure?) the boulevards. It would appear, however, that the effluvium originates outside the fortifications, in the twenty-seven *depotoirs*, or night-soil depôts, which at some distance surround the capital, and perhaps also in the sewage-boats, which are anchored in the Seine, near the Pont des Invalides. It depends in a great measure upon the absence of the disinfectants which should be used by the contractors who empty the cesspools, but who appear, from the statement of one of the municipal councillors, to have been abetted by the police in their neglect.

A list of the prizes awarded annually by the Academy of Medicine was given in THE LANCET last year, but I would again call the attention of those members of the profession who are engaged in scientific research to the fact of their existence, and to the possibility of obtaining them. As usual, a large number were not awarded this year, either because no essays were sent in, or because those which did compete were not of sufficient merit.

For 1881 the subjects are as follows:—Prize of the Academy, 1000 francs: to determine the clinical value of antiseptic methods in surgical practice. Portal Prize, 1500 francs: on the state of the uterus and its dependences in puerperal fever. Civrieux Prize, 1500 francs: on the epileptiform symptoms of hysteria. Capuron Prize, 2000 francs: the indications and contra-indications for the use of mineral waters; sea-bathing, and hydropathy in pregnancy. Godard Prize, 1500 francs: for the best work upon external pathology (surgery). Daudet Prize: upon epithelioma of the lips and its treatment. There is also a prize of 6000 francs, which was founded by Dr. Barbier, to be given to the person who shall find a curative treatment for diseases which are generally supposed to be incurable, such as hydrophobia, cancer, epilepsy, scrofula, typhus, cholera. When the prize is not awarded in its entirety, a part of it may be given as an encouragement. Your readers may be reminded that in addition to the money value of the prize itself, successful competitors acquire the title of "Laureate" of the Academy of Medicine.

Obituary.

S. B. GWYNN, F.R.C.S.

SAMUEL BETTON GWYNN, who died very suddenly on July 11th, at the age of fifty-seven, was a son of Edward Gwynn, and grandson of Edward Gwynn (senior), both former surgeons of Wem. He commenced his medical education by being apprenticed to his father, and afterwards studied at Edinburgh, and at King's College Hospital, London. He obtained his M.R.C.S. Eng. and L.S.A. diplomas in 1844, and the Fellowship of the Royal College of Surgeons in 1853.

He began general practice with his father at Wem, where he was a well-known and successful practitioner for nearly forty years. Mr. Gwynn's quiet, unobtrusive, and kindly disposition gained for him the general respect and affection of all classes, for he was not only a skilful surgeon, but also a real friend to poor and rich alike. He was for many years medical officer of the Wem Union and several Friendly Societies, and for twenty-seven years surgeon to the North Shropshire Yeomanry Cavalry. He had been failing in health for three years, but continued in active practice to the very last day of his life, his sudden death being due to heart disease consequent upon emphysema of the lungs. He leaves a widow and nine children; but his loss is deeply deplored by many besides his own family, as was testified by the hundreds who voluntarily followed his body to the grave.

ALBERT J. WALSH, F.R.C.S.I.

THIS gentleman died on Saturday last at Whitechurch, near Dublin, at an advanced age. When the Adelaide Hospital in that city was established, in 1858, Mr. Walsh was appointed one of the visiting surgeons, a post he occupied until the last few years, when failing health obliged him to resign, and he was elected consulting-surgeon to the hospital. The deceased, who until recently had a considerable amount of practice, and was a very skilful operator, was an ex-President and Member of Council of the Royal College of Surgeons in Ireland, and was formerly attached as surgeon to the Maison de Santé.

MEDICAL NOTES IN PARLIAMENT.

In the House of Commons, on Friday, petitions against the Vaccination Acts Amendment Bill were presented from the Edinburgh Branch of the British Medical Association, the Faculty of Physic in London, Whitechapel Board of Works, and Newton Abbot Union.—Mr. Puleston gave notice that he would move to add Dr. Farquharson to the Select Committee on the Contagious Diseases Act, in the place of Sir Harcourt Johnstone.

On Monday, Sir Trevor Lawrence asked the Parliamentary Secretary to the Local Government Board whether the attention of his department had been drawn to an allegation that a species of black mail is exacted in connexion with the certification of pauper lunatics in the Kensington Union. Mr. Hibbert replied that the officers of the Union denied that any such charge was levied. The report might have arisen owing to the great number of cases that had been sent to two particular medical officers, the reason being that they resided in the immediate neighbourhood of the infirmary.—Replying to the same hon. member, Sir W. Harcourt stated that the Government would consider during the recess the subject of the embarrassed financial position of the United College of the University of St. Andrews, with a view to seeing before next session whether any steps could be taken to relieve the College from its pecuniary difficulties.—Lord F. Cavendish stated to Mr. M. Brooks that it would not be practicable to employ women clerks in the preparation of the census returns.—Mr. Watkin Williams asked the Secretary to the Local Government Board whether any regulations exist defining the duties of relieving officers and medical officers of Poor-law unions in relation to orders for the supply of medical necessities to the sick poor, and whether it is competent to relieving officers to disregard or overrule at their discretion the orders of the medical officers; and, if so, whether the Local Government Board will consider the propriety of altering the regulations in question. Mr. Hibbert replied that, whilst the relieving officers had a certain discretion in such matters, they were cautioned by the Local Government Board to be very guarded in the exercise of that discretion.—On the motion of Mr. Meldon, a return was ordered of the names of all medical officers of work-houses and dispensaries in Ireland, who, since the passing of the Medical Officers Superannuation Act, 32 & 33 Vic. c. 50, have resigned their offices and applied to those officers of guardians for superannuation allowances under that Act, with the causes for such resignation; the ages and length of service as Poor-law Medical Officers of each person at date

of resignation; the result of such application to the guardians; and the reason, if any, given by the said guardians for refusing the application.

On Tuesday, further petitions against the Vaccination Acts Amendment Bill were presented from Manchester, the British Medical Association (two), Warrington, Royal College of Surgeons (England), Hackney, Saltley, and Macclesfield.—Mr. Meldon asked the Chief Secretary to the Lord Lieutenant of Ireland if it is the case that the medical officer of the Crossgar dispensary district in the union of Banbridge, having after forty years' service applied for superannuation on the ground of broken-down health, a meeting of the guardians has been summoned to consider such application, and to pass a resolution "to record on the minutes their approval of the manner in which the medical officer has filled such office for a period of forty years, but that the guardians cannot add to the rates by granting any retiring allowance." And, if the Government will promote or support a measure to make the superannuation of Poor-law medical officers, in proper cases, compulsory on boards of guardians?—Mr. Forster pointed out that the resolution had not yet been passed, and therefore the question was somewhat premature. He would defer any answer for the present.—Mr. Macdonald asked the Secretary of State for the Home Department if his attention had been called to an inquest held on Wednesday, the 14th instant, at the White Horse Tavern, St. Matthew's, touching the death of a youth named William Ball. If it were correct that he died from the effects of poison inhaled when following his employment as a copper-bronze printer. Whether there were any provisions in the Factory and Workshops Act to prevent youths from being employed in such an atmosphere as will cause the death of those that may be employed where such work is carried on. And, if there were no provisions now in existence, would he cause the suggestions made by Dr. Tidy to be carried out, which were as follows: "the free use of milk or other albuminous fluid by the workpeople employed; the wearing whilst engaged at the work a cotton-wool respirator of sufficient size to cover efficiently both mouth and nostrils; that the bronzing should be carried out in a separate compartment or room, and not in the general workshop, in order as far as practicable to limit the evil; that a dress of glazed calico or like material tied round the neck and waist should be worn by those engaged at the work, and that this dress should be removed before leaving the compartment where the process is conducted; that strict cleanliness should be enforced."—Mr. A. Peel, the Under Secretary, replied that it was true that William Ball died from the effects of poison inhaled whilst following his employment as a copper-bronze printer, but there were no provisions in the Factory and Workshops Act preventing the employment of youths in copper-bronze printing, and the Secretary of State had no power to extend the provisions of the Act. The Act did provide for ventilation, but ventilation in a case of this kind was practically inoperative, the bronze dust being of such a heavy character. The Secretary of State could only call attention of employers in the trade to the danger of the present conditions of working, as shown in this question, and direct attention also to the suggestions of Dr. Tidy, and to the usefulness of a "dusting-off" machine, which had been found very beneficial in getting rid of the dust. Mr. Macdonald, therefore, gave notice that on Monday he would ask the Home Secretary whether, considering that Wm. Ball was poisoned while in the performance of his duties, he would not direct the public prosecutor to take up the case, and have it tried, as a warning to employers of labour who keep their workshops in such a condition that the health and the lives of their workers were destroyed. He considered this a most disgraceful case, and—(cries of "Oh!" and "Order," amidst which the hon. gentleman resumed his seat).—Mr. Puleston gave notice that on Thursday he would ask the Secretary of State for the Home Department whether his attention has been called to the present condition of Guy's Hospital and to the statements made by the senior physician in a letter to *The Times* of Saturday last, and to the report of the inquest since held in the hospital; and whether, as the hospital is subject to the control of Parliament, he will take steps to remedy a state of affairs which is calculated to impair the usefulness of the institution.

On Wednesday, in reply to Mr. Hicks, Mr. Gladstone said no restriction would be placed on the use of any materials in brewing, except such as were absolutely mischievous. The substance called saccharum, or condensed maize wort, would

be charged by the excise officers as sugar. At the close of the sitting the Lunacy Law Amendment Bill was withdrawn.

On Thursday, the chief interest, of course, centred upon the news from Afghanistan. From the lists read by the Marquis of Hartington it appeared that amongst the officers of General Burrows's force who reached Candahar in safety were Surgeon-Major Harvey, Horse Artillery; Surgeon Burroughs, 3rd Scinde Horse; J. Eaton, 16th Native Infantry; and A. Dane, 1st Native Infantry. The answer given by the Home Secretary to Mr. Puleston's question, with regard to the recent inquest at Guy's Hospital, was as follows:—I have no power to interfere, but the unfortunate circumstance to which this question relates is the subject of judicial investigation, so that it will be thoroughly investigated in a court of law. I have confidence that the Governors of Guy's Hospital will consider the matter very fully.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—

The following gentlemen having passed the required examination for the diploma, were duly admitted Members of the College at a meeting of the Court of Examiners on the 22nd inst. :—

Briscoe, J. Frederick, West Hackney.
Clark, William, Hampstead.
Corbould, H. Francis, Thornton-heath.
Elliot, E. A. Savage, Kingsbridge, Devon.
Ford, L. Frederick, Highgate.
Hendley, John Lupton, Dover.
Hockin, George Treverno, Beckingham.
Hoets, Alton Kingsley, L.S.A., Adelaide-road.
Hills, A. Phillips, Battersea.
James, Charles Alfred, Plymouth.
Jones, A. C. Brett, Lavender-hill.
Morris, E. F. Griffith, L.S.A., Hereford.
Newnham, W. H. Christopher, Wolverhampton.
Lloyd, Rickard William, Wood-green.
Stansby, Charles John, L.S.A., Hoxton-street.
Steeves, George Walter, Liverpool.
Taylor, Henry Herbert, Lewisham.
Wakefield, Horace, Alwyne-place.

The following gentlemen were admitted Members on the 23rd inst. :—

Acland, Theodore Dyke, L.R.C.P. Lond., Oxford.
Batterham, John Williams, Haverstock-hill.
Coronado, Daniel Enrique, M.D. Paris, Colombia.
Lane, Alexander, Bishop's-castle, Salop.
Milnes, George Hutchinson, Turnditch, Derbyshire.
Phipps, E. V. Ayre, Husbands Bosworth.
Pizey, G. F. Price, Clevedon, Somerset.
Risk, E. J. Erskine, Plymouth.
Street, Alfred Francis, M.B. Cantab., Whittlebury, Towcester.
Tucker, Joseph, L.S.A., Chulmleigh.
Westcott, Sinclair, Plymouth.
Wilson, George John, Brixton.

The following gentlemen were admitted Members on the 26th inst. :—

Barnes, George Frederick, Weymouth.
Chitty, Alfred Goldney, Dedham, near Colchester.
Duncan, Duncan, Buckingham-palace-road.
Fenton, H. A. Hill, Cumberland-street.
Grayling, Arthur, Forest-hill.
Lerew, Frederick William, Maida-vale.
Quicke, William Henry, L.S.A., Brixton-road.
Richardson, Richard Tippetts, L.S.A., Hackney.
Silk, J. F. William, L.S.A., Gravesend.
Terry, Henry George, L.S.A., Mells, Frome, Somerset.
Weston, George Edward, L.R.C.P. Edin., Bognor, Sussex.
Wood, Edward Archer, Marlborough.

The following gentlemen were admitted Members on the 27th inst. :—

Clarke, Ernest, Hampstead.
Clarke, William Jenner, L.S.A., St. Augustine-road.
Doyle, Robert Walter, Seymour-street.
Dobraschian, Gabriel Sukias, Constantinople.
Field, James William, Chesham, Bucks.
Howard, Eaton Clark, Devonshire-road.
Jackson, Mark, L.S.A., Great Torrington, Devon.
Jay, M. H. Hindmarsh, Adelaide.
Jessop, W. H. Hylton, B.A. Cantab., Vernon-street.
Nichols, Frederick Peter, B.A. Cantab., Bury-street.
Taylor, Thomas Percy, L.S.A., Bocking, Essex.
Volckman, Ronald, L.S.A., Upper Norwood.
Woodhouse, Tom Percy, L.S.A., Pontefract.

The following gentlemen were admitted Members on the 28th inst. :—

Battiss, William Sullivan, L.S.A., Southsea.
Bradshaw, O. G. Dix, Bath.
Burton, F. H. Merceron, Avenue-road.
Carpenter, Arthur Bristowe, Croydon.
Carr, Alfred Alexander, New Barnet.

Collins, William Job, Albert-terrace.
 Hayward, John Davey, L.S.A., Liverpool.
 Macnamara, Hugh Winckworth, Uxbridge.
 Neumann, Joseph, M.D. Berlin, Bedford-square.
 Shepard, Ernest William, Euston-road.
 State, Alfred, Ockenden-road.
 Thompson, Charles Emilius, L.S.A., Delamere-street.
 Welch, George, Leamington.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on July 22nd :—

Barnes, Henry John, Thornhill-terrace.
 Brown, James Grierson, Liverpool.
 Dresser, Arthur Kinnaird, St. Oswald road, West Brompton.
 Hughes, Thomas William, Royal Infirmary, Glasgow.

The following gentlemen also on the same day passed their Primary Professional Examination :—

Wm. Oliver Tyndall Annesley, Greville Ewing Seon, and Alfred Geo. Clarke Pocock, St. Thomas's Hospital; Howard Bennett Fletcher, Sheffield School of Medicine; George Trevor Harley Thomas, St. George's Hospital; John Alex. Shaw, University College; John William Blampied, St. Bartholomew's Hospital; Michael Anthony de Quadros, Grant Medical College, Bombay.

COLLEGE OF PHYSICIANS IN IRELAND.—At the July examinations the following obtained the licences in Medicine and Midwifery of the College :—

MEDICINE.—James Henry Beattie, Robert Ettingsall Beattie, George Harry Broadbent, Fanny Jane Butler, Alexander Cosgrave, Patrick Richard Dennehy, Augustus Newton Dickenson, Geo. Philip Elliott, William Henry Fitzmaurice, Hubert Flanagan, William Gibbon, William Frederic Gilbert, Henry Wilson Stocker Hall, John Hugh Harricks, James Kernan, John M'Cullagh, William Joseph Magee, Anthony H. Morgan, Patrick O'Donaghue, James Joseph O'Dwyer, William Renner, Samuel Sharpe, John Whittake Tate, Henry Clark Wilson.

MIDWIFERY.—James H. Beattie, Robt. E. Beattie, Geo. H. Broadbent, Fanny Jane Butler, Alexander Cosgrave, Hubert Flanagan, William Fredk. Gilbert, Henry Wilson Stocker Hall, John Hugh Harricks, James Kernan, John M'Cullagh, George Henry Manning, James Joseph O'Dwyer, William Renner, Samuel Sharpe.

The undermentioned were admitted Members of the College on the 9th inst., the names being arranged in order of seniority :—

Henry Gray Croly, Charles H. Robinson, Richard Warren Pendleton, Charles Trussell Bridgford, Robert R. King Elmes.

DR. REID, jun., of Ellon, has been elected President of the Buchan Medical Society for the ensuing year.

The Visitors for the Isle of Ely and the County and Borough of Cambridge have determined to appoint an assistant medical officer for the county lunatic asylum.

ST. STEPHEN'S GREEN, Dublin, which has been beautified and improved by Lord Ardilann at a cost of £20,000, was opened to the public on last Tuesday, the 27th instant.

The salary of **Mr. James Allen, L.R.C.P. Edin.**, M.R.C.S. Eng., Medical Officer of Health to the Bollington Urban Sanitary Authority, has been increased from £10 to £20 a year.

DR. DIXON has been presented by the nurses of the Newcastle-on-Tyne Infirmary with an elegant silver-mounted decanter, as a mark of esteem, on his resignation of the senior house-surgeoncy of the institution.

H.R.H. THE PRINCESS CHRISTIAN has consented to open the Herts Convalescent Home on the 21st October. The new institution is intended to accommodate 44 patients. About £1500 is still required to meet the entire cost of the building.

The vicar and churchwardens of Temple parish, Bristol, have consented to the opening, as a garden, of a burial-ground long unused for interment and closed against the public. This is a step which should be taken in other parishes similarly circumstanced.

MR. R. NUNN, surgeon to H.M. Prison at Warwick, destroyed himself on Sunday by taking a dose of prussic acid. Deceased, who was very much esteemed in the borough, is stated to have been overworked lately, and finally his mind gave way.

TRINITY COLLEGE, DUBLIN.—The Council have recently adopted a resolution, in addition to that passed in May last, by which certificates in ophthalmic surgery will not be accepted from any hospital that does not maintain permanently fourteen beds for ophthalmic cases only.

MR. T. T. LINART, late Medical Officer to the First District of the Bedminster Union, has been awarded a superannuation allowance of £80 a year. Mr. John Vance, late medical officer for the Plaistow district of the West Ham Union, has received a similar allowance of £30 a year.

A **BAZAAR** on a grand scale was held last week on the grounds of Easthill House, Colchester, the residence of Mrs. Round, in behalf of the funds of the Essex and Colchester Hospital. It is expected that the proceeds, when the accounts are made up, will prove to be very large.

MR. GEORGE CROOM ROBERTSON, M.A., Professor of Logic and Philosophy of Mind, University College, London, has been appointed one of the External Examiners of the New Victoria University, as has also been Mr. James Bryce, D.C.L., M.P., Regius Professor of Civil Law, Oxford.

At the annual meeting of the supporters of the General East-end Tradesmen's Association in aid of the London Hospital, it was announced that the amount of subscriptions in behalf of the Association showed an increase on that usually received. A total number of thirty-two life governors had been made out of the funds of the society.

ADELAIDE HOSPITAL, DUBLIN.—The following prizes have been awarded at the termination of the session 1879-80 :—Senior Surgical prize : Messrs. Cuppage and Polden (equal). Junior Surgical prize : J. H. Scott. Senior Medical prize : Messrs. Hull and Polden (equal). Junior Medical prize : F. W. Elsner. Obstetrical prize : T. C. Moore.

CITY OF DUBLIN HOSPITAL.—The directors of this hospital, having incurred a debt of £1951 for improvements, &c., during the last few years, made an appeal a few months ago for funds to defray the amount. This has been liberally responded to, and £1347 has already been received, leaving a balance due of some £600, which it is expected will shortly be obtained.

It is to be regretted that the Woolton Convalescent Institution is, like many medical charities at the present time, suffering from want of funds. At the annual meeting of the friends of the Home, held on the 17th inst., the report read showed a balance of expenditure over receipts of £260. The chairman, however, mentioned a gratifying fact—viz., that many of the substantial subscriptions to the funds of the institution were from societies connected with the artisan class.

ACCIDENTS IN MINES.—The Home Office has just issued the annual reports for 1879, presented to the Home Secretary by the Inspector of Mines. The summaries show that during the year 1879 the aggregate number of persons employed in and about the whole of the mines in the United Kingdom of Great Britain and Ireland amounted to 523,870 persons. Of these 476,810 were employed under the Coal Mines Regulation Act, and 47,060 under the Metalliferous Mines Regulation Act. The total number of fatal accidents was 843, and the total number of deaths occasioned thereby 1037, showing a diminution compared with the totals for 1878 of 39 in the number of fatal accidents, and of 453 in the number of lives lost.

Medical Appointments.

Intimations for this column must be sent DIRECT to the Office of THE LANCET before 9 o'clock on Thursday Morning, at the latest.

CARRINGTON, R. C., M.D., M.R.C.P., has been appointed Visiting-Physician to the Dreadnought Seamen's Hospital at Greenwich, vice Dr. C. H. Raffe, F.R.C.P., resigned.

CORBY, H., M.D., M.Ch., has been appointed Assistant-Surgeon to the North Infirmary, Cork.

CORKE, C. A., L.F.P.S.G., L.S.A.I., has been appointed Medical Officer for the Baschurch District of the Ellesmere Union.

CULLING, J. C., M.R.C.S.E., has been appointed Resident Medical Officer to Charing-cross Hospital.

DAVIES, D. W., M.D., C.M., has been appointed Medical Officer for the Llanharan District of the Bridgend and Cowbridge Union.

FRASER, J., M.D., L.R.C.P.L., L.R.C.S.Ed., has been appointed Physician to the Toronto General Hospital.

GEIKIE, W. B., M.D., F.R.C.S.Ed., L.R.C.P.L., has been appointed Consulting Physician to the Toronto General Hospital.

GRIMWOOD, H. C., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for the First District and the Workhouse of the Pontefract Union, vice Simpson, resigned.

HININGS, J. W., L.R.C.P.E.D., L.R.C.S.Ed., has been appointed Medical Officer and Public Vaccinator of the Knightwight District of the Martley Union, vice Mr. David Holmes, resigned.

HUGHES, T. J., M.D., M.R.C.S.E., has been appointed Medical Officer for the West Woolwich District of the Woolwich Union.

JACKSON, G., F.R.C.S.E., has been appointed Honorary Surgeon to the Plymouth Public Dispensary, vice W. B. Stephens, M.R.C.S.E., resigned.

JONES, T., M.B., F.R.C.S.E., has been appointed one of the Honorary Surgeons to the Manchester Royal Infirmary, vice Bradley, deceased.

MCCLURE, H., M.D., M.Ch., has been appointed Medical Officer for the First District of the Romford Union.

MAKINS, G. H., F.R.C.S.E., has been appointed Dispensary Surgeon to the Sailors' Dispensary, Well-street, London Docks, which will be opened in connexion with the Dreadnought Seamen's Hospital, Greenwich, in September next.

MOORE, H. C., M.B., has been appointed House-Surgeon to the Lancaster Infirmary and Dispensary, vice Collis, L.K.Q.C.P.I., resigned.

MURISON, J. F., M.B., C.M., has been appointed Medical Officer for the Parish of Cumbernauld, Dumbartonshire.

NICHOLSON, A., L.R.C.G.Ed., L.F.P.S.G., has been appointed Medical Officer for the First District of the Hunslet Union.

O'SULLIVAN, S., M.D., M.Ch., L.R.C.S.Ed., has been appointed Visiting Surgeon to the North Infirmary, Cork.

PHILLIPS, J. W., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for the Cowbridge District of the Bridgend and Cowbridge Union.

RYERSON, G. S., M.D., L.R.C.S.E., has been appointed Surgeon to the Mercer Eye and Ear Infirmary, Toronto General Hospital.

SHEAF, C. A. E., F.R.C.S., M.R.C.P., has been appointed Medical Officer to the Board of Trade for the Port of Barrow-in-Furness.

SHEARD, C., M.R.C.S.E., has been appointed Pathologist to the Toronto General Hospital.

SLOMAN, S. G., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for the South District of the Farnham Union.

SOUTHAM, F. A., M.A., M.B., F.R.C.S.E., has been appointed Honorary Assistant-Surgeon at the Manchester Infirmary, vice T. Jones, M.B., F.R.C.S.E., appointed Hon. Surgeon.

STEAD, Mr. J. E., has been appointed Public Analyst for the Borough of Middlesbrough. £10 10s. per annum and fees.

WARE, J. W., M.R.C.S.E., L.R.C.P.L., has been appointed House-Surgeon to the North Devon Infirmary, vice Kay, resigned.

WATSON, G. S. M.B., C.M., has been appointed Medical Officer for the Thaxted District of the Dunmow Union.

WORRALL, Mr. R., has been appointed Medical Officer for the Workhouse of the West Derby Union, vice W. B. L. Langley, deceased.

Births, Marriages, and Deaths.

BIRTHS.

BAKER.—On the 24th inst., at the Rectory, Hargrave, Northamptonshire, the wife of Surgeon-Major T. Young Baker, A.M.D., of a daughter.

DARLEY-HARTLEY.—On the 26th ult., at East London, Cape Colony, the wife of W. Darley-Hartley, M.R.C.S., L.R.C.P., of a daughter.

MANDERS.—On the 22nd inst., at Agincourt House, Yorktown, the wife of Horace Manders, F.R.C.S., of a son.

PHILLIPS.—On the 13th inst., at Woodville, New Ferry-park, Cheshire, the wife of Ed. J. M. Phillips, M.R.C.S.E., L.D.S., of a son.

RENSHAW.—On the 21st inst., at School-road, Sale, Cheshire, the wife of Israel J. E. Renshaw, of a daughter.

ROOSE.—On the 22nd inst., at Regency-square, Brighton, the wife of Robson Roose, M.D., F.R.C.P., of a son.

SMITH.—On the 25th inst., at Caistor, Lincolnshire, the wife of Tom Smith, M.R.C.S.E., L.R.C.P., of a daughter.

THORNTON.—On the 24th inst., at 83, Park-street, Grosvenor-square, W., the wife of J. Knowles Thornton, M.B., C.M., of a daughter.

MARRIAGES.

BIDEN—JONES.—On the 28th inst., at St. Cybi's, Holyhead, by the Rev. Morris Jones, B.A., William Price Biden, M.R.C.S.E., of St. Mary's-road, Peckham, and Hyères, France, to Ellen Elizabeth Jones, of Ffynnon y Gorlas, Holyhead.

COUPLAND—POTTER.—On the 27th inst., at St. Andrew's, Bath, by the Rev. Prebendary Anderson, A.M., Sidney Coupland, M.D., F.R.C.P., of Weymouth-street, Portland-place, third son of the late W. N. Coupland, of Streatham, to Bessie, youngest daughter of the late Thomas Potter, of Great Bedwin.

GROVES—AUGERAUD.—On the 22nd inst., at St. Mary Abbots, Kensington, by the Rev. T. J. Williams, Rector of Waddesdon (cousin of the bride), assisted by the Hon. and Rev. E. Carr Glynn, Vicar of the Parish, and the Rev. H. Huleatt, late Chaplain to the Forces (First Class), and Vicar of St. John's, Bethnal-green, James Mary Julia Nelly, daughter of the late William J. P. Augeraud, Esq., and step-daughter to H. L. Harper, Esq., of 19, Addison-road, Kensington.

HOBSON—ARMITAGE.—On the 27th inst., at St. Martin's, Scarborough, by the Rev. James Hope, M.A., of Holy Trinity, Halifax, assisted by the Rev. C. G. Foster, M.A., Lewis John Hobson, M.B. Lond., B.S., F.R.C.S., of Scarborough, to Frances Vernon, youngest daughter of the late George Armitage, Esq., J.P. & D.L., of Milnbridge House, Huddersfield, and Nunthorpe, York.

KAY—THOMPSON.—On the 22nd inst., at Newport Parish Church, Barnstaple, North Devon, William Kay, M.R.C.S.E., L.S.A.L., of Barnstaple, to Mary Ellen (Lillie), elder daughter of the late Isaac Thompson, J.P., of Workington, Cumberland.

DEATHS.

CARTER.—On the 25th inst., at 69, Wimpole-street, after lingering illness, Helen Ann Beauchamp, the beloved wife of Robert Brudenell Carter, aged 48. Friends are requested to receive this intimation.

GREIG.—On the 18th inst., at Sunnyside, Fyvie, A. F. Greig, M.R.C.S.E., aged 65.

PEARSE.—On the 24th inst., at Penzance, John Pearse, Surgeon, late of Tavistock and Wisbech, aged 65.

PHELAN.—On the 23rd inst., at his residence, Grove-road, Rock Ferry, Cheshire, William Bernard Phelan, L.R.C.P.E., L.R.C.S.E., &c.

TREVAN.—On the 18th inst., at Padstow, Henry Trevan, F.R.C.S.E., Fleet-Surgeon, R.N. (retired).

WALSH.—On the 24th inst., at Whitechurch, near Dublin, Albert J. Walsh, F.R.C.S.I.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

BOOKS ETC. RECEIVED.

BAILLIÈRE, TINDALL, & COX, London.
The Nature and Treatment of Syphilis. By C. R. Drysdale, M.D. Fourth Edition. pp. 172.

CHURCHILL, J. & A., London.
Practical Lithotomy and Lithotripsy. By Sir H. Thompson, F.R.C.S. Third Edition, considerably enlarged. pp. 304. With Engravings.
The Riviera. By E. I. Sparks, M.A., M.B. pp. 403.
Medical Education and Practice in all Parts of the World. By H. J. Hardwicke, M.D. pp. 209.

FIELD & TUER.
Journals and Journalism. By John Oldcastle. pp. 141. 3s. 6d.

LONGMANS, GREEN, & CO., London.
Elements of Chemistry. By W. Allen Miller, M.D. Revised and in great part Rewritten by H. E. Armstrong, Ph.D., and C. E. Groves, F.C.S. Part III.: Chemistry of Carbon Compounds. Fifth Edition. pp. 1044. Illustrated.
Anatomy, Descriptive and Surgical. By Henry Gray, F.R.S. Ninth Edition, with an Introduction by F. Holmes, M.A. pp. 802. With Engravings.
An Introduction to Logic. By W. H. S. Monck, M.A. pp. 259.
Modern France. By Oscar Browning. pp. 126.
Introductory History of England. By W. M. Lupton. pp. 64.
A Familiar History of Birds. By the late E. Stanley, D.D., F.R.S. New Edition. pp. 416. With Engravings.

MACLACHLAN & STEWART, Edinburgh.
The Dissector's Guide: Abdomen. By D. J. Cunningham, M.D. pp. 329. With Engravings.

MACMILLAN & CO., London.
Sanitary and Social Lectures and Essays. By Charles Kingsley. Vol. XVIII. pp. 300.
On Aneurism, especially of the Thorax and Root of the Neck. By R. Barwell, F.R.C.S. pp. 118. With Illustrations.

PUTNAM'S SONS, New York.
Contributions to Orthopedic Surgery. By Dr. J. C. Hutchison. pp. 121. With Engravings.

SANITARY INSTITUTE OF GREAT BRITAIN.
Report of the Third Congress of the Sanitary Institute of Great Britain. Edited by H. C. Burdett and F. de Chaumont, M.D. pp. 392.

WATTS & CO.
Life and Mind, on the Basis of Modern Medicine. By R. Lewins, M.D. Edited by "Thalassoplektos." pp. 72.

WYMAN & SONS, London.
Professional Bookkeeping. By W. J. Gordon. pp. 96.

A Reply to Criticisms on "The Problems of Insanity"; what Constitutes a Discovery in Science. By Dr. G. M. Beard. (New York.)—Alcohol Tables. By O. Hehner, F.C.S.—Notes of a Case of Rare Form of Elephantiasis. By D. T. Playfair, M.B. (Oliver & Boyd.)—Annual Report of the Royal Edinburgh Asylum for the Insane.—Annual Report of the Committee of Management of the Hospital for Sick Children.—The Educational Treatment of Incurably Deaf Children. By W. B. Dalby, F.R.C.S. (Churchill.)—Journal of Anatomy and Physiology, Vol. XIV. (Macmillan.)—Revue des Sciences Médicales. No. XXXI.—The Anglo-American Practical Guide for the Continent of Europe.—Den Miasmatiskt-kontagiosa Lungotsen. Af Dr. F. Eklund.—A New Eye Bandage. By Dr. S. Theobald.—Hydro-Incubation. By T. Christy, F.L.S.—Archiv für Pathologische Anatomie und Physiologie. Herausgegeben von Rudolf Virchow.—Brain. No. X.—American Journal of Medical Sciences, July.—The Therapeutic Gazette, June.—Victorian Review, June.—Fourth Annual Report of the Managers of the Morristown Asylum.—Australian Medical Journal, April and May.—Una Parola intorno alla Patogenesi della Epilessia; lettera del Prof. Vincenzo Chirone all' esimio L. Luciani.—Canadian Journal of Medical Science.—The Improved District Railway Map. (Adams & Son.)—Twentieth Annual Report of the Burnwood House Hospital for the Insane.—Rules and Code of Etiquette of the Manchester Medico-Ethical Association.—Ataxie Locomotrice et Lésions Cardiaques. Par le Dr. J. Grasset.—Elementary Education at Home and Abroad: a Lecture by A. Sonnenschein.—On the Mode of Healing in Wounds under Antiseptic Dressings. By Dr. David Foulis.—The Irritable Bladder in the Female. By Dr. Oppenheimer.—Estudio en que se Trata de Esclarecer y Demostrar las Verdaderas Funciones de la Próstata. Por el Dr. José Torres Matos.—The Dental Jairos, July.

METEOROLOGICAL READINGS.

(Taken daily at 8 a.m. by Steward's Instruments.)

THE LANCET OFFICE, July 29th, 1880.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radiation in Vacuo	Max. Temp Shade	Min. Temp	Rain fall.	Re- marks at 8.30 A.M.
July 23	30.02	W.	67	60	107	78	57	..	Fine
" 24	29.92	W.	66	60	105	73	57	..	Fine
" 25	29.84	S.W.	69	67	116	81	53	..	Fine
" 26	29.58	S.W.	63	61	103	71	58	0.47	Raining
" 27	29.79	W.	65	61	114	77	58	..	Cloudy
" 28	29.79	S.W.	65	61	92	70	60	..	Cloudy
" 29	29.54	S.W.	65	62	111	75	60	0.12	Cloudy

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Local papers containing reports or news-paragraphs should be marked.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

Lectures, original articles, and reports should be written on one side only of the paper.

We cannot prescribe, or recommend practitioners.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET to be addressed "To the Publisher."

"CRUELTY TO WOMEN."

We are about to reissue our list of houses of business at which seats are, or will shortly be, provided for women serving behind counters and in show-rooms. Firms desiring to be included in the same will please to communicate.

DRINK FOR RAILWAY TRAVELLERS.

At some of the stations on the principal railways outside London, what is called "iced water" is provided and handed round—or perhaps we ought to say hawked about—in wire baskets. The idea is a good one, but could not the companies be generous enough to give their customers a few glasses of cold water? There need be no great trouble or expense in the matter. The water need not be actually iced; it is not now—or if it has been, that must have been some time ago. The jugs from which the dirty little boys playfully fill up the dregs left in dirty glasses by those consumers who are not so thirsty as to drink every drop, do not stand in a refrigerator, but on a table or bench somewhere on the platform, and sometimes of course in the sun. The only drawback we foresee to the plan proposed—namely, that the companies should take the business in their own hands—is, that the lessees of refreshment-stalls might ask to have their rents reduced. There need not be any haste in this respect. By continuing the practice of serving out water a little longer as it is now conducted, the public will be sufficiently disgusted to fall back on the old-fashioned seltzer with a drop of "something" in it. The "ow much?" ejaculated by each dirty little boy, as he sees one of his colleagues sell a glass of "iced water," draws attention to the matter, and the manner in which the glass is seen to be filled up from a tepid solution of dead flies is not appetising.

Dr. Irving.—We gave our correspondent an opportunity of defending himself against the statements made with regard to the administration of the General Hospital, Calcutta; but we cannot accept him as the self-constituted champion of Dr. D. B. Smith in our columns, more especially as he bases the defence on his impressions, and comments upon the report of a Committee appointed so far back as 1870; nor do we think it necessary to obtain, as he suggests, "from the Government of Bengal a copy of Dr. Smith's unpublished utter."

Mr. R. T. Tickling.—The treatment alluded to is practised, and in some cases with success. We would recommend consultation with a good general surgeon, who could probably suggest more suitable treatment.

July, 1880.—The charge for the stamp for the Membership or Fellowship of the College ad eundem is 20s.

Dr. A. H. Bennett.—The paper will appear in an early number.

ACUTE RHEUMATISM TREATED BY HOT WASHING-SODA BATHS.

In the *Australian Medical Journal* for April, two cases of acute rheumatism treated by hot washing-soda baths are reported by Mr. Bingham Crowther, L.R.C.P., as occurring under the care of Dr. E. L. Crowther. In this treatment the patients are taken in a blanket by the four corners, and lowered down in a recumbent position into the bath. Half a pound of common washing-soda is added to the water as hot as can be comfortably borne, the patient remaining in from ten to fifteen minutes, then lifted into a dry warm blanket, and replaced in bed. According to the reporter, profuse diaphoretic action follows along with diuresis, to the immediate relief of the sufferer, pains rapidly depart, and sleep follows the use of the remedy. In one severe case convalescence was effected in eleven days. The other case was treated without permanent benefit with salicylate of soda and various sedatives and salines. On the 25th of December, 1879, "the patient becoming immovably fixed in bed by the affection of new joints, and all remedies proving useless, the washing-soda bath was tried as a last chance. After remaining in ten minutes he was removed. His complexion soon changed from a muddy to a natural colour, and the pains left the joints." On the 27th there remained only a little aching in the body and slight pain in the left wrist. Complete recovery having been established on the 8th January, the baths were discontinued.

Mr. James T. R. Davison.—We do not know.

DR. TANNER'S FAST.

To the Editor of THE LANCET.

SIR,—It may interest some of your readers to know that some five years ago I attended a lady over sixty years of age who suddenly refused food in every shape and form. I never found out the reason why she did so, but I fancy it was owing to some family trouble. Be this as it may, she lived for exactly seven weeks, and died on the forty-ninth or fiftieth day, during the whole of which time she took nothing but cold water—at first freely, but gradually in smaller quantities—with one exception of a dessertspoonful of brandy in water, which was never repeated. All offers on my part to force food with the stomach-pump or enema were steadily refused by patient and friends. They were people in a good position, and there was no reason for deception of any kind; in fact, most of the friends are still alive, and if any member of the profession would like to sift this case I shall be happy to give him every facility for so doing. I may mention that the lady in question was always remarkably quiet in manners and very taciturn, seldom, when quite well, speaking unless in reply to some question. She was also very stout, and some few years earlier I had operated upon her for strangulated umbilical hernia, from which she recovered without a bad symptom; and at the time of her death, although her legs and arms had become very thin, her body retained much of its previous stoutness.

I am, Sir, yours, &c.,

July 27th, 1880.

M.D.

To the Editor of THE LANCET.

SIR,—As a considerable amount of attention is just now called to the possibility of protracting life for a lengthened period without food, perhaps the following case may be worth notice:—

R. G.—, a man of spare build, very recently deceased, had been under my care for the last three years. For some time past his occupation was that of gardener, until constantly recurring pains and weakness obliged him to relinquish all work. Without going into particulars I may state that his disease was cancer of the stomach. For forty-one days before his death he took no food of any kind, either liquid or solid, merely moistening his lips from time to time with water. For four months previously the amount of nourishment in any shape of which he partook, might be contained in an ordinary breakfast cup. His wife assures me—and I have no reason to doubt the truth of her statements—that during the previous twelve months he would only take a morsel of food once in every two or three days, as the agony he suffered after receiving anything into his stomach made him so dread its renewal that he would remain without food till forced by sinking and weakness to take some further nourishment.

There was great emaciation for a considerable time before death, but he was perfectly sensible to within twelve hours of his decease, could speak in a whisper, and knew those around him.

I am, Sir, yours, &c.,

Meadowside, Putney, July 26th, 1880. G. STANLEY MURRAY, M.D.

Only a Provincial Fellow should write to the Honorary Secretary, Mr. B. T. Lowne, F.R.C.S. The following list of provincial Fellows who have been Chairmen of the Fellows' festival will, no doubt, be found correct:—In 1847, Mr. J. S. Soden, of Bath; 1849, Mr. J. Hodgson, of Birmingham; 1851, Mr. J. H. James, of Exeter; 1853, Mr. Wilson, of Manchester; 1855, Mr. Norman, of Bath; 1857, Mr. Smith, of Leeds; 1859, Mr. T. Paget, of Leicester; 1861, Mr. J. Wickham, of Winchester; 1863, Mr. T. Turner, of Manchester; 1865, Mr. P. C. De la Garde, of Exeter; 1867, Mr. T. Green, of Bristol; 1869, Mr. T. Nunneley, of Leeds; 1871, Mr. H. D. Carden, of Worcester; 1873, Professor Humphry, of Cambridge; 1875, Surgeon T. Longmore, of Netley, Southampton, as representing the Army; and 1877, Mr. E. L. Hussey, of Oxford.

W.—We do not reply to questions unaccompanied by name and address.

LUNACY IN IRELAND.

It appears from the recently issued report of Irish Lunatic Asylums for the past year that there has been an increase of 234 in the number of insane over that of the preceding year; but the Commissioners, bearing in mind the fact that from the unbroken severity of the last winter and the destitute condition of whole counties throughout Ireland for many months, most of the imbecile and idiotic were forced to seek shelter in workhouses, infer that the total 12,819 not only supplies a very fair estimate of the actual amount of insanity in Ireland in its various forms, but affords evidence that the disease cannot be regarded as really on the increase. During the past year, 2392 were admitted into district asylums, of which number 1955 were cases of a first attack and 438 of relapses, the comparatively large number of the latter indicating a marked difference between the liability of a recurrence of disease in mental and physical affections. Of the 10,800 under treatment in district asylums, 1004 were sent out recovered, being at the rate of 42 on admissions, and not quite 10 on the whole number under treatment; 245 were improved, and 105 unimproved. The mortality amounted to 940, being equal to a death-rate of $8\frac{1}{2}$ on the entire number in asylums, the increase being due to the harshness of the weather and the prevalence of bronchial diseases. Two of the deaths were accidental and one suicidal; and when we learn that upwards of 1300 lunatics were committed as dangerous or violent, the result is very gratifying. Of 8490 resident in district asylums on the 1st of last January, 1861 were married, 467 widowers or widows, 5816 single, and in 346 instances the social condition was unknown. This discrepancy between the number of married and single inmates is remarkable, and is totally at variance with what is elsewhere recognised.

Mr. M. Bull.—The communication has been received, and will be inserted as early as our arrangements will permit.

THE INDIAN MEDICAL DEPARTMENT.

To the Editor of THE LANCET.

SIR,—Please allow me space in your columns to inform intending candidates for competition for the Indian Medical Service that three of the men who took the highest places at examinations within the past three years have petitioned for transfer to the Army Medical Department, owing to the changes in their position and prospects under the late orders of the Government of India. More may have petitioned, but I know of three for certain, and it is only fair that candidates should be aware of the way that juniors look at the present position of their service before they find themselves in the same predicament. It has been a source of great disappointment and regret to our service to find THE LANCET, to whom we naturally looked for support in our struggle for fair play and justice, should have so misunderstood our case as to present to the public and the profession such a one-sided view of the points at issue; and, in the interests of common justice and fairness, I claim the publication of this protest against the idea put forward of there being either jealousy or animosity on the part of our service against the A.M.D. Nothing that has issued from our Defence Committee can be construed to bear such a meaning, though an occasional member of the service, smarting under the sting of injustice and degradation, may have written in a strain which he would himself be the first to regret in cooler moments, and I would assure our A.M.D. brethren that we repudiate all such ideas or intentions. They have succeeded in obtaining some crumbs of justice. No one considers they have obtained all they ought to have.

Now, all we claim is equality in our especial sphere of service. We do not see why 380 Bengal medical officers should be subordinated to 185 A.M.D. officers; the latter number being the war establishment of the A.M.D. in Bengal; in times of peace the number would be about 150 or so. You will reply, "Some of your men are under the civil department." True. But we are all military commissioned officers, and not civil officers, and are merely temporarily in civil employ, liable to be sent to military duty at any moment, and our promotions, pensions, and chance of honours or distinctions are all dependent on military service. Not a medical officer in civil employ has obtained a decoration or honour of any sort or kind in all Bengal! or I believe in all India, so that we are now practically and theoretically a subordinate branch of the A.M.D. So much then for our position; that is unquestionable.

As regards our prospects, which you assert have been improved, I would merely state facts. In 1860 there were seventeen administrative appointments (including a Director-General) in Bengal, which we could all look forward to as the reward of good service when our turn came. At the present moment there are three deputy surgeon-generals in the military department, for whom have been reserved the very worst and most unhealthy stations in Bengal, and on whose shoulders has been placed all the miscellaneous work of the Government, as gaols, sanitary, civil dispensaries, &c. &c. In the civil department there is one surgeon-general and sanitary commissioner combined, and four deputy surgeon-generals. Were the old and just rules of seniority and selection in force in this department, we could look forward perhaps to promotion in this line; but the two first promotions under the new rules have been from the grade of surgeon-major, superseding every administrative officer

in the service, and in both cases, in defiance of the hitherto unviolated rule, that officers who had once refused promotion, were not eligible in future. When such men as Deputy-Surgeons-General Christison and De Renzy—both men of acknowledged administrative skill and experience—were passed over, what can we hope for in future? What guarantee have we that the junior surgeon in the service, if he can only gain the ear of some local Lieutenant-Governor or the Viceroy, may not be appointed civil surgeon-general and sanitary commissioner? We have positively none, and will you, Sir, still say that our prospects are improved?

As regards the prospective promotion of the three sanitary commissioners to the privileges of deputy surgeon-generals. In the first place, they already draw the pay of a deputy surgeon-general, so there is no gain pecuniarily; they gain nothing in rank, except that their former commissions are to count from date of promotion, and not junior of that grade to the whole army, the Army Medical Department included; so the sole advantage lies in the pension of £250 extra. But how many of the sanitary commissioners will get it, and in what time? No sanitary commissioner since the post was created some fifteen years or so ago by Sir John Lawrence, as he was then, has yet retired as such, the Bengal and Punjab men having gone into other and more congenial appointments, as colleges &c., and Dr. Planck, the sanitary commissioner of the N.W.P. will have served as sanitary commissioner nineteen years before he can claim the pension of a deputy surgeon-general. Further, there is nothing to prevent any local Government appointing a military man or a competition wallah as sanitary commissioner, as has been done before, and the new rules in no way make the appointment a purely medical one. Under these circumstances I may, I think, be excused if I fail to see any reason for being grateful to Government. When the sanitary commissioners are ordered to be chosen from amongst the deputy surgeon-generals, I will admit the advantage; and when the latter are appointed for long service and efficiency, I may also be able to see some advantage in that line; but as long as they are the reward of toadyism, I cannot either look forward to the post or respect the incumbent.

I admit fully the absurdity of the late double administration. But why not have adopted the rule that has been adopted in the military commands—viz., every alternate man to be chosen from each service, and no distinction of stations to be observed? Or why not adopt the same ruling as in the Artillery and Engineers—equitable amalgamation? We are all proud of our service hitherto, and for this reason prefer to see it abolished to being degraded to a subordinate position under another service, whose members are less than half of ours, and whose standing is in no way superior. Again, let me repeat, we only ask for equality, and till that is granted, in a way, too, that cannot be set aside, let English and Irish students beware of how they put the yoke on their own necks.

I am, Sir, yours faithfully,

July 20th, 1880.

DISAPPOINTED.

* * We have received a note from the writer of the preceding letter, in which he informs us that, "if we [i.e., the Indian medical officers] fail, our service will attribute the failure to you chiefly, for the whole weight of your influence has been thrown into the scale against our obtaining our reasonable demands." Of this threat we will say nothing more than that we differ from the writer in his opinion as to what are reasonable demands. He admits the necessity for getting rid of the double administrative staff, but would like to retain half of the military appointments and to obtain all the new civil ones. We have considered it reasonable if the Indian Medical Department gets back a share, as it desires, of the military administrative appointments, that the British Medical Department should receive some compensation in the form of a share of the new civil ones, which were created to make up for the loss of the others. We do not think it reasonable that the British should lose more than half its administrative appointments without receiving anything in exchange, while the Indian should lose half and receive far more than an equivalent in the shape of lucrative civil appointments. In this respect we wish fair play to be given to both. We may add that on the same grounds we have always strongly advocated the revision of the scale of pensions for the Indian Medical Service, and the grant of rank and honours in it, to the same extent and on the same principle as in the British Medical Department.—Ed. L.

LIMITED LIABILITY COMPANIES AND THE PHARMACY ACT.

OUR contemporary, the *Pharmaceutical Journal*, takes a moderate and sensible view of the recent decision of the House of Lords in favour of Co-operative Stores and other Companies being at liberty to carry on the business of a chemist and druggist, provided that they do such business through a person who is properly qualified and registered under the Pharmacy Act. It would be a monstrous thing if such a Company were permitted to carry on such a business without complying with the conditions of the Pharmacy Act. Chemists and druggists, under these circumstances, should have little difficulty in competing with stores and companies. The public will be always likely to prefer the local chemist to the distant store, unless there is some great and unwarrantable discrepancy in the charges.

A General Practitioner had better apply to the Secretary of the Brussels Graduates' Association, Dr. Pocock, 20, Golborne-road, Upper Westbourne-park, W.

ERASURE OF NAMES FROM THE MEDICAL REGISTER.

We gather from our correspondents that the sharp application of the 14th section of the Medical Act, empowering the Registrar to write a letter of inquiry to any registered person, addressed according to the address in the Register, and in the event of receiving no answer within the period of six months from the sending of the letter, to erase the name of such person from the Register, is followed sometimes by much inconvenience and sense of hardship. It is most desirable, of course, to use all precautions for keeping the Register accurate; but the erasure of a name is a severe proceeding that should not be carried out till very strong evidence calls for it.

X. Y. Z. has forgotten to enclose his card.

POISONING BY THE CYTISUS LABURNUM.

To the Editor of THE LANCET.

SIR,—At the Ophthalmic Hospital of the West London District School, at Ashford, there are from twenty to thirty cases of slight granular eyelids. On the 6th inst., at about 12.20 P.M., shortly before the dinner hour, a number of the children were playing in a grass-yard used as a recreation ground, where there are some trees, one of which is a young laburnum tree. This tree was the victim of an assault, being broken down, and seven of the children ate and swallowed some of its leaves. The reciprocation of the attack was not altogether anticipated by them. The ages of the children only varied a few months; they are from six years and a half to seven years and a half of age. The first symptoms that attracted the nurse's attention were faintness and pallor. Upon the nurse interrogating them they confessed to having eaten some leaves of a tree, which was verified by the ejections, which were those of the laburnum. At 12.30 the children were seen by me, all of whom were in the same ward, except an unusually stout child, whose symptoms were not alarming after a few doses of ammonia and brandy. Extreme pallor; stupor; drowsiness; a weak, faltering pulse; coldness of the body and extremities; vomiting a clear fluid, containing portions of the leaves, and dilatation of the pupil in each case were symptoms common to all seven. Emetics were not given; indeed, they were contra-indicated, as vomiting had already set in, and the depression was extreme in most of the cases. The only reliable subjective symptoms elicited were pain in the epigastrium and frontal headache. Brandy, ammonia, and hot water were freely administered, and at 1 P.M. six cases had recovered, except drowsiness and partially dilated pupils. One boy was still in a serious condition; he was cold, although artificial heat had been resorted to, as in the other cases. The pupils were dilated; the pulse-rate 45 per minute and feeble; sleepiness; distressing retching, and a generally cyanosed appearance. Stimulants were freely given, but were quickly rejected by the stomach; nevertheless, they were persevered with, and at 1.45 P.M. reaction had been well established. They all partook of bread-and-milk at 5 P.M. The interest in these cases is that the children poisoned are all of the same age, with a variation of only a few months; that the poison taken was certain; that the poison was taken when fasting; that there was no diarrhoea; that there were no convulsions, not in the most extreme case; that the poisonous action of the laburnum is of a depressant and not of a convulsive character; and that recovery or death occurs in about two hours.

I am, Sir, yours obediently,

PETER W. DE LA MOTTE, M.R.C.P. Edin., &c.

Staines, July 13th, 1880.

Surgeon, R.N.—Yes. M. Lucas-Championnière has, we believe, recently performed the operation more than once with successful results.

Dr. M'Call Anderson.—Soon.

TREATMENT OF SCALP WOUNDS.

To the Editor of THE LANCET.

SIR,—If you think the following notes sufficiently interesting for publication, would you kindly insert them, as a comment upon the remarks of a similar case detailed in THE LANCET of June 26th :—

Mrs. P. B.—, an Irishwoman, aged sixty, was hanging clothes on the leads of her house. She fell a distance of forty feet into the yard of the adjoining house, striking in her fall the stone-sill of a scullery window. On arriving at the house, I found the patient perfectly conscious, with a large T-shaped wound, denuding the whole of the left parietal and occipital bones, the flaps of scalp covering respectively the left ear and the nape of the neck. After twisting two or three vessels and thoroughly cleansing the flaps, I inserted a thick wire suture at the junction of the two lines of wound, and applied very firm pressure with pads of dry lint and a bandage. This accident occurred on Nov. 12th, 1879. On the 14th the wire suture was removed. On the 20th, and therefore a week after the accident, the pad and bandage were removed. Union was perfect throughout. I saw one drop of matter in the course of my observation of the case—that was on the third day upon removing the suture. There was no œdema of face or bogginess of scalp.

Remarks.—The recovery was certainly remarkable; but I cannot attribute it to antiseptic dressings or the youth of the patient. I do attribute the result to hard and even pressure of the whole surface with dry dressings and non-interference for several days. Possibly something of the favourable issue of the case might be attributed to the nationality of the patient.

Yours truly,

FREDK. M. ROBERTSON, M.B., &c.

Colville-road, Bayswater, July 5th, 1880.

EXAMINATIONS AT THE ROYAL COLLEGE OF SURGEONS.

THE following were the questions on Surgical Anatomy and the Principles and Practice of Surgery submitted to the 241 candidates at the final examination for the diploma of Membership of the above College on the 16th instant, when they were required to answer at least four out of the six questions, including one of the first two :—

1. Describe the relations of the thyroid body, and mention the various operations in which it may be directly or indirectly concerned.
2. Give a description of the fasciæ of the male perineum, and state the chief surgical inferences to be drawn from their anatomical arrangement.
3. Under what circumstances in injuries of the head would you consider trephining indicated? Describe the operation.
4. Describe the ordinary consequences of dissection wounds, and the appropriate treatment.
5. Give the clinical history of a case of caries of the tarsus, and describe the pathological changes which occur in the course of the disease and in the subsequent repair.
6. To what causes may converging strabismus be due? Under what circumstances would you consider an operation appropriate and how would you perform it?

The following were the questions on the Principles and Practice of Medicine submitted to the candidates on the following day :—

1. Discuss the morbid anatomy and symptoms of enteric fever, and state the chief clinical distinctions between it and tubercular meningitis.
2. What are the distinctive signs of the several diseases of the aortic and mitral valves? What are the consequences of mitral disease as regards (1st) the heart itself; (2nd) the pulmonary circulation and lungs; and (3rd) the general circulation together with the liver and kidneys?
3. Enumerate the official alkaloids and their several preparations. State whence they are derived, what are their physiological and medical properties, and what their doses.

VENTILATION OF HOT-AIR BATHS.

To the Editor of THE LANCET.

SIR,—In view of your seasonable warning in THE LANCET of June 5th, regarding the dangers from insufficient ventilation in Turkish baths, allow me to mention a mode of ventilation that, so far as I know, is, of all modes, the most simple, cheap, and effectual. It applies to baths heated by a stove burning within the room, as in the case of baths heated by means of Scriven's circular stove, now in general use. All that is required is to cause the air that feeds the stove to traverse the room, slowly but continuously, in order to reach it. Of course combustion cannot go on in the stove without a continuous supply of air containing a due amount of oxygen. If air from the outside were allowed to enter near to where the stove is placed, it would reach it by a direct short cut, and could do next to nothing to change the air in other parts of the room; but if the air could enter only, or chiefly, on the side of the room opposite the stove, and had consequently to traverse the room in order to reach it, the slow-moving current would carry with it the carbonic-acid gas from the bather's lungs, which is the chief impure gas to be got rid of. The minute openings required for the entrance of air should be high up in the walls, or, better still, in the roof. This prevents all sensation of cold draughts among the bathers. The air from the outside, even in summer weather, is colder, and consequently heavier, than the air in the bath. It quickly becomes partially heated by meeting the radiation from the stove, and by mixing with the hot air, already of a high temperature; but it is not rarefied so quickly as to prevent it from sinking slowly towards the floor, moving along which towards the stove it carries with it the carbonic-acid gas. It is obvious that this gentle movement must be continuous so long as the fire in the stove is kept up, and that the more energetically the fire burns, the better will the ventilation of the apartment be. It is equally obvious that roof ventilation cannot be depended upon for the removal of carbonic-acid gas, because, being heavier than pure air of the same temperature, it cannot ascend except in minute quantity, on the principle of diffusion of gases. Much has been written about the admission of pure air into rooms, and many seem to take for granted that, if provision is made for this, all will be right. The object, however, that should be most considered is the removal of the gas thrown off by the lungs, and provision must be made for this at as low a level as where the heads of the inmates are.

The principle I have mentioned is applicable to ordinary dwellings and to all places in which fire is kept burning. In building a house, or in buying or renting, a chief thing to be seen to is that the relation of the fire-place to doors and windows is such that the air that feeds the fire must traverse the apartment in order to reach it. Many otherwise excellent houses are faulty if judged by this principle; but anyone that bestows attention upon it must see at a glance its great importance.

Yours &c.,

A. M.

July, 1880.

A DISCLAIMER.

To the Editor of THE LANCET.

SIR,—The Bradford Chronicle and Mail of June 12th, 1880, contained letter signed "A Woolsorter," in which my name was mentioned. I wish respectfully to state that I am utterly ignorant of its author, and that I have not in any way whatsoever had anything to do with its insertion.

I am, Sir, yours faithfully,

Heckmondwike, July 27th, 1880.

FRAS. B. LEE.

A HAPPY TERMINATION.

THE *Canada Lancet* reports that a suit for malpractice in a case of arm fracture, in which damages for \$10,000 were claimed, was recently instituted against two Baltimore surgeons. Dr. Walls, one of the defendants, gave an account of the case and of its treatment so clear and convincing as to induce the plaintiff and the counsel to make a public apology and to withdraw the suit.

Secretary, Order of St. John.—The lecture was noticed in our last issue.

MEDICAL AND SURGICAL BED-DRESS.

To the Editor of THE LANCET.

SIR,—When writing some suggestions for a "Medical and Surgical Bed-dress," I was not aware that [Dr. Thomas Joyce of Cranbrook had previously made a similar suggestion for "A New Form of Bedgown for Sickness," in the *Practitioner*. So far as the principle of our two communications is concerned, the original idea was clearly due to Dr. Joyce, and I hasten to acknowledge this. Had I known of Dr. Joyce's communication in time, I need hardly say I should have referred to it in my own "suggestions."

I am, Sir, yours &c.,

H. CRIPPS LAWRENCE, L.R.C.P. Lond.

Oxford-terrace, W., July 22nd, 1880.

A PRIZE FOR A "GOOD" MEDICAL ASSISTANT.

THE following letter to an applicant for an assistantship will be read with interest:—

"DEAR SIR,—Mr. — desires me to say his terms are to good married man a permanency. Salary 30s. weekly, unfurnished house, gas down stairs (not up), 1s. in the pound commission instead of coal, increased to 2s. in the pound when 45 is reached. There is no midwifery nor bookkeeping nor nightwork. It is on the dispensary system, all ready money. He requires bond signing, and pays no travelling expenses. Mr. — has a number of these places in —. He will require reference as to sobriety &c. to last situation. I enclose you carte.

"Yours &c.,

" — — —"

ERRATUM.—In Mr. Herbert Page's letter on Colour-blindness, page 152, line 23 from top, for "watching" read *matching*.

COMMUNICATIONS, LETTERS, &c., have been received from—Sir W. Jenner, London; Mr. MacCormac, London; The Hon. W. F. Massey-Mainwaring; Mr. Tickling, London; Messrs. Schacht and Co., London; Major Sharp; Mr. H. C. Laurence, London; Mr. Keyworth; Mr. Cobb, Hatham, N. Melbourne; Mr. Winter, Wolverhampton; Mr. Holmes, Meerut; Mr. Foster; Mr. Davison, Edinburgh; Dr. Thomas, Sheffield; Mr. Yeld; Mr. Kinloch; Mr. Knott; Mr. Cressey; Mr. J. Michell, New York; H. Löffler; Mr. Burdett, London; Dr. Bodine, Trenton; Dr. Bantock; Mr. Inglis, Edinburgh; Dr. Sheen, Cardiff; Dr. Murray, Putney; Rev. J. J. Beresford; Dr. Sandford, Hereford; Dr. Savage, Birmingham; Mr. Lawton, Poole; Mr. S. Gamgee, Birmingham; Mr. Lee, Heckmondwike; Dr. Davey, Bristol; Dr. MacLaren, Edinburgh; Mr. Kelley, Shirley; Mr. J. D. Jones, Lee; Mr. Brown; Dr. Edwards; Dr. Smith, Aberdeen; Dr. Wise, Zurich; Dr. Fordown; Dr. Francis, St. Louis; Mr. Good; Major Keith; Mr. Bailey; Dr. Helme, Manchester; Mr. Whiteley, Leeds; Mr. Jackson; Mr. Thompson, Leamington; Mr. Brown, York; Mr. Norris; Dr. Buchanan, Glasgow; Mr. Vaughan; Mr. Roland; Mr. Biden; Messrs. Smith and Co.; Mr. Kirby; Mr. Stephenson; Mr. Bowen; Mr. Scott; Mr. Shepherd; Dr. Finch, Fisherton; Mr. Usher; Dr. Tetley, Keighley; Mr. Callant; Messrs. Knight and Co.; Mr. Stamford; Messrs. Harvey and Reynolds, Leeds; Dr. Eberle, Easingwold; Mr. Teevan, London; Mr. Williams, Georgetown; Dr. McCall Anderson, Glasgow; Mr. Tyrrell; Dr. Garner, Birmingham; Messrs. Brismead and Sons; Dr. A. H. Bennett, London; Mr. Saunder, Manchester; Dr. Weaver, Longton; Mr. Furlong, Enniscorthy; Mr. Bridgman, Barnstaple; Mr. Edmund Johnson; Mr. F. R. Greenwood; One of them; Courser; H. F. S.; Ignoramus; A. B., Aberdeen; X. Y. Z.; A General Practitioner; Forceps; Alpha; J. H. W., Westbourne; Forceps; Statim; Reginaldus; Partner; L.S.A., L.F.P.S. Glas.; July, 1880; Chemist; J. M. S.; &c. &c.

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Advertisements (to ensure insertion the same week) should be delivered at the Office not later than Wednesday, accompanied by a remittance.

Answers are now received at this Office, by special arrangement, to Advertisements appearing in THE LANCET.

Terms for Serial Insertions may be obtained of the Publisher, to whom all letters relating to Advertisements or Subscriptions should be addressed.

The postal arrangements relating to the distribution of THE LANCET will be considered from time to time in the interests of subscribers.

Tables of Contents, with the Index of Advertisements, for each Number can be had on application to the Publisher.

Agent for the Advertising Department in France—J. ASTIER, 67, Rue Caumartin, Paris.

LETTERS, each with enclosure, are also acknowledged from—Mr. Watson, Scarborough; Mr. Taylor; Mr. White; Mr. Ayton; Mr. Manders, York Town; Messrs. Clark and Co., Leicester; Mr. Pearce, Penance; Mr. Jackson, Leeds; Mr. Fagg, Bradford; Messrs. Stickland and Rowe, Kensington; Mr. Calder, Liverpool; Dr. Cresswell; Mr. Manning; Mr. Miller; Mr. T. Smith; Mr. Exell; Dr. Watson, Sheffield; Mr. Hodgson; Dr. Laverick; Dr. Corner; Dr. Stuart, Hulme; Dr. Duncan, Huddersfield; Dr. Duke; Dr. Carter; Mr. Harrison, Liverpool; Mr. Newman; Mr. Woodham, Broughton-in-Furness; Miss Tague; Mr. Sample; Mr. Martin; Mr. Robinson, Chesham; Mr. De Traine, Aylesbury; Mr. Letts, Spelsby; Dr. Smith, Highgate; Dr. Eaton Cleator Moor; Mr. Evans, Wrexham; Dr. Lister, Ashton; Mr. Fox; Mr. White, Bradford; Dr. Patterson, Windsor; Medicus, Manchester; B. A., Ireland; Medicus, Newcastle-on-Tyne; Midlands; Practitioner; E. J. D., Walsall; S. S., London; Q.; Medicus, Selby; J. P.; Dentist Islington; Allan; A. W., Manchester; Medicus, Shepherds-bush; Beta, Stoke Newington; Surgeon, Huddersfield; Medicus, Highgate W. L. J.; M. G., Swansea; Dr. H., Eccles; L. F. K.; &c.

Church of England Temperance Chronicle, Deutsche Medicinische-Zeitung, Citizen, Birmingham and Aston Chronicle, Canada Lancet, Melbourne Argus, Pharmaceutical Journal, Madras Times, Chemists' Journal, Englishman, New Zealand Herald, United Service Gazette, Science Finsbury Park Journal, La Independencia Médica, Carlisle Patriot, Therapeutic Gazette, &c. &c., have been received.

Medical Diary for the ensuing Week.

Monday, Aug. 2.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS. — Operations, 10½ A.M. each day, and at the same hour.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL. — Operations, 1½ P.M. each day, and at the same hour.

METROPOLITAN FREE HOSPITAL. — Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL. — Operations, 2 P.M.

ST. MARK'S HOSPITAL. — Operations, 2 P.M.; on Tuesday, 9 A.M.

Tuesday, Aug. 3.

GUY'S HOSPITAL. — Operations, 1½ P.M., and on Friday at the same hour.

WESTMINSTER HOSPITAL. — Operations, 2 P.M.

WEST LONDON HOSPITAL. — Operations, 3 P.M.

Wednesday, Aug. 4.

NATIONAL ORTHOPÆDIC HOSPITAL. — Operations, 10 A.M.

MIDDLESEX HOSPITAL. — Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL. — Operations, 1½ P.M., and on Saturday at the same hour.

ST. THOMAS'S HOSPITAL. — Operations, 1½ P.M., and on Saturday at the same hour.

ST. MARY'S HOSPITAL. — Operations, 1½ P.M.

KING'S COLLEGE HOSPITAL. — Operations, 2 P.M., and on Saturday at 1 P.M.

LONDON HOSPITAL. — Operations, 2 P.M., and on Thursday and Saturday at the same hour.

GREAT NORTHERN HOSPITAL. — Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL. — Operations, 2 P.M., and on Saturday at the same hour.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN. — Operations, 2½ P.M.

Thursday, Aug. 5.

ST. GEORGE'S HOSPITAL. — Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL. — 1½ P.M. Surgical Consultations.

CHARING-CROSS HOSPITAL. — Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL. — Operations, 2 P.M., and on Friday at the same hour.

HOSPITAL FOR WOMEN, SOHO-SQUARE. — Operations, 2 P.M.

Friday, Aug. 6.]

ST. GEORGE'S HOSPITAL. — Ophthalmic Operations, 1½ P.M.

ST. THOMAS'S HOSPITAL. — Ophthalmic Operations, 2 P.M.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL. — Operations, 2 P.M.

Saturday, July 7.

ROYAL FREE HOSPITAL. — Operations, 2 P.M.

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Books and Publications	20	5	0
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ABSTRACT

OF A

Clinical Lecture

ON A

CASE IN WHICH NUMEROUS GALL-STONES
WERE DISCHARGED THROUGH A
FISTULOUS OPENING IN THE
ABDOMINAL WALL.*Delivered in King's College Hospital, May 11th, 1880,*

By I. BURNEY YEO, M.D., F.R.C.P.,

PHYSICIAN TO THE HOSPITAL.

GENTLEMEN,—I have enumerated the various ways in which biliary concretions may escape from the gall-bladder and the biliary passages, and the case to which I now wish especially to direct your attention is one in which the gall-stones have been discharged in a somewhat unusual manner—viz., through a fistulous opening in the abdominal wall. I show you here between seventy and eighty gall-stones which have been discharged by my patient in this way. Over a hundred have been discharged altogether; twenty-five of these, however, were removed by an operation the particulars of which I shall immediately detail. You will observe that these concretions are faceted as gall-stones usually are when they are numerous. They vary in size from that of a hemp-seed to that of a large pea; they are of a brownish-yellow colour, and on section they display the ordinary structure of gall-stones—viz., a dark, almost black, nucleus, surrounded by a light brown “body” and an external crust.

This patient, a married woman, a dressmaker, fifty-six years of age, was admitted into the hospital on the 24th of last October. She had occasionally come under observation from time to time as an out-patient during the previous five years, and was looked upon as a rather troublesome nervous woman, with dyspeptic symptoms. She used to complain of pain and flatulence after food, with occasional vomiting, but had never, while attending as an out-patient, presented any signs of jaundice, nor had she ever complained of attacks of acute pain such as occur during the passage of gall-stones. She states now, however, that she remembers an attack of sudden pain in the hepatic region so long ago as 1873, and that this was associated with slight jaundice of the conjunctivæ and skin. She also states that in February of last year she had a severe attack of jaundice, during which she kept her bed for two months. For the first fortnight of this attack she suffered great pain, and the motions were quite white, then the pains diminished and disappeared, but the discoloration of the skin remained for some months, so that this patient may have discharged gall-stones in the ordinary way for some years. Last August she first noticed a swelling in the lower part of the abdomen on the right side, which she was ordered to poultice. She had suffered much pain while it was forming. In September this broke, and discharged “blood and matter,” and the day after four gall-stones came away through the opening, their passage being attended with much suffering; *fifty-one* concretions came away in one week, and as many as *twenty-one* in one day. She had passed, on her admission, *sixty-one* gall-stones altogether, and she passed *seventeen* more during the first fortnight of her stay in the hospital. On analysis, they were found to be composed of cholesterin and bile-pigment.

On examination of the abdomen, on her admission, an external opening low down on the right side in the abdominal wall was found, situated in the hypogastric region, about three-quarters of an inch from the median line, and about five inches below the umbilicus. It was discharging a considerable quantity of glairy mucus, not unlike the white of egg. A deep inflammatory blush, at this time extended for a considerable distance around the opening. A probe introduced into the opening passed readily for six or seven inches upwards and to the right, where it apparently came against and was arrested by a hard mass, which could be felt through the abdominal walls, and grasped, as if it were the fundus of a displaced and distended gall-bladder; while,

extending downwards from this, and following the course of the sinus, was an extensive mass of inflammatory induration.

No discharge of anything like bile had ever been observed from the external opening of the sinus. The few biliary calculi that were passed soon after her admission were passed without any suffering; and with rest in bed and appropriate treatment the inflammatory condition of the integuments around the sinus rapidly subsided. Her constitutional condition was good; tongue clean; appetite fair; some tendency to constipation; urine normal. There was no enlargement or tenderness over the liver, or in the natural situation of the gall-bladder.

On Nov. 7th Mr. Lister was good enough to see the patient with me, and, as we thought there might be many more calculi accumulated in the hard mass at the end of the sinus, and which might possibly be the displaced gall-bladder, Mr. Lister proceeded to dilate the passage rapidly by means of large-sized metallic urethral dilators. This was done twice, but without any marked result; one or two small calculi continued to be passed at intervals.

The patient continued without much change until the middle of February. Several weeks had elapsed without the passage of any more calculi, and, as the sinus still continued to discharge a considerable quantity of the glairy mucus I have before described, it was determined, after consultation with Mr. Lister, that he should slit up and explore the sinus.

On the 16th February the patient was put under chloroform, and a large probe being passed along the sinus as far as it could go—viz., between five or six inches,—the thickness of the abdominal wall between the surface and the sinus was cautiously divided, the cut extending from the orifice of the sinus upwards and outwards towards the somewhat globular mass situated about midway between the costal margin and the crest of the ilium. In doing this a considerable thickness of the abdominal wall had to be divided, the wound extending nearly down to the peritoneum. About twenty calculi were dislodged from along the tract of this sinus, and the round mass before described appeared, so far as we could judge, not to be the gall-bladder, but merely the result of inflammatory induration. On carefully examining the sinus now it was exposed, a small diverticulum to the right admitted of the passage of the probe for about an inch and a half. This was slit up, and five more calculi discovered, so that five-and-twenty biliary concretions in all were found infiltrated, as it were, in the abdominal wall, and were removed by this operation.

The wound, which was a large one, was dressed with glycerine and carbolic acid, and the patient removed to bed. The patient bore the operation extremely well. The next day the temperature rose about one degree, soon to fall again to normal. A faint putrid odour was given off by the wound for a few days, but this disappeared and the wound steadily filled up. It is now nearly quite healed. There has been no further discharge of gall-stones and no complaint of pain, and the sinus appears completely closed.

There are many cases on record of the passage of gall-stones through fistulous openings in the abdominal walls, and they have nearly all occurred in the persons of women of middle or advanced age, like our patient, who is aged fifty-six. The process which leads to the formation of these fistulæ is usually as follows:—The ulcerative inflammation set up in the gall-bladder leads to adhesion of the superjacent abdominal wall, and the ulcerative process “eats its way through the adherent abdominal wall till it reaches the surface.”

We may suppose that in this case the gall-bladder had become distended by a vast accumulation of biliary calculi. Some of these had from time to time escaped in the usual manner, along the common bile-duct into the intestine; the passage of the smaller ones giving rise to no suffering, the passage of the larger ones being attended with the symptoms of biliary colic, which this patient appears to have suffered at least twice, at long intervals. Then, probably, one larger than its predecessors became impacted in the cystic duct, and set up inflammation which led to the closure of the duct. Subsequently the inflammatory and ulcerative action extended through the coats of the gall-bladder and the adherent portion of the abdominal wall. A number of gall-stones then made their escape, and became as it were infiltrated into the abdominal wall, working their way downwards between its layers, and giving rise to fistulous tracts, and setting up a great amount of inflammatory thickening

and induration around, and finally discharging at a point low down on the abdominal surface, no doubt quite remote from the seat of the original opening in the gall-bladder, which may have become completely closed before the formation of an external wound. So that in this case, as in most others of the kind on record, the cystic duct must certainly have become closed before the formation of the fistula in the abdominal walls.

The discharge, after the first rupture of the superficial abscess, has always been that of white, glairy mucus. We thought, for some time, that this discharge proceeded from the mucous membrane of the gall-bladder itself, which we imagined was in direct communication with the fistulous tract, and on that account we hesitated long before having recourse to any operative procedure, for we thought that if we were to divide the fistula as high up as we could go we should still have remaining behind the discharging inner surface of the gall-bladder. But as the discharge still continued undiminished in quantity, and as it was a perpetual nuisance to the patient, and as it seemed probable, if she were allowed to leave the hospital, inflammation would again set in around the sinus and its opening, and as we considered that if we divided the sinus as far as we could we should certainly leave a less extent of discharging surface, and bring the external opening much nearer the source of the gall-stones, if there were any more to pass, as seemed most likely, and as the patient herself was very anxious that something should be done, Mr. Lister divided the sinus, as I have told you. It was an operation of some importance, for the sinus ran for some distance five or six inches, and was deeply situated in the abdominal wall about an inch and a half from the surface, and was, therefore, very near the peritoneum. A gall-stone was found impacted at the end of the main sinus, and then beyond this several more; five and twenty, and some fragments, altogether being removed from the main sinus and a diverticulum from it. The success of the operation has been complete. No further gall-stone has been passed, and there is now no more secretion, the wound appearing completely healed, so that we hope to be able to discharge the patient from the hospital in a few days.

The issue of the case has been a very fortunate one. The patient is not likely to have any further trouble from biliary calculi, and the operation has relieved her from what was, though not a painful, yet a very distressing, state of affairs—viz., a constant and profuse discharge from a fistulous opening in the abdominal walls.

Lectures

ON

THE RELATIONS OF SARCOMA TO CARCINOMA.

Delivered at the Royal College of Surgeons in June, 1880,

By HENRY TRENTHAM BUTLIN, F.R.C.S.,

ERASMUS WILSON PROFESSOR OF PATHOLOGY TO THE COLLEGE,
ASSISTANT-SURGEON TO ST. BARTHOLOMEW'S HOSPITAL, &c.

LECTURE I.—PART I.

TUMOURS OF THE TESTIS.

MR. PRESIDENT AND GENTLEMEN,—As the first Erasmus Wilson Professor of Pathology under the new conditions of the trust, the duty devolves on me, which I cannot but regard with pleasure, of expressing, so far as I can do so in words, the feeling of gratitude which must animate all those who are working in the great field of pathology towards the founder of this chair.

The act, generous in itself, is rendered yet more graceful by his permission to deflect the endowment from the purpose to which it was at first devoted to one which cannot in the nature of things be so dear to him as the encouragement of his own favourite study of dermatology. I trust, however, that Mr. Wilson may be in some sort repaid by the impetus which will certainly be communicated to the study

of pathology and by the knowledge that through his means this impetus has been conveyed.

A classification of tumours may be based either on their anatomical or clinical characters. At the present time the former is nearly exclusively employed and the clinical classification has fallen almost entirely into disuse. Nor is this, I imagine, solely due to the influence of fashion, although I am aware she exercises even in pathology considerable sway. But the anatomical classification is preferred because it is more scientific and is more in accordance with the methods which are adopted in arranging plants and animals, methods from which the best results have been obtained, and by which our knowledge of these things has probably been much increased. It cannot, of course, be maintained that the anatomical classification is perfect, or that it fulfils every purpose for which it was designed. To judge justly of its merits, however, it must be compared, not with some ideal method, but with the method it has succeeded in replacing. I think it will be admitted that a classification, on whatever basis arranged, should be consistent or should at least be capable of being made consistent; and, as a corollary of this, that classification must be the best of which every part is in harmony with every other part, and all whose parts are in harmony with the principle on which the classification is arranged.

In the "Nomenclature of Diseases" drawn up by a Joint Committee of the College of Physicians in 1869, tumours are arranged according to what is understood as the clinical method. The great primary division is of all tumours into malignant and non-malignant. Of the malignant growths the scirrhus and medullary varieties are so formed on the ground of their clinical characters; but the definition of the variety epithelial cancer admits that the cancer is "characterised by the resemblance of its cells to those of epithelium." So slight a deviation from the guiding principle, however, might be pardoned, but the non-malignant tumours are subdivided according to the likeness each presents to some natural texture of the body, as fibrous, fatty, osseous. And among these, with an inconsistency more striking still, are found varieties which depend upon their microscopic structure, the fibro-plastic and fibro-nucleated tumours, which, clinically, are more than half-malignant, and anatomically cannot be distinguished with the naked eye. I say "cannot be distinguished with the naked eye" not on my own authority, but on that of Dr. Bennett,¹ who, speaking of the fibro-nucleated canceroid growth, uses these words, "I know of no means of distinguishing it except by a microscopic examination, as sometimes the growth exactly resembles scirrhus, at others encephaloma." And Sir James Paget,² describing the recurring-fibroid tumours, which are included with the fibro-plastic, makes one of their chief characteristics the resemblance of their general aspect to that of the common fibrous tumours.

Here, then, is a classification purporting to be clinical but of which more than half the classes are based upon other than clinical grounds, some of them upon the gross or rough anatomical appearances, others of them upon the microscopic characters. I should not deem it necessary thus to criticise a method of arrangement which was most valuable thirty years ago, and under which, or perhaps in spite of which, the study of oncology made rapid strides, but the loss of it has been made a subject of deep and wide-spread lamentation, exceeded only by the indignant scorn with which its successor was received.

Now, whatever may be said against the anatomical classification on the ground of imperfection or of uselessness at the bedside, it cannot be reproached with being generally inconsistent. Its inconsistencies are few, and those which yet remain are gradually yielding before a wider knowledge of the subject and clearer insight into the nature of certain doubtful groups. Most of the groups of non-malignant tumours have been transferred unchanged to corresponding groups in the new system, but the difficulties experienced in arranging the malignant and semi-malignant tumours have not yet been wholly overcome. Virchow,³ discerning certain structural characters common to the fibro-plastic,

¹ On Cancerous and Canceroid Growths (Edin.), 1849, p. 176.

² Lectures on Surgical Pathology (London, 1853), p. 155.

³ Krankhaften Geschwülste, Band ii.

recurring fibroid, and fibro-nucleated tumours, gathered them into a single class, with such other growths as presented similar characters, and called the class sarcoma. Sarcoma, as defined by Virchow, was a tumour of the connective-tissue series characterised by an excessive development of cells. But Virchow's carcinoma was also a tumour of connective-tissue origin, and often presented a preponderating growth of cells. It was therefore impossible in many instances to distinguish between sarcoma and carcinoma. I will not weary you with a detailed history of various efforts made to overcome this difficulty, of minor differences discovered between sarcoma and carcinoma, some of them useful and still used, but none of them sufficient, until at length Waldeyer⁴ succeeded in tracing carcinoma to an epithelial origin. This theory of carcinoma, worked out with an admirable sagacity, has formed the basis of all succeeding investigations, and although it has been ably contested and has been made a subject of frequent debate, free ventilation has only served to strengthen its position and to render it generally received. I accept without reserve this theory of the epithelial origin of carcinoma, in part because, to me, Waldeyer's reasons appear sound and his conclusions just, but chiefly because I have myself been so fortunate in certain varieties of carcinoma as to trace as clearly as may be the process by which a carcinoma is developed from epithelial cells. It is right I should here refer to the more advanced attempt which has been made to classify these tumours, in accordance not merely with the form but with the origin of the tissue from which they grow. Whether this will be possible in the future I do not know. But at present I shall not adopt it, first, because I do not see what object is by its means attained, and, second, because I am sure by its use much confusion would be produced. For example, the whole testis is said to be derived from the mesoblast. Even its epithelium, therefore, according to this view, is incapable of developing a carcinoma.

I shall then define carcinoma to be a tumour of epithelial origin, having generally an alveolar structure, and sarcoma a tumour of connective-tissue origin, formed generally of embryonic tissues, and without alveolar structure. And for minor differences the cells of carcinoma generally resemble those of the epithelium from which it grows; there is little intercellular tissue; the vessels run in the fibrous tissue, not among the cells, and multiplication of cells is by endogenous formation. On the other hand, sarcoma is composed of round, or fusiform, or giant-cells, and these are packed in a more or less abundant basis; the vessels are often mere fissures between the cells, and the cells increase in number by division. These minor characters are common, but they are not constant. One or other of them may be absent in a tumour of either class, or, worse, may be present in a tumour of the other class. More commonly it is sarcoma which thus simulates the appearance of carcinoma, but, fortunately, this feigning takes place most often in textures where there can be no question of the origin, and therefore of the nature of the tumour. The alveolar structure found in some sarcomas is rarely so perfect as that of most epithelial tumours; indeed, careful study discovers that the tissue which surrounds the alveoli is generally formed of spindle-cells. There is in most cases no real difficulty in assigning each tumour to its class. But where the characters which should be distinguishing are not clearly marked, and the origin cannot be ascertained, the tumour must be left unclassified. Although little can be said against the anatomical method of arrangement, much objection may be fairly made to its nomenclature. The terms hard and soft still applied to varieties of carcinoma, even the words carcinoma and sarcoma themselves, are an offence against a rigid system of anatomical nomenclature. The powerful influence of long usage, and the difficulty of discovering and agreeing upon efficient substitutes, are the only reasons which can be given for still continuing to employ them. It appears to have been expected that if the structure of a tumour can be so clearly made out that it can be referred, not only to class, but to sub-class or group, its whole course and tendencies ought immediately to be discernible—an impression which I imagine arose from the almost unvarying course of many of the fibrous, fatty, or osseous tumours, and from the malignancy of most of those which are truly cancerous—a malignancy which nevertheless is liable to the most singular variation. And great disappointment has been felt that

this expectation has not been realised, nay, has been so little realised that it cannot be asserted of any case of sarcoma from a knowledge of its structure whether or not it will recur, or will affect the lymphatic glands, or in what direction it will become generalised.

The objects of the present inquiry are to discover how far the course of a tumour can be predicted from a knowledge of its intimate structure, whether there really exists so little or so large a difference as has been asserted between sarcoma and carcinoma, and whether in a doubtful case the microscope is likely to be truly useful. Of course I am aware that many general and special text-books on pathology contain accounts of these tumours, and of their supposed tendencies. My excuse for adding one more to these accounts is—first, that most of them were written before the modern method of arrangement and manner of preparing sections permitted their authors to collect a sufficient number of unquestionable cases for the purpose of comparison; and next, that I shall investigate the subject in a different manner to that which is commonly adopted, and shall study not so much similar tumours of different tissues and organs as different tumours of the same tissue or organ, by which means I hope a more correct idea may be obtained of their relative course and tendencies. Even now the number of cases gathered from my own experience at St. Bartholomew's Hospital, and from published records, is not so large as I could wish; for many have been rejected of whose accuracy I could not feel assured in order that the truth of the inquiry might be as little as possible prejudiced by falsity of the details on which it is founded. Among other difficulties by which I have been met one is due to those transformations of their substance so common in many tumours, which render their original structure a matter of conjecture. In such cases I have been guided chiefly by the nature of their softer and more recent parts, and have often been much assisted by a study of any secondary tumours which were present.

In to-day's lecture I shall compare tumours of the testis; and in the two following lectures tumours of the bones. Of course, these are only parts of a much larger study, comprising indeed the whole pathology of carcinoma and sarcoma, but I hope each part will be so far complete that, should the inquiry be arrested at any point, what has been finished may be found not altogether useless.

The testis may be the seat either of sarcoma or carcinoma. The former appears to originate in the connective-tissue walls of the tubuli seminiferi or in the tissue between the tubules. The new growth increasing, gradually separates the tubules more widely from each other, and at the same time diminishes their calibre and destroys their natural form. But for a long time, even in tumours of large size, tubules can still be recognised scattered at irregular intervals through the growth, perhaps still lined with epithelial cells or with the remains of epithelium. The new tissue generally takes the form of vast numbers of round cells imbedded in a somewhat scanty basis substance, often traversed by fibrous tissue, and not uncommonly exhibiting a delicate reticulated structure; or of fusiform or spindle cells arranged in the form of trabeculae, which interlace, join, and cross each other at various angles. Sometimes, mixed with either of these two forms, there occur stellate cells in a viscid or hyaline basis, or hyaline cartilage may be found forming either a kind of framework through the growth or perhaps a large portion of its bulk.

Carcinoma is a growth originating in proliferation of the epithelium of the gland. Its alveolar structure is generally pronounced, its cells increase in number by endogenous multiplication. I have not myself been fortunate enough to trace the development of carcinoma from the tubules of the testis, but this has been done by Birch-Hirschfeld⁵ in a testis the cancerous tumour of which was still surrounded by a thin layer of the tissue of the gland. In this layer existed a series of transitional forms from an almost normal tubule to the fully-developed alveolus of the carcinoma. The changes were effected mainly by the action of the epithelium, the cells of which multiplied, filled, and dilated the tubules, and thence spread into the surrounding tissue. The only form of carcinoma with which I am acquainted is the soft variety. Nor have I found on record any authentic case of hard carcinoma of the testicle. Three cases are mentioned by Mr. Curling,⁶ but they do not appear to have

⁴ Virchow's Archiv, Band IV. (1872), S. 124, Die Entwicklung der Carcinome.

⁵ Archiv der Heilkunde, 1868, S. 537.

⁶ Diseases of the Testis, 4th edit., chap. viii. London, 1878.

been examined with the microscope. Manoury's⁷ celebrated case, of which Nepveu made the examination, was, I cannot but think, a fibrous sarcoma. For the fibrous tracts radiating forwards fanlike from the body of Highmore suggest hypertrophy of the fibrous partitions of the gland; the fine mesh-work in the alveoli is not indicative of carcinoma; and the wide tracts of connective tissue separating compressed and atrophied tubules are appearances characteristic of sarcoma, not of carcinoma. Kocher⁸ states that cartilage occurs in carcinoma, and that the combination is more frequent than that of cartilage with sarcoma. I can scarcely understand the source whence this conclusion is derived, for in the cases of carcinoma drawn from my own experience, and from the records of surgery searched through many years I have not found a single case of carcinoma containing cartilage. Judging from analogy, too, the combination is not one we should expect.

Of the course and characters of most cases of sarcoma and carcinoma a single description might suffice, for with certain exceptions, to which I shall presently refer, there are no means by which we can distinguish between the two diseases. Let me illustrate their general course by certain cases in which the salient features are exhibited of each disease, if not all of them, some, at least, of the most important in each case.

First of carcinoma.

A German student, single, twenty-one years of age, whose case is very fully related by Birch-Hirschfeld⁹ in the *Archiv der Heilkunde*, first noticed swelling of the left testis in 1866. He could assign no cause, venereal or other, for the enlargement, and could remember no squeeze or hurt. For a while the affection seemed to grow less, or at least not to increase; and in the early part of 1867 it had made so little progress that he was considered fit for active military service. But in the spring of 1867 he was again examined, when the testis appeared as a tolerably firm tumour, perhaps as large as a small egg, smooth, and free from pain. From this time, its growth, although not rapid, was continuous, and the tumour attained a considerable size. In February, 1868, he could no longer walk or even move about, but was obliged to retain his bed on account of swelling and oedema of both legs. These symptoms were shortly followed by manifest enlargement of the liver, and in May he died. At the autopsy the tumour was the size of a child's head, but by the evacuation of eight ounces of fluid from the tunica vaginalis its bulk was much diminished. It was at no part ulcerated, or even adherent to the scrotum. The cord was greatly thickened below, but the increase in its size became much less before it entered the abdomen. When laid open the tumour presented a perfect specimen of encephaloid cancer. The epididymis was changed in like manner as the testis. At first all the normal structure of both appeared to have been destroyed, but examination left no doubt that opposite the corpus Highmorei a thin layer of gland-structure covered the surface of the tumour. The right testis was sound. The inguinal, pelvic, and lumbar glands formed a large cancerous mass occupying the left side of the pelvis and abdomen. The liver was much enlarged, and very full of secondary growths, many of which were of large size. Both lungs contained secondary nodules, but neither in size nor number could they be compared with those of the glands or liver. I have already spoken of the minute structure of the tumour, for it is that in which Birch-Hirschfeld succeeded in tracing the process by which alveoli are formed from the tubules of the gland. Only in one particular does this case deviate from what may be regarded as the type of carcinoma of the testis. The patient was younger than the age at which the disease most commonly occurs.

A dyer, thirty years old, married, the father of five children, the youngest of whom was but two months old, noticed two years before he was admitted to the hospital that his right testis was the size of a hen's egg. He could not account for this circumstance, and apparently thought little of it; but the tumour continued regularly to enlarge, until at the end of a year it was tapped and six ounces of bloody fluid were removed. Six months later the tapping was repeated, but only a few drops of blood issued through the trocar. Although the tumour attained a considerable size, and was therefore wearisome by reason of its bulk and weight, it caused the patient very little pain. He was a thin, anæmic man, with a huge tumour occupying the posi-

tion of the right testis—a tumour of oval form, fourteen and a half inches in circumference, quite smooth, elastic, tense, firmer below than at the upper part. The scrotum could be raised with difficulty off the surface of the tumour, and the superficial veins were tortuous and full. The disease extended high up along the cord, which appeared, however, to be of normal size before the internal ring was reached. Deep down in the abdomen, on the same side, firm masses of irregular form could be distinguished. To relieve him of the encumbrance, but only as a palliative measure, Mr. Langton performed castration. During the operation some twenty ounces of clear yellow fluid were drawn off. The tumour, the fibrous tunic of which was still unbroken, consisted of a central, soft, dark fawn-coloured pulp, surrounded by a firmer substance of the same fawn colour. No trace of the secreting structure of the testis or of the epididymis could be discerned. Immediately above the tumour in the cord was a second smaller mass of like colour and consistence, but above this mass the cord seemed natural. The microscope revealed an alveolar structure, the alveoli of which enclosed large round or ovoid cells, resembling greatly the epithelium of the gland. Five days after the operation symptoms of peritonitis were observed, and with these symptoms ten days later the patient died. No post-mortem examination was permitted—a twofold misfortune; for, first, its absence destroyed the completeness of the case so far as the cancer is concerned; and second, the cause of the inflammation of the peritoneum must remain for ever uncertain, since nothing occurred during the operation by which it could be accounted for.

As examples of sarcoma to compare with these the following may serve:—

In November, 1876, I received a tumour of the testis from Mr. Lant Smith, of Alcester, with a note to the effect that it had been the day before removed from the scrotum of a child six years of age, who had come under his notice about six weeks previously. It was uncertain when the tumour first began to grow, but during those weeks it had increased one-half in size. Mr. L. Smith added, "there is some uncertainty about the paternity of the boy, but a reputed father died last year from cancer of the liver. The husband of the mother is living, which renders it difficult to establish the paternity." The epididymis and body of the testis were both affected, but the cord was not involved. The tumour measured, after removal, 3 in. by 1½ in. Externally its surface was quite smooth and unbroken, on section white and homogeneous, but intersected by faint fibrous bands. Its consistence was firm and equal. Everywhere the normal structure of the testis was replaced by spindle cells and coarse fibres, with which were mingled confusedly round or oval cells, granular, and of large size. Diagrams of enlarged copies of the microscopic structure, the one as seen with a low power, the other more highly magnified, both accord in an entire absence of alveolar structure.

The boy recovered from the operation, and until July of last year (1879) I heard no more respecting him. Mr. Smith then wrote to tell me that his patient was at the point of death. His abdomen was occupied by a large tumour, extending from the right inguinal region to the cartilages of the ribs, and by a second smaller mass in the situation of the spleen. The larger tumour had first been noticed fully two years previously, some six or eight months therefore after castration was performed. The second tumour was of recent growth. A few days later the patient died, when, to our chagrin, his mother's husband, who had learned to entertain for him the affection of a father, could not prevail upon himself to permit him to be opened.

In almost every point this case corresponds with most cases of sarcoma of the testis in children, particularly in its somewhat confused structure and absence of cysts or cartilage, in its rapid growth and in the secondary affection of the lymphatic glands, for that I imagine was the nature of the tumour which reached from the groin to the costal cartilages. So little doubtful does this appear to be that I would even venture to deduce from it a lesson teaching of the slow progress of glandular disease, its mild action on the economy, perhaps even its power of withholding, for a period, generalisation by the blood.

A case equally characteristic of its kind, but differing widely from the last, is that of a wood-sculptor, fifty-seven years of age, who was castrated by M. Trélat in February, 1876. His case is related by Letulle,¹⁰ and I use it in

⁷ Gazette Hebdom., 1871, p. 640.

⁸ Pitha and Billroth's *Handbuch der Chirurgie*, Bd. iii., Abth. 2, Lief. 738, S. 340.

⁹ Loc. cit.

¹⁰ Bull. Soc. Anat., 1876, p. 149.

preference to one very similar which I myself observed, because it is somewhat more complete. The man was the father of fourteen children. At twenty years of age he was exempted from military service on account of a slight affection of the left testis, probably only varix. With that exception he had ailed little until seven or eight years before he came under observation, when the scrotum was found to be enlarged. The growth was very slow until the last six months, but from that time became just as rapid as it had previously been slow. Before removal the testis presented the shape and size of a large kidney, a contour tuberoso or bossed, a consistence very unequal. The scrotum was not adherent, and the cord was scarcely thickened. On section the tumour contained no cysts or softened portions; its upper part was firm and white, its lower tinged with red and lobed. No separation existed of the body from the epididymis. In thin sections from various parts seminal tubes could be discerned, altered in shape, nearly deprived of epithelium and separated by adenoid tissue, of which the tumour appeared entirely to consist. Shortly after the operation the right testis became enlarged, two months later tumours formed beneath the integument of various regions of the body, and in September the patient died. The disease was widely generalised. The cicatrix of the operation was indurated and the structures of the cord were separated by new growth; the right testis was much enlarged and hard; the inguinal, pelvic, and lumbar glands were infiltrated; and secondary growths occurred in the sternum, vertebræ, bones of the skull, and in the subcutaneous tissue. The tumours most superficial were ulcerated, and ulceration was observed of some portions of the small intestine, although no thickening of its coats about these ulcers was apparent.

NOTES OF A CASE OF HYSTERO-EPILEPSY

By DR. MCCALL ANDERSON,

PROFESSOR OF CLINICAL MEDICINE IN THE UNIVERSITY OF GLASGOW

IN THE LANCET for July 12th of last year I reported a typical case of hystero-epilepsy, illustrating not only the symptoms of the disease, but also the effects produced by the application of various metals, magnets, and solenoids to the surface, as well as the influence of the internal administration of the acetate of lead in modifying the symptoms.

The case which I am about to relate presents most of the symptoms observed in the last, although the epileptiform seizures occupied a much more subordinate place, but it differs from it in that the patient suffered in addition from partial hemiplegia, from irritation of the spine, and from phantom tumour of the abdomen; while the results of various applications to the surface were somewhat different, and calculated in some respects to support the theory of expectant attention as the cause of the phenomena.

This patient, a married woman twenty-eight years of age, was admitted into the Western Infirmary under my care on the 22nd October, 1879. She had been formerly (15th March, 1877) in the wards of one of my colleagues, and from the ward journal the following particulars were gathered. She complained at that time of pain in the iliac and hypogastric regions, especially the left. The abdomen also was very much distended, the enlargement being uniform and extending even up to the sternum; and the abdominal walls were very tense. Up to the age of sixteen she enjoyed good health, but at that time she had inflammation of the left lung, and since then has never been very strong. When recovering, she menstruated once for the first time; she did not menstruate again for a period of two years, and since that time the monthly discharge has been very irregular. At the age of eighteen the abdominal swelling was first observed, and she has been troubled with this on and off ever since. When between twenty-three and twenty-four years of age she received a kick from a horse in the left iliac region, the pain from which was relieved by the application of leeches. Six months thereafter she was married; and about a year after that, and three weeks after having been kicked on the abdomen by her husband, she had a miscarriage, and since then she has never been free from pain. She also complained of a choking sensation in the throat at

times, and suffered occasionally from severe headaches; and when she was in the infirmary on the first occasion she had four fits, which were believed to be of a hysterical nature. She had sometimes, too, attacks of sickness and vomiting. She remained for about three months in the hospital, and improved somewhat, but not materially.

On readmission on the 22nd October, 1879, she presented most of the symptoms above mentioned, with the following additions:—Her bowels have long been very costive, and now she is never moved without medicine. She has frequently difficulty in making water, and at times the catheter has to be used. She has also, in great measure, lost the power of the left lower extremity, which she attributes to an inflammation of the calf of the left leg, which set in in the winter of 1877, which was accompanied by much pain and swelling, and which lasted about six weeks. She has had to use a crutch ever since.

She was a healthy-looking, well-nourished woman. There was no fever, but her appetite was indifferent. She had occasional attacks of nausea and vomiting, and her bowels were so costive that she often passed a week without a motion. It was with difficulty that we could get her to speak at all, and then only in a whisper. She wept readily, was bashful, and could not look one in the face; in fact, she had the typical appearance of a hysterical female, as might have been anticipated from the history just given.

The left arm was found to be weaker than the right, and on squeezing the dynamometer with the right hand it registered forty kilogrammes, while with the left she could make no impression upon it at all. The left lower extremity was much more decidedly paralysed, and when she walked she dragged her foot after her. This limb also was stiff, and the foot strongly extended. There was very slight wasting of the muscles from disuse. The electro-muscular sensibility was very defective, but the muscles responded normally to faradisation; in fact, the usual symptoms of hysterical paralysis were present.

The abdominal enlargement, always considerable, was sometimes very great; at times it was uniform, at times the prominence was greater in one locality than in another, notably on the right side below the liver. Along with this there was marked arching of the back in the lower dorsal region, so much so that the closed fist could be readily placed between the spine and the bed. No tumour, however, could be made out, and if her attention was completely diverted, while the abdomen was firmly compressed by the hand, the abdominal enlargement in great measure subsided, and on putting her fully under the influence of chloroform it entirely vanished.

On examination of the spine, two or three of the lower lumbar vertebræ were found to be very tender on pressure, although she made no complaint of pain in this locality previous to the examination. The whole of the left side of the body was completely anæsthetic as regards touch, temperature, and pain; there was also complete loss of general and special sensation on the corresponding side of the tongue; vision on the left side was also very defective, so much so that she was unable to read anything, and with this eye she was tested with six colours—red, green, yellow, blue, mauve, and black,—and was found to be completely colour-blind.

On Monday, Nov. 17th, metalloscopy was resorted to. At 10.15 A.M. a circular disc of lead, about three inches in diameter, was applied to the left forearm. At 10.22 there was a transference of the anæsthesia¹ from the left to the right upper extremity. On the abdomen the transference was less complete, while no change could be detected on the head, neck, or lower extremity. Vision was much improved in the left eye, and all colours were now recognised except yellow, which was called brown.² In about three minutes more, at 10.25 A.M., the anæsthesia was completely transferred to the whole of the right side of the body.³

On Nov. 21st, the patient's symptoms being the same as on admission, except that the vision of the left eye was much improved, she being able to read print of medium size by holding the book about an inch and a half from it, and being able to name all colours correctly, with the exception of yellow, which she still called brown, as after the first

¹ In all cases the sensation as to touch, temperature, and pain was tested by the fingers, the application of hot and cold sponges, and needles.

² During all the observations the patient was blindfolded, except, of course, when the eyes were being tested.

³ In all cases this is to be held to include the transference of general or special sensation, as regards the tongue as well.

observation, the disc of lead was again applied to the left forearm at 3.53 P.M. At 3.58 sensation began to return in the neighbourhood of the plate, while it disappeared at the corresponding part of the right forearm, and this went on spreading until 4.2½ P.M., when the patient began to weep, and then the transference of the anæsthesia to the right side was found to be complete. The left eye, too, was found to be normal, both as regards vision and the discrimination of colours. With the right eye, however, she could not read the same type as she did before the plate was applied. With it she could distinguish blue, but yellow she called brown, and the other colours she said she did not know.—4.13 P.M.: The same plate was applied to the right forearm. At 4.18 sensation had returned in the neighbourhood of the plate, and the needle punctures made in testing that part began to bleed. At 4.20 she began to weep, and then it was found that the transference of the anæsthesia from the right to the left side, which had been slowly advancing, was complete. The right eye was now normal in every respect, while with the left she could read medium type as before, but could distinguish no colour except blue.

Nov. 22nd.—3.15 P.M.: Patient in same state as on admission, except that she could distinguish colours with the left eye, with the exception of black and yellow, which she called brown. At 3.21 P.M. a circular disc of wood, about three inches in diameter, was applied to the left forearm. At 3.24 there was a transference of the anæsthesia to the right side, the sensation on the left side first appearing in the neighbourhood of the disc, from which it quickly spread, and the patient weeping, as on former occasions, when the transference took place. The left eye was now found to be perfect in every way, while with the right, although she could see print, she could not read it, and she could distinguish all colours, except yellow, which she called brown. At 3.34½ P.M. a disc of wood was applied to the right forearm, and at 3.37 the transference of the anæsthesia to the left side occurred exactly in the same way as in the last observation. These results were so extraordinary that they were repeated, and with exactly the same result.

24th.—Right side in every way normal. Left side complete anæsthesia as on admission, but with left eye can read print of medium size at a distance of an inch and a half, and can distinguish all colours except yellow, which she calls brown. 9.30 A.M.: Five sovereigns were applied to the left forearm and kept there for thirty-seven minutes. It was then found (what had been indistinctly observed a quarter of an hour earlier) that there was partial return of sensation as regards touch and pain, but not as regards temperature, to that side, and a corresponding loss of sensation (including, however, defective sense of temperature) on the right side. There was no change, however, in the condition of the eye.

26th.—Patient in the same state as at the end of last note. 9.9 A.M.: Lead plate applied to right forearm. At 9.13½ sensation became much more distinct in the neighbourhood of the plate; and at 9.15 the patient began to weep, and sensation was completely restored to the whole of the right side. With the right eye all the colours were distinguished except yellow, which was called brown. The left side of the body, including the tongue, was now completely anæsthetic, but by the left eye all colours were distinguished accurately.—9.19 A.M.: Lead plate applied to the right side of the face, and in two minutes all colours were distinguished accurately with the right eye, but with the left she called yellow brown, and was not sure about green.

Dec. 14th.—Since last note patient has been left entirely to herself. When tested to-day she was found to have dulled sensation on the right side, a needle stuck into the arm or leg only being felt as something touching her. On the left side she could only feel very heavy pressure. The tongue was in the same state as the body—that is, sensation was dulled on both sides. Her perception of colours was nearly perfect, although yellow she still called brown with the left eye. 4.37 P.M.: A tin-plate applied to the left forearm. At 5.7 P.M. there was a decided though not complete transference of anæsthesia to the right side, while the sensation was nearly though not quite restored on the left. With the right eye she now called yellow brown.

Jan. 4th, 1880.—Sensation dulled on both sides of the body, less so, however, on the right than on the left side; tongue in a similar condition. Can distinguish all colours equally well with both eyes.—11.15 A.M.: Lead plate applied to left arm. At 11.20 there was some improvement in the sensation on that side, and at 11.40 it was nearly complete,

while on the other side it was proportionately dulled. Tongue and eyes as before.

Feb. 13th.—It was intended to test the patient with solenoids and electro-magnets, in conjunction with Prof. McKendrick, but she was allowed an airing in the grounds, and took advantage of it to get away. A patient in the wards saw her making for a tram-car in the neighbourhood, and said that "She walked as well and as quickly as any woman could."

In the present state of uncertainty as to the nature and explanation of the phenomena observed in cases such as that just reported, it will probably be better to abstain from offering any speculations upon the subject, although it is to be hoped that by and by, when our experience of them becomes more extensive, a trustworthy opinion may be formed.

But it may be pointed out, in conclusion, that the foregoing differs from the case which I formerly put on record in these respects:—

1. That the convulsive seizures occupied a very subordinate place in the symptomatology of the disease.
2. That no tenderness in the ovarian region could be made out, although this may be due to the ovary having been protected from pressure by the prominent abdomen.
3. That the application of a disc of wood had a similar effect to that of a metallic disc, as regards the transference of the anæsthesia, &c., from one side of the body to the other.
4. That in no case did we succeed in making the whole body at once either æsthetic or anæsthetic.
5. That, in addition to the usual symptoms of hystero-epilepsy, there was well-marked spinal irritation, and morbid states long regarded as manifestations of the hysterical diathesis—namely, hysterical hemiplegia and phantom tumour of the abdomen.

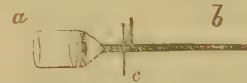
Glasgow.

PASSAGE OF NEEDLE OF HYPODERMIC SYRINGE INTO BRONCHUS; EXPECTORATED DURING A PAROXYSM OF COUGHING THIRTEEN DAYS AFTERWARDS.

BY SYDNEY JONES, F.R.C.S.,
SURGEON TO ST. THOMAS'S HOSPITAL.

THE following case has recently come under my notice, and seems interesting enough to be put on record.

On June 21st a medical man, after using a hypodermic syringe, put the needle (size exactly indicated in figure below) between his lips. During an inspiration this was drawn into the larynx and passed down into the left bronchus. It caused occasional paroxysms of coughing,



which the patient described as not of a severe character; and the needle could be felt by him somewhat above and to the left of the left nipple. The patient went about his work as usual, and occasionally inverted himself in the hope that the foreign body might be expelled; but, finding that this did not occur, he consulted me on the 25th of June, four days afterwards. By means of the tripod I suspended him by the heels and subjected him to succussions in different directions, but did not succeed in evacuating the needle. I saw him the next day with Dr. Bristowe, who carefully examined his chest, but did not find any appreciable interference with the admission of air into the lung. We advised that the patient should be kept as quiet as possible, and were of opinion that any operative interference would be of doubtful benefit, and might do serious mischief. After about a week the patient began to feel less discomfort about his chest, "only occasionally being conscious of something preventing comfortable expansion." He had occasional fits of coughing, and on four or five occasions got rid of small pellets of bloody mucus. For a week his nights were somewhat restless; after that he slept better, but generally coughed and expectorated a little mucus on waking in the morning.

On Sunday, July 4th (the thirteenth day), the patient, whilst dressing himself about 10 A.M., had a fit of coughing more severe than usual, and presently got rid of the portion of needle-marked *a*. The process of oxidation had gone on rapidly, and the needle had separated into two portions at the spot marked *c* in the figure. A few hours later the other bit was coughed up. In both pieces the needle was much thinned. The white metal forming the tip of the needle was not at all acted on. Since getting rid of the needle there has been no cough or expectoration.

George-street, Hanover-square.

REPORT OF A CASE OF AORTIC ANEURISM TREATED BY GALVANO-PUNCTURE,

AT THE WESTMINSTER HOSPITAL, UNDER THE CARE OF
DR. STURGES AND DR. HUGHES BENNETT.

With a Commentary

By A. HUGHES BENNETT, M.D.,
ASSISTANT PHYSICIAN TO THE HOSPITAL.

Antecedent History.—James G—, aged forty-three, a labourer, had been a soldier for twenty-one years, and left the army in 1876. During this time he had been a perfectly healthy man, and had never suffered from any illness. Two years ago he began to experience pains in the chest, cough, and dyspnoea, which did not, however, prevent him following his usual occupation as an out-door labourer. In September, 1878, he observed two swellings on the upper part of the chest, each about the size of half a walnut; and the above symptoms so increased in severity that he was admitted into the Westminster Hospital on the following month. The existence of an aortic aneurism was then recognised, and he was kept under observation for five months, after which time his symptoms were greatly relieved. For the next sixteen weeks he remained at home, feeling so well that he subsequently resumed his work (road-making), which he continued to perform without difficulty till November, 1879, when he "caught a cold," and the former symptoms of cough, dyspnoea, and pain in the chest returned, suffering from which he was readmitted into the hospital.

Condition on admission.—The patient when admitted was a healthy-looking, powerfully built man, whose organs and functions were normal, except those of the chest. *On inspection:* A tumour of somewhat oval shape, five and a half inches in length and three inches in breadth, was seen lying obliquely at the upper part of the chest, its upper margin close to the inner third of the right clavicle and its articulation, and its lower border situated a little to the left of the sternum, about four inches above the ensiform cartilage. The surface of the tumour was irregular in form, and consisted of three rounded elevations, the upper or largest, the middle or smallest, and the lower, which was nearly as large as the first; and they measured vertically at right angles to the base of the growth respectively one, one-half, and three-quarters of an inch. The skin over the tumour was of normal colour, but, especially over the lower segment, was tense and glossy in appearance. No pulsation was anywhere visible. The veins over the manubrium sterni were considerably dilated. The whole of the right side of the chest, both back and front, was much larger than the left, the ribs being more expanded and the spine being slightly curved towards the left. The pupils were equal and normal. *On palpation:* The apex-beat of the heart could not be detected. The tumour was felt everywhere soft and pulsating, each impulse being synchronous with the heart's beat. There was also a distinct sensation of expansion in every part of the swelling. These signs were most marked in the lowest elevation, where the skin was tense and thin, so as to give the sensation as if the blood was flowing directly under the finger. No purring or thrill could be detected. Pulsation could also be felt for some distance to the right of the tumour, and gradually fading off towards the axilla. On the left side there was no impulse. No pulsation could be detected in either carotid artery, but it was present in the temporals. The pulse at

the left wrist was of good strength, at the right very feeble. The expansion of the chest on the left side on inspiration was well marked, while on the right it was in comparison imperfect. *On percussion:* The heart's dullness could not be measured, that organ evidently being covered by the left lung. Over the external tumour there was absolute dullness, and this extended to the right as far as the nipple-line, and also a little to the left of the swelling. The area of complete dullness extended vertically from the clavicle to the liver, and horizontally from the left border of the sternum to a line drawn obliquely through the nipple parallel to the direction of the tumour, measuring in breadth six inches and a half at its middle. Percussion over the right lung elicited great loss of resonance, but no actual dullness. The left lung was everywhere hyper-resonant. *On auscultation:* Over the heart, both sounds were distinctly heard to be perfectly normal at apex and base. These healthy sounds were propagated all over the right side of the chest, before and behind, but chiefly over the dull area. They were also distinctly audible on the left of the sternum, but faded off so as to be almost inaudible at the side and back. At a spot two inches below the middle of the right clavicle, a distinct but soft blowing murmur was heard synchronous with the first sound of the heart, and propagated for an inch or so on every side. Puerile breathing with slight sibilus were heard all over the left lung, which was otherwise normal. There was imperfect and feeble vesicular murmurs all over the right lung. The patient when in bed suffered in no way except from slight cough; he had no dyspnoea, difficulty of swallowing, or other symptoms of pressure.

It was decided to treat the case by galvano-puncture.

First operation, Feb. 17th, 1880.—Two insulated needles, each attached to different poles of the battery, were introduced into the sac at the lowest elevation, about an inch and a half apart, and two inches in depth. By the aid of a rheostat the full force of twenty cells of a Leclanché's battery was very gradually introduced into the circuit, so that the galvanometer indicated 25 millivebers. This current continued to pass through the blood in the aneurism for three-quarters of an hour. During this time the patient suffered from no inconvenience whatever. He declared he felt nothing but the introduction of the needles, the pain of which was trifling, and that while the current was passing he felt nothing. The withdrawal of the needle attached to the negative pole was followed by a rush of gas, and a few drops of dark-coloured blood. The positive needle was adherent to the tissues, was followed by no blood, and its uninsulated point was partially eroded away. A piece of dry lint was placed over the tumour and retained there with strapping. For some hours after the operation the patient suffered from pains flying about his back and shoulders, but after a hypodermic injection of morphia these disappeared. Next day the patient was well in every respect, there had been no bleeding, but there was slight puffiness of the skin in the neighbourhood of the punctures. Two days later the whole of the lower elevation was swollen, the skin was tender and covered with a red blush. No marked change was detected on the pulsation. Seven days after the operation the patient continued without any unfavourable symptoms.

Second operation, Feb. 25th.—Two needles, as before, were inserted into the sac of the upper segment of the tumour about an inch and a half apart, and two inches and a quarter in depth. The points of both needles came in contact with bone. A current from twenty cells, indicating on the disc of a galvanometer a force of 30 m. v., was passed through the aneurism for an hour. The patient suffered no pain or uneasiness during the operation. On withdrawing the needles there was no hæmorrhage. The positive needle was partially dissolved, and the negative was bright and unacted upon. Two days later the patient stated that he had suffered from no uneasiness except from flying pains about the back and shoulders. The upper segment of the tumour was swollen and puffy, and over it the skin was faintly red, but there was no tenderness on pressure. Four days afterwards the condition was the same, but this portion of the tumour felt firmer and less pulsatile than formerly.

Third operation, March 7th.—The needle attached to the positive pole was inserted at the under border of the lowest elevation, and that to the negative at the centre of the middle segment of the tumour. The details of the operation were as before, and the same strength of current was used for an hour, the needles being inserted two inches and

a half in depth. The patient, as before, suffered no pain. Two days afterwards the upper elevation was distinctly firmer and harder than at first. The impulse was as formerly, but the lateral expansion was markedly diminished; it felt hard, and no longer fluctuated; the lower elevation was still soft, but less so than before.

Fourth operation, March 11th.—The same steps were repeated, the negative needle being inserted into the most prominent part of the upper elevation of the tumour, and the positive into the centre of the middle segment. As before, a current from twenty cells was employed for an hour. On withdrawal, the positive needle was almost entirely dissolved. Eight days afterwards there had been no unfavourable symptoms. The upper segment of the tumour was now quite hard, and was smaller than formerly, and it had no trace of lateral expansion or pulsation, but there was an impulse all over its surface synchronous with the heart's beat. The lower segment was prominent, tense, and although firmer than formerly, still pulsated, and fluctuation and lateral expansion could be detected.

Fifth operation, March 19th.—Both needles were inserted into the lowest segment of the tumour, and a current from twenty cells, as before, passed through it for an hour. Six days later (the patient in the meantime having been quite well), a small abscess was found to exist in the site of the last puncture of the positive needle, and at the most prominent portion of the lower elevation of the tumour. It was then about the size of a sixpence, fluctuated, and was evidently superficial. Three days afterwards this abscess had increased, and was now about the size of a walnut. It was red, and the skin in the neighbourhood was inflamed. The patient was feverish and depressed. Five days later all the symptoms had increased. The abscess was then about the size of a hen's egg. It presented a dark, purple, fungating-looking appearance, and from the mass was exuding a little blood and yellow matter. It was no longer soft and fluctuating, but felt of a doughy consistency. The whole of the lower portion of the tumour was greatly swollen, red, and inflamed. This condition rapidly increased, and two days afterwards suddenly the sac gave way; there was a gush of blood, and the patient died almost instantaneously.

Post-mortem examination next day showed the whole body to be extremely anemic. The external tumour was smaller than during life. The upper and middle segments were prominent and firm, the lowest had entirely collapsed—at its inferior border there was a round, ragged rupture, about the size of a shilling. The trachea and bronchi were normal, except at the bifurcation of the former, where the mucous membrane was congested. The left lung was emphysematous throughout, otherwise healthy, and its anterior border completely covered the heart. In the cavity of the right pleura was about half a pint of clear fluid. The pleura itself was thickened, and adherent throughout to the walls of the chest and to the aneurism. The substance of the right lung was congested, oedematous, and partially collapsed. The pericardium contained about half a pint of clear serum. The heart was not weighed, owing to its being attached to the specimen, but was apparently of normal size, without hypertrophy or dilatation, and its substance was pale, but otherwise normal. The mitral and aortic valves were healthy, and there was no evidence of incompetency. Immediately above the aortic valves the aorta began gradually to dilate, and expanded so as to form a fusiform dilatation. This extended from the aortic valves to the lower portion of the descending arch. The widest portion was about the middle, where it measured in circumference eight inches. Its lining membrane was thickened, atheromatous, and here and there were embedded minute patches of calcareous matter. There was no obstruction to any of the large vessels, which arose from the summit of the dilated portion. Three inches above the aortic valves, in the centre of the anterior wall of the aorta, was a circular opening, the size of half-a-crown (diameter $1\frac{1}{2}$ in.), the upper border of which reached to within an inch of the innominate artery. This orifice led into a large sacular aneurism, which occupied the whole space between the aorta and the sternum, especially on the right side. Roughly speaking, this was about the size and shape of a flattened, moderately-sized cocoa-nut. On making an incision into this, its walls were found thick and firm. Its interior was filled with recent clots. On removing these it was found that the posterior aspect of the sac into which the orifice opened was white, smooth, and free from any clot formation; while the whole anterior portion—namely, that nearest the ster-

num, was completely covered with a dense, organised, fibrinous clot, about an inch in thickness. Embedded in this clot were three orifices. The upper one passed between the cartilages of the first and second ribs, at the right border of the sternum, to the posterior aspect of the upper segment of the external tumour, and admitted the forefinger. The middle orifice passed between the second and third ribs to the middle segment of the tumour. The lowest orifice, through the third and fourth ribs, communicated with the lowest elevation of the external tumour. In all these passages the finger could detect that the ribs, cartilages, and sternum in the neighbourhood were rough, bare, and denuded of periosteum, parts of the bone had been destroyed, and in the lower two the ribs were actually separated from the sternum. A vertical section made through the entire external tumour showed that the three elevations of the external tumour did not communicate with one another, but were each separated by a distinct wall of its own. The upper segment was entirely filled with a firm, dense, laminated, and organised clot of a pale red colour, occupying the whole space in the sac between the sternum and external wall. The laminae were arranged parallel to the walls of the sac, the centre from which they radiated being at the base of the clot. The middle elevation was also filled with firm organised clot, but not so dense or so distinctly laminated as in the upper segment. At the under border of the lowest elevation the opening where the rupture took place was seen. The interior was filled with recent clots and broken up old ones, and through this the finger could be passed without obstruction into the internal sac of the aneurism. At the seat of the rupture, under the skin and between this and the aneurism, was a sac about the size of a walnut. This was the cavity of the abscess, and it was through this that the blood escaped when the aneurism ruptured. At the outer edge of the upper segment there was a second cavity, about the size of an olive, containing about a drachm of pus. All the other organs of the body were healthy.

Commentary.—The treatment of aortic aneurism by galvano-puncture is comparatively so rarely adopted that each case claims special consideration. Is such a measure justifiable? In aortic aneurism, the only hope of recovery, or prolongation of life, is by the coagulation of blood in the sac, so that the tumour becomes converted into a solid mass of organised clot. Although this sometimes takes place spontaneously, in the vast majority of cases, owing to the situation of the aneurism, this does not ensue. On the contrary, the morbid process extends, and ultimately ends in rupture of the sac. We know that a galvanic current passed through blood rapidly coagulates it; and could such a procedure be accomplished within the aneurism, without danger to the patient, it is obvious that the natural process of cure would thus be assisted. This case, along with others, shows that, if properly performed with suitable instruments, the operation itself is not of necessity attended with any danger or even discomfort. That this patient died indirectly as a result of the fifth operation I look upon as an accident. The first four operations were attended by absolutely no unfavourable circumstances either local or general,—indicating that by itself the procedure is harmless. Unfortunately, immediately after the last puncture, erysipelas broke out in the ward, attacking several patients, one of whom died. To this, it is possible, may be attributed the local irritation and inflammation in the present case. On the appearance of the abscess it was suggested that the pus should be evacuated, but the surgeons thought it best not to interfere.

The construction of the needles is of great importance, and upon this the success of the operation greatly depends. Those hitherto employed seem to me to be clumsy, difficult of introduction, and imperfect in insulating power. Messrs. Coxeter and Son, of London, constructed those used in this case, which answered with satisfaction in every respect. They consist of a delicate steel needle with a flat spear-pointed head, and are insulated to within half an inch of their points by a delicate film of glass. These can be introduced into the sac with the greatest ease; the glass does not break or dissolve, and it insulates perfectly.

In this case, needles attached to both the positive and negative poles were inserted into the sac. Apart from the fact that a clot is formed into each, it is obvious that when both poles are directly in contact with the blood a much stronger current passes; in other words, there is less resistance than when the skin and tissues intervene, as occurs when one of the electrodes is placed externally. Hence a

given strength of current produces a much more powerful coagulating effect, without increased discomfort or danger to the patient.

In most of the cases hitherto recorded a small number of cells were used, and yet considerable uneasiness and pain were experienced. This was obviated in the present instance by the use of a rheostat introduced into the circuit, which enabled us to apply the full force of twenty cells without the patient feeling even any uncomfortable sensations. When the current from a large number of cells is suddenly applied to the body, not only is there a severe shock, but the burning pain afterwards is unbearable. It is, however, well known that galvanism is a nerve-anæsthetic; hence a feeble current dulls the sensation for a subsequently stronger one, and this in turn for one more powerful, and so on. Thus, by slowly and insidiously increasing the strength without producing any shock, which the rheostat can accomplish, a current so powerful can be passed through the tissues without pain, which if suddenly applied would be intolerable.

That a powerful current in this case actually passed through the blood was demonstrated, not only by the positive needle being dissolved, but by a galvanometer, which was always employed. By this it was ascertained that in the circuit, of which the aneurism formed a part, there passed a current measuring from twenty to thirty millivolts.

A somewhat pertinent question was asked at the post-mortem examination, Are the organised clots the result of the galvanism, or did they not exist before the operations were performed? From the appearance of the formations themselves, it is difficult to settle this question. The fact of their being dense, organised, and laminated, suggests their being of ancient date, and whether it is impossible for such to be produced in six weeks after electrolysis, is a point I cannot answer. The lamination is in no way opposed to the clot being produced by electricity, as Dr. McCall Anderson and others describe and figure precisely similar conditions resulting from galvano-puncture. On the other hand, when the patient was admitted, the tumour was carefully examined by many competent physicians and surgeons, who all agreed that it was soft, fluctuating, pulsating, and with lateral expansion; and before death the same regions were found by the same observers to be dense, hard, resistant, and non-fluctuating. From these facts it may be assumed that the subsequent consolidation was due to the action of the electricity on the blood.

In conclusion it may be stated that, with our improved knowledge of electricity, and the more perfect instruments for its application we now possess, a great field is opened out for the treatment of aneurisms in general, and those of the aorta in particular. Hitherto the results of this procedure in the latter have not been successful as regards saving life, but this may be explained on the ground that it has only been employed in hopeless cases, and in those, after which every other treatment having failed, it has been adopted as a last resource. In the present case, had the operation been performed when the patient first came under observation a year ago, judging from the post-mortem appearances, the prospect of a cure or prolonged alleviation, appears not only possible but probable. As it was, this treatment was carried out because it was judged the patient if left to nature could not live many weeks. Considering that galvano-puncture if properly conducted appears to be practically harmless, there need be no hesitation in resorting to its application in any case of aortic aneurism, which can be easily diagnosed to be sacular in character, and which can be reached without difficulty.

REPORT ON ONE HUNDRED CASES OF EAR DISEASE.

By E. CRESSWELL BABER, M.B. LOND.,

SURGEON TO THE BRIGHTON AND SUSSEX THROAT AND EAR DISPENSARY.

FROM July, 1878, to December, 1879, one hundred different cases of ear disease came under my care at the above institution, of which notes, more or less complete, have been kept. They include the following forms of ear affection: One case of abscess of the auricle; four cases of diffuse external otitis (unilateral); eighteen of impacted cerumen

or epidermis (nine unilateral and nine bilateral); one case of exostoses of the external auditory meatus (unilateral); two cases of Eustachian obstruction; four of acute catarrh of the middle ear (two unilateral and two bilateral); and one case of otitis media serosa (unilateral). There were also twenty-seven cases of otitis media purulenta chronica (thirteen unilateral and fourteen bilateral), nine of these being complicated with polypus (the growths being unilateral in eight cases and bilateral in one instance). One case of chronic purulent inflammation of the middle ear was complicated with mastoid periostitis. Results of suppurative processes in the tympanum were found in fourteen cases (five unilateral and nine bilateral); and there was one case of necrosis of the temporal bone, and one of deaf-mutism. Of the remaining forty-seven cases, the great majority were classed under the head of "otitis media catarrhalis chronica," or would be better termed "otitis media non-suppurativa chronica," seeing that they included also the sclerotic or dry forms of middle-ear disease. In a considerable proportion of these cases (as well as of those above classified as "results of suppurative processes") there was evidence of nerve-impairment to a greater or less extent. Whether this was secondary to the tympanic mischief or constituted the chief affection could not always be accurately ascertained, partly from want of time, and partly from irregularity of the patients' attendance—circumstances which unfortunately often render records of out-patient practice incomplete. Apart from this, however, as Lucae has not long since pointed out,¹ the distinction between nerve-deafness and chronic non-suppurative inflammation of the middle ear (in the less well-marked forms) constitutes one of the weakest points in aural diagnosis. In at least three cases nerve-impairment was well marked, one of them being a case of congenital syphilis, which is still under treatment (March, 1880). More than one of the above diseases of course often occurred in the same patient.

Impaction of cerumen or epidermis.—In four of these cases (two unilateral and two bilateral) the impaction of wax came on after bathing or diving. The symptoms being deafness with tinnitus, continuous or pulsating, and of "hissing," "rushing," or "singing" character. This, as far as my experience extends (both in dispensary and private practice) is the most common form of ear-affection, attributed by the patients to bathing. Removal of the wax almost invariably relieves all the symptoms. Under the same heading is included the following case of impaction of epidermis, associated with chronic purulent inflammation of the tympanum and nerve-impairment, which forms a well-marked instance of the disease described by Wreden of St. Petersburg as *keratosis obturans*.

Case of keratosis obturans.—M. J.—, aged forty-five, chemist's assistant, applied on August 15th, 1879, with the following history:—Has had dulness in the left ear since he was a boy, which has been worse the last three months. No noise, pain, or discharge. Never had any fever. On admission, with the right ear watch² was heard at $\frac{1}{2}$ in. distance; left not at all. Tuning-fork on teeth heard loudest on left side, but not heard on forehead or on bridge of nose. A large quantity of epidermis in long-shaped pieces removed from the left meatus by syringing, but as some still remained drops of bicarbonate of soda dissolved in glycerine and water were ordered to be instilled into the meatus.

Aug. 18th.—A quantity more of white folded and corrugated epidermis was removed from the left meatus, a large portion of it having to be carefully extracted with forceps, as it was very adherent to the walls of the canal. Afterwards the meatus appeared dilated and of pearly and shining aspect. Hearing for watch not improved on the left ear.

29th.—There had been some discharge from the left ear. Watch heard with right ear at $\frac{1}{2}$ in.; left slightly on pressure on auricle and mastoid. More large epidermic scales removed from left meatus by forceps and scoop, after removal of some purulent discharge by syringing. Left membrana tympani then presented a white surface with scales on it and granulations in the posterior superior segment. On Politzerising perforation sound in left ear. Afterwards hearing about the same.

¹ Archiv f. Ohrenheilkunde, xiv. 2, p. 125.

² The watch mentioned throughout this paper is heard audible normally at about ten feet.

The patient was seen a few times after this, and the granulations touched once or twice with a solution of nitrate of silver (a drachm to the ounce). They presented the peculiarity of bleeding, not only when touched with the tuft of cotton-wool in applying the caustic, but even on mere syringing. When last seen, the watch was not heard at all at the left ear.

Remarks.—Whether in this case the perforation was the result of the pressure of the accumulated epidermis, or whether the tendency to the excessive formation of epidermis was superadded to a case of chronic suppuration in the tympanum, must, I think, remain doubtful. Although, owing to the nerve-impairment, the removal of the epidermic accumulation did not effect any improvement in the hearing power, it was undoubtedly of benefit in preventing any accumulation of pus behind the epidermic masses. (The specimen removed from this case was exhibited, and an account of the case given before the Sussex and Brighton Medico-Chirurgical Society in November last.)

The case of *exostosis of the auditory meatus* occurred in the ear of a man aged thirty-one, suffering from chronic non-suppurative inflammation of the tympanum, probably of gouty origin. They were two in number, and situate on the anterior and posterior walls of the meatus respectively, but as they did not encroach greatly on the lumen of the canal, they demanded no special treatment. The four cases of *acute catarrh of the tympanum*, which all occurred in adults, did well without paracentesis. The operation did not appear indicated, probably because the cases were not seen early enough. In only one case was a minute perforation observed whilst the patient was under treatment, and in this instance it healed readily.

The following case is interesting on account of the obstinate recurrence of the effusion into the tympanic cavity, associated with repeated occlusion of the Eustachian tube:—

Otitis media serosa; paracentesis; reaccumulation of fluid; treatment without paracentesis.—Mary S—, aged forty-eight, single, applied on March 31st, 1879, with the following history. Left ear has been deaf for years from discharge. Right ear has been deaf for one year, she believes owing to cold from sleeping near a damp wall. She thinks it gathers sometimes, and discharges down her throat. Throat feels swollen and aches at times. Last summer she had violent pain in the right ear, and went to the Throat Hospital in Golden-square, where she says the ear was punctured. *Present state:* Watch heard only on contact with right temple. Right membrana tympani yellowish. After Politzer-inflation watch was heard right ear at half an inch, also on contact with right mastoid and temple. The posterior segment of the right membrana tympani is then seen bulging outwards, with yellow fluid shining through.

April 2nd.—Right ear: watch heard almost on contact, and slightly on contact with mastoid. Membrana tympani has a yellow tint, and appears somewhat streaky. Politzerising produces no improvement in the hearing for watch, although it causes the membrane to bulge with yellow fluid, showing through, as yesterday. On the anterior segment of the membrane is a thin layer of wax or hardened secretion. A puncture about two millimetres long is then made vertically downwards in the posterior segment, which allows some serous fluid to escape. On repeated Politzerising, producing, of course, a perforation sound, a considerable quantity of clear yellow fluid runs out into the concha. Parts cleansed with dry wool. Immediately afterwards watch is heard with right ear at one inch and a half.

3rd.—With right ear watch heard at one inch and three-quarters, and plainly on right mastoid. Point of puncture indicated by a small blood spot. The posterior segment of the membrana tympani has lost its yellow colour. On Politzerising air enters the right tympanum freely, but I cannot be sure of perforation sound, and no change in the puncture is produced, neither does any discharge escape.

4th.—There has been no discharge from the ear. The hearing has improved to 3 in. for watch. No perforation sound on Politzerising; but inflation diminishes the hearing to 1½ in.

7th.—After removal of a thin layer of yellow discharge from the surface of the membrana tympani, there appears to be yellow discharge shining through its anterior inferior segment, but not through the posterior. Politzerising improves the hearing from ½ in. to 1½ in.

The patient was then seen about thrice weekly until

August 1st. She was treated locally by Politzer-inflation, vapours of compound tincture of benzoin, firwood-oil, creasote, &c.; internally, tonics and chloride of ammonium. On three occasions (June 6th, July 2nd, August 1st) the catheter had to be employed, as air would not pass on Politzerising. The tube did not always yield on catheterising, but subsequent Politzerising was always successful, usually with considerable improvement to the hearing (from which it may perhaps be concluded that the obstruction in the tube was at or near the faucial orifice). The hearing for the watch, though it varied very much, improved decidedly on the whole. After each inflation the hearing was usually found improved, but on one or two occasions it was temporarily diminished, perhaps owing to a rushing noise in the ear produced by the inflation. Not only did the lining membrane of the tympanum participate in the inflammatory condition, but also the outer surface of the membrana tympani; for on July 14th the membrane appeared opaque and uneven, with the hammer very indistinct, only the small process being visible. A short time after, a regular membrane of dry yellow discharge was removed with the scoop and forceps from the surface of the membrana tympani. When the patient was discharged, on August 1st, the hearing distance was—Right ear, watch 5 in.; after inflation 7½ in.

On Aug. 18th she was readmitted, yellow fluid again showing through the membrana tympani, the hearing having gone back to 1 inch. This time she was only treated by inflation and vapours, and was discharged on Sept. 15th with hearing distance:—Right ear, watch, 4½ in.; improved by Politzerising to 8 in.

Quite recently—Feb. 27th, 1880—this patient has returned with the hearing for the watch reduced to “contact,” and the fluid reaccumulated. I proposed to puncture the membrane again, and if necessary pass a stream of fluid through the ear; but the hearing has improved so much on simple inflation, with the head held so that the Eustachian tube is in the most dependent position in order to allow the fluid to run out (as recommended by Politzer),³ that I have not done so yet.⁴

The following case is one of interest:—

Tinnitus, audible objectively.—E. D—, aged twenty-three, unmarried, laundress, applied on Oct. 14th, 1878, giving the following history: For three years on and off she has had a clicking noise in the left ear, and has noticed deafness in that ear during the same period. No pain or discharge. Has always enjoyed good health. The noise, which is audible to other persons, is louder than it used to be, and her neighbour, who accompanies her, thinks it comes on especially when she is excited. She sometimes has a buzzing noise in the right ear. (It appeared subsequently that about a year previously there had been discharge from the ears, chiefly the right one.) On examination the watch was heard with left ear at 3½ in. Left membrana tympani presents a large circular perforation, rather below its centre, into which the handle of the malleus projects. Perforation quite dry, and the exposed mucous membrane of tympanum appears of yellowish colour. Both in front and behind the malleus the membrana tympani presents a hard white surface, probably chalky deposits. Perforation-sound on Valsalvan inflation. There is no noise at present.

Oct. 18th.—Since last seen she has had the noise twice, lasting twenty minutes. With right ear watch heard at 15 inches. Right membrana tympani presents a considerable sized perforation at the lower part, and also two chalky deposits on the membrane. No discharge.

21st.—No noise till yesterday, when it lasted ten minutes. Left membrana tympani appears the same. On making her move the upper jaw up and down, a fine clicking sound is heard which takes place irregularly, but soon ceases after the movement of the jaw is stopped. On careful inspection of left membrana tympani, during the noise no movement of the malleus can be detected, nor any bubbling through the perforation. The clicking sound is brought on again by Politzerising, but soon ceases. She says it is often much louder than this. The noise heard to day resembles very much that produced by snapping the nails together. Throat, nothing abnormal.

Nov. 1st.—On swallowing, a similar click is heard through otoscope placed in left ear, only somewhat fainter than when it occurs independently of swallowing. When the otoscope

³ See his Handbuch, vol. i., p. 325.

⁴ Subsequent experience confirms the great tendency to relapse in this case, and inflation only appears to improve the hearing for a time (August).

is placed in the right ear, a very faint click is heard on deglutition, apparently similar in character to that heard on the left side. The noise is heard to-day a few times independently of deglutition, but is not loud. After the clicking ceases she has a buzzing noise in the ear.

I was naturally anxious to hear the noise in this case during one of the attacks, when it was occurring loudly, especially with a view to examining the throat during its occurrence, but in spite of repeated injunctions to the patient (who lived at some distance) to present herself if possible when the noise was taking place loudly, I could not get an opportunity of hearing it.

I saw this patient again in February, 1879. There was no change in the membrana tympani, and the clicking noise still continued at intervals. My attempts to see the patient during an attack were again unsuccessful. On one occasion she reported that after retching during a bilious attack, the noise came on very loud, and lasted for half an hour. It should be mentioned that although the buzzing noise occurred in both ears, the objective clicking sound was, according to the patient, confined to the *left ear*.

Remarks.—Although the observation of this case is unavoidably incomplete, I think (from the similarity of the noise to that produced during swallowing, and from the absence of movement in the malleus) there can be little doubt that the clicking noise was produced by a separation of the moist walls of the faucial orifice of the tube as occurs during deglutition. This view agrees with that of Burnett, who describes these cases at length in his work on the ear. Quite recently also he has reported⁵ the case of a gentleman who was able to produce a noise of this description at will. On the other hand, however, Dr. Bremer of Copenhagen has lately⁶ described the case of a boy who could voluntarily produce an objective noise apparently of similar character, which continued *unchanged in intensity and character* whilst a bougie was passed through the catheter to the isthmus of the Eustachian tube. Although no movements in the membrana tympani could be observed Dr. Bremer attributes the noise in this case to the action of the intrinsic muscles of the ear, especially the tensor tympani.

Arguing from the fact that complete cessation of the noise occurred after spontaneous perforation of the membrana tympani in a case under his care, Burnett⁷ recommends artificial perforation in these cases if relief from the symptoms should be urgently required. My case appears to throw doubt on the success of this plan of treatment, for in this patient the membrane, as mentioned, was already perforated. This affection appears to be more common in men than in women, for, according to Burnett (who writes in 1877)⁸ "of all those in whom such an objective aural noise, either voluntary or involuntary, has been observed only three were females." The points of interest in this case are, therefore, that the noise was involuntary, that it occurred in the female sex and in connexion with an ear of which the membrana tympani was perforated.

The term "*chronic catarrhal or non-purulent inflammation of the middle ear*" includes, I cannot but think, a number of cases which are really of very different character. For the history, and also the prognosis, in some of these cases are so different that but for the name they appear to have little in common. The subject, however, is too large a one to be discussed in this paper. There are several other points of interest in different cases in this series; indeed it may be said that a large proportion of ear-cases, if only carefully studied and treated, present features of interest. An account of these, however, must be postponed until the special subjects to which they refer are dealt with.

Brighton.

⁵ Archives of Otolaryngology, Dec., 1879.

⁶ Monatsschrift für Ohrenheilkunde, Oct., 1879; and London Medical Record, Feb., 1880.

⁷ A Treatise on the Ear, p. 447.

⁸ Op. cit., p. 443.

APOTHECARIES' HALL OF IRELAND.—On the 2nd inst. the following were elected office-bearers for the ensuing year:—Governor, Edward H. Bolland; Deputy Governor, Thomas Collins. Court of Directors and Examiners: John Evans, Arthur Harvey, Charles Holmes, Charles H. Leet, Charles J. Moore, Robert Montgomery, Henry P. Nolan, Jerome O'Flaherty, Edward J. O'Neill, George B. Owens, John Ryan, James Shaw, George Wyse. Examiners in Arts: H. Colpoys Tweedy, Arthur Wilson. Representative on the General Medical Council: Charles H. Leet.

ON THE ANTI-MALARIAL ACTION OF THE CHINCHONA COMPOUNDS.

By T. J. MACLAGAN, M.D.

(Continued from p. 187.)

BUT though there are many analogies between continued and malarial fevers, there are also great and important differences. These, equally with the analogies, demand attention. They are as follows:—

1. There is ample evidence that the poisons of the continued fevers are reproduced in and given off from the system in large quantity during the course of the maladies to which they give rise. There is not such evidence in the case of malarial fevers.

2. The continued fevers are communicable from the sick to the healthy. Malarial fevers are not.

3. The continued fevers have a continuous regular course, and a definite period of duration. The course of malarial fever is intermittent and irregular, and its period of duration indefinite.

4. One attack of the continued fevers confers, as a rule, immunity from a second. There is no such immunity in malarial fever.

Let us consider each of these points.

1. *Contagia are produced in and given off from the system. Malarial poisons are not.*—The evidence of the reproduction of the poisons of the continued fevers is their elimination in increased quantity and in an active form. And the evidence is sufficient. A poison cannot be received into the system in small quantity, and be given off from it in large, without having been reproduced there. But though increased elimination is a proof of reproduction, its absence is not a proof to the contrary. An organised poison might be reproduced in, and exercise its action on, the system, without being eliminated in an active form. Its life history might be completed in one cycle of growth within the system, and itself come to an end in the course of the morbid action which it set going. Or it might be destroyed and disintegrated in the system and thrown off by the eliminating organs. In either case it would pass from the system in a form different from that in which it entered it. It is certain that in malarial fever the poison is introduced from without. It is probable that this poison is an organism. If it be so, its action is likely to bear a relation to its organic growth.

The phenomena of these fevers are, indeed, such as can scarcely be explained on any other view. A short residence—even one night—in a malarial district may give rise to a fever of some weeks' duration. If during one night the patient inhales enough poison to cause so prolonged an attack of fever, if the whole of the poison requisite to the production of such an illness exist in the system at the commencement of the attack, he surely should be killed right off by it. Again, if the dose taken suffice to cause the fever, why does it not go on acting? Why are there intermissions and remissions? Why is the patient one day in a raging fever, and the next day free from it? And why, in the absence of treatment, does this alternation of pyrexia and apyrexia go on indefinitely?

If the whole of the poison necessary to the production of all the phenomena of the malarial fevers existed in the system at the commencement of the illness, they would lose their intermittent and remittent character, the full effects of the poison would be produced at once, and their phenomena would be concentrated into one violent attack of fever which could scarcely be recovered from.

It is impossible to explain the phenomena of the malarial fevers on the supposition that the whole of the poison necessary to the production and full development of each exists in the system at the time of its onset. Their varying course, their often increasing severity, their prolonged duration, and their small mortality, can be accounted for only on the view that their poisons are reproduced and destroyed during the course of the maladies to which they give rise—that that which produces the symptoms of to-day has to-morrow ceased to be active, but has given rise to an offspring which keeps up the action which its parent set agoing, and in its turn hands down to its offspring the same morbid properties which itself received.

Such reproduction is peculiar to organised structures. That the poisons of malarial fevers are somehow destroyed in the system there can be no reasonable doubt. They enter it from without; they are almost certainly reproduced therein, and they are not eliminated in an active form. They must, therefore, be destroyed and disintegrated. The only alternative view is that they remain permanently in the system, and that is an untenable position.

It seems to me that we must accept the view that malarial poisons are destroyed, probably in some of the eliminating organs, and that the products of their destruction are eliminated with the ordinary excreta. The presence of these products in the system may partly explain the unusually copious urinary deposits which are noted in connexion with intermittent and remittent fevers.

The fact that malarial poisons are not eliminated in an active form does not prove that they are not reproduced.

2. *Malarial fevers are not communicable from the sick to the healthy.*—Communication of a disease means the passage of its poison from the bodies of the sick to those of the healthy. It therefore presupposes the elimination of that poison in an active state. Malarial fevers are not communicable because their poisons are not so eliminated. Non-communicability is at once the proof and the necessary consequence of non-elimination in an active state.

3. *Malarial fevers have an intermitting, indefinite course, and an irregular period of duration.*—The poisons of the continued fevers and of malarial fevers, if organisms, are also parasites. As such they require for their development something more than the bare materials requisite to organic growth—something which they find in their nidus, and which is as necessary to their reproduction as are nitrogen and water to their organic growth. The materials requisite to organic growth exist all over the body, and are practically unlimited. The special material which the poisons find in their nidus (and which for convenience sake we call the second factor) is not so. It exists only in the nidus in definite and limited quantity, and may therefore be readily exhausted. In typhoid fever, for instance, it is limited to the intestinal glands; in small-pox to the skin. So long as any of this second factor exists, the poison continues to be propagated, and the febrile symptoms are kept up. When it is exhausted, the system no longer possesses the necessary nidus—no longer presents to the poison the conditions requisite to its continued action—its propagation ceases, and the fever comes to an end.

The quantity of the second factor is not the same in all persons. It has an average, however, and the period requisite for using up this average represents the mean duration of the malady. If the quantity be large, the contagium finds a rich field for its propagation and development, and the resulting attack is prolonged and severe; if small, the field is a poor one and the resulting attack is short and mild. The course of the continued fevers is continuous and regular, because the quantity of the second factor in the nidus does not fluctuate during the course of these fevers; and because, therefore, the contagium goes on being reproduced steadily, continuously, and without break or intermission, until the nidus is exhausted.

Their period of duration is definite, because the second factors necessary to the propagation of their poisons exist in limited and definite quantity, are exhausted in a given time, and when exhausted are reproduced tardily or not at all.

In typhoid fever, for instance, the second factor necessary to the propagation of the poison of that disease has its seat in the intestinal glands. In the absence of these glands (as in infancy, in old age, and after their destruction during an attack of typhoid), the typhoid poison has no action on the system; it is as impotent for evil as is the poison of small-pox to one who has already suffered from that disease. At the commencement of an attack of typhoid fever these glands contain a certain quantity of the second factor. This quantity must be both definite and limited, because the size of the glands is so. It is because its quantity is definite, and not liable to vary during the course of the disease, that the fever is continuous. It is because it is limited, and is not apt to be reproduced, that the fever has a fixed period of duration.

If there existed a parasitic organism whose second factor, after having been exhausted, was readily and quickly reproduced before the first factor, the organism was all eliminated from the system, the fever resulting from the propagation and growth of this organism would consist, not of one continued attack, but of alternations of pyrexia and apyrexia;

and as the exhaustion and reproduction of the second factor might go on indefinitely, so also might these alternations. In this way there would be developed a disease having all the characteristics of intermittent fever.

If the second factor were still more rapidly reproduced, it might never be thoroughly exhausted. Its quantity might only be considerably reduced, and continue to rise and fall, for some time without ever being thoroughly used up. In this way there would be produced a disease having all the characteristics of remittent fever.

If the second factor, instead of being localised, as it is in the eruptive fevers, existed in the blood, such rapid reproduction would be very likely to take place; for the blood is an ever-changing fluid containing nothing but what, when removed, is likely to be replaced.

That the second factor may exist in the blood, and may be so quickly reproduced as to give rise to alternations of pyrexia and apyrexia, is evidenced by what we see in relapsing fever. This is the only one of the continued fevers in which an organism has been detected in the blood. It is also the only one in which the course of the fever is not continuous, and in which there is no characteristic local lesion. With reference to the spirilla which is found in the blood, it has been proved that it exists during the pyrexia, and is absent during the apyrexia; and there can be no reasonable doubt that the spirilla is the poison whose propagation causes the disease.¹

From what we find occurs in relapsing fever, we know that the period of pyrexia corresponds to the period of abundant propagation of the organism—the period of apyrexia to its absence. From what we believe regarding the nature of the poisons of malarial fevers, from a consideration of the phenomena to which they give rise, and from a comparative study of what is observed in the somewhat analogous case of relapsing fever, we regard it as in the highest degree probable, first, that the poisons of intermittent and remittent fevers find the second factors necessary to their propagation in the blood; second, that this second factor is at no time very abundant; third, that it is, therefore, quickly used up during the active propagation of the poison; and fourth, that when used up it is quickly reproduced. The rapid using up and speedy reproduction of the second factor have much to do with the production, not only of the characteristic intermissions and remissions of these fevers, but also with their equally characteristic indefinite period of duration. Their course is intermitting and irregular, because the quantity of the second factor essential to the reproduction and action of their poisons fluctuates and varies during the course of this action, and because therefore the quantity of poison reproduced varies from day to day. Their period of duration is indefinite, because the tendency to the speedy reproduction of the second factor is not limited to a definite period of time.

In the malarial fevers, as in relapsing fever, a time comes when the renewal of the second factor is so retarded that the poison is all got rid of before that event takes place. The advent of this time marks the onset of convalescence.

4. *One attack of malarial fever confers no immunity from a second.*—The insusceptibility to the action of the poisons of the eruptive fevers enjoyed by those who have once suffered from them constitutes one of their most striking characteristics. As the decline of the fever is due to the exhaustion of the second factor, so immunity from a second attack is due to its non-reproduction. If, after having been exhausted, the second factor be not reproduced, the system no longer presents the conditions requisite to the propagation of the contagium, and it does not act. That such is the explanation of the immunity from second attacks enjoyed by those who have once suffered from these diseases is evidenced by the fact that, as a rule, no amount of exposure to their poisons, not even their direct introduction into the system, serves to produce a second seizure.

It is to be noted that this immunity is peculiar to the eruptive fevers, that is, to those forms of continued fever in which the second factor is localised in some particular organ; and that relapsing fever, the only form of continued fever in which the second factor is not thus localised, is also the only one in which one attack confers no immunity from a

¹ The opinion is indeed held by some that the fever is primary and the spirilla secondary—that the former induces a condition of the blood which favours the development of the latter. But if that were the case the spirilla should equally be found in typhus, typhoid, and other fevers in which the febrile disturbance is as marked as in relapsing fever. But it is found in no fever except relapsing.

second. In relapsing fever the second factor exists in the blood. Now it is evident that a lasting impression may be more readily made on a formed and solid organ than on a constantly-changing fluid like the blood. An organism which finds its second factor in the former is, therefore, more likely to produce a permanent effect than one which finds it in the latter. Moreover, it is to be observed that some of the tissues which are the seat of the local lesions of the eruptive fevers undergo permanent change in the ordinary course of nature. I would specially instance the tonsils, which are affected by scarlatina, and the intestinal glands, which are involved in typhoid fever; both of which dwindle away and ultimately disappear as years advance.

In intermittent and remittent fevers the second factor is readily reproduced, because it exists in the blood.

The same tendency to the reproduction of their second factors, which serves to account for the varying course and indefinite duration of these maladies, serves also to explain their tendency to recur again and again in the same individual. The second factor is reproduced, and with its reproduction there is a renewed susceptibility to the action of the first.

It is generally said that one attack of malarial fever produces a greater susceptibility to its subsequent recurrence. The truth is that the constitutional peculiarity which led to the first, leads equally to subsequent attacks, and the later as well as the earlier attacks are merely the evidence of the existence of this peculiarity.

(To be concluded.)

A Mirror OF

HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

WESTMINSTER HOSPITAL.

PLYLEPHLEBITIS; RIGORS SIMULATING AGUE.

(Under the care of Dr. O. STURGES.)

FOR the following notes we are indebted to Mr. W. Gristock, M.B. Lond., medical registrar.

H. M—, aged fifty-eight, was admitted April 22nd, 1880. She stated that she had lived till twelve years old in Essex, in a marshy district, and had had ague (tertian) several times; never since childhood. She had always been strong and healthy, but twenty years ago she had scarlet fever, from which she quite recovered, and twelve years ago she had rheumatic fever, and had not been quite so strong since. She did not complain of pain, palpitation, &c. Father of patient died of "consumption," aged forty-two. Her mother died, aged fifty-one, cause unknown to patient. There was nothing particularly noteworthy in the family history. The present illness began three weeks before admission, with "fever" and "aching in limbs," which kept her in bed. About ten or twelve days later she began to have ague-like attacks, which recurred daily, sometimes three times a day.

On admission, she was sallow, but not jaundiced, and was fairly well nourished. She had no pain or tenderness anywhere. The tongue was dryish, with white fur. The attacks occurred daily in the afternoon, and also in the morning on April 23rd, 24th, and 27th. These attacks at first closely resembled ague, and were mistaken for it. There was a regular sequence of "cold stage," lasting fifteen to twenty-five minutes; "hot stage," lasting from half an hour to three hours; and "sweating stage," of variable duration. In the attacks the temperature rapidly rose to about 105° Fahr. (the highest temperature was 105° 6' on April 24th), and then rapidly sank to subnormal. There were, however, no long intermissions of fever. Quinine was given in five-grain doses on April 23rd; in ten-grain doses on the 24th and 25th. Five grains three times a day were ordered on the 28th, and also two ounces of brandy in twenty-four hours. The quinine had an obvious effect in arresting the rigors, but did not seem otherwise to affect the

course of the disease. The last rigor occurred on May 2nd, and after then the temperature gradually fell, though there were still great diurnal variations. After May 6th it was persistently subnormal—below 95° on the 10th. There was rapid wasting, and for several days before death the patient was very collapsed, and took nourishment with great difficulty. She sank very gradually, and died on May 12th. The pulse throughout was rapid, but variable and weak. The tongue was dry, extremely so towards the end, and covered with thick brown scales. The bowels were regular throughout, rather loose. Urine deposited large quantities of lithates, but never any albumen. On April 28th the liver-dulness was noticed to be increased, and the margin of the liver was felt below the ribs. The splenic dulness also was a good deal increased. The patient's prostrate condition prevented careful examination.

Necropsy thirty-three hours after death.—The body was very emaciated. The heart weighed 12 oz.; all the valves were thickened, and the aortic valves were not quite competent; there was commencing atheroma at the root of the aorta, but no ulcerative processes. The lungs were somewhat emphysematous. The spleen weighed 13 oz., was soft; capsule normal. The kidneys weighed 4 oz. each, and were fatty; cortex diminished; capsule adherent; surface smooth. The uterus contained two small fibroids in the fundus, one containing pieces of true osseous tissue. An old fibrous membrane was adherent to right cornu. The liver weighed 54 oz.; the capsule in various places was easily detached; general colour dark red; the upper surface of the right lobe bulged up against the diaphragm over an area of about two inches square. Over this area the liver and contiguous surface of the diaphragm were covered with purulent lymph; beneath this area, and extending into hepatic substance for an inch and a half in depth, was a portion of much lighter colour than the rest of the liver, and separated from it by a distinct capsule. The included part did not apparently contain pus. Most of the large portal veins were quite filled with pus, which reached, in many instances, into the finer branches, so that a section of the liver gave the appearance of a branch with leaves on it. The course of the pus was traced from the portal vein to the pancreatic and duodenal vein, which appeared dilated, and contained a clot requiring some force to remove it from the walls of the vessel. For about two inches the intima of the vein was swollen, thickened, and of a dark colour, and could be easily stripped off, leaving a rough surface. The tributaries of the vein were normal, and did not contain clots. Two or three glands in the adjacent mesentery were enlarged and contained pus. The stomach and peritoneum, except in the parts above-mentioned, were healthy. The duodenal mucous membrane was congested. There was no ulceration anywhere in the intestine.

PROGRESSIVE WASTING; RIGORS; CASEATION OF SPLEEN.

(Under the care of Dr. STURGES.)

W. J. E—, aged forty-nine, was admitted on March 31st, 1880. He stated that he had had rheumatic fever thirty-six years before, but quite recovered. He had had no other known illness. He was well till January, 1879, when he felt pain in the left hypochondrium, preventing him lying on his back on the left side. His bowels also began to be confined, requiring continual purgatives. The pain increased till May, 1879, when he had a severe attack of vomiting, bringing up blood and "stuff like white of egg." In the following June he felt "something give way inside," and almost immediately passed a large quantity of blood and pus from the bowel. He was never after free from more or less pain in the abdomen and loins. The patient's manner was confused and rambling, rendering it very difficult to get details.

On admission he complained of pain in the left hypochondrium, epigastrium, and both lumbar regions. He had also cough, accompanied with much expectoration of thick mucus, was 'ng, and dysuria. There was no albumen in the urine. The bowels were confined, and the tongue was swollen and furred. On April 15th medium-sized crepitations were heard over bases of both lungs, and these continued to be audible till death, especially on the left side. The patient had three distinct rigors (on April 22nd and 23rd and May 2nd respectively), each accompanied with high temperature, and followed by profuse sweating. There were no other rigors. In the beginning of May he became drowsy and listless, but could be easily roused. His mind became more and more confused, and later he had delusions and

occasional quiet delirium. The temperature till a day or two before death was high and variable (highest temperature 104.2° on April 19th and 22nd). For a day or two before death the temperature was lower (98.8°—100° F.) The pulse varied from 108 to 120. The respiration during May varied from 30 to 36. No organic changes, except those of lung, were found, and no diagnosis was arrived at except of "suppuration." He gradually sank, and died May 21st. The medicinal treatment consisted of stimulants and tonics, and for the pain bromide of potassium and chloral and opium plaster to the loins.

Necropsy twenty-two hours after death.—Much emaciation. Adhesions between dura mater and pia mater in parts over vertex. The grey matter over an area about the size of a florin, and located in the marginal and superior anterior frontal convolutions of the left side, was totally disorganised. In similarly softened condition was an area of about the same size situated in the right inferior surface of cerebellum, chiefly in the slender lobe, but in this part the membranes were absorbed over a space three-quarters of an inch by a quarter of an inch; a broken-down nerve substance was in contact with the bone. The arteries at the base of the brain seemed normal, as did the rest of the encephalon. It was remarked that the left side of the skull was flattened (probably congenital). The heart was fatty, valves were normal; the kidneys also were normal. There were old adhesions in the right pleura, especially at the base. Both lungs were riddled with nodules of caseation about the size of peas. There were also many miliary tubercles. The left lobe of the liver, the cardiac end of the stomach, and the spleen were adherent by fine firm bands of fibrous tissue. There were no signs of recent inflammation. The stomach was firmly adherent to the spleen over a circular area about the size of a shilling, and at this spot the coats of the stomach were so thin that on removal the stomach separated from the spleen leaving a round patch of mucous membrane adherent to spleen. The left lobe of liver was much flattened. The spleen (which, together with the stomach and part of left lobe of liver, weighed forty-nine ounces) was about the size of a cocoa-nut. Its capsule was thick and purple, mottled with red, and round patches of yellow corresponding with the caseous nodules with which the spleen was filled. The spleen was transformed into a collection of caseous nodules, each about the size of a pea, these apparently being converted Malpighian bodies, and between these ramified fibrous tissues and bloodvessels. The stomach appeared healthy but thinned, especially at the cardiac end. The liver, which weighed forty-eight ounces without the piece of left lobe, was fatty and fibrous. Two caseous masses were found in upper surface of right lobe, and another in quadrate lobe; adjacent to each were dilated bile-ducts containing viscid secretion. In the head of the pancreas was a caseous mass about the size of an ordinary marble.

SOUTH STAFFORDSHIRE HOSPITAL.

A CASE OF SCIRRHUS OF THE BREAST IN THE MALE.

(Under the care of Mr. KOUGH.)

E. B—, aged forty-five, was admitted March 9th, 1880. Nearly three years ago a tumour of the size of a pea was noticed in the left mamma. It gradually increased till it acquired its present dimensions, but caused no pain till January, 1880. He then felt shooting pains passing upwards, to the neck. In February the patient sought advice, and was admitted into the hospital as soon as he could leave his employment. There is no history of injury or eruption about the breast or discharge from the nipple.

On admission the tumour was the size of a large egg; it was of stony hardness, adherent to the skin, but movable on the pectoral muscles. One gland at the anterior fold of the axilla was enlarged. The patient's general condition was fair, although he said he had lost flesh lately. The family history was indefinite.

On March 11th the tumour was removed by two elliptical incisions, and the axillary glands were enucleated. Owing to the adherence of the skin to the surface of the tumour a somewhat large wound was left. This had nearly healed by granulation by April 20th, when the patient was discharged.

The physical and microscopic examination of the tumour showed it to be scirrhous. There is no reason to believe that the axillary gland was infiltrated with cancer.

The case is interesting as forming a unit in the statistics of cancer of the male breast, but it also has some points of interest when read with similar cases published in the "Hospital Mirror" of THE LANCET, the "Transactions of the Medico-Chirurgical Society," and elsewhere. (1) The growth was noticed when it was very small. (2) It occurred after the period of physical perfection. (3) It was attributed to no physical cause. (4) Mr. Birkett states that in the male cancer of the breast is less rapid in its course, and slower in its recurrence, than in the female. This was slow in its growth, and it will be interesting to note whether it will return.

COTTAGE HOSPITAL, MORETON-IN-MARSH.

CASE OF OVARIOTOMY; RECOVERY.

(Under the care of Mr. JOHN N. MOORE.)

Mrs. P—, aged forty-nine, was admitted on April 22nd, stated that, until two years ago, she had enjoyed fairly good health. She began to menstruate at twenty. She had had two children, both of whom were living, aged seven years and ten years respectively. The catamenia stopped about two years ago. In May, 1879, she first noticed a tumour about the size of a four months' fœtus just above the pubes; the swelling was perfectly uniform, and exactly the shape of a pregnant uterus. She stated that she had occasional shooting pains through the pelvis, and afterwards distinctly felt the movements of a child. The tumour gradually increased in size until the abdomen became much distended, and the pressure of it caused the legs to swell, and interfered with the breathing and the power of locomotion; micturition was not affected in any way, but there was a constant sanious discharge from the vagina.

On March 4th, 1880, Mr. Moore tapped the tumour, to relieve the urgent symptoms, and drew off four gallons of semi-transparent straw-coloured fluid. This gave great relief, and was followed by no bad symptom except a marked depression of strength for a few days. The tumour commenced to fill again, and on April 22nd she was admitted into the Cottage Hospital. Two days later ovariectomy was performed.

The patient was placed under the influence of the chloroform and ether mixture (in the semi-recumbent position); an incision was made in the median line from the umbilicus to just above the pubes, dividing the layers of abdominal wall down to the peritoneum, which, when exposed, was found to be thickened in character and roughened. The peritoneum was carefully divided on a director, and the anterior surface of the cyst wall exposed. It was adherent to the anterior wall of the cyst by recent adhesions, which were easily broken down by the hand. At this stage a large trocar was plunged into the tumour, and a little over a gallon of thick, dark-coloured, gelatinous fluid was drawn off. It was then found on attempting to lift the tumour that there were lateral pelvic adhesions, one being of an exceedingly firm character. These were carefully broken through by the hand and finger-nail, and the tumour got free. The mass was then raised through the wound, exposing the pedicle, which was about three inches long by an inch broad. A needle, armed with a double ligature of Chinese gimp, was then passed through the centre of the pedicle and tied on either side, and afterwards completely round "the pedicle," which was then cut short and dropped into the abdomen. In breaking through the lateral adhesions there was an escape of fluid into the peritoneal cavity. This was carefully sponged out, the omentum replaced *in situ*, and the edges of the wound were brought carefully together by four deep and six superficial sutures, the former including the peritoneum. The wound was dressed in a simple manner by dry lint, the edges of it being supported by broad strips of Leslie's adhesive plaster, and the whole secured by means of a broad flannel bandage.

The after-treatment consisted in careful attention to the bladder, the administration of small but frequent quantities of gruel and milk and a little iced champagne to allay the sickness, which was of a trifling character. The temperature never rose beyond 102° F., and that forty-eight hours after the operation. The deep sutures were removed on the fifth day, by which time the wound had completely healed. No medicine was given at all, with the exception of two single pills, containing a grain of opium, on the night of the operation.

On examining the tumour after its removal it was found to be a composite ovarian, one large cyst, together with a solid substance, containing several small cysts, and weighed about five pounds.

No special antiseptic treatment was adopted; there was no hæmorrhage or vessel of any kind requiring ligature, and the patient made a rapid and complete recovery, leaving the hospital on the twenty-sixth day after operation.

Valuable assistance was rendered in the operation by Dr. Yelf (one of the surgeons to the hospital), Mr. Moore of Bourton-on-the-Water, and Surgeon-Major Crisp, A.M.D.

Reviews and Notices of Books.

Lessons in Gynecology. By WILLIAM GOODELL, A.M., M.D. London: Baillière, Tyndall, and Cox.

THE name of this book fairly describes it. It consists of short clinical lectures delivered, in many if not in all instances, at the bedside or in the operating theatre. The author in his preface says: "This book is not a treatise upon diseases of women, but mainly the outcome of clinical and didactic lectures delivered to the advanced students of the medical department of the University of Pennsylvania." Still most of the diseases peculiar to women are treated of. The author has been long known as an able and original worker in the obstetric department of medicine, but no one can read the book before us without feeling that he is also a very able teacher—that is, that he has the power to convey his views clearly to, and to impress them deeply upon, his hearers. His style is terse and pointed, and, without elaboration and in short space, he draws a striking picture of a disease. Originality of matter is not to be expected of a teacher educating students, but there are things which we have a right to expect of him—his teaching should, in so far as possible, be correct, and should be free from evil or dangerous tendencies.

There are subjects treated of in this volume with regard to which the opinions of experienced physicians widely differ, such as displacement of the uterus, lacerations of the cervix uteri, &c.—subjects upon which each one must form his opinion upon the evidence at his command. Dr. Goodell holds flexion of the uterus of a certain degree—be it backwards or forwards—as a pathological condition. In the treatment of anteversion he recommends, among other means, the use of stem pessaries. Now this method of treatment is, unfortunately, one of those subjects upon which opinions are widely asunder. There is, however, one fact about which there can be no doubt, and all are agreed—namely, that death has in many instances followed the introduction of stem pessaries into the uterus. Whenever the use of stems is recommended, this important fact in their history should be made known. The author makes no mention of it, but contents himself with referring to two cases of his own, in one of which "a smart attack of peritonitis," and in the other "a pelvic soreness," followed the introduction of a stem!

Again, we cannot help regarding the manner in which the employment of the curette is recommended for the removal of fungosities supposed to be present in the cavity of the uterus as hazardous. That fungosities are sometimes present in the uterus there is no manner of doubt, yet post-mortem examination shows how rarely they occur. Moreover, their detection during life is very difficult, for they cannot be easily recognised by the finger introduced into the dilated womb because of their softness; every gynecologist knows how liable small mucous polypi in the cervix of the uterus are to escape the sense of touch, and how the sight is necessary for their detection. We cannot but think also that in many instances pieces of tissue which have been removed by the curette, and regarded as fungosities,

are nothing but portions of the mucous membrane of the uterus, for on examination they have presented a structure precisely similar to that membrane. They may be present, moreover, with or without symptoms, so that it is by no means established that they are often the source of the mischief which has been ascribed to them. From this book one would be led to think that fungosities giving rise to symptoms are of frequent occurrence. In describing the preparation of the patient for Emmet's operation for laceration of the cervix, the author says: "Whenever the catamenia are profuse the preliminary use of the curette is always good practice." From what is well known of the result of interference with the interior of the uterus, we cannot help regarding such advice as reckless and highly dangerous.

There is one other subject to which we must call attention—namely, sexual relations as causes of uterine diseases. This is repeatedly referred to in the course of the work and at the end a special "lesson" is devoted to it, in which several scriptural characters, together with an apostle, are summoned to support the author's views. This subject may be one of the highest importance medically, as it is socially and morally, but we have no evidence regarding it which justifies us in forming an opinion. Whether the result would repay an investigation into so nauseating a subject surrounded by such peculiar difficulties we do not pretend to say, but we cannot hesitate to assert that the subject is too offensive to be touched upon now and then. Like a stinking cesspool, it should be opened, once for all set right, and closed, so that its foulness may not pollute its surroundings. This can only be effected by an exhaustive investigation of the subject, and thus setting it on a scientific basis. The author has not done this. The lesson referred to contains little that is scientific, little or nothing that the moralist could not teach; indeed the author, from the highest motives, has played the part of the moralist under the guise—and a very thin one—of the physician. We think this a mistake, for it can lead to no good to morality or medicine. Until the subject can be treated in a scientific manner, by the physician as such, it had better be left untouched.

On Aneurism; especially of the Thorax and Root of the Neck. By RICHARD BARWELL, F.R.C.S., Surgeon to Charing-cross Hospital. With Illustrations. London: Macmillan & Co. 1880.

THE practice and success of Mr. Barwell in this special department of surgery have already been brought under the notice of the profession in papers at the Medico-Chirurgical Society, but the subject is so important and his success has been so signal, that we are glad to welcome this little book, which will make the facts more widely known than they could otherwise be. Mr. Barwell has performed the double distal ligature for innominate aneurism four times, and is able to report that in three cases cure resulted. This is a success quite new to surgery. The result is attributed to the use of a new flat or ribbon ligature and the Listerian dressing. Although Mr. Barwell is a warm supporter of Listerism, he is strongly impressed with the imperfections of the carbolised catgut for ligatures, and proposes to replace it by a ribbon ligature prepared from the fresh aorta of an ox. It is stated that this ligature is organised in the body, and that being flat, it is used without severing any of the coats of the artery. He has employed it for the ligature in continuity of the largest arteries of the body seven times, and in no case has any trouble arisen from the ligature, and all the cases have done very well. Unfortunately the ligature is unsuited for divided arteries, and we note that Mr. Barwell does not give evidence to show that the coats of the vessels are not severed by this flat ligature. We are presented with a very gloomy picture of the pain attending the treatment of aneurism by compression; in view of the many rapid re-

coveries under Esmarch's bandage it appears to be an exaggeration to speak of the ligature as a pleasanter mode of treatment. We are surprised to read that the risk of gangrene supervening on the ligature of an artery for aneurism "has not been previously mentioned." A reference to the works of either Erichsen, Holmes, Bryant, or even to the handbook of Fairlie Clarke, would have saved Mr. Barwell from an error which, however, is too obvious to be harmful.

The Lancet Commission ON ATHLETICS.

II.

ATHLETICISM, like every other pursuit, does not pass scathless from the attacks of its enemies. It is objected to as injurious both on social and physical grounds. In the first place, it is alleged that it unfits men, especially young men, at the University, for reading and steady work, and improves the body at the expense of the intellectual powers. Certainly, a man may be so passionately devoted to athletic exercises as to be willing to give up everything else for the pleasure of this one pursuit. But the same is to be said of every other amusement, and the proper use of a thing should not bear the blame that attaches to its abuse. It must be granted, however, that during the Race-week at the University, and for a short time preceding it, a man in hard training usually feels rather restless, and in such admirable spirits that he finds it hard to apply himself to any distasteful work; but this state lasts for a very short time, and, we believe, does more good by varying the monotony of the system than harm by the temporary interruption it may cause to the routine of work. But that even severe physical exercise is not inconsistent with hard work and success in intellectual pursuits is demonstrated by the fact that many men who have been renowned as oarsmen have taken the highest honours at their University, or afterwards reached positions of eminence only attainable by the most cultivated intellects. Amongst these we may mention C. Wordsworth, late Bishop of St. Andrews; the late Dean of Norwich, Dr. Garnier; C. Merivale, author of "History of the Romans under the Empire"; G. A. Selwyn, late Bishop of Lichfield; W. W. Smyth, late President of the Geographical Society; Justice Sir W. Balliol Brett; Justice Hon. G. Denman; F. T. MacDougall, late Bishop of Labuan, Fellow of the Royal College of Surgeons, England; Dr. Hornby, Head-master of Eton. Besides, it appears from Mr. MacMichael's biographical notice of University oars that of the 190 gentlemen who took part in the contests between the years 1829 and 1861 no less than seventy-nine highly distinguished themselves in after-life at the Bar, in Medicine, in the Church, or in literary pursuits, or took a good degree at the University. But even if the accusation that rowing diminishes the intellectual powers were true (and the examples we have quoted show the contrary), would not the injury be more than outweighed by the unquestionably good influence which it exerts on the *morale* of men who make it their exercise? Training is another word for the strictest sobriety and self-denial, and in no branch of athletics is training carried to so great an extent as among rowing-men. It is no small matter for an undergraduate to give up during five weeks of the summer term all the small self-indulgences that make life pleasant; and any pursuit which makes hundreds of men willing converts to such self-denial must inevitably produce elevating results. Judging from the popular novels of fifty years ago, the tone of the universities has in many ways since then greatly improved. Loafing and inebriety, the virtues of the old university hero, are happily now rarely to be met with, and we believe that the improvement is due in a great measure to the increase of rowing and other athletic exercises, and the training which is their necessary adjunct. The river, too, is a school for endurance which cannot be surpassed. Even the most carping critic must have some admiration for a man who, for

bare honour, undergoes regularly the discomforts of training in an English spring to the end that he may take part in a contest which, temporarily at all events, will cause him severe bodily distress.

As to the question of health, however, considerable difference of opinion exists with respect to the effect that athletic pursuits carried to their full extent have, directly or remotely, on the constitution of the individual. As a rule, it may be stated that medical men who have been educated at the universities, or are practising in university towns, regard athletics with a favourable eye, whilst those practising in large cities frequently take a contrary view. This discrepancy of opinion is due to two causes. The University physicians see large numbers of men who, year after year, come up to the University engaged in severe athletic pursuits, and find that only an extremely small proportion are injured by it, whilst a vast number are distinctly benefited. The physicians in a large town see only the exceptional cases of breakdown, and not having the opportunity of witnessing the corresponding advantages, are unduly impressed by them. Moreover, the undergraduates of a University as a body are the least likely to feel the ill effects of prolonged and violent muscular exertion. The majority of them have had a long training from boyhood in all kinds of sports and exercises, and by the time they come to the University they are pretty conscious of what their powers are, and consequently we find that those who engage in athletic pursuits at the University are those who physically are best fitted to endure the strain. With a town population the case is different. In the majority of instances athletic feats are undertaken without any previous physical preparation; the pursuit is taken up generally later in life than is the case with the Universities, and often with a view to strengthen failing health. Then, too, the conditions of life of the athlete in town are very different from those of the undergraduate, who is well fed, well housed, and takes his exercise at hours when his bodily powers are not exhausted by the fatigues of a day's business or confinement in close, ill-ventilated chambers or offices. The townsman's meal-hours are more irregular, and his meals are perhaps eaten with less relish. The opportunities for exercise, too, are not constant, and periods of violent exertion alternate with corresponding periods of sedentary occupation. Taking all these circumstances into consideration, it will be seen that the townsman is heavily handicapped when he engages in athletic pursuits, and it is not to be wondered at that breakdowns more frequently occur than is the case at the Universities. In making these remarks we do not intend to throw any discouragement on the pursuit of athletic exercises in towns, but merely to point out that the conditions under which they are followed are different from those obtaining at the Universities, and therefore more care ought to be exercised in selecting any special pursuit, and particular attention should be paid to the circumstances under which it can be practised.

Our remarks, therefore, in the present article, will be confined to the influence athletic exercises have generally on the health and constitution of town populations, more especially as affecting those dwelling in large towns, contenting ourselves with endorsing Dr. Morgan's opinion,¹ that as far as any injurious effect can be traced to violent athletic exercises among men at the University, they can be accounted for "by too great a strain being laid upon the system in early life, or that the harm may generally be accounted for either by the existence of constitutional unsoundness, or by some deviation from the commonly accepted laws of health and prudence." Moreover, we may quote Professor Humphry's assurance, that undergraduates are, "as a general rule, when not under the eyes of their parents, cautious enough in what concerns their health . . . they are prone to seek advice when they are in doubt as to their fitness for boating, and are for the most part willing to follow it, provided they feel that it is unprejudiced, and grounded on the real merits of the case. Being regarded as responsible agents, and allowed to judge for themselves, they are amenable to reason, and usually take the right course."²

¹ Dr. Morgan finds that from the year 1829 to 1869, both years included, 294 men have rowed in the Inter-University race; of the 294 oars 17 either describe themselves, or are spoken of by their relations and friends, in some cases with considerable reservation, as having suffered from their labours.—Vide University Oars, by John Edward Morgan, M.D. Oxon., F.R.C.P.

² Extract from a letter of Professor Humphry, quoted in Mr. MacMichael's Chronicle of the Oxford and Cambridge Boat Races from 1829 to 1869, pp. 26.

In forming an opinion as to the effect that certain athletic pursuits may have on the health of the individual a variety of circumstances have to be taken into consideration. Age, conformation, and habit of body, constitutional tendencies, &c. No man in his senses would think of taking to the running path after thirty, and few would be injudicious enough to allow rapidly-growing lads of thirteen to fifteen to engage in athletic exercises which throw a severe or prolonged strain on the muscular and osseous systems, as boat-racing, alpine climbing, or severe pedestrian exploits. Nor do we find men with large frames and a powerfully-developed muscular system generally engaging in athletic pursuits that require great dexterity or celerity of action. Moreover, the form of exercise pursued should in all cases be subordinated to the power of the individual and the peculiarities of his constitution. A man would act most unwisely who, with the knowledge that certain members of his family had suffered from heart disease or consumptive tendencies, should undertake an exercise that would throw any undue strain upon the heart or lungs; but he might, with great advantage to himself, adopt other athletic pursuits that would harden his frame and perhaps enable him to ward off his hereditary tendencies. The introduction of golf and lawn tennis among athletic pursuits are in this respect a great boon to the feeble members of the community, not merely to those whose health prevents them from undertaking more vigorous exercise, but to those whose strength is failing through age. Again, a medical man, without any inconsistency, may prohibit the rough-and-tumble game of foot-ball to a youth of strumous tendencies and yet permit him to play cricket, since in the first game there would be danger of inducing joint or bone disease from some comparatively slight bruise or strain inseparable from the game, whilst such accidents are comparatively rare in the latter pursuit. The great point, therefore, in every case is to determine what the effects a particular exercise will have upon the individual, and, having decided upon the proper form of exercise, to proceed to form some opinion as to the amount that should be taken.

With regard to this latter point, we fear more difficulty will be experienced than in determining the form of exercise that may be adopted. Estimates have been made, based on chemical and physiological observations and mathematical calculations, showing the amount of work a man weighing 150 lb. can accomplish in eight hours' vigorous occupation at different kinds of labour. Thus eight hours' pile-driving is equal to the force expended in lifting 312 tons one foot in height; turning a winch for the same period equals 374 tons lifted one foot; walking one mile on the level, unloaded, is said to be equivalent to lifting 17·67 tons one foot; but if loaded with a knapsack weighing 60 lb. the work done in a mile's march amounts to 24·75 foot tons. However correct the mathematical calculations and the chemical and physiological observations may be on which these estimates are founded, still, when pushed beyond the limits of common sense, they become dangerous in their application, because they ignore what, for want of a more expressive phrase, we may call the "stamina" of the individual. It is impossible from scientific data at present before us to explain how it is that the Hindoo coolie,³ with his slim muscles and rice diet, will perform an amount of external mechanical work that the English navvy, with his grand muscular development and ample diet, would find it difficult to excel. The estimate, therefore, of the amount of exercise that may be taken without injury to health in any given case is not to be decided by any hard-and-fast rule, but by observation of the effect that exercise has on the health and development of the individual. And here we would remark, parenthetically, the great advantage it is for schools to have a medical attendant who not only visits the boys when sick, but is constantly brought into contact with them when in health. It is in boyhood that the physical powers are first tested, and it is of the utmost importance that the experiment be fairly watched. We do not advocate any fussy interference with boys' sports and games, but we do think an eye should be kept on them to see that

they do not "take too much out of themselves." This could easily be done if the height, weight, and chest girth of each boy were taken from time to time during the half year. So long as the weight increased in a normal ratio for the boy's age, no apprehensions need be entertained; but a retrogression or even a pause would be the signal for placing a lad under surveillance as regards his work, mental as well as physical. With respect to adults, the rule should be that exercise should stop short of fatigue. When a feeling of painful effort is experienced in the performance of any work we may be sure that the nervous system is becoming exhausted, and that ere long symptoms of acute local fatigue will manifest themselves. These, as regards the muscular system, are recognised by irregular, painful muscular contractions known as cramp, and by a peculiar tremulous quivering and twitching of the muscles. When fatigue is carried so far as to affect the respiratory and circulatory systems, the symptoms are of a graver character. Panting, sighing respiration, rapid and irregular action of the heart, cold sweat, and frequently giddiness and indistinctness of vision, show that the physical powers have been pushed beyond the physiological limit. A judicious trainer, therefore, will cry "Hold! enough," at the first symptom of fatigue, and content himself by gradually developing the powers of endurance, carefully increasing the task in accordance with the increase of the muscular power; but, above all, with the establishment of that concordant action of the heart, lungs, and great vessels which is so essential to development of a man's "breathing power" in fast work.

Regularity and constancy in the pursuit of exercise are imperative if perfect health is expected to result from its employment. It is far better for men to lead altogether a sedentary life than to be irregularly active. This caution is the more needed since the transition from sedentary habits to arduous and exhausting physical labour is of frequent occurrence. Dr. Kalfé, in some remarks on this subject, has pointed out that "Every year a number of middle-aged men, who, for some months past, have been engaged in the sedentary occupations of a profession, of literature, or of business, at the commencement of the autumn holiday start for the Continent or the Highlands, and suddenly undertake immense fatigue in the ascent of alpine heights, or no less laborious work of a day on the moors without the least preparation. So also we see every Bank-holiday crowds of young men starting off for some tremendous walk or 'bucket' up the river, utterly unprepared for the task they undertake. Is it to be wondered at that men return complaining that their holiday has done them no good; that, instead of vigour, they complain of exhaustion; that their appetite fails them, their nights are sleepless, their limbs ache, and they are jaded and spiritless?" Again, the transition from active habits to sedentary pursuits is generally accompanied by a marked disturbance of health, since organs roused to full activity by the stimulus that exercise gives them are liable to become "functionally deranged" when that stimulus is withdrawn. This, perhaps, would not be so frequently observed if instead of relapsing immediately, as is too frequently the case, into idle habits as far as exercise is concerned, an attempt was made to engage regularly, for however short a time, in some pursuit which would ensure brisk muscular movement; so that the health acquired by exercise during the vacation should not be lost; and moreover that the body, when the next holiday period came round, should be found in fair condition to undertake the increased physical strain then thrown upon it.

New Inventions.

THE UNIVERSAL INVALID TUBULAR WATER-OR AIR-BED.

MESSRS. POCKOCK Brothers, of London, have manufactured, at the suggestion of Dr. Miller of Bethnal House, a very serviceable water- or air-bed. Instead of having the air or water contained in one large chamber, it is in several separate tubes held together in a case. The cylinders are of course waterproof, and those in the centre of the bed are provided with an additional coating of macintosh. The tubular structure allows of free ventilation and of draining of fluid from the surface of the bed. The separate tubes can be

³ Professor du Chaumont, of Netley ("Parkes's Hygiene," 5th edition), has given some interesting particulars of the work done in India by natives. (1) Thus a hill coolie will go thirty miles, with an ascent of 5500 feet, in three days, carrying 80 lb. weight, the weight carried on a frame supported on the loins and sacrum, and aided by a band passed round the forehead—work per diem, 500 tons lifted 1 foot. (2) Eight palanquin-bearers carried an officer weighing 180 lb., and the palanquin weighing 250 lb., twenty-five miles in Lower Bengal; assuming each man weighed 150 lb., the work was 600 foot-tons per diem.

more or less inflated to raise or relieve from pressure certain parts, while the removal of a couple of the tubes permits of the easy use of the bedpan. It is free from noise and surging, and is of course easier to arrange and move than an ordinary water bed. Another great advantage in it is, that an injury to any one tube requires the repair or renewal of that part only. The bellows for inflating the tubes supplied with the one submitted to us is far too small; with a larger one the process of inflation would be much easier.

GOUDIE'S PATENT MATTRESS.

WE have received from Messrs. Taylor Bros. and Co., of Queen Victoria-street, one of Mr. Goudie's new cork and air mattresses. When inflated it resembles in appearance a thick horsehair or spring mattress, the air chamber being surrounded by a fairly thick casing of granular cork mixed with "a powerful but inodorous disinfectant."

The advantages Mr. Goudie claims for his patent mattress are:—It is cheaper than hair or feather, is less liable to get out of shape than hair or wool, maintains a more even temperature than air- or water-beds, and is as soft, but not so liable to be damaged, and is lighter than, and equally as durable as hair. It is non-hygrometric, and does not cause chills, as when the india-rubber is exposed. The mattress can be purified after use by immersion in water mixed with any disinfectant, and will dry in twenty-four hours in a temperature of 60°. There is no smell of india-rubber, nor the uncomfortable "spring" of an ordinary air- or water-bed. For ordinary use it is both comfortable and healthy, but it hardly fulfils the object of an air-bed in cases requiring an even distribution of pressure over the whole body, as it is not flexible enough to fit closely into the surface of the body.

Analytical Records.

MISTURA BISMUTHI CO. (DR. BROWNING'S).

(MACKAY, MACKAY, & CO., BOUVIERIE-STREET.)

A good and useful preparation. It is intended for use in dyspepsia, sickness, gastric catarrh, &c. Bismuth could hardly be given in a better form.

MIST. PEPSINÆ CO. C. BISMUTHO.

(C. J. HEWLETT & SON, LONDON.)

Contains pepsine, solution of bismuth, purified solution of opium, hydrocyanic acid, nux vomica, &c. It is clear, mixes easily with water, and is undoubtedly a valuable and convenient preparation.

ESSENCE OF DANDELION COFFEE.—ESSENCE OF COFFEE AND CHICORY.—THE EDINBURGH COFFEE AND MILK.

(T. SYMINGTON, EDINBURGH.)

The taraxacum extract is really an excellent substitute for coffee, and will, we think, be an advantage to many bilious and dyspeptic patients.

Edinburgh Coffee and Milk is a mixture of condensed milk with coffee essence. It is convenient, and will be useful to travellers, yachtmen, and others.

BENGER'S PREPARATIONS OF THE NATURAL DIGESTIVE FERMENTS.

(MOTTERSHEAD & CO., MANCHESTER.)

Liquor Pancreaticus (Benger); Liquor Pepticus (Benger).

These are carefully prepared, and, so far as we can tell from the tests we have been able to use, thoroughly trustworthy preparations. So many worthless articles of the kind have been sold that great care is required in choosing those upon which reliance can be placed. Mr. Benger's care has therefore been well spent.

MCDUGALL'S PATENT FLOUR (SELF-RAISING).

(MCDUGALL BROS., LONDON & MANCHESTER.)

This is an interesting, and as far as we know, perfectly original method of treating and improving flour. During the process of milling, and afterwards during the ordinary fermentation-process of baking, the flour suffers, as is well-known, a definite loss both of phosphates and of nitrogen. The new process, which is the subject of a patent under the joint names of Professor Horsford, Cambridge, U.S.A., and Messrs. McDougall, consists in the mixture of the flour with bicarbonate of soda and dry acid phosphate of lime. The addition of water causes the formation of the phosphates of lime and soda, and the raising of the dough is effected by the carbonic acid liberated from the alkaline carbonate. Thus the phosphates lost in milling are restored, and the destruction of gluten attendant upon fermentation prevented. The bread, pastry, &c., made with this flour are very light and sweet, and the making of bread becomes very simple. The process appears to us to be one of great value and importance.

FARR TESTIMONIAL FUND.

To the Editor of THE LANCET.

SIR,—I am desired by the Committee for the Farr Testimonial Fund to request your further valuable assistance by publishing in your next issue the enclosed Second List of Subscriptions to the Fund.—Faithfully yours,

Aug. 2nd, 1880.

NOEL A. HUMPHREYS, *Hon. Sec.*

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THE LANCET.

LONDON: SATURDAY, AUGUST 7, 1880.

THE reports of the deputation of representatives of the British Medical Association, on the subject of medical reform, of their interview with Earl SPENCER and Mr. MUNDELLA, are of a character to warn medical reformers that the work which has been well begun by a Conservative Ministry, is in strange danger of being abandoned by a Liberal Administration, which is without a *raison d'être* if it abandons the task of putting wrong things right. It is a novel and curious thing in history to hear a man of Mr. MUNDELLA'S stamp speaking comfortably to the enemies of improvement, and very discouragingly to the friends of progress and beneficial change. If we might venture to give Mr. MUNDELLA a little advice—we know the low esteem in which gratuitous advice is generally held—it is to abandon this rôle at once. He plays it badly. Words of cold discouragement to those who have brought a reform movement to the very verge of success come with doubtful grace from him. He should leave them to others, though in the ranks of the Conservative camp there could scarcely be found a man to make the representations which he made to the deputation of the British Medical Association on Saturday. The profession knows Mr. MUNDELLA well enough to believe that he did not intend to act so. But whatever he intended, this is the result, and his answer in the House of Commons to Mr. ERRINGTON, and his remarks to the deputation, have filled every opponent of medical reform with new hope that the long-delayed and much-needed Amendment of the Medical Acts is going to be indefinitely postponed. What will happen next? Mr. MUNDELLA speaking comfortably to the defenders of old corporations, and of a useless, wasteful, costly Medical Council! The times are out of joint. We shall soon hear of Dr. ANDREW WOOD among the Radicals of Edinburgh, presiding at a banquet to celebrate the defeat of the House of Buccleuch and the reign of Mr. MUNDELLA.

But let us analyse a little more closely the reply given by Lord SPENCER and Mr. MUNDELLA to a deputation asking, most reasonably—though perhaps at an unseasonable time—that a piece of reform commenced by the late Conservative Ministry should be completed by the present Government. Lord SPENCER spoke of the difficulty of the question of medical reform, and of the opposition which measures to promote it excited: "Measures of this kind appear to create very considerable difficulty and opposition," and "unless there is something like general concurrence of the medical profession in England, I do not think it would be wise to attempt it." Lord SPENCER would surely admit that no measures worth passing are ever passed without "considerable difficulty and opposition"—certainly not by a Ministry in which he has so proper a place, both on personal and hereditary grounds. As regards the "general concurrence of the profession," which he requires to see in order to justify the Government in undertaking the measure—this is the very state of matters that

exists. There is not only general concurrence, but almost absolute unanimity. It would be impossible to find a profession more "agreed" than ours on the simple and urgent points of medical reform—(1) consolidation of the examining boards, and (2) a Medical Council representing the profession and capable of carrying out with authority its own decisions. On the one side of this question is the profession—agreed, harmonious, unanimous; on the other, are nineteen competing, interested, and in a few instances perfectly antiquated bodies, which have outlived the circumstances in which they were required, and even a few of these are on the side of reform, or prepared to accept what they know to be inevitable. But—and here we come to Mr. MUNDELLA—the Vice-President tells us, as an argument against the Government settling this question, "the existing examining bodies have a number of representatives in the House of Commons, and unless there can be some common agreement among the profession, it is utterly impossible for any Government, however strong, to carry it out. I find Medical Bills always defeated by the action of medical men themselves." Surely Mr. MUNDELLA, when the recess comes and he has time to think over these strange representations, will regret them. We did not know that the examining bodies had representatives in Parliament, except the Universities, which we cannot suppose will at the last oppose changes recommended by a Select Committee. But even if it be so, even if Dr. PLAYFAIR and other university representatives are putting the drag on, which we do not believe, has the great medical profession no representatives in Parliament? Let Mr. MUNDELLA give the answer. "They have always defeated medical Bills." If they can defeat Bills, they can, with the help of a good Government, pass Bills. They have defeated Bills simply because the Bills have never pretended to do what, in the unanimous judgment of the profession, needed to be done. Let the Government now in power complete the investigation two-thirds accomplished, and bring in a Bill dealing with the whole question, and it will find the profession has representatives in Parliament as well as the examining bodies, and a great question will be well settled, with credit to the Ministry that helps to settle it.

ALTHOUGH in some of the lower animals it has been shown that the spinal cord, after division, may reunite, all attempts to obtain this result in the case of dogs have hitherto failed. It is possible that this is to be ascribed to the age of the animals on which the experiments were performed. EICHORST, experimenting upon very young dogs, has succeeded in obtaining union of the cord and partial restoration of function, in a comparatively short space of time. Although successful in only one case, the particulars of the experiments are of much interest.

In three young dogs the spinal cord was divided between the lower part of the dorsal and upper part of the lumbar regions. Immediately after the operation there was, of course, complete motor and sensory paralysis of the parts supplied from the cord below the section, and vigorous reflex movements could be obtained. The wounds were treated on strict antiseptic principles, but thymol was employed instead of carbolic acid, on account of the action of the latter on the nerve-tissues. The first animal experimented on died in twenty-one days, without any return of

voluntary power or of sensation in the paralysed parts. The post-mortem examination showed that there had not been the slightest attempt at regeneration of the divided cord. The ends were three millimetres apart, and were united by a grey translucent gelatinous substance which was in intimate organic connexion with each extremity. This intermediate tissue consisted of large round cells, containing nuclei which were deeply stained by carmine, and a finely granular interstitial tissue which could be resolved, by a high magnifying power, into clear granules and fibres. There were numerous capillary vessels, the proper wall and adventitial sheath of which were permeated with elongated oval nuclei. Nowhere could any trace of nerve-elements be discovered. It was a cicatricial tissue closely analogous to that of the neuroglia. The nerves of the lower extremities presented no structural alteration.

In a second dog operated on in the same manner, a return of voluntary movements commenced at the end of the fourth week. The dog became able to stand, sit, and finally to run 180 feet without interruption, although its movements were distinctly ataxic. Sensibility, however, remained absent. The animal was killed on the thirty-fifth day. A greyish substance, somewhat flattened from before back, had restored the continuity of the cord. That part corresponding to the anterior and lateral columns already presented a medullary aspect. The nerves and muscles of the lower extremities were normal. Microscopical examination of the new tissue in the cord showed it to be permeated by tracts of nerve-fibres, running from above downwards, of which most possessed a medullary sheath. Many of the fibres presented nuclei which had the aspect of being pressed into the fibres from their surface. Non-medullated nerve-fibres were less abundant, and showed a tendency to a varicose condition. The two kinds had no regular distribution. The interstitial connective-tissue presented cellular elements, colouring deeply with carmine, and provided with processes. Besides these, there were two very large cells with double contoured nuclei and large processes, but whether nerve-cells or connective-tissue elements it was impossible to say.

In the third dog, although it lived for 131 days after the operation, there was no renewal of the motor or sensory functions, nor was there any restoration of the continuity of the cord. The extremities were two millimetres apart. In neither animal was there any secondary degeneration in the cord.

LET us go aside awhile, out of reach of the heart- and head-aching din, and the acrimonious disputation about the "nursing system" and "hospital management" at Guy's, and try to discover the principles involved, or at stake, in the contention. What makes it especially important to do this is the fact that whereas the grand engagement at a Metropolitan hospital is just now the centre of interest, the conflict on this particular field is only one episode in a campaign on the final issue of which the best interests of the sick poor, and of medicine as an art, if not also as a science, depend. We may tell the Governors of hospitals generally that Medicine has made the hospitals, and, if they think to succeed in rendering the simply administrative element, however philanthropic, the foremost feature in these establishments, they are mistaken, and not only in error, but engaged in a

ruinous enterprise, which is neither to be tolerated nor endured.

Hospitals are not charities to which Medicine contributes something, but, in a special sense, *medical* charities. Nor does medical aid consist of two parts, as certain members of the lay public would seem to suppose. It is not a combination of medicine and nursing, or nursing and medicine. The whole charity from first to last is *medical*. The sick poor are taken away from their homes, and are placed in an establishment which is—or should be—constructed and administered with a single eye to the complete and rapid cure of the cases admitted to its benefits. It is an engine of "cure," and the engineer should be—must be—an expert in the art of curing. This is the principle of the hospital system, and it is this which is at stake in the dispute. The lay governors of hospitals are trying to make these institutions houses of charity, and to treat the medical business as auxiliary! They wish to take charge of the sick poor and to nurse them, with or without the advice of the medical faculty; a corps of women who, in the energy of their discontent at the natural subordination of their sex, have seized on nursing as a sphere for the vent of their emotional natures—being the agents of this lay "sick-tending." The physicians and surgeons of the various hospitals are, forsooth, to be reduced to the level of practitioners called in by the governors to *advise* as to the treatment of their—that is the governors'—patients. It is well to state this plainly and clearly, and to let it be understood, in a cool moment of reflection, without the irritation produced by that special conflict of opinion which must occur in connexion with any particular case. Divested of personal attributes and considerations, the simple facts are as we have stated them—Hospitals are *not* homes for the sick, with medical advice as an adjunct; but institutions wholly medical in their character and purpose, and, therefore, they must be under direct medical control. We are not prepared to endorse or approve any half-measure or schemes whereby the medical faculty of a hospital is under grace of the lay governors to be allowed a muffled voice in the administration. Medicine must be paramount. If the present governors of these medical charities, the name and fame of which have been wholly made by the medical men connected with them, are not prepared to carry on the institutions in which they have a little brief authority on this footing, they must be taught by the logic and force of facts that these, and these only, are the terms upon which the medical profession will continue to regard the hospital as an appliance of *its* work and *its* charity.

We may seem to take high ground. We do so deliberately and after mature and even slow deliberation. The time has come to step outside the special circle of this dispute at Guy's, and appeal to the medical profession as a whole to declare itself on the question at issue. Without such action in concert as we now advise and invite, it is apparently impossible to make the matter clear to the governors of hospitals, who would seem to be, strangely, in the dark as to their actual position in relation to these charities. It has long been painfully evident that the committees of hospitals do not recognise the men who give time and skill to the service of a charity as among its principal contributors. The vulgar estimate of gold—as of higher value than money's-worth in

brains and power—pervades the councils of men who are simply the trustees of the money bequeathed or subscribed by the public for the cure of disease. That money has been left, or is given, to enable the medical profession to carry out its beneficent work as a body expert in the art of healing. The funds collected must, in common sense and fitness, be administered as the medical faculties of the hospital, the representatives of the profession in this matter, desire.

This should be self-evident; but let us look at the question in another way. The object is to cure, and the nursing of a patient is an integral part of his medical or surgical treatment. How then can it come to pass that intelligent and reasonable men presume to think they can fulfil the conditions of their trust by separating nursing from the rest of the treatment, and affecting to take it under *their* control? For ourselves, we must be excused for feeling some reluctance to intervene in this matter. We cannot help seeing the hand of NEMESIS in these differences and disputes between the governors of hospitals and medical gentlemen all over the country. It was a short-sighted as well as a scientific blunder to sanction the introduction of independent nursing sisterhoods into hospitals. What the true interests of the sick require is not the presence of misguided “ladies” hovering round their beds and taking every “opportunity” to proselytise, but a fair number of women of their own class, trained to do their business as nurses, humbly and honestly, at the bidding of the medical officers. How would it be if the dispensers of drugs were to decline the “modest” duty of making up the prescriptions given by the staff, and take to prescribing on their own account, being supported in their presumption by the governors? The creation of a class of “sisters” who are above the rank of nurses has been a mistake, and we are now reaping the consequences. Apart from this view of the facts, however, there is that which we have already propounded and trust to see debated temperately and quietly by members of the profession whose names will have weight. It is a great question, a practical and pressing one. Nothing but good can come of its being fully and freely discussed.

Annotations.

“Ne quid nimis.”

THE ILLNESS OF MR. GLADSTONE.

THE illness of Mr. Gladstone is a matter of huge public interest, and will be a sufficient excuse for us giving some medical particulars of it, and trying to get some lessons out of it. For a week or more before any decided symptoms declared themselves, Mr. Gladstone was showing signs of fatigue, and not looking well. On the night of Friday, the 30th ult., while dining with Lord Frederick Cavendish, he was attacked with rigors, and had to leave the dinner-table. After awhile he recovered, and went to the House, fortunately to find that it had just been counted out. On the Saturday Mr. Gladstone had another severe rigor, and Mrs. Gladstone went for Dr. Clark, who returned with her, and was fortunately just in time to see his distinguished patient descending the stairs, muffled up to the eyes in the collar of his great coat, and looking exceedingly ill, but on the point of joining the meeting of the Cabinet. Dr. Clark finding a temperature of 103°, and all the indications of an acute and critical illness, had to tell the Premier that he must not attend

the Cabinet. Mr. Gladstone is an eager man, but he knows the value of medical opinion, and submitted promptly. It is serious to think how much worse matters might have been had his keen sense of duty not been qualified by finding the House counted out on Friday, and by the opportune arrival and firmness of Dr. Clark on Saturday. Beyond rigor, high temperature, and the feeling and look of illness, there were no other marked symptoms. The pulse was quickened, but never exceeded 90, and was generally only 80, being, we believe, ordinarily steady and slow, even under animating and exciting conditions. Dr. Clark found, at his first visit, slight crepitation at the base of the left lung posteriorly, which, at subsequent visits, varied strangely in position, and suggested some septic element in the case. The facts continued much the same for several days without any marked development of the physical signs of pneumonia. For a day or two the temperature underwent a considerable remission in the morning—a fact which, in the absence of decided lung symptoms, gave a typhoid aspect to the facts. At intervals there were very profuse perspirations, which at first were attributed to the action of medicines, but which continued in the absence of medicines, and proved part of the natural history of the case, which may be regarded as a *febricula*, or short fever, occasioned by a chill. On Monday, at Dr. Clark's own suggestion, Sir William Jenner was called in and saw Mr. Gladstone. Occasionally, as on Sunday, the temperature fell even below 100° for a short time, but only to rise again in the evening. So late as Wednesday morning the fever facts were curious. At nine in the morning the temperature was 101°, and within an hour it had risen to 103°. In the afternoon it had fallen to 99°, and has not risen since, a drenching perspiration having happened before the fall. The treatment has consisted chiefly in absolute quietness and judicious support of the system; stimulants were carefully used, but not found helpful.

We cannot, speaking medically, acquit Mr. Gladstone altogether of the charge of having recently neglected to remember that even his powers have a limit; but it is to be said, to the credit of his judgment, that he has been a most submissive patient, and, to the credit of his splendid and well-preserved constitution, that he has passed through a testing illness without the slightest sign of failure in the great vital organs, and in a way to justify the hopes of his countrymen that he will, with a little more consideration for his physical needs, be long spared to play his conspicuous part in the councils of the nation. No illness since that of the Prince of Wales has produced such profound and universal anxiety. Mr. Gladstone will have the most refined sense of this interest, and cannot better recognise it than by taking a little more care of himself.

ROYAL COLLEGE OF SURGEONS.

AT the last examination for the diploma of membership of the College, which was brought to a close on Friday, after a fortnight's work, two hundred and thirty-eight candidates had been examined, of which number no less than ninety-two failed to acquit themselves to the satisfaction of the Court of Examiners, and were consequently referred to their studies for six months. Some of these young gentlemen have had considerable experience of these collegiate examinations, many of them having paid their respects to the examiners from twice to five times. Thirteen candidates passed in Surgery, and when qualified in Medicine will be admitted members of the College. Sixty-two of the 238 candidates held a recognised medical diploma or degree, and therefore had not to undergo another examination in Medicine; of these, 39 held the L.S.A., 7 M.B. Edin., 3 L.R.C.P. Edin., 2 M.B. Aberd., 2 M.B. Cantab.,

2 L.R.C.P. Lond., 1 M.B. Dub., 1 M.D. Malta, 1 M.B. Toronto, 1 M.B. Durham, 1 M.D. Berlin, 1 M.D. Paris, and 1 M.D. Ohio. The examinations for the present session have now been brought to a close, and before the next meeting of the Court a new member will have to be elected by the Council, in the vacancy caused by the resignation of Mr. Frederick Le Gros Clark, F.R.S. Mr. Clark was admitted a member of the College February 15th, 1833; elected one of the Honorary Fellows December 11th, 1843; a member of the Council in 1864; Professor of Human Anatomy and Surgery in 1867; a member of the Court of Examiners in 1870; of the Dental Board in 1872; and in 1874 the highest distinction the Council could confer—that of President of the College; and in 1875 Hunterian Orator; and well performed his duties as a member of Committees.

CONVALESCENT HOMES.

THE report by a Special Committee of the Charity Organisation Society on Convalescent Homes is a good illustration of the work of that much-abused though very useful society, and is well worth a study by those who wish to help judiciously the cause of such institutions. The report, with the accompanying catalogue, can only have been constructed with great labour, though it may be consulted with great ease. The charity that labours and takes trouble is almost more rare than the charity that gives. Many a person will fling a guinea to an institution who will decline to attend an annual meeting to investigate how the guineas are spent, or to visit the house of an applicant for his hospital letter to judge of fitness and to give a personal character to charity. The Charity Organisation Society has shown more of the disposition to take trouble than to give money. It has even gone to the verge of severity in its investigation and judgment of individual cases and charities, and in the exposure of that want of co-operation and of system which is so very injurious both to the patients needing help and the institutions which have help to give. The fear of imposition and the keen eye for unworthiness in the Charity Organisation Society have been more conspicuous even than the desire to help, as the latter is more conspicuous in individuals than the former. We want, however, both qualities if we are to make a successful effort to increase self-respect and diminish a vicious pauperism. We commend this report to the study of that large section of society who regard the Charity Organisation Society with at least coldness. They will get from the report much information, very carefully classified, concerning more than 150 convalescent homes, and will see some useful suggestions by the Special Committee for developing yet more the methods of furthering the convalescence of patients whose means are apt to be exhausted just as the wants of convalescence assert themselves. We are glad to notice and to corroborate two or three conclusions of the Committee. One is in favour of more accommodation for medical and surgical advice in Convalescent Homes than at present exists, for in many of them it is taken for granted that the convalescent requires no more medical or surgical attendance. They direct attention to the evil of long waiting for letters. This is a most painful and faulty feature of the present system. Patients are kept waiting weeks or even months for admission, and in doing so lose ground, and sometimes hope. What makes this more unsatisfactory is that we are never quite sure that the beds are fully occupied. The Committee kindly suggest that the offices of the Council be used for the present as an office for information regarding vacancies, conditions of admission, railway fares, &c. As we have said, a wonderful amount of information is given in the catalogue, under eighteen heads. There is need for one or two columns more. One great difference among Homes is the diet allowed to patients. The Committee suggest drawing up rules on this and other

hygienic questions. They would do great service by directing attention to such subjects, if not inserting in a column the diet-table of each institution. We cannot leave this subject without commending Convalescent Homes to the sympathy of the charitably disposed. At this season of the year, when the healthy and the wealthy are making provision for the just enjoyment of their blessings, nothing will more enhance their pleasure than the feeling of having helped to put a change of air and a generous diet within reach of one who has been shattered with illness.

BRITISH MEDICAL ASSOCIATION.

THE forty-eighth annual meeting of the British Medical Association commences on Tuesday next, at Cambridge. The president elect is Professor Humphry, and the addresses in medicine, surgery, and physiology are to be delivered respectively by Dr. Bradbury, Mr. Timothy Holmes, and Professor Michael Foster. We may anticipate a valuable address from Dr. Foster. The officers of the various sections have been wisely selected, the presidents being Dr. Paget, Mr. Savory, Dr. Playfair, Dr. Acland, Dr. Crichton Browne, Dr. Rutherford, Sir James Paget, and Mr. Bowman. Mr. Lister is to open a discussion on the treatment of wounds, and Sir Henry Thompson is to introduce the subject of stricture of the urethra. Hysterical anaesthesia, asthma, uterine haemostatics, the removal of uterine tumours by abdominal section, the general working of the Public Health administration in Great Britain and Ireland, the diseases communicable to man from diseased animals when used as food, the influence of alcohol on the causation of insanity, the formation of urea in the body, sleep, hypnotism, the influence of injuries and morbid conditions of the nervous system on nutrition, the relation of micro-organisms to disease, and the nature of glaucoma are other subjects to be specially discussed in the various sections; some of them at any rate, are sufficiently well-worn, if not threadbare. There will also be the usual festivities which are the special feature of these annual gatherings, and as Cambridge has so many attractions, and is within easy reach of London, we may expect a large attendance of members.

DANGEROUS TOYS.

A PLENTIFUL and cheap supply of toys will, it is generally considered, contribute to the happiness of children and the tranquillity of their parents. The recent action of the authorities in Paris suggests, however, that this result may not always be ensured. A toy producing the symptoms of lead-poisoning is not so conducive to the diversion of children and the peace of their parents as the Parisian itinerant vendor of these wares would have us believe. A number of boxes, loaded with toys, painted in brilliant colours, elastic balls coloured and varnished, lead soldiers in every variety of uniform, have been seized by the French police. It has been proved that the colour would easily come off, particularly if the children put the toys to their mouths, a habit which seems inherent in every child's nature. These playthings, painted with poisonous colours, had been imported from Fürth, in Bavaria, and a committee of the manufacturers of that town have recently held a meeting on this subject. A circular was at once issued to all the toy manufacturers, urging them to use non-poisonous paints, and reminding them that according to the German law they had exposed themselves to penalties—fines and imprisonment. The *Gesundheit* of Frankfort justly remarks that but for the repressive measures adopted in Paris the German authorities would still neglect to enforce the German law. This apathy, according to the German papers, is all the more reprehensible as the Fürth manufacturers send their toys all over Germany, and may therefore poison

the children of the fatherland as well as the little Parisians—a consideration which, in the Teutonic mind, must greatly accentuate the gravity of the question. To us the matter is not less serious. It is well known that the majority—in fact, nearly all—of the cheap toys sold in England are imported from Germany, and we regret that it is to the Parisians rather than to the English authorities that we must attribute the honour of seizing these dangerous playthings. We trust that no time will be lost in following this excellent example, and that a more strict watch will be kept to prevent the importation from abroad of poison for the nursery.

PATHOLOGICAL SOCIETY OF LONDON.

A "LIST OF DESIDERATA," drawn up by the Council of the Pathological Society, has just been printed and circulated among the members. It is issued in the belief "that it may prove useful in guiding the work of the Society. It is not intended in the least to restrict the spontaneous action of members, or to limit its scope." "The Council desires to gain for certain subjects that kind of elucidation which can be secured only by the abundant production of carefully examined facts." The plan of showing certain specimens "by card," which worked well last session, is to be continued, and the Council suggest "that, as a rule, any specimens exhibited simply in proof or illustration of a definite statement may be shown by card, whilst those which are more doubtful, which require explanation, and concerning the real nature of which differences of opinion may arise, had better be brought before the meeting *viva voce*." The "List of Desiderata" will probably be revised and reissued annually, and the Council will be glad to receive suggestions concerning it. The present list is a long one, and is evidence of the vastness of the field of pathology still unexplored.

THE MICROSCOPIC EXAMINATION OF WATER.

THE chemical examination of water leaves, as is well known, much to be desired from a sanitary point of view. It informs us of the condition with which organisms may be associated, but gives no information as to the presence of organisms. The microscope, as at present used, reveals only the coarser forms of animal life, and those only with uncertainty. M. Certes has endeavoured to ascertain how far it can be made to yield information of more direct value. The discovery of the microscopic organisms has hitherto been very much a matter of chance. Patience and skill are even of slight help. Fortunately, however, certain chemical reagents kill these organisms without changing their appearance; osmic acid is of especial value for this purpose. Once destroyed, they sink to the bottom, and, if enough of the liquid has been employed, they may thus be collected in appreciable quantity. The value of this method is shown by the following experiment:—If a test tube be broken, and the water it contained is contaminated by dipping in it the extremity of a rod which has been placed in an infusorial liquid, and it is then treated with osmic acid, the organisms will be found intact, and with readiness, by the aid of the microscope.

In the examination of water M. Certes employs a one and a half per cent. solution of osmic acid. One cubic centimetre of this solution will suffice for thirty or forty cubic centimetres of water, all animal and vegetable organisms being by it rapidly killed and fixed. In a few minutes, in order to lessen the blackening action of the osmic acid, as much pure water, as the test tube will hold, is added. In certain waters rich in organisms the microscopical examination may be made in a few hours. If the water is comparatively pure, twenty-four or forty-eight hours must be allowed to pass. The liquid, with the exception of the last one or two

centimetres, may then be decanted. The detection of the organisms in the residue is facilitated by the employment of colouring agents, such as Ranvier's picrocarminate, methyl violet, logwood, &c. It is always well to introduce the colouring agent mixed with glycerine; the organisms are thus better tinted, and can, if desired, be better preserved.

THE BIRMINGHAM AND MIDLAND EYE HOSPITAL.

THE annual meeting of this institution was held on July 24th, when the medical report was read by Mr. E. Chesshire, the Senior Surgeon. It showed that the number of patients was upwards of 1000 more than during the preceding year. The Chairman, Mr. W. S. Dugdale, adverted to the increasing popularity and usefulness of the charity, and urged on the governors the desirability of a speedy reconstruction and extension of the present building, as it was far from equal to the present demands on its accommodation. Others followed in the same strain, and it was ultimately resolved that immediate steps should be taken to carry the Chairman's suggestions into effect. The opposition on the part of the Town Council to the further use as a hospital of the present building, was not mooted at the annual meeting. The general opinion of the governors present seemed to be in favour of utilising the present building exclusively for in-patients, after rendering it in every way suitable to the modern requirements of an Ophthalmic Hospital, and to provide elsewhere a commodious out-patient department.

MEDICAL COLLEGES IN INDIA.

THE total number of students entered at the Calcutta Medical College at the commencement of the session inaugurated on June 15th last was 277, against 299 and 281 in the two previous years. The falling off in number has been attributed in great part to the elevation of the standard of preliminary education and the removal of the secondary classes. The Madras Medical College, on the other hand, appears to have experienced a season of increased prosperity during the year ending June 30th, 1880, the day on which the distribution of prizes, &c., took place. The report read by Dr. King, Principal of the College, showed that at the beginning of the forty-fourth session the names of 228 students were on the books, being 44 more than in the previous session, 47 of the total number being new entries. A corresponding increase in the strength of the teaching staff was considered necessary. The cost of the establishment had been 43,330 rupees, towards which 5920 rupees were contributed as students' fees. Surgeon-General Cornish, who presided on the occasion referred to, in the course of his address announced his intention of offering an annual prize of 100 rupees for the best reports of surgical cases treated in the Madras General Hospital.

THE CASE OF MR. BUNCOMBE.

MR. BUNCOMBE, medical officer of the Infirmary of the City of London Union, surrendered at the Central Criminal Court on August 3rd to take his trial upon a coroner's inquisition of a charge of manslaughter, arising from the murder of an inmate of the infirmary by David Salewskal, a Russian, who was insane. Mr. Poland, with whom was Mr. Montagu Williams, appeared for the Public Prosecutor, and stated that it was found there really was no evidence to support the charge, and that he had come to the conclusion that no bill should be preferred. Mr. Justice Hawkins concurred in this course being taken. He said it was clear that the coroner's inquisition could not be supported, made strong remarks upon the informal manner in which Mr. Buncombe had been sent before the court, and expressed his opinion that no imputation rested upon him, but that his conduct had been most kind and considerate.

DEATH CERTIFICATION BY MIDWIVES.

MR. HUMPHREY commented strongly lately on the circumstances attending the death of an illegitimate child, which died an hour and a half after its birth, but was certified by the midwife to have been *stillborn*. A medical man was called in after death, but, of course, could not certify. He communicated with the coroner, who very properly issued his warrant for an inquest. But his inquiry was forestalled and frustrated by the easy method of the midwife certifying that the child was stillborn. It is very wrong that midwives should have the power of certifying even to *stillbirth*. But it shows great carelessness on the part of the parish authorities to have buried in such a case as this. The midwife even was not present to explain the case and her conduct—viz., the certifying of a child as stillborn which had lived an hour and a half,—which seems worthy of the attention of the Registrar-General. The coroner should have applied to the Home Secretary to order the exhumation of the body.

DEATH OF BRIGADE-SURGEON W. R. STEUART.

WE regret to announce the death, on the 26th ult., at Dover, of Brigade-Surgeon William Ramsay Steuart, of the Army Medical Department. Mr. Steuart was gazetted an assistant-surgeon in August, 1854, shortly after which he was ordered to the Crimea, where he remained till the fall of Sebastopol, receiving for his services the war medal and clasp, and the Turkish medal. He was promoted surgeon on March 9th, 1867; surgeon-major in August, 1874; and was one of the officers selected by the Director-General for the new rank of brigade-surgeon a few months ago. Mr. Steuart's death was extremely sudden, and was due to apoplexy. He leaves a widow, but no children, to lament his loss.

THE VACCINATION BILL.

THOUGH this Bill is not yet formally withdrawn, the opinion prevails that there is no chance of its being proceeded with this session.

THE dinner of the Edinburgh Graduates' Club was held on the evening of Monday, the 2nd inst. (capping day), at St. James's Hall, Piccadilly; Dr. James Grey Glover in the chair. The attendance was good, and included the Rev. Dr. Allon and Col. Arthur, Dr. John Muir, Dr. Mortimer-Granville, Dr. Smiles, Dr. Holman, Dr. George Harley, &c., &c. A very interesting series of speeches were delivered by the chairman and others. In the course of his remarks on the subject of medical education in Edinburgh, Dr. Glover communicated the statistics showing the large national and imperial work done by the university. During the proceedings a congratulatory telegram from Professor Rutherford was read.

THE falling off in the funds of the Metropolitan Drinking Fountains Association, as announced in the report of the institution, is greatly to be regretted. Few enterprises have contributed more to the health and comfort of man and beast in the metropolis than the one which has supplied the thirsty traveller and the jaded animal with a refreshing draught; and we trust the means at the disposal of the Association will not be suffered to remain below the requirements of the benevolent object held in view.

It is stated that Mr. Lister, F.R.S., has declined to be put in nomination as a member of the Board of Examiners in the vacancy occasioned by the retirement of Mr. F. Le Gros Clark, and that in all probability Mr. Christopher Heath, a member of the Board of Examiners, will be elected, in which case he will resign his seat at the Board.

THE Government of France have placed 50,000 francs at the disposal of M. Pasteur in aid of his researches on contagious diseases of animals.

MR. AUGUSTUS PREVOST has been appointed treasurer of University College Hospital in succession to the late Mr. Edward Enfield.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Sturminster Rural Sanitary District (estimated population, 11,208).—Mr. J. Comyn Leach's report for this district for 1879, as the report for the year before, 1878, is of so favourable a character as, to use his own phrase, to be "uninteresting from a sanitary point of view." We are disposed to cavil at the phrase, and to take more interest in reports that give indications of steady amendment in the health of a locality than in reports that are characterised by illustrations, usually fatal, of the mischievous effects of unhealthy conditions. It is desirable that sanitary authorities should learn that uneventful reports are the reports most to be coveted, as setting forth the goodness of their own efforts and the efforts of their officials. *Sturminster (Rural)* had in 1879 a birth-rate of 24·7 per 1000 population, and a death-rate of 15·7—the lowest death-rate observed since the organisation of the district under the Public Health Act, 1872. The lowered death-rate was particularly observed among infants, and as this was not to be accounted for by an exceptionally small mortality from diarrhoea, Mr. Leach hopes that the instructions to parents for the better management and feeding of infants issued by the Authority may be considered to have been a not unimportant factor in bringing about this result. Consumption appears to have been the most conspicuous of the causes of death in the district during the year, and Mr. Leach takes occasion of this to point out the influence of damp dwellings, unwholesome surroundings, and overcrowding, in fostering disease, and to urge the necessity of improved drainage, ventilation of dwellings, and increased cottage accommodation in the district. Two deaths from diarrhoea (in both instances in conjunction with other ailments), and one from whooping-cough, were alone registered as arising from the miasmatic order of zymotic diseases.

St. Asaph Rural Sanitary Authority.—Dr. J. Lloyd-Roberts has to report for this district for 1879 a general mortality differing little from that of 1878. There was some increase of the mortality of infants and children under five years of age, chiefly arising from the prevalence of scarlet fever and whooping-cough. Much sanitary work has been done in St. Asaph, and indications are given of sanitary work in progress and contemplated in other parts of the district. The following observations deserve attention:—"Generally the class of nuisances which have now become prominent by the removal of the more gross ones which were found when the sanitary authority came into existence are those which arise from accumulations in farm-yards and of house-refuse. In a district peculiarly agricultural the former accumulations are to a certain extent a necessity, and can scarcely be brought within regulations to limit them. On farms in many instances the position of the manure heaps might be changed without inconvenience to the farmer, and, with care in storing, their condition and influences might be ameliorated. In villages certainly some method might be introduced by which more frequent removals of night-soil might be effected. Thus ash-closets might replace the common privy; and in effecting a contract with neighbouring farmers to undertake the periodical scavenging of such places, the convenience of such a system of scavenging would be appreciated in many populous places in the district."

LIBEL ON A MEDICAL OFFICER OF HEALTH.

At the Manchester Midsummer Assizes an action was tried before Lord Justice Bramwell, in which the plaintiff

was Mr. J. Makinson Fox, the Medical Officer of Health for the Mid-Cheshire combination of sanitary authorities. The object of the action was to recover damages for the publication of an alleged libel upon the character and conduct of the plaintiff, as medical officer of health. The defendant was a resident of Lynn, and former member of the Lynn Sanitary Authority, and he had published in the *Warrington and Mid-Cheshire Examiner* a severe, and, as it was alleged, libellous criticism on the conduct and judgment of the plaintiff, in dealing with an outbreak of scarlet fever, using the words, "I ask, would not such conduct, under such circumstances, look something like insanity?" And if the children died, as in the case of the —, one after another, till the whole family of five were swept away, should not such a doctor as we have been supposing be justly regarded in the public opinion of the district as morally responsible for the consequences?" These were the words complained of; and the jury found that they were not a fair and temperate criticism. The Court thereupon gave judgment for the plaintiff, with costs.

Colonel Bolton, in his report on the water delivered by the metropolitan companies during the month, states that that derived from the Thames was generally free from turbidity, as also the water from the Lea, previous to filtration. He states also that the filtration of the several companies was "generally efficient," and adds some observations on the want of a duly authorised and official "standard of filtration." This is an old complaint, but hitherto the companies have evaded any standard of the "effectual filtration" the Act of 1852 requires, and the Government and metropolitan public have connived at the evasion. The chemical qualities of the Thames and Lea waters were fairly good throughout the month, and the deep well water of the Kent Company maintained its usual good character. All the companies are still extending the area of constant supply in their districts.

At the Southwark Police-court the magistrate has inflicted a fine of 20s. and costs upon a woman for having exposed herself in public, by pacing the streets and entering several public-houses, when she had the eruption of small-pox out upon her, and refusing to be taken to a hospital. The case was eventually removed to hospital under a magistrate's order, and the woman when she had been discharged recovered was prosecuted for the exposure. The defendant pleaded ignorance of the nature of the disease and distress in consequence of the loss of a child from small-pox. The plea of ignorance was shown to be inaccurate; the distress was held to be sufficient reason for not requiring the immediate payment of the penalty.

A curious case of nuisance is reported as having been before the Hertford Borough Bench. The nuisance complained of was caused by the offensive effluvia from a pipe used to ventilate the drains of a house, and apparently the sewer with which they communicated. The nuisance was ordered to be abated, but not a word appears to have been said about the state of the drains and sewers out of which the nuisance must have arisen; and it is by no means clear from the case as reported that the nuisance was not in reality caused by defective attention of the Sanitary Authority to the state of its sewers.

The managers of the Small-pox Hospital, Stockwell, have more than once been placed in serious difficulty by the failure of the water supply, which is derived from the mains of the Southwark and Vauxhall Water Company. A recent failure of the supply formed the subject of a discussion at the last meeting of the Metropolitan Asylum District Board, and it was decided to appeal to the Home Secretary on the subject.

Dr. Cameron and others have introduced into the House of Commons a Bill for amending the Public Health (Scotland) Act, 1867, and the Amending Act of 1879, with regard to the special rating of lands and premises where part only of a burgh or town falls within the district of a parochial board as local authority; and with regard also to the alteration or combination of special drainage and water-supply districts.

A butcher in Exeter has been sentenced to six weeks' imprisonment with hard labour for sending unwholesome meat to the London markets. He had been convicted three times before for a similar offence. A grain-merchant of Cocker-mouth has also been fined for having had the carcase of a cow unfit for food dressed for sale, and the butcher who dressed it has been fined £2.

A report recently made to the Barnsley Board of Guardians on the consumption of stimulants in the workhouse shows that the quantity of spirits consumed last year was less by £50 in money value than in the previous year. Milk, it is stated, has been substituted in great measure for stimulants, much, it is added, to the benefit of the inmates, the death-rate having been lowered. This seems a premature deduction from so short an experience in a small community. An inquiry is to be made into the supply of spirits to out-door patients.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

Infantile summer diarrhoea was still more fatal last week, and caused a further increase in the rate of urban mortality. In twenty of the largest English towns, estimated to contain in the middle of this year seven and a half millions of persons, or nearly one-third of the entire population of England and Wales, 5174 births and 3353 deaths were registered last week. The births were 11 below, whereas the deaths exceeded by 78, the average weekly numbers during 1879. The deaths showed a further increase of no less than 398 upon the numbers returned in recent weeks. The annual death-rate per 1000, which had been but 19·2, 20·1, and 20·6 in the three preceding weeks, further rose last week to 23·3. During the past four weeks of the current quarter the death-rate in these twenty towns has averaged 21·4 per 1000, against 24·3 and 17·6 in the corresponding periods of 1878 and 1879. The lowest death-rates in the twenty towns last week were 15·1 in Sheffield, 15·2 in Bristol, 15·6 in Bradford, and 19·5 in Nottingham. The rates in the other towns ranged upwards to 24·6 in Manchester, 24·9 in London, 28·3 in Liverpool, and 33·5 in Brighton. The high death-rates in the three last-mentioned towns were mainly due to excessive zymotic fatality, more particularly of infantile diarrhoea.

The deaths referred to the seven principal zymotic diseases in the twenty towns, which had steadily increased from 406 to 636 in the seven preceding weeks, further rose last week to 884. These included 577 from diarrhoea, 133 from scarlet fever, 65 from whooping-cough, and 66 from measles. The annual death-rate from these seven diseases averaged 6·1 per 1000 in the twenty towns; while it was but 0·8 and 1·7 in Bradford and Newcastle-on-Tyne, it ranged upwards to 10·9 and 13·6 in Norwich and Brighton. Scarlet fever was proportionally most fatal in Norwich and Salford, and whooping-cough caused the highest death-rate in Liverpool. Two more deaths were referred to diphtheria in Leicester. Small-pox caused 4 deaths in London (against 3 in each of the two preceding weeks), but not one in any of the nineteen large provincial towns. The number of small-pox patients in the Metropolitan Asylum Hospitals, which had been 200 and 198 at the end of the two preceding weeks, had further declined to 178 on Saturday last; 16 new cases of small-pox were admitted to these hospitals during the week, against 13 and 22 in the two previous weeks. The Highgate Small-pox Hospital contained 9 patients on Saturday last.

The fatal cases of diarrhoea in the twenty towns, which in the six preceding weeks had steadily increased from 51 to 337, further rose last week to 577, of which 350 occurred in London. The annual death-rate from diarrhoea averaged 4·0 per 1000 in the twenty towns; it was equal to 5·0 in London, but did not exceed 3·1 in the nineteen provincial towns. The death-rates from diarrhoea among these towns ranged from 0·5 in Bradford, and 1·2 in Sheffield and Bristol, to 5·3 and 10·2 respectively in Salford and Brighton.

The deaths referred to diseases of the respiratory organs in London, which had been 176 and 161 in the two preceding weeks, rose again last week to 200, and exceeded the corrected weekly average by 42. The annual death-rate from diseases of this class was equal to 2·8 per 1000 in London; it was 3·7 in Liverpool.

HEALTH OF SCOTCH TOWNS.

In eight of the largest Scotch towns, having an estimated population of rather more than a million and a quarter persons, the annual death-rate, which had been 18·6 and 20·6 per 1000 in the two preceding weeks, declined to 18·4 last week, and was 4·9 below the average rate in the twenty large English towns. The rates in the eight Scotch towns ranged from 16·1 and 16·5 in Aberdeen and Edinburgh, to 23·4 and 24·9 in Paisley and Greenock. The fatal cases of

the seven principal zymotic diseases in the eight towns were 117, against 109 and 107 in the two preceding weeks; they included 55 from diarrhoea, 24 from whooping-cough, 11 from scarlet fever, 13 from fever (mainly enteric), 8 from measles, and 6 from diphtheria. The annual death-rate from these seven diseases averaged 4·7 per 1000 in the eight towns, against 6·2 in the large English towns. The zymotic death-rate in the Scotch towns ranged upwards from 3·0 in Aberdeen, to 7·8 in Perth and 8·5 in Greenock; the high rates in the two last-mentioned towns were mainly due to diarrhoea. The fatal cases of diarrhoea in the eight towns further rose last week to 59, against 39 in the previous week; the annual death-rate from this disease, however, did not average more than 2·2 per 1000, whereas the rate in the English towns averaged 4·0. The highest death-rates from diarrhoea in the Scotch towns were 5·9 and 6·6 in Perth and Greenock. Seven of the 8 fatal cases of measles were returned in Glasgow; and 13 of the 24 of whooping-cough occurred in the same town. The 13 deaths referred to fever exceeded the number in recent weeks, and included 8 in Glasgow, and 3 in Edinburgh. The deaths referred to acute diseases of the respiratory organs (bronchitis, pleurisy, and pneumonia) in the eight Scotch towns were 59 last week, against 58 and 69 in the two preceding weeks; the annual death-rate from these diseases was equal to 2·4 per 1000, against 2·5 in London. The causes of 112, or 25 per cent., of the 456 deaths registered in the Scotch towns last week were uncertified; in the English towns the proportion of uncertified deaths was only 2 per cent.

HEALTH OF DUBLIN.

The death-rate in Dublin showed a further decline last week, and was equal to 28·2 per 1000, against rates declining steadily from 42·5 to 30·2 in the seven preceding weeks. The death-rate in the city last week was lower than that which has prevailed for many months. During the past four weeks, however, the death-rate has averaged 30·0 per 1000 against 21·4 in London, and 17·9 in Edinburgh. The 170 deaths in Dublin included 35, or nearly 21 per cent., which were referred to the seven principal zymotic diseases, against numbers declining from 53 to 42 in the four preceding weeks; 7 resulted from small-pox, 7 from whooping-cough, 6 from fever (including typhus and typhoid), 6 from measles, 5 from diarrhoea, and 4 from scarlet fever. The annual death-rate from these seven diseases was equal to 5·8 per 1000 in Dublin, against 7·4 in London and 4·3 in Edinburgh. The seven fatal cases of small-pox showed a further decline from recent weekly numbers, and those of scarlet fever showed a marked decrease. The fatality of diarrhoea does not show the increase in Dublin which has occurred in recent weeks in the large English towns, the deaths of infants under one year of age, however, considerably exceeded the numbers in recent weeks.

WEATHER AND SUMMER DIARRHOEA FATALITY.

The rapid increase in the fatality of infantile summer diarrhoea in recent weeks, more especially in London, is the more remarkable when considered with reference to the meteorological conditions of the past month. The mean temperature of July was 61·7 at the Royal Observatory, Greenwich, and was almost identical with the mean temperature of the corresponding month in 100 years. The temperature of the month was, therefore, moderate; it was below the average on each of the first thirteen days, while it showed a slight excess on twelve of the last eighteen days. The weather was, moreover, unusually wet, even for July, and rain was measured on twenty-four of the thirty-one days to the aggregate amount of 3·8 inches, exceeding by 1·2 inches the average July rainfall in sixty-one years. The nearest approach to so large and frequent a rainfall in July during the present decade was in 1879, when 3·7 inches were measured on nineteen days. With moderate temperature and frequent and abundant rainfall throughout the greater part of July, the excessive fatality of diarrhoea during the past four weeks is the more noteworthy. In London no less than 810 deaths were referred to diarrhoea during the four weeks ending last Saturday, against 1167 and 94 in the corresponding periods of 1878 and 1879. In July, 1879, when the fatality of diarrhoea was so exceptionally slight, the mean temperature was remarkably low, while the rainfall was almost as large as it was last month, measured on almost as many days. Diarrhoea fatality generally

occurs rather earlier in London than in the provincial towns. During the past four weeks the annual death-rate from the disease has averaged 2·9 per 1000 in London, whereas in the nineteen large provincial towns it has not averaged more than 1·8 per 1000.

HEALTH MATTERS GENERALLY AT HOME AND ABROAD.

THE DANGER OF MILK FROM PHTHISICAL COWS.

Dr. Vallin, in the *Revue d'Hygiène*, briefly referring to recent contributions on this subject, including the writings of Fleming, and especially Dr. Creighton's recent paper in THE LANCET on an infective variety of tuberculosis in man identical with bovine tuberculosis, urges the attention of scientific bodies to the subject. These bodies, he says, have at different times instituted Commissions for the study of cow-pox, rabies, glanders, &c.; should they not institute a Commission for an investigation such as this? He especially urges the question upon the attention of the Institute or the Academy of Medicine. Here is a subject which specially concerns the medical department of the Local Government Board, and which we should be glad to see included in the scientific medical research carried on by that department in continuation of Dr. Burdon Sanderson's investigations, made for the department, on the inoculation and development of tuberculosis. Meanwhile, asks Dr. Vallin, pending the experimental determination of the question at issue, is it not a matter of common prudence, in giving milk of which the source is doubtful to infants and invalids, that it should first be thoroughly boiled? Unless we are mistaken, it has been alleged that boiling does not offer a sufficient protection!

PREVENTION OF SPREAD OF INFECTION.

In the recent report of the Royal Commissioners on the sanitary condition of Dublin, the Commissioners state that, although it did not come within the limits of their instructions to report upon the imperfection of existing arrangements for the removal of sick persons suffering from infectious diseases to hospital, the disinfection of their dwellings, and the provision of temporary accommodation for their families during such processes of disinfection, yet these points deserve, they submit, the careful consideration of the Corporation as being the responsible sanitary authority. They suggest that it would be desirable to afford legal power to all sanitary authorities to make chargeable upon the funds at their disposal for the purposes of the Public Health (Ireland) Act, 1878, the expenditure necessary to provide temporary refuges for the reception of families who may be compelled to leave their infected dwellings during the progress of disinfection. Further, with the view of overcoming the objections of the poor to early removal to hospital for the treatment of dangerous infectious disease, they suggest that it would be desirable that in such institutions a ward for each sex be set apart as an "observation ward," into which all cases of a doubtful character should be admitted, where they could be retained and treated until the further progress of the symptoms had indicated the proper course to pursue with respect to them.

MILITARY OPHTHALMOLOGY IN RUSSIA.

Among other instances of the special attention which is now being devoted to ophthalmic medicine in the Russian army, it is reported that the "oculist" of the Kiev military circumscription, having recently visited the troops forming the garrison of that city, found many soldiers suffering from ophthalmia. He attributed this to the unwholesome hygienic conditions of the barracks and to the action of the sands surrounding the place. He has recommended the removal of the affected soldiers from the city, and it has been resolved in consequence to establish a special hospital for them on a healthy site on the banks of the Dnieper.

A TAX ON PRIVIES AND SEWERS.

The *Bombay Gazette* reports that Mr. Crawford, the second Assistant Collector, and Vice-president of the Municipality of Dholka, Ahmedabad, has issued a notice imposing taxes on houses, *privies, and sewers*. Eight of the unofficial members of the municipality having in vain protested against this taxation on the ground that the people were too poor to bear the burden, have tendered their resignations,

and memorialised the Governor of Bombay on the subject. The taxation of privies and sewers is a novelty to us, and indicates curious views of political economy on the part of the promoters. We could understand a public grant of money for the purpose of encouraging persons to construct privies and sewers, but privies and sewers as a source of revenue is a form of taxation which must be classed with that barbarous form of which we had an example here in the window-tax.

HOW CONTAGIOUS DISEASES ARE SPREAD.

At Drumcondra Petty Sessions, last week, Patrick Soey was summoned by the Guardians of the North Dublin Union, under the Public Health (Ireland) Act, 1878, for having on the 3rd of July, while suffering from small-pox, exposed himself to the public without taking any precaution to prevent the disease spreading. The defendant, it appeared, had gone about before he was properly recovered, although frequently cautioned by the medical officer of the Union, who attended him. The Bench, considering the case had been fully proved, fined him in the mitigated penalty of £3, Soey having pleaded ignorance of the consequences of his act.

The number of cases of fever in Swinford Union has decreased considerably of late, and no death has been recorded since the 17th ult. Up to last Saturday, the 31st ult., there were sixteen cases of typhus in the entire Union, and only eight cases in the fever hospital.

The Poplar Board of Guardians have agreed to a suggestion made by the Asylums Board, that the ambulances employed for the conveyance of persons suffering from infectious disease should be disinfected at the several hospitals at which the patients had been received.

During the week ending the 10th July, 675 deaths (404 males and 271 females) were registered in St. Petersburg. The greatest number of deaths were assigned to "typhus" and phthisis.

THE VACCINATION ACTS AMENDMENT BILL

ON Monday, the 2nd inst., a deputation, consisting of Mr. Spottiswoode (President of the Royal Society), Dr. Risdon Bennett (President of the College of Physicians), Mr. Erichsen (President of the College of Surgeons), Mr. Spencer Wells (Vice-president of the College of Surgeons), Dr. Erasmus Wilson, Professor Huxley, Dr. Farquharson, M.P., Dr. Pitman, Dr. Quain, Dr. Russell Reynolds, and Dr. Wilson Fox, had an interview with Mr. Dodson, at the Local Government Board Offices, to urge their views on this Bill.

DR. RISDON BENNETT said,—It would be perhaps right that I should, in the first place, explain what may seem rather wanting in respect towards you in connexion with this matter; but the fact is that when you were good enough to give me your courteous reception before, it was with the view of my ascertaining the opinion of the College on this Bill, and having done so they expressed so strong a feeling upon the subject that it was determined to ask from you an informal reception on behalf of the College at large, and so it is that we are here a second time. We have looked again into this Bill with care, and the result was, the drafting of the petition which, I believe, has been presented to the House of Commons, and which contains, in a summary form, the views of the College of Physicians on the subject. The law as it stands seems to us to be acting most beneficially, and to be doing much towards diminishing the spread of small-pox; so that if it is continued in its present force, with a little more attention to the efficiency with which vaccination is performed, there is good reason for believing that practically—I do not say absolutely—small-pox will be exterminated from this country. Now, the Bill as it stands openly says to the public, "You may either be vaccinated or pay the fine;" and if you pay this fine you are at liberty to communicate to the public this disease, which has been attended with such frightful consequences in bygone times." The answer to that, as I understand, is, that the law as it stands leaves a certain number

of children unvaccinated, who are consequently sources of danger. That is true; but it does not say to the world at large, as this Bill does, that these children may continue to be unvaccinated, and that it is matter of little consequence to the public whether they do it or not, and that it is a matter of free choice and you can do it if you like. We feel that it is of very serious moment for any number of children to remain unvaccinated; because, although a very large portion of the community are protected, they are only protected to a certain extent. Nobody maintains that vaccination is an absolute protection after the expiration of a certain number of years against the taking of small-pox, because the complaint is only as a rule taken once. There are many instances where it is taken a second time from peculiarity of constitution, climatic influences, and so on; and although we are prepared to advocate the efficiency of vaccination as a protection, we do not say that you may not, after a certain time, become susceptible to it; and we say that these unvaccinated children would subject persons so susceptible to the disease. It seems rather late in the day to say anything broadly and simply in the matter of vaccination. Then with reference to the objection of some of the anti-vaccinators to the law as it stands, that it introduces other diseases which are at the same time attended with fatal consequences; there are sufficient answers to be given to that; and with reference, for example, to certain cases of syphilis, which in some cases have followed vaccination, it does not follow that they have ensued where vaccination has been properly performed. There is no doubt that there are cases where disease has followed from vaccination, but not where the vaccination has been properly performed. Then with reference to erysipelas and other causes that occur after vaccination, the fact is that these things are occasioned by the most trifling causes in connexion with the state of the atmosphere, and have no relation to the vaccination. Then we also feel that it is very undesirable in a great measure of this sort, where the health of the community at large is so seriously concerned, that too much attention should be paid to the objections of a small party who, from various motives, but mainly, I apprehend, from sheer ignorance, raise these objections. We feel that when a consensus of opinion of a great profession like the medical profession is so decided upon the subject, and when the evidence before the public is so convincing, if it is looked into, that it is scarcely the thing for the Government to give way to a few objectors, or to give way on the plea that the thing is troublesome to carry out now and then. We can quite understand that the Local Government officers have troublesome people to deal with, and it may be annoying; but we think these are trifling things, which should not weigh with the Government interfering with the efficiency of a great measure like this.

MR. ERICHSEN said the College of Surgeons looked upon compulsory vaccination as absolutely necessary for the protection of the community and the maintenance of its health, and looked with regret on any measure that would in any way militate against vaccination becoming universal. If vaccination could be made universal in infancy, and were properly performed, small-pox would become a thing of the past. The law had to contend against ignorance of the evils attending the spread of small-pox. People of the present day only knew small-pox in the form modified by the beneficial influence of vaccination. There was no evidence that vaccination spread diseases provided it was carefully and properly performed. A careless surgeon might spread syphilis by the touch of his hands, or by using a dirty knife, by not wiping an instrument in going from one patient to another, and so, also, might a careless vaccinator spread disease. If he did he should be proceeded against for malpractice, and he would be punished, as he deserved to be. If a large number of children were to be left unvaccinated, as it was to be feared would be the case by payment of the fine, a considerable portion of the community might take advantage of the law, and thereby lead to the epidemic of small-pox becoming excessive among those children. In former days sevenths of the whole mortality from small-pox occurred in children under the age of puberty; and if vaccination were neglected the disease would spread itself in a far less modified form amongst those who were only partially protected by primary vaccination and who had not had the advantage of being revaccinated. Revaccination was a subject which might well engage the attention of Government hereafter.

MR. SPOTTISWOODE observed that the members of the

Royal Society concurred in condemning the Government Bill which was concerned with a subject so nearly relating to physiological science.

Professor HUXLEY said—The remarks which I would venture to offer to you are these: that the present moment is particularly inopportune, from a purely scientific point of view, for any action on the part of Government, which might be construed by ignorant persons into an admission that the evidence in favour of vaccination is in any way defective or weaker than it has formerly been. Of course, up to the present time, or, at least, six or seven months ago, the evidence in favour of vaccination, however satisfactory it might be to many persons, including myself, had not scientific completeness. The subjects of inquiry being human beings, you could not apply the scientific method in its fulness; but within the last six or seven months a very eminent French investigator, M. Pasteur, and some other French observers, have been applying an experimental method in all its rigour to certain epidemic diseases, and that which M. Pasteur has investigated is known as "chicken cholera." The disease to which he refers is excessively fatal. If it attacks a farmyard the general rule is that it kills all the fowls attacked. But in the most favourable cases a few (80 per cent.) recover. Those are his figures. M. Pasteur has determined the nature of the infection, and he finds he can cultivate and produce the disease artificially, and so forth. But the most remarkable part of his discovery is this—that, by treating the *matrices morbi* in a certain fashion, he can diminish its virulence; and by vaccinating fowls with it he can protect them from the influence of the disease. So that supposing you take forty fowls, and divide them into two parts of twenty each, and you give the one the undiluted poison, those twenty in all probability die; but if you carefully inoculate in the manner he indicates the other twenty fowls, as you submit them to exactly the same process as that which causes them to die, they either do not suffer at all, or, in the least favourable cases, 80 per cent. recover. So that we have here in the case of a serious epidemic conclusive evidence of a process precisely analogous to vaccination in protecting against the effects of infection. The experiments of splenic fever are as yet incomplete; and the results have not been published, but they tend in exactly the same direction, to show that sheep and dogs by being inoculated by the splenic fever poison in the particular form, they suffer a slight malady and are absolutely protected from the disease. This to us, in the presence of the first evidence, would be perfectly satisfactory to science in its first form, but so far as the evidence stands it is clear and perfectly demonstrative of the value of the process analogous to the process of vaccination. So that we are quite safe in extending the argument by analogy. We may say that we have for the first time got something like complete scientific evidence of the value of the process of vaccination.

Dr. FITMAN pointed out that the Bill seemed to give immunity to persons to break the law by the payment of a fine. If that principle were to be applied to every offence it would be a dangerous principle to introduce into the English law.

Dr. WILSON FOX reminded Mr. Dodson that the law did not allow one person to injure another from conscientious motives; and he quoted the case of the "peculiar" people, who would not call in medical aid, but depended on superstitious rites for saving life, and who had been charged with and convicted of manslaughter. A man left his child unvaccinated, and thereby endangered that child's life and the life of other people. It was criminal and an entire variation of the law to allow conscience, which was the only thing that could possibly be argued, to justify any departure from the present law. The law, if anything, ought to be made more stringent.

Mr. DONSON in replying said, "It appears to me that we have arrived at an understanding; that is to say, it is perfectly seen and understood now that the law as it stands is not directly compulsory, but simply inflicts a succession of fines for the omission to have a child vaccinated; and that what the Bill does is not, as has been said, to give a licence to violate the law or to exempt people from its operation; it is simply a question of mitigating penalties by reducing their number. There is no difference between us as regards the value of vaccination, and the desirability of making it, if possible, universal. The only question between us is as to the best mode of bringing it about, and upon that of course the opinion of the medical profession is exceedingly valuable. Sometimes it is a question of expediency and

policy upon which persons who wish to administer the law and to establish the law are perhaps as competent to form an opinion as the medical profession itself. At all events, it is one which, as must be seen, no one profession can claim to be able to form a judgment more particularly than another. Perhaps those who have to administer the law are, if any, those whose opinions would be the most valuable in such a matter as this. We have to deal, as it has been stated here—and I will assume for a moment that it is so—with a very small minority of persons who in the main belong to the more uneducated classes. We have to deal with men as we find them, and the question is, Which is the best way? Is the object best attained by this multiplication of fines, and giving men notoriety, and making martyrs of them at the expense perhaps of the Association that pays their fines; or will the object be better attained by avoiding giving this importance to certain individuals? That is entirely the point which introduces itself; and it is simply a question of expediency. It may be that it is exactly this multiplication of penalties that tends to foster and keep alive anti-vaccination leagues. It has been said "that the blood of martyrs is the seed of the Church," and that is the question in this case. The blood of these martyrs may not be the seed of the anti-vaccination case that keeps it alive, but it is a question of expediency. Well, I can only say that I am exceedingly glad to have seen this deputation to-day, and to find that we have come to understand each other much better, and that the only point of difference between us is this one of expediency. Upon that point I quite allow the medical profession is entitled to great weight, but I cannot admit that on such a question as that that it is entitled to outweigh other opinions, more especially the opinions of those who have to administer the law. By the way, it has been said that the Bill was a concession to agitation, and so forth; I can safely say that the Bill was no concession to any agitation whatever: the Bill was simply introduced with the view of giving effect to the recommendations of the Committee of 1879, which expressed the opinion that the multiplicity of penalties tended to keep alive an animus against the law; and I am not aware that the agitation has been particularly alive within the last few months more than it was before—I mean there has been no pressure brought to bear upon the Government.

The deputation thanked Mr. Dodson and retired.

THE PARKES MUSEUM.

WE were unable last week, owing to pressure upon our space, to give more than a brief notice of the meeting which was held at the Mansion House in connexion with the above Museum. Sir W. Jenner's remarks upon the occasion were, however, so forcible and so practical, and their importance is so great, that we give them here in a more extended form. Sir William Jenner said—

My Lord Mayor, Ladies, and Gentlemen,—You have heard some very eloquent addresses in support of this Museum. I wish to say a few words as to its origin. Dr. Parkes, whose name it bears, was one of the most amiable men that ever lived. I think he was the nearest to perfection that I have, in my long experience, been acquainted with. He was not only amiable, but he loved his race, and desired on all occasions to benefit others. He thought little of himself, and devoted the last years of his life to the study of hygiene and how it could be applied for the public good, and died deeply regretted by all who knew him. When he was dead the profession thought how they could best honour his memory—what memorial we could erect to so excellent, so good, so honourable, so great a man; and we thought of busts and pictures and various other modes of keeping alive, so long as those who knew him were here, his memory. We loved him too dearly to require to see his picture before us. We dismissed that, and then we thought of scholarships, thinking they would be of some service, but not much. There are a great many scholarships, and many of them of little service; and we did not see how they would accomplish what he, good man, would wish; and so it was determined to found a Museum for the purpose of spreading abroad the knowledge of those principles of hygiene to which Dr. Parkes had devoted the energies of his latter days. And so we joined together to found the Parkes Museum. I was elected Chairman of the Executive Committee, and hence I

am here especially this afternoon. Well, that was its origin. Now, it was determined to get together a collection of appliances, &c., which required to be explained, and it was determined that some of our friends should give lectures and expositions to the workingmen especially; others who pleased were to go, but the workingmen were invited with the view not only to the improvement of their own homes, but the homes of you who live in great houses also. Living in a great house does not keep a man safe from disease, and I will give you a case in point. I had a gentleman to see who was too ill to leave London and who has a great place of his own in the country. He was staying at an hotel, and had to be moved into a house suitable to his rank and station. Well, his wife looked round London for a house, and at last she found a great mansion, described to me as one of the finest mansions in London, situated in one of the finest regions in London, from which a noble earl was about to move out, and who consented to move a little earlier to make way for my friend. The medical man of the gentleman about to become the tenant said, "Let us see what is the sanitary state of the premises, and let us have a report from a competent authority." Many of you will not understand this allusion, for if you want to have your houses healthy you must support this institution in which the workmen employed will know how to make a house healthy. Many will not understand it, but those that do will see the importance of it. This report was only given a few days ago, and what did it say? Why, that in this, "one of the finest mansions in London, the waste pipes from the baths descend into the soil pipe unventilated." That is to say, that the sewer gas found its way right into every bath-room in the house. Now let us think what that is for a moment. The sewers of this metropolis are always filled with the poison of typhoid fever, of diphtheria, and a series of other terrible maladies, so that the persons living here were breathing these vapours, and it could only have been by accident that the inhabitants of the premises in question escaped infection. If they had inhaled them they would be suffering from some of these dreadful diseases. Medical men know only too well the fatal consequences of ignorance of the commonest forms of sanitary precaution. To-day they find a mother weeping for her child, to-morrow a wife lamenting the loss of her husband—and all through not knowing the first principles of sanitary science as applied to the houses in which they lived. Well, what else is found in "one of the finest mansions in London"? "The basement sinks, and all upstairs save one housemaid's sink, go into the drain direct; the closets are valve-closets in best part of house; but the closet-rooms are unventilated, except the second floor and top water-closet. The main cistern on the roof supplies a closet, and the basement drinking-cistern has its waste-pipe entering the drain." From this description you will see that there is nothing to prevent the drinking water of "one of the finest mansions in London" becoming charged with typhoid poison direct from the sewers, which must give typhoid fever. This shows you what some of the biggest houses are like. It is not intended to found a charity. We do not come here to plead for a charity, unless it be, and I think there is great truth in the saying, that "charity begins at home"; but it should not end there. It would commence there if you would support an institution like this, so that a true knowledge of sanitary science may be spread amongst the working classes; it would not end there if men who have been taught to save the lives of their own children will, by their skill in the construction of dwellings, enable others to do the same. Even if only one mother should save her child's life, do you not think it would be beginning charity at home? I have spoken of the terrible diseases which may arise from bad water, bad air, &c. That is a small part of what may be produced. The life of a man depends upon his blood. It is his blood that nourishes his brain and his body, and the quality of the future man depends to a very great extent upon the quality of the blood in the child. Now, it follows that a child who is constantly breathing foul air is deteriorating, for blood is the pabulum of life. Many a person who is suffering from out-of-healthiness is suffering from breathing perpetually foul air. Sore-throats and a variety of complaints owe their origin to this cause. The doctors see it, and tell you you are living where there is foul air. A parent asks, "Why, all my children are looking pale and miserable; they have a healthy situation, where they have baths, &c." But the explanation was simply that the sanitary arrangements were not perfect. I

will give you an instance that came under my own observation. Not long ago I went to Mortlake, where my children were at school, and I was told by the schoolmaster that a sewer was ventilated outside his door, and I gave the master a certificate that serious consequences might result, and I said, amongst other things, that perhaps you will have pneumonia. What happened? They would open this sewer, and the result was that a poor little page boy, whose window abutted on to the work which was being done, was seized with pneumonia. I ask you to educate these people. I paid a lot of money a little time ago that the drains of my house should be put into order, but after a month I found everything as bad as it could be, and I sent for another man and paid a lot more money; but they were not put right, and I sent a third time, and I had been recommended a sort of clerk to the works, a man who seemed very well educated. I happened to come home in the middle of the work, and the foreman pointed out to me that he had fixed a D-trap to a certain pipe, and I said I would not have a D-trap. He said it was a model thing. When I turned upon him, and said, "A D-trap; I call it a double D-trap, for it will deal out disease and death." D-traps always require inspecting. The fact was that these so-called intelligent workmen were desirous of doing what was right, but were ignorant how to do it. I went round the house, and found that the man had trapped the ventilating-pipe of the sewer, and the result would have been a burst of sewer-gas. If any of you want your drains or your water-supply put in order how are you to get it done? I am asked the question constantly; the workmen have never been taught, and you should go to those who have made these matters their study. These workmen are as conscientious in their work as you and I, but they are ignorant of sanitary principles, and ignorance deals out disease and death. I am sorry to detain you so long. What we want—I am chairman of the Executive Committee, and I am going to speak very plainly, as I usually do—is money to carry out our views, and to continue the work which we have begun. A good many years ago I was asked by a lady to visit her husband, who was desirous of giving away a large sum of money, much larger than she thought he could afford, and use my influence in the matter, and she said, perhaps you will accidentally drop in after church, and just bring up the subject; and so after church, where perhaps I had heard a good sermon, I mentioned the matter to him, and this is the remark he made when I referred to the largeness of the sum: "Yes, it may seem so to you who are a doctor, but it is nothing to City men." Now we come into the City and we want a large sum to found this institution. We have done what we could, and we doctors are animated solely by the desire to prevent people being ill. We are like the lawyers, who are animated by the desire to prevent people going to law, and we ask you to help this museum. Now that we have got the first citizen in the City of London, the largest city in the world, the richest city in the world, and most liberal city in the world, presiding on this occasion we hope that his name and the influence of him and others will be brought to bear to secure a habitation and all that is needful for advancing this good cause.

ARMY MEDICAL SCHOOL.

THE Summer Session of the Army Medical School at Netley terminated on Monday, the 2nd inst., when, after the preliminary business of winding up the Session had been concluded, the prizes at the disposal of the senate of the School were handed to the successful competitors, before a large assembly of officers and visitors, by Sir C. K. Pearson, K.C.M.G., C.B., of Ekowe reputation, now Governor of the Royal Victoria Hospital and Commandant of the Station of Netley. After delivering the prizes, Sir C. Pearson gave an interesting and lengthened address on the position and responsibilities of officers of the medical department in the different branches of the military services. Sir J. Fayer, K.C.S.I., and Mr. Macconnac, also addressed some appropriate remarks to the assembled probationers. The visitors then adjourned to the Army Medical Staff mess-room, where luncheon was served.

The following are the names of the successful surgeons on

probation for Her Majesty's Army, with the numbers of marks obtained by them. In the instances of these gentlemen the marks gained at Netley are not counted, and they retain the places taken by them in the competitive examination at London:—

	Marks.		Marks.
G. H. Sylvester ..	1925	E. L. Maunsell ..	1375
W. J. Macnamara ..	1900	J. S. Langdon ..	1350
D. O'Sullivan ..	1725	W. F. Heffernan ..	1345
E. O. Milward ..	1710	R. W. E. Nicholson ..	1345
P. B. Conolly ..	1660	J. G. W. Crofts ..	1330
C. R. Woods ..	1600	W. Dugdale ..	1325
H. F. Babington ..	1585	D. L. Irvine ..	1325
W. C. Milward ..	1575	J. Ronayne ..	1320
W. H. Bracken ..	1565	C. H. Clabburn ..	1290
M. F. Macnamara ..	1490	E. R. Cree ..	1275
J. O. Sandiford ..	1480	M. O'C. Drury ..	1260
R. L. Love ..	1465	W. Deane-Freeman ..	1245
H. W. Murray ..	1455	J. H. Nicholas ..	1200
M. W. Kerin ..	1420	D. F. Franklin ..	1175
A. Peterkin ..	1420	J. L. Curtin ..	1160
J. Harran ..	1405	H. Saunders ..	1155
W. S. Leckey ..	1395	J. Battersby ..	1150

The following is the list of candidates for commissions as Surgeons in Her Majesty's Indian Medical Service and Royal Navy in order of merit, and with the total number of marks gained by them at both the London and Netley examinations:

INDIAN MEDICAL SERVICE.

	Marks.		Marks.
*J. Simpson ..	5635	T. R. Macdonald ..	4094
†C. P. Lukis ..	5483	C. B. Maitland ..	4068
R. R. H. Whitwell ..	5465	D. F. Dymott ..	4018
L. A. Waddell ..	5283	R. H. Cama ..	3998
H. P. Dimmock ..	4530	W. B. Browning ..	3980
G. Shewan ..	4445	C. Henderson ..	3896
D. B. Spencer ..	4396	F. R. Divecha ..	3892
J. Clarke ..	4391	A. P. Adams ..	3864
C. C. Vaid ..	4388	C. M. Thompson ..	3783
P. D. Pank ..	4303	C. S. Rundle ..	3667
†C. F. Willis ..	4106	J. W. Evans ..	3612
T. R. Mulroney ..	4115	J. Leonard ..	3604

* Gained the Herbert Prize and the Martin Memorial Medal.

† Gained the Parkes Memorial Bronze Medal.

‡ This gentleman became ill last session.

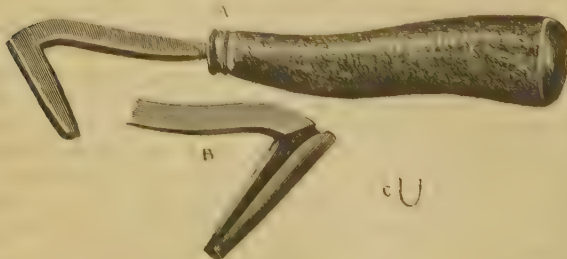
	ROYAL NAVY.	Marks.
H. G. Jacob ..	..	4758
W. M. Lory ..	..	4266
W. S. Lightfoot ..	..	3644

ROYAL COLLEGE OF SURGEONS.

At an ordinary meeting of the Council of the College of Surgeons held on Thursday last, a letter was read from Sir James Paget, reporting the proceedings of the General Medical Council. Mr. Le Gros Clark's resignation from the Court of Examiners was received, and several nominations were made. The President announced the result of the interview with the Local Government Board respecting the proposed Vaccination Acts Amendment Bill.

HOEING BONE-GOUGE.

DR. HENRY MONCKTON, of Rugeley, desires to draw attention to a form of bone-gouge of which the accompanying woodcut is an illustration. He has used it several times, and believes it to be more handy and convenient than the straight, angular, or forcep gouges in common use. The



instrument is, in fact, the timber-scribe employed in marking trees, &c.; but it is found in surgical practice very efficient in rapidly cutting away sound bone beneath which a sequestrum is known to be buried. From inquiries made among

surgical instrument makers and dealers, Dr. Monckton has reason to think that bone-gouges having this reversed action have not hitherto been in the hands of surgeons. Should the idea be adopted, makers will doubtless improve upon the tool depicted above in the details of elegance and refinement. The actual cutting edge is shown at C.

THE SERVICES.

MEDICAL OFFICERS FOR INDIA.

IN view of the extended operations in Afghanistan a large reinforcement of medical officers has been placed under orders for immediate service in India. Surgeon-major S. E. Maunsell, with Surgeons Cowen and Clark, embarked at Portsmouth on Tuesday last in the *Orontes*. Surgeon-major Wade is detailed for medical charge of the troops leaving England on the 6th in H.M. Indian troopship *Euphrates*, with Surgeons Barker and Michael as assistants. Forty of the newly-joined surgeons who have completed the Netley course, and also undergone instruction in ambulance and stretcher drill at Aldershot, have been warned to hold themselves in readiness to embark for the East at short notice. The medical staff at the disposal of Surgeon-General Crawford will, on the arrival of these reinforcements, be ample, as it is probable that many medical officers who in the ordinary course would have been relieved this season will be detained in India till the Afghan War is ended, a termination which we hope to see before many months are past.

THE EXAMINATION FOR THE ARMY, NAVY, AND INDIAN MEDICAL SERVICES.

The competitive examination for Commissions in the Medical Departments of the Army, Navy, and Indian Medical Service commences on Monday next, the 9th, at Burlington House. We understand that no less than eighty-six gentlemen have sent in their names for the Army, eight for the Navy, and thirty-five for the Indian Service. The unpopularity of the navy with the young members of the medical profession is not likely to be removed till a liberal and satisfactory Warrant is issued.

ADMIRALTY.—Staff-Surgeon Solomon Kellett has been appointed to the *Impregnable*, in lieu of a surgeon; Surgeon W. M. Rae to Bermuda Hospital; Fleet Surgeon T. R. Warren to Sheerness Dockyard; Surgeon W. S. Lightfoot to the *Duke of Wellington*, for Haslar Hospital; Surgeons G. Jacob and W. M. Lory to the *Royal Adelaide*, for Plymouth Hospital; and Surgeon E. W. Luther to the *Asia*.

The Standing Medical Boards at ports of embarkation have (says the *Indian Medical Gazette*) been abolished, so far as concerns officers of the Indian Services who have appeared before local boards.

Correspondence.

"Audi alteram partem."

THE CASE OF SWEETLAND.

To the Editor of THE LANCET.

SIR,—The case of the unfortunate Sweetland is additional evidence, if evidence were wanting, of the unsatisfactory state of the law with regard to insane homicides. I use the term "insane homicide" in preference to "criminal lunatic," for I fail to perceive how a man can be a criminal lunatic when the fact of insanity being proved absolves from all responsibility as to the particular act for which he is tried. The whole of the difficulty which surrounds these cases is to be found in the determined opposition of the law to medical science—a conservatism which has sent many an unfortunate lunatic to the gallows. It appears that some of the American judges are inclined to take a view of these cases of insane homicide more in accordance with the progress of modern science. I have before me while I write the charge

of Judge Doe, of New Hampshire, delivered in 1869. He says, "At present precedents require the jury to be instructed by experts in new medical theories, and by judges in old medical theories." In doing this "the legal profession were invading the province of medicine, and attempting to install old exploded medical theories in the place of facts established in the progress of scientific knowledge. That cannot be a fact in law which is not a fact in science; that cannot be health in law which is disease in fact; and it is unfortunate that courts should maintain a contest with science and the laws of nature upon a question of fact, which is within the province of science and outside the domain of law." He further remarks, "If the tests of insanity are matters of law, the practice of allowing experts to testify what they are should be discontinued; if they are matters of fact, the judge should no longer testify without being sworn as a witness, and showing himself qualified to testify as an expert." This, to my non-legal mind, seems to be good, sound common sense. If it were not admitted that there are certain facts with regard to insanity cognisable by medical men none of the persons found in our asylums ought to be there. The law in these cases admits that there are facts of insanity of which medical men are competent judges, but in criminal cases, for some reason not clearly defined, the law utterly repudiates medical testimony. In all other cases the testimony of experts is accepted and acted upon; why not, therefore, in the case of insanity? Another anomaly also present in these cases is this, the public are fully acquainted with the evidence that convicted Sweetland, but no one knows the grounds for the alteration of the sentence. The grounds for the reprieve should become as public as those for the conviction; and why should not the evidence on which the reprieve is granted have been allowed on the trial? Apologising for having taken up so much of your valuable space,

I am, Sir, yours faithfully,

H. AUBREY HUSBAND, M.B.,

Lecturer on Medical Jurisprudence, Edinburgh
School of Medicine.

July 12th, 1880.

CHIAN TURPENTINE IN CANCER.

To the Editor of THE LANCET.

SIR,—In so horrible a disease as cancer of the female genital organs, and one in which we are compelled to admit that we are powerless to do more than palliate suffering, I quite agree with your correspondent Mr. Hickinbotham (*vide THE LANCET* of June 19th), that it is our duty to adopt any treatment which is supported by high authority, and especially by so high an authority as Professor Clay. It is, I think, equally our duty to report the result of such treatment fairly and without prejudice, whatever those results may be, and I therefore briefly give you my notes of a case in which I have employed this remedy.

Mrs. H—, aged sixty-two, a widow, who has never borne children, complained to me in February of the present year of passing blood with the urine, pains in the back and legs, and great weakness. I thought her suffering from disease of kidneys and consequent hæmaturia, but on visiting her at home I found the urine perfectly clear, with one or two small coagula at the bottom of the vessel. I then made a vaginal examination, and found a cancerous growth, which bled freely on the slightest touch, extending from the back of the meatus upwards for about two inches in the anterior wall of the vagina; above this the wall appeared healthy, but somewhat hard and thickened; the os uteri was freely movable, and did not appear to be involved. Continuing under treatment she had occasional attacks of sharp hæmorrhage, which yielded to rest and astringent injections.

On the appearance of Professor Clay's article I thought this a typical case for treatment, and accordingly, having first examined her again, and found the disease slowly but steadily progressing, commenced the Chian turpentine in the form of emulsion as advised by Professor Clay, explaining to the patient that it was a new mode of treatment which had already produced highly successful results, and thus, by instilling great hope into her mind, securing her anxious co-operation with me in the treatment. She commenced taking the turpentine on April 18th, and continued it without the intermission of a single dose to June 20th, when it was discontinued. The effect at first appeared to be that of decidedly relieving the pain and enabling her to move about

with much more comfort, though whether this was due to renewed hope or the action of the remedy is a question. After a month's trial the medicine seemed to create some loathing, but she determined to persevere. She continued it till June 21st, when a severe attack of hæmorrhage compelled me to resort to other treatment, and at the request of her relatives Dr. Coates saw her with me on the 25th inst. The condition we then found was as follows:—The front of the vagina was converted into a solid hard mass, which had extended in all directions, contracting the passage considerably; the os uteri fixed and hard; the inguinal glands enlarged, and, in fact, a more rapid development of the disease than I was prepared to expect.

My conviction (with which I believe Dr. Coates fully coincides) is that this remedy had utterly failed either for good or evil to influence the course of the disease.

I have tried it in two other cases, one of epithelioma of the lip, the other of cancer of the pylorus, but in both cases without the slightest effect, but have preferred to publish the above case as being one in which no other treatment was used, and in which it was perseveringly and unintermittingly followed up.

I may add that the emulsion was dispensed by Messrs. Davies and Hughes, whose reputation as dispensing chemists ranks deservedly high in this city.

I remain, Sir, yours, &c.,

Green Park, Bath. ROBERT BIGGS, M.R.C.S.E., L.S.A.

To the Editor of THE LANCET.

SIR,—The two following cases have recently been treated by the above method:—

Case 1 was a woman, aged forty-eight, with cancer of womb of six months' duration. Dr. Clay's ethereal solution of turpentine with sulphur was used. Treatment commenced on April 17th, 1880, and continued to the present time; patient has gradually emaciated; pain unrelieved; disease has continued to advance, notwithstanding that the medicine has been well tolerated by the stomach. Case 2 was one of cancer of breast in a woman aged sixty-five. The breast had been totally destroyed by the disease—a large circular ulcer, with hard everted edges, situated where the breast had been. Treatment commenced same date as Case 1, and continued till patient's death, on July 3rd, 1880. Although the patient died in this instance, the base and edges of the ulcer became softer and the ulcer smaller in diameter. Although there was some affection of the axillary glands when the treatment was commenced it did not spread much. What the result would have been if treated earlier it is impossible to say.

I am, Sir, yours faithfully,

Workington, July 17th, 1880.

F. ORMROD.

EDINBURGH.

(From a Correspondent.)

AT the graduation ceremonial on Monday 158 medical candidates appeared for degrees; of these 28 received that of M.D.; 124 M.B. and C.M.; and 6 M.B. alone. The following gentlemen obtained gold medals for their theses, Drs. De Burgh Birch, Allan Gray, David Berry Hart, and J. Francis Sutherland. The Ettles Prize has been awarded to T. P. Anderson Stewart, who obtained the highest number of marks during the course of his professional examinations; the Beaney Prize to H. W. Dobie, who stood highest in Anatomy, Surgery, and Clinical Surgery; the Wightman Prize to R. F. Rand, for the best essay on clinical cases, and the Syme Surgical Fellowship to Dr. David Berry Hart. Mr. W. L. Goodwin obtained the Hope Prize in chemistry. Professor Turner introduced Dr. William Roberts, of Owens College, Manchester, to receive the Cameron Prize for his researches in the Digestive Ferments, &c. Professor Rutherford, in delivering the valedictory address took up the subject of Medical Examinations and Reform. He objected strongly to the English one-portal scheme, indicated the leading part played by Scottish Universities in medical education, and suggested that a few simple reforms would act more beneficially than certain proposed radical changes. Professor MacLagan presided at the Graduates' dinner in the evening.

Last week Mr. Spence had, as he anticipated, a very troublesome case of lithotomy. The patient was an adult with a somewhat narrow pelvis. All attempts to remove the stone by the ordinary lateral incision failed, although a considerable part was removed by the crushing action of the forceps. It was then resolved to employ the high operation. The carbolic spray was turned on, and the abdominal cavity opened by means of an incision made over the pubic symphysis, and prolonged upwards for about four inches. The finger was then introduced close behind the symphysis, so that the peritoneum was readily hooked up. An instrument was then introduced into the bladder from the perineal wound, and, pushed forwards by this, it was cut into and the stone extracted. The patient did not long survive. The stone seemed to consist of a large, oval-shaped, uric-acid nucleus, with a very thick external shell of phosphates. Mr. Spence remarked that he had never before been obliged to perform the supra-pubic operation, although he had removed many larger stones. He also drew attention to his mode of cutting down on the symphysis, so as to avoid injuring the peritoneum.

PARIS.

(From our own Correspondent.)

THE death-rate of Paris continues to be very high. This is partly due to the epidemics of typhoid, small-pox, and diphtheria, but mainly to the great mortality amongst children from atresia and infantile diarrhoea, which, from 188 in the week ending July 22nd, reached a total of 228 last week. The *Tribune Médicale* opportunely publishes a paper on the Treatment of Infantile Cholera, by Dr. Boing, which is translated from the *Allgemeine Medicinische Central-Zeitung* of the 26th of June. The results said to have been obtained are so remarkable—fifty recoveries in fifty cases treated—that I do not hesitate to transcribe it for the benefit of your readers. "The method consists chiefly in the use of large quantities of quinine administered in repeated small doses, and in the limitation of food to milk-and-water, which have been previously and separately boiled. At the same time large quantities of wine are given, and sometimes ether." Dr. Boing only comprises in his statistics children under four years of age, and the youngest of these was but two months old. The smallest dose of quinine given in any case was one gramme (about fifteen grains) in the twenty-four hours, of which a proportional part was taken every hour, or half hour. If the dejections are acid, phosphate of lime is also prescribed, and should be used until the urine acquires an alkaline reaction. One little girl three years old, apparently moribund when the treatment was begun, took half a litre (one pint) of Tokay wine in fifteen hours. The French translator states that in some instances, besides the thirty grains of quinine administered by the mouth (in children under four years of age!), as much as 120 grains (eight grammes) were injected into the rectum. Dr. Boing does not appear to have met with any cases requiring more energetic treatment, but should any occur in his practice which resist milder measures, he intends to supplement the administration of quinine by the mouth and bowel by hypodermic injection of corresponding doses of the same alkaloid.

The *Progrès Médical* of last week publishes the first instalment of some lectures by Professor Parrot, upon rickets, which are sure to attract attention. As a cause of this disease, inherited syphilis holds an important place, and one recognised by all writers on the subject; but it has never been considered as the only cause. This, however, is the proposition which the lecturer advances: "All cases of rachitis are derived from one source—hereditary syphilis." As physician to the Hospice des Enfants Assistés, M. Parrot has an unrivalled field for observation; and although the statement is sweeping, it has probably been made upon good foundation. At a recent meeting of the Biological Society Dr. P. Redard exhibited a thermo-electric apparatus, which has been constructed for him by MM. Rumkoff and Gaiffé. It is intended for taking surface temperatures, and records variations of one-fortieth of a degree Centigrade. As an instrument for biological research it will, no doubt, prove most useful, but it is too costly, delicate, and complicated to meet the requirements of a medical practitioner.

A young physician of Lyons, whose name is not given, is said by the *Nouveliste* of that town to be emulating on a small scale the now famous Dr. Tanner. He began to fast on the 1st of August, and will endeavour to remain without food until the 15th. More interested, however, than his American *confrère*, he has staked a hundred louis upon his power of endurance, or rather, that is the sum which is to reward his success.

Although Paris possesses some of the most eminent dentists in the world, the practice of the dental art has hitherto been open to all without any proof of proficiency being required. For some time the members of this branch of surgery have been endeavouring to obtain a law to make it compulsory for every dentist to pass examinations, and obtain diplomas like all other responsible professional men. A dental hospital has recently been inaugurated in the Boulevard Clichy, where theoretical instruction will be given in dental anatomy, physiology, surgery, and therapeutics, and clinical demonstrations on the patients who may apply for relief. It is hoped that the creation of a practical school for study will lead to other reforms.

A commission has been named by the Anthropological Society to take steps to erect a monument to the late Professor Broca. It is formed by MM. Henri Martin, Verneuil, De Quatrefages, Menier, Leguay, Topinard, Parrot, Pozzi, Gavarret, Ploix, and Magitot. Subscriptions may be sent to M. Masson-Leguay, 3, Rue de la Sainte-Chapelle.

MEDICAL NOTES IN PARLIAMENT.

IN the House of Commons on Thursday, 29th ult., the only petition, so far, in favour of Mr. Dodson's Vaccination Acts Amendment Bill was presented from the Clerkenwell Ratepayers' Association. Petitions against the measure continue to be forwarded, and three were now presented from Swansea Union, vestry of Giles's, Camberwell, and Vestry of St. Leonard's, Shoreditch.—On the motion of Mr. A. Moore a copy was ordered of Dr. MacCabe's recent report on the state of the Belfast Workhouse.

On Friday another petition from the British Medical Association was presented against the Vaccination Acts Amendment Bill.—A return was ordered to be printed of examinations for medical appointments in the East India, army, and naval departments. The thirty-fourth report of the Lunacy Commissioners was laid upon the table.—Mr. Arthur O'Connor gave notice that he would draw attention to the dietary scale in the Dingle Workhouse, and move a resolution.—Mr. Bellingham gave notice that he would ask the Chief Secretary to the Lord Lieutenant of Ireland whether he has any objection to lay upon the table of the House a return of the number of dispensary committees that have availed themselves of an Act passed in August, 1879, giving facilities for providing dispensary houses and dwelling houses for medical officers of dispensary districts in Ireland.

On Monday, petitions against the Vaccination Acts Amendment Bill were presented from Derby Union, Paddington, and St. Pancras, and a petition in its favour was presented from Derby Union. The second reading of the Bill was again deferred, this time to Thursday, but without much chance of its then being reached.—Mr. Parnell asked the Chief Secretary to the Lord Lieutenant of Ireland whether he had received a copy of a report made by Drs. Sigerson and Kenny to the Dublin Mansion House Relief Committee, in reference to the fever in the west of Ireland; and, if so, whether he would lay it upon the table of the House. Mr. Forster replied that the Committee had sent him the report, but as it was not officially obtained he did not see how he could lay it on the table of the House. Fever in the west of Ireland, and especially in the union of Swinford, was declining; so much so, that the medical officer sent down by the Irish Local Government Board was returning to Dublin. To a further question the right honourable gentleman answered that instructions had long since been sent to the boards of guardians in the distressed districts to provide an improved dietary for the suffering poor.—Mr. Hubbard asked the Secretary of State for the Home Department whether, in view of the deficient residential accommodation

for the labouring population within the metropolis, aggravated by the demolition, under Improvement Acts, of unsuitable habitations not hitherto replaced, he would consider and propose some means through which, at the earliest period, a remedy may be applied to an evil so prejudicial to the health and morals of the people. Sir W. Harcourt said the matter was a very serious one, and required a great deal of consideration. Every exertion would be made to carry out the object stated in the question.—Mr. A. Arnold, on behalf of Mr. Macdonald, reverted to the case of poisoning in copper-bronze printing, which was mentioned last week, and asked the Secretary of State for the Home Department if, considering that the boy, William Ball, had suffered severely from an attack of poison prior to the one that he died from, he would direct the attention of the Public Prosecutor to the circumstances of the case, and order a prosecution; and, failing this, if he would bring in a Bill with such provisions as will meet the requirements of similar cases. Sir W. Harcourt said he had communicated with the Chief Inspector of Factories, who was of opinion that copper-bronze printing was not included in the schedule of dangerous trades under the Factory Act, because it did not come under the notice of the Committee who framed the Act. He had instructed the Chief Inspector to inquire what other dangerous trades were unscheduled, and would bring in a Bill next session to remedy the defects of the Act in that respect.—Mr. Middleton asked the Vice President of the Council if his attention had been called to an alarming outbreak of enteric fever which occurred in Glasgow in April of this year. If he was aware that the Medical Officer of Health in his report to the authorities traced the cause of the epidemic to milk supplied from a farm in a neighbouring county. Had the authorities issued regulations under the Order in Council of July, 1879; and, if so, the date. And whether, in view of the repeated outbreaks of fever traced to milk, the Government would take into consideration the propriety of introducing an Act for the sanitary regulation of places of milk-supply to towns.—Mr. Mundella replied that his attention had been called to Dr. Russell's report, that the fever was traced to milk supplied from a farm in Stirlingshire, that the farm was registered and inspected, and that upon receipt of Dr. Russell's report the Stirlingshire authorities prohibited the further selling of milk from the farm, and ordered the water-supply to be amended. At that time some inmates of the farmhouse were suffering from fever, and the water-supply was objectionable. A new water-supply, which was fresh and abundant, had now been obtained, and the inmates of the farmhouse were restored to good health, but it had not yet been deemed prudent to remove the prohibition of the sale of milk. The local authorities applied to had acted with promptitude and intelligence, and he saw no necessity for further legislation.—The following notices were given:—Mr. William Corbet,—To ask the Chief Secretary to the Lord Lieutenant of Ireland if he is aware of the fact that a distinction exists between England and Ireland in regard to the manner of pensioning officers and servants of lunatic asylums on retirement, inasmuch as in England they can receive at the end of fifteen years' service a pension amounting to two-thirds of their salaries, under the Lunacy Acts Amendment Act of 1862, while in Ireland they must have served forty years before they can receive an equal amount; whether he is aware that the clause in the Superannuation Act of 1859, which provides that when professional qualifications are necessary for the holding of any office the Lords of the Treasury may by Warrant direct that in computing the retired allowance of any person so specially qualified a number of years not exceeding twenty be added to the number of years he may have actually served, does not apply to the medical officers of lunatic asylums in Ireland, as their salaries are not paid out of the Consolidated Fund; and whether he will take steps to place the officers and servants of lunatic asylums in Ireland, when incapacitated by age or infirmity to perform their duties, on an equal footing in regard to pensions with their brethren in England. Mr. Sexton,—To ask the Chief Secretary to the Lord Lieutenant of Ireland, whether he has observed that the Rev. P. McNulty, Catholic administrator of the parish of Ballina, informed the Ballina Board of Guardians, at their meeting of the 17th ult. of the existence of thirty cases of fever in one district of the union, and assured the Board that the fever had made its appearance in every case in

families which had been obliged to subsist for a long time on Indian meal, used without milk; that this diet had resulted in dropsy and phthisis, as well as fever, and that a change of diet is necessary if the epidemic is to be abated; whether it appears, from the statement of the Rev. P. McNulty, that the fever had been active in the district in question for a very considerable time; that, nevertheless, its existence there was not known to the Board of Guardians until he informed them of it, and that many of those stricken by fever had neither food, bed clothing, nor any common necessary of life; and, whether, considering the number of districts from which fever has been reported, the danger of a further spread of the epidemic, and the evident inadequacy of the ordinary agencies of the Poor-law system to deal with the present and probable state of things, the Government will specially instruct the Board of Guardians, and will take steps to strengthen the relieving staffs, increase the number of medical officers, and appoint competent nurses to attend upon the sick in localities where such assistance may be needful.—Mr. O'Connor Power (on going into Committee of Supply), to call attention to the Reports of Dr. Nixon and Dr. Woodhouse, presented to the Irish Local Government Board, and to the Reports of Dr. Sigerson, Dr. Kenny, and Mr. J. A. Fox, presented to the Dublin Mansion House Relief Committee, on the condition of the fever-stricken districts of Mayo and other parts of the west of Ireland; and to move: That, in the opinion of this House, the present condition of the agricultural population in Mayo, Sligo, and other parts of the west of Ireland demands the serious and immediate attention of Her Majesty's Government; that effective sanitary arrangements should be carried out in those districts under the authority of the Local Government Board; that it is essential, with a view to preventing the spread of contagious disease, that a change of nutritious food should be given to all persons receiving relief under the Poor-law, or under the system substituted for the Poor-law in certain localities, and that a competent medical staff should be organised without delay, and distributed over those parts of the country visited by fever.

On Tuesday, Lord Hartington read the latest telegrams on the disaster in Afghanistan, from which it appeared that Surgeon-Major Preston was amongst the wounded. The report of the Select Committee on the London Water Supply was brought up, and ordered to be printed.—The following notices were given:—Mr. Mackintosh,—To ask the Secretary of State for the Home Department, whether, as indicated in Her Majesty's Speech, the Lunacy Laws do not require amendment; whether it is the intention of Government to introduce a measure next session for amending these Laws; and whether the Government will, during the recess, institute a full and searching inquiry into the system and working of these Laws by a Royal Commission or otherwise, in order that, with the view of satisfactory legislation, the fullest possible information on the subject may be before Parliament.—Mr. Robert Fowler,—To ask the Under Secretary of State for Foreign Affairs, whether Her Majesty's Government have taken any steps to put an end to the interference, on the part of the Japanese Government, in the drug and chemical trades, which was the subject of a memorial, signed by several influential firms, to Lord Salisbury in August last.

On Wednesday Mr. Corbet postponed his question with regard to officers of lunatic asylums in Ireland until Monday.

On Thursday, Mr. Foster replied to Mr. Sexton that from the report of the medical officer of the Ballina District, it appears that there were under treatment only four cases of simple fever, two cases of rheumatic fever, and one family was convalescent after typhoid. The Local Government Board were very successful in checking the spread of disease, and he had not heard that the present system was inadequate; but, if necessary, the Local Government Board would issue orders to Boards of Guardians to strengthen their staffs. In answer to Mr. Mackintosh, Sir William Harcourt remarked that there was some ambiguity in the Hon. Member's question. With regard to the amendment of the Lunacy Laws, there had been two great speeches from the Throne this year, and this matter was not mentioned in the last speech. He could only say that he had no doubt that the Lunacy Laws did require amendment, but he could not state that a measure would be introduced next session. As to instituting inquiries during the recess, he thought that there was ample material already at

hand for legislation, if it were desired to legislate. Mr. Foster replied to Mr. Bellingham, that it was Boards of Guardians, and not the dispensary committees, who availed themselves of the Act of 1879. He would be happy to grant a return of the boards who had done so. Mr. Pugh gave the following notice for Monday next :—
 "To ask the Secretary of State for India whether the orders of the Governor-General of India, No. 13 of Jan. 3rd, 1880, Military Department, and No. 150 of March 13th, 1880, Home Department, do not contravene the provisions of Section 56 of the Stat. 21 and 22 Vict. c. 106, in that they alter the terms of service and the title to pay, pensions, allowances, privileges, and advantages as regards promotion of those officers; and whether such orders are not so far illegal and void; what redress it is proposed to grant to such officers of the Indian Medical Service as have already been prejudicially affected by the operation of these orders; and what steps it is proposed to take to prevent their further operation?"

Medical News.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—The following gentleman was admitted a Fellow of the College on July 29th :—

Fox, Cornelius Benjamin, M.D. Edin., Ilfracombe.

On the same day the following gentlemen were admitted Members of the College :—

Biss, Cecil Yates, M.B. Camb., Sydenham-park.
 Colquhoun, Daniel, M.B. Lond., Denmark-hill.
 Gabbett, Henry Singer, M.B. Dub., Upper Bedford-place.
 Horrocks, Peter, M.D. Lond., Merrick-square.
 Ludwig, Gustav Heinrich Wilhelm Rudolph, M.D. Leipsic, German Hospital.
 Maclean, Lachlan Hector J., M.D. Heidelb., Bernard-st.

The following gentlemen were at the same time admitted Licentiates of the College :—

Acland, Theodore Dyke, Vincent-square.
 Adam, Caleb Denovan, London Fever Hospital.
 Atkin, Charles, Sheffield.
 Capon, Herbert James, M.D. Brussels, Edgware-road.
 Cree, William Edward, Pemberton Villas.
 Davies, Morgan, M.B. Aberd., London Hospital.
 Dingley, Allen, Argyle-square.
 English, Thomas Johnston, Fulham-road.
 Faithfull, Robert Lionel, M.D. New York, Gower-street.
 Falla, Walter, Jersey.
 Hamerton, George Albert, Lambeth Infirmary.
 Hanson, John Edward, Reedworth-street.
 Hudson, Theodore Joseph, Pyrland-road.
 Lawford, John Bowring, M.D. McGill, Palace-road.
 Perkins, George Chapman Steele, Guy's Hospital.
 Pilkington, Francis Sergeant, Merrick-square.
 Porritt, Norman, General Infirmary, Leeds.
 Richardson, Charles Boards, Great Hadham.
 Ross, James Fredk. Wm., M.B. Toronto, Oxford-terrace.
 Routh, Amand Jules McConnell, Montagu-square.
 Sanders, John William, M.D. Brussels, Guy's Hospital.
 Stansby, Charles John, Hoxton-street.
 Sutcliffe, John, Denmark-hill.
 Ware, John William Langston, Barnstable.
 Warren, Henry Guy Seymour, Cambridge-street.
 Wigg, Alfred Edgar, M.D. Brussels, Albert-street.
 Wilson, John, St. Bartholomew's Hospital.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen having passed the required examination for the diploma, were duly admitted Members of the College at a meeting of the Court of Examiners on the 29th ult. :—

Ackery, John, Queen Anne-street.
 Baddeley, Charles Edward, L.S.A., Newport, Salop.
 Buxton, Thomas, Fazeley, Staffordshire.
 Colledge, Lesley Robert, Surbiton.
 Collingwood, David, Liverpool.
 Cook, Jonathan Neild, Rochdale.
 Marlow, Frank William, Wantage.
 Shearman, Percy Edward, Wimbledon.
 Smith, William Alexander, Clifton, near Bristol.
 Stevenson, Henry Wickham, L.S.A., Castletown, Isle of Man.
 Turton, James, L.S.A., Portsmouth.
 Wood, Arthur George, Trinity-square.

The following gentlemen were admitted Members on the 30th ult. :—

Brookes, Frederick William, Westminster-bridge-road.
 Bullar, John Follett, Southampton.
 Elliott, Nicholas Phillips, St. George's-road.
 Evans, Arthur Owen, Oswestry.
 Greensill, James Haynes, Great Whitley.
 Hart, Alfred Paul, L.R.C.P. Edin., Norwich.
 Henry, George McWilliams, Omagh, co. Tyrone.
 Hunt, James Sidney, Besley, Gloucestershire.
 Maudsley, Henry, Settle, Yorkshire.

Of the 241 candidates examined during the past fortnight,

134 passed to the satisfaction of the Court, and obtained their diplomas; 14 passed in Surgery, and when qualified in Medicine will be admitted Members; the remaining 93 failed to reach the required standard, and were referred for six months' further professional study. Nine candidates who had passed in Surgery at previous examinations, having subsequently obtained a medical degree or licence recognised by the College, were also admitted Members. With this meeting the Professional Examinations were brought to a close, until November next. The Museum and Library will be closed as usual during the month of September for the necessary repairs, painting, cleaning, &c.

The next Preliminary Examination for the diplomas of Member and Fellow of the Royal College of Surgeons will be held on Tuesday, Wednesday, and Thursday, Sept. 7th, 8th, and 9th, at the University of London, Burlington-gardens. Candidates going in for this examination are reminded that their forms of admission, properly filled up, must be forwarded to the Secretary of the Royal College of Surgeons, Lincoln's-inn-fields, on or before the 17th inst.

UNIVERSITY OF LONDON.—The following candidates have passed the recent Preliminary Scientific (M.B.) Examination :—

FIRST DIVISION.

Aikin, William Arthur, Guy's Hospital.
 Alcock, Samuel King, High School, Newcastle-on-Tyne.
 *Allen, Henry. (Private study.)
 *Anderson, George Elliott Caldwell, South African College and Guy's Hospital.
 Andrews, Charles, University College.
 *Barratt, John Ogilethorpe Wakelin, University College.
 *Bowes, William Henry, Epsom College.
 Bowman, Henry Claxton, Owens College.
 Brock, James Harry Ernest, University College.
 Carr, John Walter, University College.
 Cave, Edward John, St. Bartholomew's Hospital.
 *Chapman, Harry Cecil, St. Bartholomew's Hospital and Royal School of Mines.
 Child, Herbert, Yorkshire College, Leeds.
 Dunn, Louis Albert, Guy's Hospital.
 *Edmunds, Percy James, University College.
 Flemming, Percy, University College.
 Fowler, Alfred Henderson, Guy's Hospital.
 Glover, John Philip, St. Thomas's Hospital.
 Guy, William, University of Edinburgh.
 Halstead, George Ezra, B.A., Guy's Hospital.
 Hart, Herbert Wheatley, Westminster and Guy's Hospitals and Birkbeck Institute.
 *Hurst, Walter, Owens College.
 Innes, Charles Barclay, University College.
 Jones, Frederick Wm. Caton, St. Bartholomew's Hospital.
 Jones, Hugh Edward, Guy's Hospital.
 Jones, Samuel Cromwell, University College.
 Lyndon, Arnold, St. Bartholomew's Hospital.
 Marriott, John, Charing-cross Hospital.
 Mathews, Frank Edward, Owens College.
 Mumby, Langton Philip, St. Thomas's Hospital.
 *Ransom, William Bramwell, University College.
 Robinson, Henry Betham, St. Thomas's Hospital.
 Shipley, Arthur Everitt, St. Bartholomew's Hospital.
 Thane, Edgar Herbert, University College.
 Thomas, Benjamin Wilfred, Charing-cross Hospital.
 Watson, William Ivens Buswell, Guy's Hospital.
 Wells, George Lee, Yorkshire College, Leeds.
 Williams, Reginald Muzio, St. Thomas's Hospital.
 Williamson, Richard Thomas, Owens College.

SECOND DIVISION.

Adami, John, George, Owens College.
 *Adie, Joseph Rosamond, University College.
 *Andrews, Edward Collingwood, University College.
 Arkle, Charles Joseph, University College.
 Bailey, William Henry, St. Bartholomew's Hospital.
 Barnett, Lawrence, University College.
 *Biden, Charles Walter, Charing-cross Hospital.
 Black, Robert, London Hospital.
 Bohrsman, Matt. Chn. R., B.A. Syd., University College.
 Bown, Arthur Thomas, St. George's Hospital.
 Buckmaster, George Alfred, St. George's Hospital.
 Bullock, Thomas Warren, St. Thomas's Hospital.
 Calvert, James, St. Bartholomew's Hospital.
 Carpenter, George Alfred, St. Thomas's Hospital.
 Castle, Bernard, St. Bartholomew's Hospital.
 *Childe, Letterstedt Frederick, Guy's Hospital.
 Cocking, William Tusting, University College.
 Crowther, Fredk. Wm., University College and private study.
 Downing, Charles, St. Bartholomew's Hospital.
 Draper, William Grey, Owens College.
 Earle, Walter George, University College.
 Fisher, Henry Holdrich, Epsom College.
 Frames, Alfred Cronwell, St. Bartholomew's Hospital.
 France, James Mead, Guy's Hospital.
 Francis, Alfred George, University College.
 Freeland, Freeland John, King's College.
 *Gow, William John, Owens College.
 *Grant, William Francis, University of Edinburgh.
 *Griffiths, William, University and Regent's-park Colleges.
 Habershon, Samuel Herbert, Trinity College, Cambridge.
 Hart-Smith, Franke Chamberlain, University College.
 Helme, Thomas Arthur, University College and University of Edinburgh.

Kauffmann, Otto Jackson, Owens College.
 Larkin, Frederick Charles, Liverpool School of Medicine.
 Lawson, Robert, St. Thomas's Hospital.
 *Leach, Priestley, Owens College.
 Macartney, Edward Kendrick, University College.
 M'Cabe, William Alexander Bowes, University College and Victoria College, Jersey.
 Melson, George Hyde. (Private tuition.)
 Meyer, Charles Hartvig Lomo, Guy's Hospital.
 Moss, Arthur James, Owens College.
 *Mukerji, Phani Bhushan, University College.
 Muspratt, Charles Drummond, Guy's Hospital.
 Napier, Francis Horatio, St. Bartholomew's Hospital.
 O'Connor, Edward Kersey, University College.
 Parker, Herbert, St. Bartholomew's Hospital.
 Pearson, James, University College.
 Pereira, Conrad, University College.
 *Perez, George Victor, University College.
 Pollard, George Richard M'Intosh, Guy's Hospital.
 Purnell, Purnell, Guy's Hospital.
 Roome, Stanley Molesworth, Epsom College.
 Shillito, Henry, Queen's College, Birmingham.
 Spencer, Walter Baldwin, Old Trafford School, and Owens College.
 *Stevenson, George, St. Bartholomew's Hospital.
 Storrar, William Morrison, University of Edinburgh.
 Taylor, Charles Henry, King's College.
 Taylor, Joseph, University College.
 Turner, Philip Dymock, University College.
 Vince, John Foster, Queen's College, Birmingham.
 Voelcker, Arthur Francis, University College.
 Walsh, John Henry Tull, Westminster Hospital.
 *Warrick, Frederic Walmsley. (Private study.)
 Weighell, Christopher William, University College.
 Williams, Patrick Watson, University College, Bristol, and private study.
 Williams-Freeman, John Peere, University College.

* These candidates have also passed in the Mathematics of the First B.Sc. Examination, and are now admissible to the Second B.Sc. Examination.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on July 29th:—

Addison, Charles James, Weymouth.
 Crosse, William Henry, Guy's Hospital.
 Farmer, Ernest William White, University College.
 Maxwell, Charles Mayne, Euston-road.
 M'Alister, Donald, St. Bartholomew's Hospital.
 Rhodes, James Havelock Alexander, Osmond-street.
 Rigby, John, Preston.

The following gentlemen also on the same day passed their Primary Professional Examination:—

George Adkins and John Sinclair, London Hospital; Francis Henry Furnival, St. Thomas's Hospital; Michael John Verdon, King's College.

ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH AND FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.—The following gentlemen have passed the First and Second Professional Examinations respectively for the double qualification granted conjointly by these two bodies, at the quarterly examination held in July:—

FIRST EXAMINATION.

Crean, William.	Gemmel, Archibald B.
Corkery, W.	Hannah, Frederick R.
Dawson, J. M.	Maidment, F. G.
Dunkin, Charles.	

SECOND EXAMINATION.

Boyd, James D., M.B. Glasgow.
 Fergusson, James H., Londonderry.
 Jackson, William, Glasgow.
 Love, John, Glasgow.
 Macdonald, John, Glasgow.
 Pickworth, Alfred J., Liverpool.

FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.—The following gentlemen have passed the First and Second Examinations respectively:—

FIRST EXAMINATION.

Bluett, P. E. W.	Dickson, Peter S.
Beatty, W. J.	Partridge, W. S.
Brownlow, Ed.	Taylor, Alfred.
Cameron, Angus.	

SECOND EXAMINATION.

Reheim-Schwarzbach, B., M.D. Würzburg.
 Chalmers, Alexander, Glasgow.
 Erson, W. R., L.S.A., Huddersfield.
 Kelly, M. F., L.A.H., Felling.
 Luddell, J. L., L.S.A. London.
 Macmillan, Colin, Glasgow.
 Macdonald, William, Glasgow.
 Phillips, W., B.A., Portarlington.
 Tinsley, Seth, Malton, Yorkshire.

THE will of Dr. Alfred Swaine Taylor has been proved under £60,000.

MR. A. J. NUNN, late District Medical Officer of the Alderbury Union, has been granted a superannuation allowance of £20 a year.

A CENTRE for the St. John Ambulance Association has been formed at Halifax, and classes are being organised to impart instruction in the first treatment of injured persons. Dr. Britton is the secretary of the new centre.

THE sum of £1800 is stated to have been received as the result of the bazaar lately held for the benefit of the Essex and Colchester Hospital. After the incidental expenses have been defrayed it is expected there will be a surplus to be handed over to the treasurer of the hospital sufficient to reduce the debt due in respect of the recent improvements in the building to about £900.

DR. DAVIDSON, of Banbridge Union, has been refused a retiring allowance of two-thirds of his salary as late medical officer of Crossgar Dispensary, although he had served in that position for the past forty years. We regret that the Banbridge Guardians should have acted in the way they have done to a gentleman who has always efficiently discharged the duties of his office, and who is obliged to retire in consequence of declining health.

WIGAN INFIRMARY.—By permission of the Corporation a gala was held in the Park on Monday, in aid of the funds of the above infirmary.

PRESENTATION.—A handsomely illuminated address and solid silver salver, with a pair of goblets, were presented to Alexander Flood, Esq., who lately resigned the Holywell Dispensary District in the Enniskillen Union, of which he was medical officer for thirty-four years. The presentation was made on Thursday, the 29th ult., by a large deputation, headed by James Bracken, J. P., and Rev. Dr. Clarke, who were chairman and secretary respectively of the Presentation Committee.

YOUGHAL WATER-SUPPLY.—The Town Commissioners having resolved to abandon the waterworks scheme, the Local Government Board for Ireland have requested them to obtain from the medical officer of health a special report as to the sufficiency and wholesomeness or otherwise of the existing water-supply in the urban district. The Board further ask if the pump in Friar-street, which had been condemned as being impure and unfit for dietetic purposes, is still used by the people of that district. A committee has been appointed to obtain samples of the water for analysis.

THE MEDICO-PSYCHOLOGICAL ASSOCIATION.—There was a good attendance at the annual meeting of this Association held on the 30th July at the Royal College of Physicians, under the presidency of Mr. Mould of Cheadle. At the morning sitting a hearty vote of thanks was accorded to Dr. Lush, the retiring President, and the usual routine business was transacted. In the afternoon the President read a carefully-prepared and exhaustive address, introducing, among other topics for discussion, the question of providing detached villa-residences for lunatics apart from the asylum proper; and Dr. Boyd read a paper upon the simplification of admission formalities. The members dined together in the evening at Willis's Rooms, when they were joined by the Earl of Shaftesbury, Mr. J. T. Hibbert, M.P., and other distinguished guests. Lord Shaftesbury's health having been enthusiastically drunk, his lordship, in feeling terms, expressed the great pleasure it gave him to meet a body of medical and scientific gentlemen, of whose services he could speak with the greatest gratitude. Referring to the length of time during which he had been connected with lunacy work, he favourably contrasted the present state of things both in public and private asylums with that in former years, and alluded to the conscientious manner in which medical practitioners had discharged the duties imposed upon them by the Lunacy Acts, as proved by the evidence adduced before the Parliamentary Committee. The present tendency (one to be guarded against in the public interest) was to let out everybody who was shut up, and henceforward to shut up nobody at all. It was to be hoped that, when measures of lunacy reform were decided upon, nothing would be done which would throw unnecessary impediments in the way of early treatment by a mistaken delicacy in regard to the "liberty of the subject." The two great principles to be maintained were a thoroughly efficient, permanent, and independent body of visitors, and every facility, under proper control, for early treatment. The toast of the House of Commons was responded to by Mr. Hibbert, M.P.

CHARING-CROSS HOSPITAL.—At the recent Distribution of Prizes Lord Watson, late Lord Advocate and M.P. for the Universities of Glasgow and Aberdeen, presided, and after the distribution addressed the company in a felicitous speech, which showed his high appreciation of the profession of Medicine. The following is a list of the prizemen, &c.:—Llewellyn Scholarship, Charles Rout. Gilding Scholarship, W. B. C. Treasure. Governor's Clinical Gold Medal, C. W. G. Burrows. The Pereira Prize, C. R. Lyster. Senior Anatomy, D. L. Jones, silver medal; W. Tibbles, W. B. C. Treasure, J. L. Rodwell, J. Donald, certificates. Junior Anatomy, W. H. Haw, bronze medal; E. S. Josling, B. W. Thomas, A. F. Turner, certificates. Senior Physiology, J. T. Tibbles, silver medal; J. Donald, W. B. C. Treasure, D. Llewellyn Jones, W. Tibbles, certificates. Junior Physiology, H. d'Arcy Power, bronze medal; E. S. Josling, E. Berkley, certificates. Chemistry, B. W. Thomas, silver medal; J. Marriott, A. E. Nelham, R. S. Oram, certificates. Senior Medicine, Charles Rout, E. E. Newnham, silver medals; C. W. G. Burrows, A. Honman, certificates. Junior Medicine, H. R. Hancock, bronze medal; J. Donald, W. C. Beatley, J. H. Taylor, certificates. Senior Surgery, Edwin Wooton, silver medal; C. W. G. Burrows, Charles Rout, certificates. Junior Surgery, J. Donald, bronze medal; G. Locke, certificate. Botany, S. Wyborn, silver medal; J. Donald, W. B. C. Treasure, certificates. Materia Medica, G. Locke, silver medal; H. R. Hancock, W. B. C. Treasure, certificates. Midwifery, Charles Rout, silver medal; A. Honman, certificate. Forensic Medicine, C. W. G. Burrows, silver medal; W. J. Haddock, certificate. Pathology, A. Honman, silver medal, W. Niblett, certificate. Practical Chemistry, W. C. Beatley, Silver medal.

BEQUESTS ETC. TO MEDICAL CHARITIES.—Mr. James Macgregor Mackay, of Brighton, bequeathed £1000 to the Edinburgh Royal Infirmary. Miss Jessie Gordon bequeathed £1000 to the Paisley Infirmary and Dispensary. Mr. John Cuttell, of Long Walls, has given £1000 to the Huddersfield Infirmary. Mr. R. Barnard, of Painswick, bequeathed £200 each to the Stroud Hospital, the Bristol Infirmary, the Gloucester Infirmary, and the Bristol General Hospital, and £100 each to the Hospital for Incurables at Putney and the Asylum for Idiots at Earlswood. The Worcester Infirmary has become entitled to £100 under the will of Dr. Nash. Lady Codrington has given £50 to the Victoria Hospital for Sick Children. The Mercers' Company have given thirty guineas to the West-end Hospital for Paralysis and Epilepsy. Mrs. Ann Cash, of Hackney-road, bequeathed £300 each to the Central London Ophthalmic Hospital, the German Hospital, the North-Eastern Hospital for Sick Children, the London Hospital, and the Metropolitan Free Hospital, and £100 to the Royal Hospital for Incurables. "The Misses B." have given one hundred guineas to the building fund of the North London Hospital for Consumption, and three hundred and fifty guineas to name and endow a bed. The Charing-cross Hospital has received £105 from the Mercers' Company, and £100 from the Goldsmiths' Company. The Trustees of the residuary estate of the late Sir George Bowles have assigned £2000 to the Shepton Mallet District Hospital.

Medical Appointments.

Intimations for this column must be sent DIRECT to the Office of THE LANCET before 9 o'clock on Thursday Morning, at the latest.

BENHAM, F. L., M.B., has been appointed Resident Clinical Assistant to the West Riding Asylum, Wakefield.
BRYDEN, R. J., M.R.C.S.E., L.S.A.L., has been appointed Physician's Assistant to the Bristol General Hospital, vice E. W. Hope, M.B., resigned.
GEOGHEGAN, E. G., M.D., has been appointed Assistant Medical Officer to Portsmouth Borough Asylum, vice Hay, resigned.
GEORGE, G. A., L.R.C.P.Ed., M.R.C.S.E., has been appointed Medical Officer for the Dorchester District and the Workhouse of the Dorchester Union, vice Emson, resigned.
GOYDER, C. M., M.B.C.S.E., L.R.C.P.L., has been appointed Senior House-Surgeon to the Newcastle-on-Tyne Infirmary, vice J. D. Dixon, M.D., resigned.
HEATON, C. W., F.C.S., has been reappointed Public Analyst for the Parish of St. Martin-in-the-Fields, for one year. £50 per annum and fees.
HOPKINS, J. W., L.R.C.P.Ed., M.R.C.S.E., has been appointed Medical Officer to the Eccleshall District of the Stone Union.

HORNE, A. J., L.R.C.S.I., L.K.Q.C.P.I., has been appointed Assistant-Physician to the Rotundo Hospital, Dublin.
JONES, T., M.B., F.R.C.S.E., has been appointed Consulting Surgeon to the Children's Hospital, Pendlebury.
KEELAN, P., L.R.C.S.I., L.K.Q.C.P.I., has been appointed Medical Officer to the Callon Dispensary, Ardee Union.
LYTLE, J., M.D., M.Ch., has been appointed Junior House-Surgeon to the Wigan Infirmary, vice J. C. B. Robinson, L.R.C.P. &c., resigned.
MCARDLE, Mr. J. S., has been appointed Resident Surgeon to St. Vincent's Hospital.
MCDONNELL, E. P., L.R.C.S.I., has been appointed Resident Surgeon to Gervis-street Hospital, Dublin.
MANBY, F. E., F.R.C.S.E., has been appointed Honorary Surgeon to the Wolverhampton and Staffordshire Hospital, vice Newham, resigned.
MONTFORT, A. H., M.D., M.Ch., has been appointed Assistant House-Surgeon and Dispenser to the Kent and Canterbury Hospital, vice Mr. T. F. Vaisey, resigned.
NEWHAM, C. A., M.R.C.S.E., L.S.A.L., has been appointed Consulting Surgeon to the Wolverhampton and Staffordshire General Hospital.
O'CONNOR, C. J., L.R.C.S.I., L.K.Q.C.P.I., has been appointed Medical Officer to the Clane Dispensary, Naas Union.
O'DEA, P. St. L., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer to the Ennistymon Dispensary, Ennistymon Union.
RICHARD, B. M., L.F.P.S.G., has been appointed Medical Officer of Health for the Burgh of Dumbarton.
SUTHERLAND, J. F., M.B., has been appointed Surgeon to H.M. Prison, Duke-street, Glasgow, vice Leishman, resigned.
WALSH, J. L., L.R.C.S.I., L.R.C.P.Ed., has been appointed Medical Officer to the Kilmacthomas Dispensary, Kilmacthomas Union.
WILKINS, G. H., M.R.C.S.E., has been appointed Visiting Medical Officer to the St. Michael's District of the South Lambeth, Stockwell, and North Brixton Dispensary.
WRIGHT, G. A., M.B., B.A., F.R.C.S.E., has been appointed Surgeon to the Children's Hospital, Pendlebury, vice Jones, resigned.

Births, Marriages, and Deaths.

BIRTHS.

ARNOTT.—On the 29th ult., the wife of Sandford Arnott, M.R.C.S.E., of a son.
KENNEDY.—On the 3rd ult., at H.M. Penal Settlement, Essequibo, British Guiana, the wife of David Kennedy, M.B. &c., of a son.
LEACHMAN.—On the 27th ult., at Fairley, Petersfield, the wife of A. Warren Leachman, M.D., of a son.
MAY.—On the 28th ult., at Pentonville-road, N., the wife of Edward H. May, Surgeon, of a daughter.
PURDON.—On the 14th ult., at Guernsey, the wife of J. E. Purdon, Esq., M.B., Surgeon-Major, of a daughter.

MARRIAGES.

CHARLES—GORDON.—On the 31st ult., at St. Matthias', Earl's-court, T. Cranstoun Charles, M.D., to Georgiana, daughter of the late Adam A. Gordon, M.A.
FOSTER—WEBB.—On the 27th ult., at St. Barnabas Church, Pimlico, Henry George Foster, Esq., of Attleborough, Norfolk, to Mary Clementina, second daughter of Dr. Edward Lowe Webb, of St. George's-road, Pimlico, S.W.
NEWTON-CLARE—ANScombe.—On the 28th ult., at St. Jude's, Mildmay-park, Edward S. Newton-Clare, M.R.C.S.E., of Calne, Wilts, to Emma Anscombe, niece and adopted daughter of the late Thomas Honychurch, of Mildmay-park.
O'BRIEN—MEREDITH.—At the Church of St. Joseph, Highgate, London, Michael Joseph O'Brien, L.K.Q.C.P.I., to Lizzie Baldwin, third daughter of the late William Meredith, of Derrylough, Queen's County, Ireland.
WALKER—ORIEL.—On the 15th ult., at St. Mary's, West Kensington, by the Rev. J. F. Sergeant, M.A., Vicar, assisted by the Rev. J. Henry Smith, B.A., of Dulwich College, Horace Walker, L.R.C.P.L., M.R.C.S.E., of No. 4, The Cedars, West Kensington, to Maria Louisa, third daughter of the late Dr. Oriel, of Alfred-place, W.C., and of Mrs. Oriel, of Elms House, West Kensington. At home after August 15th.
WORSLEY-BENISON—DAVEY.—On the 29th ult., at Harecourt Congregational Church, Canonbury, by the Rev. W. M. Statham, Henry Worsley Seymour Worsley-Benison, eldest son of the late Henry Worsley-Benison, Esq., of Bristol, to Mary Louisa, second daughter of the late Charles Davey, Esq., of Canonbury.

DEATHS.

GRIERSON.—On the 30th ult., at Towerside, Weston-super-Mare, the residence of her son-in-law, Major-General Hailes, Mary McCulloch, widow of David Grierson, M.D., Deputy Inspector-General of Hospitals, Poona, in her 71st year.
HEELIS.—On the 1st inst., at his residence, Blatchington-road, West Brighton, Sussex, Robert Heelis, M.R.C.S.E. & L.A.C., aged 81.
KENNY.—On the 18th ult., Dr. Randal Y. Kenny, of Killeshandra.
ROBERTSON.—On the 24th ult., at Redland-green, Bristol, H. Robertson, M.D.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8 a.m. by Steward's Instruments.)

THE LANCET OFFICE, August 5th, 1880.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radiation in Vacuo	Max. Temp Shade	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
July 30	29.57	S.W.	58	57	107	71	54	0.60	Raining
" 31	29.79	N.W.	59	53	110	71	49	0.20	Fine
Aug. 1	29.72	N.E.	57	55	95	67	54	0.10	Raining
" 2	29.66	W.S.W.	62	58	97	68	51	..	Overcast
" 3	29.80	W.	58	55	104	73	50	0.18	Fine
" 4	29.92	W.	65	61	105	75	56	..	Cloudy
" 5	29.86	S.W.	64	61	112	77	57	..	Overcast

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Local papers containing reports or news-paragraphs should be marked.

Lectures, original articles, and reports should be written on one side only of the paper.

We cannot prescribe, or recommend practitioners.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET to be addressed "To the Publisher."

FINGERS V. KNIVES AND FORKS.

THE arrangements devised by the authorities presiding over the education of the children of the new Parochial Schools at Bedminster would appear to be distinguished by a charming simplicity, almost indeed of a primitive character. The teaching of the young idea how to shoot seems, at all events, in the opinion of the guardians of the poor children of Bedminster, not to include impartation of the knowledge of the use of the knife and fork. The following is from the *Bristol Mercury*:—"Mr. Richard Harding said that the Visiting Committee had gone through the new schools that morning, and were generally pleased with the arrangements. On visiting the dining apartment, however, they found the children's dinners ready, but beyond a spoon there was nothing for them to eat with. From inquiry he found they had to use their fingers, and he did not think such a thing should continue. There was little use in training them properly and forcing them to eat their food like cannibals. He thought that knives and forks should at once be ordered." We think so too. Either give the knives and forks, or take away the spoons and revert to the "natural" mode of devouring.

Pericula.—Our correspondent's power of recovering for the period in question is very doubtful.

Eucalyptus.—We cannot supply the information required.

Sardinia.—Barnes.

PASSAGE OF A FISH-BONE FROM MOUTH TO ANUS WITHOUT CAUSING INJURY.

To the Editor of THE LANCET.

SIR,—Last night (August 3rd) a carman in the employ of one of the great Railway companies applied to me for advice with regard to a swelling about the anus. He had only noticed it during the day, and it had given him great pain during defecation and while sitting on his box. On my seeing him a little after 8 P.M., and hearing his story, my first thought was that he had an inflamed pile, and I asked him to let me see the swelling. On looking I could see nothing but some pieces of skin about the anus (condylomata), and nothing to give rise to his symptoms. I then touched these, and in one of them, where he felt the most pain, I felt a hard, sharp substance, giving me the idea that I had to deal with a needle. On using gentle traction upon the point which protruded, I was able to bring away a fish-bone (apparently from a haddock), about an inch or rather more in length, with complete relief of all symptoms.

The patient's history is this: On July 31st (i.e., three days before) he had eaten haddock for supper, and no fish since. This bone then must have passed from mouth to anus, and, fortunately for him, without causing perforation. The case is worth recording, as showing how necessary it is always to examine every case of piles coming before a medical man.

I am, Sir, yours &c.,

Fore-street, E.C.

T. ROWING FENDICK, L.R.C.P. Edin.

LUNATICS IN IRISH WORKHOUSES.

At the close of last year, 3491 lunatics were located in 163 unions throughout Ireland, of which number 1382 were males and 2109 females, being 154 in excess of the previous year. A distinct and progressive contrast is noticeable as regards idiocy; for enumerating, on the one hand, the simply idiotic, and the idiotic or imbecile labouring under epilepsy, those under thirty years of age amount only to 560 between both sexes, while those over that age reach 1198. Hence it may be naturally inferred that in the present generation the recurrence of idiocy is on the decline—a fact, no doubt, attributable in great measure to the safe harbouring of the afflicted in early life through the instrumentality of asylums and poorhouses, with a consequent check to its propagation.

SIMULATED (OR SO-CALLED) HYSTERICAL ERUPTIONS OF THE SKIN.

To the Editor of THE LANCET.

SIR,—The following eruptions of the skin we may find more generally imitated—viz., pemphigus, erythema, eczema, dyschromata or discolorations, ulcerations, and sometimes alopecia. Several cases of simulated eruptions having been brought under my notice lately, and more particularly one very forcibly, I deem it worthy to bring them to the notice of the profession, as they may occasionally occur in practice. Hysteria as a term has been applied to these simulated eruptions of the skin, and no doubt hysteria is an imitative disease, and is seen in many and strange forms, as fasting, of which several instances occur to most of our memories. Notwithstanding these simulated eruptions are mostly to be found amongst the female sex, and that hysteria mostly occurs to them about the time of puberty, I do not think we must take all we see for granted as hysterical; indeed I have seen several of these so-called hysterical skin affections very soon pass away when treated firmly and kindly. I have heard of and read of some cases of simulated eruptions seen in males; but I confess I have only seen one, and that a very doubtful case—that of a man, who I firmly believe only came to the hospital to be taken in for his keep, who had patches of ecchymosed skin caused by pinching I had no doubt, and, after being questioned closely, suddenly left the hospital.

The first case was an example of imitated erythema marginatum, and very well copied, too, by a well-nourished young woman, aged twenty-two, about middle height, and sallow complexion. She came under my notice at the hospital on the 22nd of April last, with an eruption on the breasts, shoulders, forehead, and inner side of the ankles, of a bright red colour, scaly, and "very tender to the touch," and accompanied with inflammation. In parts there were seen long scabs, caused by the patient's scratching; eczema even had come out, so great was the irritation set up in the skin. In other parts were seen brownish stains, not unlike old syphilitic stains. The girl's history of the eruption was that at first there came out small patches of redness on the arms, very irritable, and showing some small blisters, gradually spreading, and that she had been under Dr. Broadbent's and Mr. Morris's care at St. Mary's Hospital for three weeks. Not quite understanding the character of the eruption at first, I closely questioned the girl, and desired the matron to watch her very closely, as I strongly suspected the nature of the eruption. After a few days, and at my next visit to the hospital, the matron brought me a small paper-bag, which had contained mustard, and which she had found secreted by her. This made it quite clear how this assumed erythema was caused. I then wrote to Dr. Broadbent, who kindly informed me "that there had been a patient suffering from an anomalous eruption of the skin, which he found to be caused by mustard, but unfortunately she went out of the hospital unexpectedly before he had the opportunity to speak to her. I merely used a little vaseline to the skin, which soon healed it."

The second case was that of a young woman, aged thirty-six, who came to me in August last with an eczematous eruption on both legs, on no other part of the body, the patches nearly symmetrical in size, which she said she had had on and off for some years, and had seen several medical men for it. From the sharply-defined nature of the eruption, and from the fact of the patient asking me to write a certificate to enable her to obtain benefits while she should be laid up, I had my doubts as to the case, and much confusion arose to her on my closely questioning, and her admitting the fact of the self-infliction.

The third case was that of a girl about eighteen, who came to see me with an eruption of well-marked bullae on the anterior surface of both legs, on no other part of the body, quite distinct, closely simulating pemphigus, which I elicited was caused by applying blistering fluid. This patient was certainly subject to hysteria, the menses being regular. But certainly others I have seen could not be put down to hysteria.

Yours truly,

JAMES STARTIN.

Sackville-street, July, 1880.

CURIOUS CASE IN VETERINARY PATHOLOGY.

To the Editor of THE LANCET.

SIR,—I have a greyhound puppy, aged three months, and ever since he could see there is on the ball of each eye at the outer corner a quantity of hair, which entirely covers the white of that part, and approaches quite up to the pupils. I have shown the dog both to a surgeon and veterinary surgeon, and they have never met with a similar case. If any of your readers have, I should be glad to hear as to what treatment was adopted.

I am, Sir, yours &c.,

July, 1880.

COURSER.

MEDICAL ETHICS.

To the Editor of THE LANCET.

SIR,—We hope you will find space in your journal to insert the following correspondence between ourselves and Dr. Davison, which we shall be also glad to learn your opinion and the opinion of the profession generally concerning.

After receiving the first two letters of Dr. Davison's, refusing to release Mrs. S— from her arrangement with him, which release we believed any medical man would at once have given who knew all the facts as Dr. Davison said he did, we again called on Mrs. S—, and said that if she really wished Dr. W. H. Sheehy to attend her as before, he would do so, and would forward the fee (two guineas) to Dr. Davison, as that was the only way by which an arrangement could be made.

We are, Sir, yours truly,

W. H. SHEEHY.

PATMORE SHEEHY.

Claremont-square, N., July 2nd, 1880.

[COPY.]

8, Oxford-terrace, Upper Holloway, N., May 26th, 1880.

SIR,—Mrs. S—, of —, who engaged me some time ago to attend her in her confinement, writes me this morning, asking whether I will release her from her engagement, *because you were good enough to call upon her yesterday, and make her an offer of your services.*

I have refused to release her, as I do not consider her reason for wishing to break our arrangement a valid one, unless on the condition of paying my fee—viz., £2 2s. If under the circumstances you are disposed to hand me that amount, you are at perfect liberty to do the necessary work.

I am, Sir, yours faithfully,

JAS. DAVISON.

Dr. Sheehy.

[COPY.]

4, Claremont-square, N., May 26th, 1880.

DEAR SIR,—I have received your letter concerning Mrs. S—. The facts you do not appear to quite understand.

Mrs. S— has been a patient of mine for many years, and in all her confinements I have attended her. This winter my health has been much affected, so that Mrs. S— believed that I should not be able to attend her as before.

I called on Mrs. S— yesterday, as I promised some time ago, not knowing Mrs. S—'s condition, and not knowing that she had spoken to any medical man about herself. Mrs. S—, on finding that I was able to attend her as before, naturally wished that I should do so.

I am, yours truly,

W. H. SHEEHY.

Dr. Davison.

[COPY.]

May 26th, 1880.

DEAR DR. SHEEHY,—I have written to Mr. Davison, and he does not seem willing to give me up. He does not think it fair, so we must let the arrangement remain. No doubt you will hear from him.

Trusting it will not make any difference in the future,

From yours very truly,

L. S—.

[COPY.]

8, Oxford-terrace, Upper Holloway, N., May 28th, 1880.

SIR,—I am in receipt of your letter of the 26th inst., in reply to mine respecting Mrs. S—. Pardon me, but your letter is most unsatisfactory to me. You are in error in supposing I did not know all the facts. I knew all you mention in your letter, and something more.

The fact of Mrs. S— having duly engaged me should have been in itself sufficient to have prevented you putting pressure on her to get out of her distinct engagement. In commercial life your conduct would be much reprobated, and in our profession I think such behaviour cannot be too severely condemned.

Your letter does not deal with my proposition to you, and I shall therefore assume that you are not so desirous of attending Mrs. S— that you will feel disposed to do so without fee.

Take my advice—viz., leave touting to tradesmen, and in doing so you will earn for yourself and your profession respect.

I am, Sir, yours faithfully,

JAS. DAVISON.

Dr. Sheehy.

[COPY.]

4, Claremont-square, N., June 3rd, 1880.

SIR,—My father attended Mrs. S— this afternoon for the seventh time. He forwards a cheque for two guineas, as demanded in your ungentlemanly and unprofessional letters. An acknowledgment of it he requests.

I am yours truly,

PATMORE SHEEHY.

Dr. J. Davison.

[COPY.]

8, Oxford-terrace, N., June 4th, 1880.

SIR,—I am in receipt of cheque for two guineas (Mrs. S—'s fee), for which I thank you. I quite expected the cad's cry of "ungentlemanly" and "unprofessional." Our mutual agreement in these points is remarkable, with this difference, that it never occurred to me to suspect your father of being a gentleman.

Mr. P. Sheehy.

I am, Sir, yours truly,

JAS. DAVISON.

Dr. Davison's Explanation of Correspondence between Dr. Davison and Dr. Sheehy.

Last February I received a message to call and see a Mrs. S—, who was desirous of engaging me to attend her in her confinement. I called in the course of the day, and Mrs. S— duly engaged me to attend her in June. Mrs. S— explained that she had been previously attended by Dr. Sheehy, but now wished to change her medical attendant, because she considered it too far to send to Pentonville for Mr. Sheehy, now that

she had moved her residence to Upper Holloway. Besides, she added she was sorry to say Dr. Sheehy's eyesight was very bad, and she was afraid to trust him. Having only recently come into this neighbourhood, she had also to change her nurse, and I took some pains to secure her a good one. So far all was satisfactory, and I confess I was rather surprised to receive a note by hand of a relative of Mrs. S— a few days before her confinement, asking whether I would release her from her engagement, because, as her note says, "Dr. Sheehy had called upon her, and offered her his services." The relative who brought the note stated that Dr. Sheehy's visit and offer had quite upset Mrs. S—. I at once declined to release her from her engagement, as I did not consider Dr. Sheehy's offer quite a correct proceeding, nor a valid reason why I should give up an engagement I was prepared to carry out. Mrs. S— the same day sent me a second note, which I here copy:—

"DEAR DOCTOR,—I should be very sorry to have any unpleasantness, so will let our arrangement remain. Hoping to see you soon."

I wrote Mr. Sheehy at once, telling him of my refusal to give up my engagement unless on payment of my fee. His reply was evasive, and I was informed by the nurse that it was his intention to attend the case, and simply ignore my engagement. I wrote him again in language no one could mistake, the reply to which was an insulting note from his son, telling me his father had attended Mrs. S—, and enclosing cheque for my fee. I retorted, and expressed the contempt I felt for any professional man who could so demean himself.

* * We publish the correspondence sent to us by Mr. Sheehy, with the consent of Dr. Davison, in letters which show us that he thinks he is right. We do so with some regret, feeling that neither party will think he has done his best in respect of the amenities either of letter-writing or of the profession, but from a sense of necessity, feeling the difficulty of placing the controversy more concisely, even if at all, before our readers, without also giving the correspondence. In truth, in most of these cases the correspondence is the controversy. About the abstract merits of such a case as this, ninety-nine men out of a hundred would not differ. They would concede the right of an old practitioner who had attended a lady with seven children, and was overtaken with a great physical calamity, to call on his patient and represent to her that he was still capable of attending her in her eighth confinement, if her wish seemed in that direction, and if an engagement with another practitioner, made in the belief that her old adviser was incapacitated, could be set aside. If ever one practitioner is entitled to the kind consideration of another, it is when he is overtaken by an illness which must ultimately disable him, but which has not yet quite done so. With the love of work surviving the loss of eyesight, and perhaps a son with good eyes to help, it would be hard to prohibit an old accoucheur from attending an old patient, or blame him for representing that he was able to do so, especially if he acted without knowing that other arrangements had been made. But, still, there are rights on the other side. Dr. Davison had been four months retained, and in this capacity had taken some trouble, and perhaps had come under some inconvenient restraint with respect to the obstetric engagement. He was fully and legally engaged, so much so that he might have claimed his fee had the patient had no further communication with him. We will go further, and say that Mr. Sheehy would have done better than he did, after receiving the letter of Mrs. S—, dated the 26th May, to have let the case remain in Dr. Davison's hands. But there is another party in this controversy—the patient,—and, as in most professional controversies, she has something to answer for. If only medical men would take each other's account direct, and not trust to the literal report of the patient, who often quite unintentionally errs, much less harm would be done. The patient here was evidently in a strait. She wished for her old doctor, and she also wished for a nearer one. Her action at the time of her need must be held to show which way her mind inclined. She sent for Mr. Sheehy, and this accords with Mr. Sheehy's important statement, "On finding that I was able to attend her as before, Mrs. S— naturally wished that I should do so." The patient, in her message to Dr. Davison, made too much of Mr. Sheehy's "offer," and too little of her own wish. But the wish of the patient and the whole circumstances of Mr. Sheehy being as they were, there should have been no difficulty in adjusting the matter with Dr. Davison. There are moments for the most generous judgment possible of our fellows, and one of these moments certainly occurs when he is overtaken with a great affliction. We now come to the correspondence, and we shall not dwell upon that. If our judgment be right, there is no excuse for the expressions used and the advice tendered by Dr. Davison in his letter of the 26th of May to his senior by many years, and which not unnaturally led to further expressions on both sides, which discredit the profession and deface the letters, and which we venture to say will be regretted in cooler and more benevolent moments.—ED. L.

THE Secretary of the Medico-Ethical Association of Manchester is thanked for the fifth edition of the Rules of the Association.

C. T. C.—It is sufficient.

D. Ingle.—The paper is marked for insertion.

COMPULSORY MEDICAL EXAMINATIONS.

THE *Athenæum* states that "the authorities of Guy's Hospital Medical School have resolved upon making an idle first year's student a rare thing, if the help of a compulsory and non-competitive examination is sufficient for that purpose. This examination has just been held for the first time, and students have had four elementary papers on the principal subjects of their first year's lectures. The progress of our great hospitals into fully organised Medical Colleges is thus proceeding without hindrance; but a conjoint examination for diplomas is as far off as ever."

Dens Sapientie.—It has been computed that there are 13,000 dentists in the United States.

Mr. H. J. Rutherford.—The error was inadvertent.

P. H. D.—Yes.

THE NAVAL MEDICAL SERVICE.

To the Editor of THE LANCET.

SIR,—The fleet-surgeons of the navy on the active list will read with regret the following official notice, as it deprives them of one of the coveted appointments due to them after years of expatriation in varied climates, and of confinement within ships—an appointment previously held by a naval surgeon on the retired list:—

"Admiralty, 22nd June.—The Lords Commissioners of the Admiralty have this day appointed John H. Aldridge, Esq., M.D., to be Visiting Surgeon at Southampton for the purposes of the Contagious Diseases Acts, 1866 to 1869, *vice* Acheson, deceased, and have nominated Dr. Simon Halford Hobley to act for Dr. Aldridge in the absence of that gentleman."—(*The Times*, 26th June, 1880.)

The junior members of the medical profession will be prompted to carefully examine, if it should ever be published, the report of the recent Admiralty Committee, presided over by Admiral Hoskins, C.B., for an explanation of the causes that have conspired to render the Naval Medical Service unpopular at the medical schools! If this report is deficient, or has ignored this important detail, the profession is in duty bound to ask that a Royal Commission may give a full and searching inquiry into the mismanagement of the Naval Medical Service that has brought it into its abject state. It is to be feared that the same spirit of intolerance still reigns and rules over naval surgeons as held sway in the first decade of the present century, when jealousy was so strikingly shown after the battle of Trafalgar.

It may be reasonably asked what have been the claims of the medical Directors-General of the Navy to their long terms of office? How has the Naval Medical Service been treated in comparison with the combatant branch of the navy and of the Army Medical Department since 1805? Why is it that the literary merits and labours of naval surgeons have been shelved in the non-publication of the *Blane Gold Medal* journals, the property of the nation, but withheld contrary to the intentions of its founder from public reading and open criticism?

Medical students can draw their own conclusions, and may form this as their final opinion, that the Government does persistently all that lies in its power to render the Naval Medical Service unattractive and inferior to that of the army.

With thanks for your valuable efforts,

I remain, Sir, yours truly,

July, 1880.

RODERICK RANDOM.

To the Editor of THE LANCET.

SIR,—As I take an interest in the Naval Medical Service, could you inform me what is the cause of the delay in issuing the Warrant for its improvement? I understand that the Committee appointed to inquire into its unsatisfactory state have long since finished their sittings. Is it expected that there will be seventy candidates for the Naval Medical Service at the next examination on August 9th (for such is the number of vacancies now), and that the medical schools will send forth men who will prefer a sea service, with far inferior pay, compulsory loss of time on half-pay, and a lower retirement, to a land service? Is it expected that the hope of good things coming may induce some to offer themselves even independent of those who fail to enter the Medical Department of the Army?

A dilatoriness in issuing the Warrant, and letting the profession know what are its provisions, is hardly the way to induce good men to enter the service.

I remain, Sir, yours truly,

July, 1880.

ENQUIRER.

Senega.—Niemeyer's Medicine (2 vols.); Flint's Physiology and Henman's Physiology; Garrod's *Materia Medica*; Ringer's Therapeutics; Sibson's Medical Anatomy; Bryant's Surgery; Klein's Handbook for the Physiological Laboratory; Squire's Pharmacopoeia.

Enquirer.—Cassell's.

"NEW INSTRUMENT FOR CLEFT-PALATE."

To the Editor of THE LANCET.

SIR,—Seeing an article in THE LANCET of July 24th on an instrument brought out by Dr. Edward Woakes, we beg to contradict the following statement:—"The principle of the shuttle now introduced for the first time as a surgical appliance"; having made a somewhat similar instrument, with shuttle action, for a Dr. Furlong, of Enniscorthy, Ireland, more than three years ago. We would not have taken any notice of the matter, but think we would not be doing justice to Dr. Furlong (the inventor of the shuttle action cleft-palate instrument) by overlooking the statement.

Yours truly,

Dublin, July 26th, 1880.

O'NEILL, SON, AND THOMPSON.

TREATMENT OF OPIUM-EATING.

SURGEON T. MAYNE, Narsingpur, in a communication to the *Indian Medical Gazette*, reiterates his belief that the best method of treating opium-eating is to stop the supply at once. He refers to sixteen cases which had been under his care, one of which was a patient exceedingly weak and emaciated, and the results tend to confirm Mr. Mayne in his opinion. The condition of the patient, he states, begins to improve perceptibly about a fortnight after the withdrawal of the opium.

AN ANCIENT MEDICAL CHARITY.

To the Editor of THE LANCET.

SIR,—On the boundary line of Rochester and Chatham is situated the Chapel of St. Bartholomew, together with the ruins of the Hospital for Lepers, which was attached to it. These formed one institution, founded by Gundulph in 1078. The Lepers' home is replaced by our excellent General Hospital, and we are endeavouring to restore the venerable Norman Chapel, now over 800 years old, the sole remaining link which binds us to what is, I believe, the oldest medical charity in England. Plans were furnished by the late Sir Gilbert Scott, who speaks of the Chapel as a "precious archaeological and historical relic, the preservation of which is of the utmost importance." The sum of £600 is still required to complete this good work. Will you allow me to appeal to your readers for help on medical, ecclesiastical, archaeological, and architectural grounds? I will gladly furnish the fullest particulars to anyone who may be disposed to assist, and I hope that some of those whom God has prospered in their profession may be willing to give of their substance for the preservation of His House.

I remain, Sir, yours truly,

JOHN BAILEY,

Chaplain of the Chapel and Hospital of St. Bartholomew, Rochester.

August, 1880.

Dr. F. Fourniss-Brice.—We agree with the view taken by the surgeon of the ship. Medical men travelling as passengers on board ships have no right to interfere, and are committing a flagrant breach of professional etiquette in interfering, with the duly qualified and appointed medical officer in charge.

Army Doctor.—1. The Secretary of State for War.—2. £350 per annum.

R. B.—We can only say that the gentleman named is a registered practitioner.

THE LATE DR. JOHN MACDONALD.

To the Editor of THE LANCET.

SIR,—May I be permitted to say that your article on the late Dr. John Macdonald has given universal satisfaction in Buenos Ayres; but, in doing justice to our lamented friend's merits, you have, on one point, done an unconscious wrong to others of the profession. I refer to the following paragraph:—"Three medical men only remained—one only, Dr. Macdonald, remained till all was over—in a plague-stricken city of some 150,000 inhabitants."

I know that medical men of other nationalities braved the whole plague, though their names I cannot for the moment call to mind; but, from my own circle of acquaintance, I can supply those of at any rate two more Englishmen, to whose devotion during the pestilence you will not, I trust, grudge a similar tribute of respect. They were Dr. Valentine Conyngham (since dead) and Dr. Charles Bailey Greenfield.

I enclose my card, and beg to remain, Sir, yours obediently,

Buenos Ayres, April 20th, 1880.

J. G. X.

BLINDNESS IN CONNEXION WITH PREGNANCY.

To the Editor of THE LANCET.

SIR,—Seeing in your issue of June 12th an account of a case of Blindness in connexion with Pregnancy, by Dr. Thompson, of Leamington, the following may prove interesting to many of your readers:—

On Feb. 28th, 1880, I was summoned to attend Mrs. C—, who was in the last month of pregnancy. At 11 A.M. she was seized with severe headache and dimness of sight. On my arrival at 2 P.M., I found her totally blind, with widely dilated pupils and unconscious. At 4 P.M. she had a severe convulsion, followed by four more in rapid succession. At 5.30 P.M., the os uteri being patulous and dilatable, I delivered her by version of a fully-developed, though small, female child. Convulsions, though less severe, continued until 7 A.M. the following morning. On my visit at 8 A.M. she was still unconscious and perfectly blind. On March 1st she had regained consciousness and partial vision, and had had no recurrence of convulsions. From this date she gradually recovered her sight, and was at the end of a fortnight downstairs, perfectly well.

I am, Sir, yours faithfully,

J. BEDFORD KERSWILL, M.R.C.P. Ed.

St. Germans, Cornwall, July 6th, 1880.

"LEGALISED QUACKERY AND LOW CHARGES."

To the Editor of THE LANCET.

SIR,—As a comment on your article headed as above, I would ask you to compare the payments made by the, so to say, legalised dispensaries to their medical men. For example, you published some time back the sums received yearly by the medical officers to the Reading Dispensary. If you calculate the number of visits paid at home and the patients seen at the dispensary, you will find that, allowing sixpence for each visit at their homes, it will leave threepence halfpenny for each prescription and examination of the patients attending at the dispensary; yet the medical men who submit to such payments are praised, while their poorer brethren are chastised.

I am, Sir, yours &c.,

August, 1880.

H. F. S.

Ignoramus.—We presume the husband could exert legal pressure in such circumstances in various ways. The question is legal rather than medical. We should be glad to hear further of the case.

THE Editor of the *New Zealand Herald* is thanked for his just vindication of the profession.

F.R.C.S. 80.—We do not reply to questions unaccompanied with the name of the inquirer.

Hinc Sanitas has omitted to send his name.

PERAMBULATORS.

To the Editor of THE LANCET.

SIR,—Mr. Punch is fond of pointing out the dangers to which perambulators subject the limbs of the general public. I would ask you to call attention to the perils to which these machines in their present make expose the tender offspring of the public.

My attention has been drawn to this subject by the difficulty I have had in finding suitable machines for my patients and friends, and by the fact that when I wanted a coach-perambulator for one of my children suffering from spinal caries, I could not buy it, and had to have one made. There are in ordinary perambulators three great defects, the lesser of which I consider to be, insufficient support on each side of the child, so that he falls into a bad position if he is weak or is allowed to go to sleep. Next to this is the attachment of the handle to the body, the nurse's hold interfering with the swing of the carriage. But the main fault is that the springs are much too rigid; anyone may find out, by pressing heavily on the seat, that the machine is made to bear weight, and not to be elastic, and this fault is rendered more important by the smallness of the wheels; for a very slight knowledge of mathematics will show that the jerk a small wheel receives in passing over a stone or a roughness in a pavement is far greater than would be given to a larger wheel. The best kind of spring for perambulators is a helix of two or three turns. I first saw such on a rather costly little carriage at Coventry, and have since tried in vain to obtain them; but I believe that if perambulators were made with this valuable addition, they would not cost many shillings more than they do without it. Bicycle wheels with rubber tyres are an improvement, but, involving an extra outlay of a pound, are not likely to be very commonly used. I have found that one of the usual infant bone-shakers may be turned into an easy carriage by having a loose seat fitted, resting on two spiral couch-springs, its back being supported by shorter ones.

That this matter is really one of preventive medicine, and deserves the attention of the profession, is the humble opinion of,

Yours very truly,

C. P. COOMBS, M.D.

Castle Cary, July, 1880.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. B. Yeo; Mr. S. Gamgee, Birmingham; Mr. Sydney Jones, London; Mr. Baker, Derby; Dr. P. Smith, Shepton Mallet; Dr. R. Norris, Birmingham; Mr. Worthington, Lowestoft; Mr. Morris, Swansea; Mr. Armstrong, Newton Abbot; Mr. T. Cooke; Mr. Adams, Liverpool; Dr. S. White, Bradford; Dr. Fourniss-Brice, Oxton; Dr. Alfred Hill, Birmingham; Dr. McCall Anderson, Glasgow; Mr. Newnham; Dr. G. H. Boyland, Baltimore; Dr. Biggart, West Hartlepool; Mr. H. F. Baker, London; Mr. Baber, Brighton; Dr. H. Bennett, London; Dr. Norman Kerr, London; Mr. Constable; Mr. Dunn; Mr. Goyer, Newcastle-on-Tyne; Dr. Nixon, Swineford; Dr. Skinner; Dr. Maclean, Cairo; Mr. Downes; Messrs. O'Neill, Son, and Thompson; Dr. Charteris; Dr. Macpherson, Glasgow; Dr. Heywood Smith; Dr. Finlay, London; Dr. Rayner; Surgeon-General C. A. Gordon; Dr. Sheen, Cardiff; Mr. B. Jones; Dr. Monckton; Mr. Lloyd; Dr. Logie; Mr. Phillips; Mr. Cornish, Manchester; Mr. Eastwood, Blackburn; Messrs. Byles and Son, Bradford; Dr. Buchanan, Glasgow; Mr. Forester, Deeping-gate; Mr. Powell, Exham-on-Tyne; Mr. Ross, Elmira; Mr. Browne, Liverpool; Dr. MacLagan, London; Mr. G. Smiles, London; Mr. Fendick, London; Mr. Bailey, London; Dr. F. E. Clarke; Dr. Livingstone, Stanhope; Messrs. Taylor Brothers; Dr. W. H. Barlow; Dr. Dolan; Mr. Thicke; S. U. M.; P. H. D.; Ignoramus; Senega; Philo-Lancet; Eucalyptus; Army Doctor; M.R.C.S.; L.R.C.P., Bradford; Enquirer; Pericula; Sardinia; &c. &c.

LETTERS, each with enclosure, are also acknowledged from—Mr. T. Smith; Mr. Baldwin, Warwick; Dr. Bell, Preston; Mr. Moulding, Liverpool; Mr. Glen, Southbank; Mr. Crinan, Burnley; Mr. Gamson, St. Clears; Mr. Folkard, Wymondham; Mr. Hughes, Sudbury; Mr. Pritchard, Brighton; Mr. White, Newport; Mr. Henchey, Quebec; Mr. George, Liverpool; Mr. Godfrey, Northampton; Mr. Morris, Llandrindod; Mr. Callant, Bridgnorth; Messrs. Clark and Co., York; Mr. Roberts; Dr. Duke; Mr. Milner; Mr. Hutchinson, Newport; Mr. Grenfield; Messrs. Norton and Co.; Mr. Miller; Dr. Hall; Mr. C. Wood; Mr. Greenwood; Mr. Thomas; Mr. Collings; Mr. Walford, Dudley; Dr. Sandford, Hereford; Dr. Pinder, Bow; Messrs. A. and C. Black, Edinburgh; Dr. Squire, London; Mr. Shirdiff, Kingston-on-Thames; Mr. Legge, Aberdeen; Mr. Brett, Leicester; Mr. Wilson, Eastbourne; Mr. Burnie, Nottingham; Mr. Burn, Weston-super-Mare; Z. T. P.; Victoria Hospital; N. S. T., Cambridge; Genuine; H. F., Chobham; Medicus, Sheffield; M. G. W.; A. P., Pall-mall; G. A. S., Worcester; X. Y. Z.; L. M., Great Ayton; M. C., Watton; Surgeon, Sheffield; T. M. R., Lintz Green; M. D., Llanelly; Medicus, Polperro; A. Z., Lowestoft; Surgeon, N.; J. Clifton; G. H. E., Sheffield; Surgeon, Stockport; North London; Medicus, Great Grimsby; O. R.; &c.

Students' Journal, Wharfedale and Airedale Observer, Chemists' Journal, Calcutta Medical News, Pharmaceutical Journal, Derbyshire Advertiser, Indian Medical Gazette, St. Pancras Guardian, Bradford Observer, Weekly Herald, Deutsche Medicinal-Zeitung, Hampshire Advertiser, La Independencia Medica, Hatifaz Courier, &c., have been received.

Medical Diary for the ensuing Week.

Monday, Aug. 9.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS. — Operations, 10½ A.M. each day, and at the same hour.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL. — Operations, 1½ P.M. each day, and at the same hour.

METROPOLITAN FREE HOSPITAL. — Operations, 2 P.M.

ROYAL ORTHOPEDIC HOSPITAL. — Operations, 2 P.M.

ST. MARK'S HOSPITAL. — Operations, 2 P.M.; on Tuesday, 9 A.M.

Tuesday, Aug. 10.

GUY'S HOSPITAL. — Operations, 1½ P.M., and on Friday at the same hour.

WESTMINSTER HOSPITAL. — Operations, 2 P.M.

WEST LONDON HOSPITAL. — Operations, 3 P.M.

Wednesday, Aug. 11.

NATIONAL ORTHOPEDIC HOSPITAL. — Operations, 10 A.M.

MIDDLESEX HOSPITAL. — Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL. — Operations, 1½ P.M., and on Saturday at the same hour.

ST. THOMAS'S HOSPITAL. — Operations, 1½ P.M., and on Saturday at the same hour.

ST. MARY'S HOSPITAL. — Operations, 1½ P.M.

KING'S COLLEGE HOSPITAL. — Operations, 2 P.M., and on Saturday at 1 P.M.

LONDON HOSPITAL. — Operations, 2 P.M., and on Thursday and Saturday at the same hour.

GREAT NORTHERN HOSPITAL. — Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL. — Operations, 2 P.M., and on Saturday at the same hour.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN. — Operations, 2½ P.M.

Thursday, Aug. 12.

ST. GEORGE'S HOSPITAL. — Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL. — 1½ P.M. Surgical Consultations.

CHARING-CROSS HOSPITAL. — Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL. — Operations, 2 P.M., and on Friday at the same hour.

HOSPITAL FOR WOMEN, SOHO-SQUARE. — Operations, 2 P.M.

Friday, Aug. 13.

ST. GEORGE'S HOSPITAL. — Ophthalmic Operations, 1½ P.M.

ST. THOMAS'S HOSPITAL. — Ophthalmic Operations, 2 P.M.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL. — Operations, 2 P.M.

Saturday, July 14.

ROYAL FREE HOSPITAL. — Operations, 2 P.M.

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Tables of Contents, with the Index of Advertisements, for each Number can be had on application to the Publisher.

Agent for the Advertising Department in France—J. ASTIER, 67, Rue Caumartin, Paris.

Presidential Address,

*Delivered at the Meeting of the British Medical Association,
at Cambridge, on August 10th, 1880.*

By G. M. HUMPHRY, M.D., F.R.C.S.,
SURGEON TO ADDENBROOKE'S HOSPITAL, CAMBRIDGE.

PROFESSOR HUMPHRY welcomed the Association to Cambridge, and bade the members realise that not only the learned living, but the many illustrious dead who had made every spot in that town sacred also, bade them welcome. As they recalled the names of many great men who had, by their work, adorned their profession and that University, the question, Why there was now so little connexion between the old universities and the medical profession? would certainly arise in their minds, and they would be asking, Why the study of medicine was almost entirely disregarded at the great seats of learning?

The question recurs, What has prevented its being so? Such barrenness in a great faculty was certainly never intended—was not contemplated—by our founders and first legislators. In the earliest college statutes, permission or direction is given to some of the members to pursue the study of medicine. In the scheme for the university, which was in the main taken from the University of Paris, the faculty of medicine was placed on a par with those of theology and law, and the provisions for teaching and graduating in the three faculties were alike. In the professorial foundations by Henry VIII., by which the professorial system, as distinguished from the preceding method of teaching by regents, bachelors, and doctors, was inaugurated, medicine shared in common with the other faculties. The Regius Professorship of Physic received at that time an endowment and a status similar to those of theology and law; and in the additions to the professoriate which were subsequently made from time to time, the medical sciences have had their fair share. Thus, instead of any idea of stifling them, we recognise a reasonable provision for their nurture; and among the hopeful visions of the early benefactors of Cambridge must have been the scion of medicine, which they grafted and tended, flourishing as a goodly tree, drawing sap from the best sources of science, spreading forth its branches, and bearing rich fruit to England.

How have these intentions been foiled? Whence the mildew which blighted the plant, and deprived so many ages of its produce?

To these great and interesting questions, as to many others on subjects no less largely affecting the welfare and destiny of man, the answers are not direct and easy, and are to be found, if at all, only by a careful study of the history of the past.

In the early part of the thirteenth century, when the gathering of pupils and teachers here seems first to have come under the legal direction of the sovereign, when students were arriving from Paris, and Cambridge was beginning to organise itself upon the model of that great university, the study of medicine, which meant little more than a culling of the views of Aristotle and Galen, obscured and misrepresented in their transmission through Arabian translations, was as much confined to Salerno¹ as law was to Bologna, and theology to Paris. Learning, though reviving from the depression which almost amounted to extinction, was at a low ebb, especially on the north of the Alps, and was chiefly in the hands of the clergy, who thought secular knowledge to be unworthy of the attention of men whose minds should be engrossed with the great subject of the, as they imagined then impending, dissolution of the universe; and natural science, where it had any existence, was still poisoned by the follies and mysteries of alchemy, which had not yet given way before the genius of Roger Bacon. This country which, five centuries earlier, before the desolating inroad of the Danes, had taken the lead in Europe, and had sent from its schools of York and

Canterbury men who, under the far-reaching wisdom of Charlemagne, drew the first outlines of the French and German universities, was now in the background—at any rate, it could boast of no superiority. Grammar—that is, Latin, and arithmetic and the logic of Aristotle, as handed down by the Arabians, and expounded by Thomas Aquinas and Duns Scotus, formed and remained for centuries the basis of education in arts. Astronomy and mathematics were but little studied. Some passed on to the faculties of theology and canon law; but very few, not more than one or two in a year, were attracted by that of medicine. Those who make any progress in it were compelled to resort to foreign universities, as did Caius and Harvey to Padua and Bologna, in which latter place Vesalius, after the long and almost unbroken interval² which had elapsed from the time of Galen, was venturing to dissect the human body, and was followed by Eustachius and Fallopius. Caius, Harvey, and others returned to England; but none of them came back to Cambridge to found a school of medicine here, or to add the lustre of their names, and the vigour of their intellect to such school as there was here, for there must have been some sort of medical teaching in the university. There were then, as there ever have been, greater pecuniary and courtly attractions elsewhere. They proceeded, on their return from abroad, to practise their profession, or prosecute their studies, in various parts of England. Caius, it is true, after practising in Shrewsbury and Norwich, was not unmindful of his college, which he refounded and governed till shortly before his death in 1573, though apparently he still resided chiefly in London. In his foundation he was not forgetful of the interests of medicine; and he showed his sense of the importance of anatomy, acquired doubtless during his residence with Vesalius at Padua, by obtaining, in the sixth year of Queen Elizabeth, a licence that his college might, for ever, yearly take the bodies of two malefactors and dissect them without the control of any person. Whether Harvey, when at Caius, may have derived from this any stimulus to his researches, or, indeed, whether the privilege was ever acted on, I cannot tell.³ But that there was no great accession to medical study and teaching in Cambridge we may infer from the fact that Glisson, who held the Regius Professorship of Physic for forty years, from 1637 to 1677, was a resident in London.

Ere this events had occurred which seriously influenced the relations of London, Oxford, and Cambridge to the study and science of medicine. The highly learned Linacre, the great promoter, indeed renovator of learning, more particularly of Greek, in this country, beholding with concern that the practice of medicine was chiefly engrossed by illiterate monks and empirics, endeavoured to strike at the root of this evil by obtaining from Henry VIII., in 1518, letters patent for the foundation of his College of Physicians, with the privilege of licensing practitioners throughout the kingdom. The graduates of Oxford and Cambridge were exempted, forasmuch as, by virtue of their degrees, they were independent of the College, except within its precincts.⁴ Linacre lived to carry out and superintend his plan. Lectures were delivered at the College, and London thus became a centre of teaching, as well as of licensing the practitioners of medicine and surgery; and a new and formidable rival to Oxford and Cambridge was raised in the growing capital of the kingdom. But Linacre, who had been a student and doctor of Oxford, and an incorporated graduate of Cambridge, was not unmindful of the two universities. He showed his anxiety for their welfare, and his desire to promote the study of medicine in them, by bequests for the foundation of lectureships. Unfortunately, owing to the mismanagement of his trustees, these intentions were never carried out. The proceeds of his property, assigned for the

² Mondini appears to have dissected two females in 1315, at Bologna, and wrote a work on anatomy, which for three centuries was the textbook in the Italian schools.

³ Caius lectured on anatomy at the College of Surgeons in London for twenty years. He appears to have introduced the study of practical human anatomy into England. If his intentions with regard to dissection in his College in Cambridge were really carried out, it is probable that human dissection in this country was first practised at that College; and Harvey may have there acquired an insight into the structure of the human body which led to the formation of his views respecting the circulation of the blood.

⁴ Shortly before this time it had, been enacted (not improbably through the advice of Linacre) by a statute—which seems to have been the earliest statute in this country for the regulation of medicine—that no person should exercise as a physician or surgeon unless examined and approved by the bishop of the diocese in which he lived, who called to his assistance expert persons in the faculty.

¹ Salerno probably owed its early distinction as a university to its lying on the high road of the Crusaders. Robert of Normandy stopped here, on his way home, to be cured of a wound.

purpose, were, in great measure, lost, and the residue was diverted by private influence, at Oxford, to Merton College, and, at Cambridge, to St. John's College. The result upon medicine of what Linacre effected in his life was perhaps greater than that accomplished by any other man in this country, and it might have been far greater had his wise and beneficent intentions been fulfilled. What he left to others to perform, however, missed its mark, and his desire to place in the university scale a gift that might balance the effect of his munificence in London was woefully frustrated.

The metropolitan influence grew fast. The great centre attracted the practitioners, the teachers, and the students of medicine; and to the universities was left little beyond the function of giving a preliminary training to the few who could avail themselves of it. It must be remembered that in no other country are there ancient and powerful competing corporations similar to our Colleges of Physicians and Surgeons, and having power to grant licences to practise. In other countries the universities are the only avenues, each in its particular division, to medicine, as well as to theology and law. This very important difference, which is too often overlooked, must ever be borne in mind in making comparisons between the English and the other European universities. Add to this the small population of the districts in which Oxford and Cambridge are situated, together with the proximity of an overshadowing metropolis, and the difficulties attendant on the development of medical schools in the universities are sufficiently apparent.

To proceed, however, with my brief narrative. During the seventeenth and eighteenth centuries, the influence of Aristotle gave way to that of Bacon and Newton, and the system of the university verged more and more to the exclusive pursuit of mathematics and natural philosophy; the method of written examination, which had previously been subordinated to the scholastic exercises, became organised, the valuable fellowships and scholarships were given in accordance with the result of them, the spirit of emulation was excited, and the preparation for the examinations, which had been originally instituted in Paris for the purpose of testing the ability of those who sought to teach, became the too absorbing pursuit; the teaching of the professors, as well, for the most part, as the subjects taught by them, was thrown into the shade, and the students were brought almost entirely under the influence of the college authorities and the private tutors. Classics, at length, contrived to force a recognition. The rich prizes given exclusively for these two school subjects extended the study of them into too late a period of life, attached an undue importance to them, dwarfed all other subjects, both at the schools and at the universities, deterred those students from coming to Cambridge who had not a taste or capacity for them, or who had not the sufficient means of prolonging their school education, and, to say nothing of the religious restrictions, had well nigh divested the university of the character of a national institution, and of its claim to public sympathy and regard.

Happily, the reform from within was at hand; and, thanks to the liberal thoughts and wise discernment of the leading minds of the last generation—more particularly of Whewell and Sedgwick, of Peacock and Henslow—the tide was at length turned. Slowly and somewhat tremblingly the advancing wave of broader educational view came on, and showed its first influence, in 1851, in the foundation of the natural and moral sciences triposes. These were followed in succession by the theological, the law, the historical, the Semitic, and the Indian languages triposes. The subjects of these triposes are growing in estimation and in favour; the provision for teaching them is, year by year, more carefully and liberally made; and rewards for the successful study of them are more willingly granted.

Why not a medical tripos also? I may suppose you inquiring. I can only answer by expressing the hope that, when you next come to Cambridge, you may be relieved from the necessity of asking the question.

At the same time that a wider range was given to the studies of the place, the rigid and inelastic statutes of Elizabeth, which had for three centuries held the university with an iron grip, have been relaxed under the heat of public opinion—that sterling friend to Cambridge—and have given way to a freer constitutional code, which has afforded scope to, and thrown into strong relief, the naturally liberal spirit of the place.

As a result, the university has been opened to all comers

from all parts of the world, of every rank and of every religious persuasion. All are on an equality. The College stamp is no longer necessary; for the non-collegiate student stands on the same level with the collegiate. He enjoys the advantage of not being distracted by the anxiety for college rewards, and he can regulate his expenses by the measure of his purse. The requisite tests of general education may now, and should, be passed before the student comes up to Cambridge, or in his first term of residence, so that the whole of the university period may be devoted to those branches of medicine or natural science which are selected. Time is thus economised, and the well-grounded student may pass into the profession through Cambridge almost as quickly and economically as by any other route. It can be no longer urged that the middle classes are excluded from Cambridge, or discouraged from coming; or that the medical student cannot reasonably look forward to obtain a degree. All may come to the waters and drink, not without money, but without any undue cost, not without price, but with the price of that labour and perseverance which will bring their own sure reward.

That a great future, most potent for good, in connexion with medicine, is open to Cambridge I cannot doubt. The opportunity is before her—not, I grant, to make amends for past shortcomings. That can never be done. The past can no more be made amends for than it can be recalled. The debt of lost time and occasion cannot be repaid, except in so far as regret for the omissions of the past may stimulate to better effort in the future. The opportunity is open, not simply to influence the few, but to leave the large masses of the profession. The opportunity lies in a progressive advance and expansion of the teaching, under which I include examining; for examining should ever be regarded as the handmaid and most important adjunct of teaching. In proportion as Cambridge avails herself of this opportunity, and in that proportion only, will her influence upon medicine be great and good. Her social advantages are much and rightly valued; her literary renown is high; her academic prestige is great; her buildings are inspiring; her history is long and noble; but it is not upon these, but upon the high character of her teaching, that her future must stand. No other foundations will carry the temple to which coming generations are to be attracted. This ought to be so, and it will be so. The ideal, the æsthetic, the poetic, the conventional "gentlemanly" may, and should, give their tone and refinement and play their parts in the formation and elevation of character. The *literæ humaniores* are the proper, the requisite, complement to the *ars et scientia medicinæ*; but the real basis of university success in medicine, as indeed in the other faculties, must be the soundness, and thoroughness, and high standard of its teaching. These will be the measure of the dimensions, and will give solidity to the building; those may impart tone and grace to its structure. Cambridge must give that kind of teaching which will engender broader and clearer appreciation of principles, which will render the study of medicine a medium for the cultivation of intellect, as well as a means of passing into a profession and earning a livelihood. It must show the scientific to be the natural and necessary adjunct to the practical, and must weave the two together into the woof of a high educational system. In no other branch of knowledge are the two so naturally and so entirely conjoined; in no other is there so much that is calculated to give strength and balance to the thinking and the observing faculties; none in which mental and bodily effort is more required and more telling. There is no one, therefore, which is more worthy of university culture, or which would more truly profit by it. May we not also say that, of all the physical sciences, medicine is the most difficult, the most important, the highest? What problems can be so hard of solution as those which relate to the aberrations of the most exquisite of organisms—the organism in which the properties of matter reach their maximum of variety, of complexity, of exquisiteness of combination and action—the organism in which they have their outcome in an association with the marvellous attributes of responsibility and intellectual process. These problems of healthy and morbid action transcend all known methods of calculation; and, as is too commonly found under such circumstances, are liable to fall under the range of demonology and quackery—at any rate, to come within the scope of that mysterious and unfathomable *ignotum* which transcends the *magnificum*. The very difficulty of the problems causes them to be ignored or overlooked.

Men scarcely venture, or are able, even from a distance, to contemplate them, and therefore have a tendency to leap over them on to conclusions, without calculating the data which brought them there. That these hard problems may, and will one day, be brought within the domain of exact science, and be seen to be regulated by clearly-defined law, we may well believe; and we may also believe that, to effect this, in many of the instances, will, through long ages, afford unceasing labour to the investigator, and test the highest powers of the thinker. Indeed, the little way we have been able to make along the path of true medical science in the centuries during which we have laboured at it is scarcely enough even to open to us the difficulties that lie along it; and we may well believe that many of the enigmas of the science, of those more especially which have relation to psychological abnormalities, must await their solution till the far off, possibly the latest, cycles of human thought and work.

The importance of the result in this, as in so many other things, is proportionate to the difficulty. When we contemplate the effect upon the physical and moral condition of the people which is likely to result from a clearer knowledge of physiology and pathology; of the causes, nature, and prevention of disease; of the influences of hereditary transmission of peculiarities of temperament; of the various circumstances attendant upon progressive civilisation and social changes; of atmospheric, magnetic, and climatic variations upon those nice balances of function, and those delicate modifications of them which constitute disease—when we contemplate, I say, the vast importance of all this in its bearing upon the physical, mental, and moral status of man, and when we remember that it is the special object and duty of medical science to investigate and elucidate all this, and to formulate principles and rules for our guidance as individuals and as legislators, we find ourselves ready to assent to the striking statement of Descartes, that all great movements in the world of thought, of philosophy, of morals, and of government, are to come out of medicine.

And is such a subject, so fitted to evoke and invigorate the mental powers, and upon the successful prosecution of which the future destiny and welfare of our nation and of our race so much depend, not to receive its fair recognition in this great seat of learning? Is Cambridge to stand aside for the future, as she has too much done in the past, and keep aloof from the task of generating and wielding this potent force? Is this important member of the body politic of the university to be suffered to go un nourished and untended, to the great detriment of the whole? My own experience tells me that such is by no means now, whatever it may have been, the feeling or desire of the members of the university. Certainly it cannot be the feeling or desire of the members of the British Medical Association. Your presence here is the expression of your sentiment, and will, I am sure, give the impulse you desire. You come, not as ordinary careless visitors, but as serious responsible men, who, for your brethren and children's sake, your profession's sake, and your country's sake, have a deep stake in this place. As such you are received. You come as representatives of the medical profession, as members—that is, of the great brotherhood of learning who ought to, and who must, exercise an influence upon all learning; as such you are hailed, and esteemed, and looked up to by the university.

It is in the preliminary subjects of medical study, those which form the subjects of the earlier medical examinations, in addition to the broad ground of general education, that Cambridge will find her most appropriate sphere. The feeling is growing that these subjects would, for many reasons, be best taught apart from the great centres of clinical instruction; and it would be an enormous benefit to the cause of medical education to secure a thoroughly good teaching in these subjects upon the basis of sound general education. This, I am sure, lies at the root of the improvement we are all desirous to effect in our profession; and it is in this work more especially that Cambridge may and ought to play an important and conspicuous part in the future.

In evidence of this, I may refer to the buildings—the New Museums—which will be occupied by you during the meeting, and in which a suspension of our ordinary teaching work is necessitated for the accommodation and carrying on of your Sections. And here I would observe, you must not suppose that “vacation” in Cambridge implies cessation of work. On the contrary, the practical classes are, for the

most part, continued during a considerable period of the vacation, and some of the best work of this kind is then carried on; because, the regular courses of lectures being discontinued, and the lecture-rooms yielding to the laboratories and the hospital, the student can devote his attention more uninterruptedly to them. This week's holiday is in compliment to, rather is enforced by, your presence. I make that remark because it is right you should know that the vacation is not now, whatever it may have been in times past, a vacant period in Cambridge; and because, unless you bear in mind that this week's interruption of medical study is an exceptional condition for which you are responsible, you would carry away a wrong impression of our vacation life. The erection of the buildings to which I have referred, with the laboratories, lecture-rooms, and dissecting-rooms, for experimental physics, botany, mineralogy, mechanism, optics, zoology, and comparative anatomy, and physiology, and the provision of a staff of professors and demonstrators, and the better provision for chemistry and human anatomy, are an evidence of the impulse which the teaching of these sciences has lately received in the university, and are the forerunners of further building upon the same plot, by which it is hoped that, ere long, geology will find a suitable dwelling, worthy of the name, and in honour of the memory of Sedgwick, and that a much-needed expansion of the chemical and medical schools will be effected. I speak of a much-needed expansion of the medical school—and those of you who are anxious to inform yourselves respecting this will have the opportunity of learning for yourselves that, though physiology is thoroughly equipped—as thoroughly as in any European school, and though the means of teaching and studying chemistry and anatomy have been augmented to meet the requirements of growing classes of students, yet in both of these a further improvement might with advantage be made. A well endowed professorship of pathology is about to be instituted, and a suitable pathological laboratory must be added. A fully complete curriculum Cambridge does not profess; but a sound scientific and practical teaching in the first two stages of medical education—in physics and chemistry; in anatomy and physiology, vegetable, comparative, and human—and a careful clinical training at the hospital, associated with pathology and therapeutics, are quite within our scope; and, I trust, will continue to be carried on with yearly increasing efficiency to a yearly increasing number of students.

ABSTRACT

OF THE

Address in Medicine,

*Delivered at the Meeting of the British Medical Association
on Aug. 11th, 1880,*

BY

JOHN BUCKLEY BRADBURY, M.D., F.R.C.P.,

PHYSICIAN TO ADDENBROOKE'S HOSPITAL, CAMBRIDGE; LINACRE LECTURER IN PHYSIC; MEDICAL LECTURER IN GONVILLE AND CAIUS COLLEGE; AND ASSESSOR TO THE REGIUS PROFESSOR OF PHYSIC IN THE UNIVERSITY OF CAMBRIDGE.

MODERN SCIENTIFIC MEDICINE.

In reviewing the progress in the science of medicine during the last ten years, every one must be struck with the influence which discoveries in physics and biology (especially physiology) have had upon it; and, in looking forward, it is impossible not to feel that further advances will largely depend upon discoveries in the physical and biological sciences—sciences which, I am proud to say, this university has of late done much to promote; and in which, by means of her physical, chemical, and biological laboratories, she endeavours thoroughly to train her medical students, as the only sure basis upon which their subsequent more purely medical studies can be built. The future progress of medicine depends, in no small measure, upon students thus scientifically educated and trained to exact methods of investigation. Physics and physiology are advancing the healing art each day, step by step, more nearly to the position of an accurate science.

It will be my endeavour, then, in this address, to show that medicine is something more than a practical art; and that the statement of the late Dr. Whewell, that "we have even yet no science of medicine," in the sense in which he used the term science—namely, "a collection of general truths inferred from facts by successive discoverers;" whatever truth there might have been in it when he wrote is becoming less and less applicable in the present day.

We can hardly estimate how much modern medicine owes to physics, unless we reflect how helpless the physician in the present day would be in the study of morbid processes and their results, and in the diagnosis and treatment of disease, without such instruments as the microscope, the thermometer, the ophthalmoscope, the laryngoscope, the aspirator, and other instruments in daily use. In the hands of skilled investigators these instruments of precision have worked changes in the diagnosis, interpretation, and treatment of disease of which the physician and surgeon of an older generation could never have dreamt.

I do not propose to place before you all the discoveries made by the aid of these instruments during the period alluded to. I shall content myself by referring to those only which appear to be of primary importance in marking the progress of modern scientific medicine.

MICROSCOPE.—By the aid of the microscope an advance has been made in the exact diagnosis of so-called idiopathic or progressive pernicious anæmia. This disease, although first described by Addison (probably in the *Medical Gazette* for March, 1849), has only during the last few years been generally recognised—about fifty cases have been recorded by various observers. So far as I can ascertain, Addison made no microscopic examination of the blood in this disease; but in the Guy's Hospital Reports for 1855, Dr. Wilks, who had been testing the blood in reference to the number of white corpuscles, soon after Bennett's and Virchow's discovery of leukaemia, thus alludes to it: "In that class of cases which had specially gained the attention of Dr. Addison, and which he has designated 'idiopathic anæmia,' and where, above all others, it might be presumed that the existence of an excess of colourless globules was possible, no such condition has been found.¹ This observation of Dr. Wilks has been confirmed by all subsequent writers on this disease, and, in addition to this means of diagnosis, other important microscopical changes have been noted in the blood in this disease, which help to differentiate it from chlorosis and other closely allied diseases, such as leukaemia, &c. Messrs. Mackern and Davy,² and other observers (especially Drs. Byrom Bramwell,³ Stephen Mackenzie,⁴ and Finny⁵), have noticed in blood, drawn from persons with this disease by the prick of a needle, that the red corpuscles do not collect into rouleaux, as in health, but lie separately, or form masses of irregular shape; that these corpuscles are very noticeably reduced in number, are variable in size, of great diversity in form, some being oval, others spindle-shaped, some having a tail-like projection, some are larger than the white corpuscles, others not one-fourth of the normal size. In all the abnormal corpuscles the so-called zoid or yellow substance (hæmoglobin) seems to be collected in one part, leaving the œcoid rest of the corpuscle (stroma) clear and transparent, and this probably gives rise to the apparent nucleation of the corpuscles.

I have carefully examined the blood in one well-marked case of idiopathic anæmia, and I failed to find the small spherical red corpuscles regarded by Eichorst as pathognomonic of this disease. Rosenstein, Grainger Stewart, and Bradford have also failed to find these "microcytes," and they have been seen by Cohnheim in a case of medullary leukaemia, by Dr. Litton in a case of phthisis, and by Dr. Greenfield in a case of Hodgkin's disease. Dr. Osler of Montreal has found similar corpuscles in his own blood, and in that of persons free from disease. These corpuscles cannot, therefore, be regarded as diagnostic of essential anæmia; but the three combined abnormal conditions—viz., diminution of the number of the red corpuscles, their paler colour, and the alteration of their shape and size—may be regarded as characteristic.

C. M. Sørensen of Copenhagen emphasises the counting of the red corpuscles for the purpose of exact diagnosis, and, from observations in eleven cases of this disease, says

that the number of red corpuscles counted (according to Malassez's method) is only one-fourth to one-twelfth of the normal number. Dr. Stephen Mackenzie has also made some valuable observations on the reduction of the red corpuscles, in various anæmic states; but in none did he find such a diminution as in this disease.

Whilst upon the subject of the microscopical examination of the blood, I must not fail to mention the ingenious hæmacytometer devised by Dr. Gowers, for estimating⁶ the corpuscular richness of any specimen of blood. This instrument has the great advantage of accuracy and simplicity of application in clinical practice, and is an improvement in the latter respect upon the "compte globule" of Malassez⁷ and the hæmatometer of MM. Hayem and Nachet. M. Malassez has also devised an instrument, the hæmachromometer, for estimating the amount of hæmoglobin in blood, which is both accurate scientifically, and most convenient clinically. He has pointed out that blood-corpuscle counting is of little diagnostic or clinical use unless combined with estimating at the same time the amount of hæmoglobin present.⁸

The diagnosis of idiopathic anæmia by means of the microscope furnishes us, then, with a "general truth" as to the abnormal conditions of the blood-corpuscles which has been "inferred from facts by successive discoverers;" and thus may serve to illustrate the statement that we have, at the present time, a true science of medicine in Whewell's sense of the word.

One further application of it as an instrument of precision is of considerable interest at the present time, and ought, perhaps, to be noticed in this address. It was only in 1860 that Zenker of Dresden made out, post-mortem, the disease of trichinosis in a patient who was supposed to have had typhoid fever. How many cases of trichinosis had before that been attributed to some other condition cannot be estimated. The microscope has discovered the disease, and by the aid of this instrument it will probably be stamped out. In the year 1876 there were in Prussia no fewer than twelve thousand inspectors charged with the duty of inspecting slaughtered swine. Trichinae were found in one of every two thousand animals. This is a humble use of the microscope, and one not entailing delicate manipulation and high magnifying powers. It is mainly to Professor Virchow, eminent no less as a practical administrator than as a scientific pathologist, that Prussia owes this great triumph of preventive medicine.

Mr. Power, one of the medical officers of the Local Government Board, was enabled, by microscopical examination of the muscles of the only fatal case of the outbreak which occurred on board the reformatory school-ship *Cornwall* in September and October of last year, to show the disease to be trichinosis, and not, as was at first supposed, enteric fever. It is highly probable that in future many cases of supposed enteric fever, for which no adequate cause can be discovered, will prove, as in the instance I have just quoted, to be due to eating trichinised meat.

A very remarkable fact in connexion with this investigation is the discovery by Mr. Power of bodies somewhat resembling trichinae in the voluntary muscles of two undoubted cases of enteric fever which had died in St. Thomas's and Greenwich Hospitals. Mr. Power offers at present no positive opinion as to the nature of these bodies, or their relation to enteric fever; but, if this disease should be found to be a form of trichinosis, our views as to its etiology and pathology must be very much modified.

THERMOMETER.—But the thermometer has done even more than the microscope to place medicine upon a scientific basis, and to refute the statement that "we have even yet no science of medicine." I think it may be said without exaggeration that the treatise on "Medical Thermometry" by Professor Wunderlich has more than any other work furthered the progress of medicine during the last ten years; for it is only during this period that the thermometer has come into general use in the profession, although the first edition of Wunderlich's book was published at Leipsic in 1868. This physician was enabled, from complete thermometric observations, extending over a period of sixteen years, in many thousand cases of disease, to abstract and formulate

¹ See Guy's Hospital Reports for 1878, p. 185.

² THE LANCET, May, 1877; also Guy's Hospital Reports, 1878, p. 206.

³ Edinburgh Medical Journal, November, 1877.

⁴ THE LANCET, December, 1878.

⁵ British Medical Journal, Jan. 10th, 1880.

⁶ See THE LANCET, December 1st, 1877.

⁷ De la Numération des Globules rouges du Sang. Pamphlet. Paris, 1873.

⁸ See London Medical Record, 1879, p. 257. See also contributions to Clinical Hæmometry by Baxter and Willcocks, THE LANCET, March 6th, 13th, and 20th, 1880.

well-founded general principles from the mass of separate cases; or, in other words, to form a collection of general truths inferred from carefully-recorded facts. Owing to his treatise, we have been able to diagnose diseases which at an early stage were previously confounded—e.g., acute tuberculosis and enteric fever. We have also become acquainted with the typical course which certain diseases run; and it is possible from thermometric observations alone to predict with almost absolute certainty the progress which many acute diseases are making. Probably no one phenomenon helps us so much as the temperature of a patient to reveal the existence of complications, and to predict the favourable or unfavourable issue of fevers and inflammations. Furthermore, as we have learned the natural course of most acute diseases, so have we come to trust less in drugs, and to leave more to nature, or, perhaps I should say, to careful nursing, rest, cleanliness, and suitable nourishment. Again, as the temperature can neither be feigned nor falsified, the thermometer may render us assistance in determining whether a disease is feigned or not.

In some diseases, such as acute rheumatism and enteric fever, the temperature indicates more truly the gravity of some cases than any other phenomena. Dr. Wilson Fox and others have shown that, by appropriate cooling of the body by baths and other external means, patients suffering from acute rheumatism, with a temperature of 110° Fahr., may be rescued from death. The method of cooling the body by affusion of cold or tepid water was known to Dr. Currie of Liverpool and other physicians at the end of the last century; but until the last few years this mode of reducing abnormal temperatures has never been systematically and scientifically carried out. In the German hospitals the method of treating the pyrexial state by the external application of cold has come into general use, and has also to some extent been introduced into private practice. Jürgensen, Liebermeister and Hagenbach, Ziemssen and Immermann, Brand of Stettin, and others, have published statistics of several thousand cases of fever treated in this way; from which it appears that the mortality has been reduced more than one-half, being now only from 3 to 10 per cent. In our own country, this method of treating enteric fever has not carried conviction to the minds of Sir W. Jenner⁹ and of Dr. Collie,¹⁰ Medical Officer to the Homerton Fever Hospital; but is well spoken of by Dr. Ord of St. Thomas's Hospital, and Dr. Cayley of the Middlesex and London Fever Hospitals. My own experience of this mode of treatment is limited to one case of enteric fever, in which the temperature reached 106° 8' Fahr., and which was successfully treated by baths.

The value of the thermometer in clinical medicine has recently received a fresh illustration in the most interesting researches of Peter and Vidal on local temperatures in acute pleurisy, phthisis, and some abdominal diseases. M. Peter has found in acute pleurisy, from a long series of investigations: (1) that the parietal temperature outside the pleurisy is from one-half to two degrees Cent. higher than the average temperature of the patient; (2) that the more rapid the effusion, the quicker the elevation of temperature; (3) that when secretion is not going on, and the level of the fluid remains stationary, the elevation of the parietal temperature decreases, but the temperature is still from one-half to one and a half degrees Cent. higher than the sound side; (4) that pleurisy not only raises the parietal temperature of the diseased side, but also that of the opposite side; but the parietal temperature of the diseased side is always higher than that of the healthy; (5) that, while spontaneous absorption of the effused fluid is going on, the parietal temperature drops gradually; (6) that in dry pleuritis the local excess of heat is less than when there is effusion, and the return to the normal temperature also occurs more rapidly; and (7) that the absolute elevation of the local temperature on the diseased side is more considerable than the absolute elevation of the axillary temperature.

M. Peter has also investigated the results of thoracentesis upon the parietal temperature, and has found, when the effusion is not reproduced, that although there is, immediately after the puncture, a slight rise, which lasts for some hours, nevertheless the parietal temperature afterwards decreases, and continues to do so until the normal figure is

reached, unless the effusion is reproduced, when the local temperature rises again.

The observations of M. Peter on local temperatures in pulmonary phthisis, which have been fully confirmed by M. Vidal, are even still more interesting. He believes that, as soon as tubercles occur at any point, the local temperature rises there, and he points out that in doubtful cases of phthisis, where the physical signs are not developed, this local thermometry may materially assist us in arriving at a correct diagnosis. M. Peter has made a further communication to the Académie de Médecine on the subject of local temperatures in abdominal diseases, and has indicated the differences between the local temperatures of the abdominal parietes in ascites and in the various forms of peritonitis. Local thermometry has also been applied to the detection of the precise locality of a cerebral lesion by Broca,¹¹ Dr. Carter Gray¹² of Brooklyn, and others. These temperature observations seem to be of value for the purpose of localising lesions. Dr. Gray has found, from observations on 102 males, among other things, that in health the temperature of the left side of the head is nearly one degree higher than that of the right, and that the average temperature of the frontal and parietal regions is nearly two degrees higher than that of the occipital. Lombard has also made elaborate experimental researches on the regional temperature of the head, but he is not "inclined to place much reliance on the examination of the relative temperatures of different parts of the integument of the head as a means of medical diagnosis." Dr. Gray, however, thinks the surface-temperatures at various points of the head indicate similar differences of temperature in the convolutions lying beneath those points. Cases have been recorded¹³ which, notwithstanding the adverse criticisms of Rendu,¹⁴ seem to show that we can attribute a positive value to local thermometry in making regional diagnosis in cerebral cases.

General thermometry has been found useful in diagnosing cerebral hæmorrhage from alcoholic poisoning, the general bodily temperature (rectal) falling at first below the normal in cerebral apoplexy, but not in drunkenness.

General thermometry also assists us in the differential diagnosis of true apoplexy from the so-called apoplectiform seizures, which occur in progressive general paralysis, disseminated sclerosis, cerebral softening, and also from uræmic coma. Charcot says, "I have demonstrated by repeated observations that in true apoplexy, especially when it depends upon cerebral hæmorrhage, the temperature constantly diminishes some moments after the attack, and afterwards remains, generally for at least twenty-four hours, below the normal standard, even when intense and reiterated convulsive fits occur"; whereas, in the congestive attacks (so-called apoplectiform seizures) which occur in progressive general paralysis and in disseminated sclerosis, "the temperature, on the contrary, rises above the physiological standard, and tends to become gradually more and more elevated, during the whole continuance of the attack."

In cases of cerebral softening, according to Bourneville, the "period of initial lowering" of temperature commonly met with in cerebral hæmorrhage is either absent or much less slightly marked; and, after the first two hours in a case of softening, the temperature may suddenly rise to 102° or even 104°, though it soon descends again to the normal standard, and afterwards exhibits altogether irregular oscillations (unless the pons Varolii be the part affected); whereas in cerebral hæmorrhage, it is found that, if the temperature after the "initial lowering" rises soon after the attack beyond 102° 5', it rarely sinks again to the normal standard, unless under the influence of a shock resulting from fresh hæmorrhage (Bastian). "In uræmic coma, according to Bourneville, the temperature of the body begins to fall at the onset of the seizure, and continues to sink as long as the coma persists, so that it may fall as low as 90° Fahr. in fatal cases. On the other hand, in coma due to cerebral hæmorrhage or softening, the lowering of the temperature is slighter in amount, and, in cases not fatal within this period, rarely lasts longer than twelve to twenty-four hours" (Bastian).¹⁵

The thermometer is also useful in forming a prognosis in these diseases, but into this I have not time to enter.

¹¹ Journal de Médecine et de Chirurgie Pratiques, Art. 10,634 et Art. 11,238.

¹² New York Medical Journal, August, 1878.

¹³ See American Journal of Medical Sciences, July, 1879.

¹⁴ Revue Générale des Sciences Médicales. Art. des Localisations Cérébrales Corticales. Par H. Rendu, 15 Janvier, 1879.

¹⁵ Paralysis from Brain Disease, 1875.

⁹ See THE LANCET, November, 1879, p. 715.

¹⁰ See British Medical Journal, Sept. 20th, 1879. Dr. Collie says those cases in which the bath is most useful are those in which, according to Liebermeister, it is contra-indicated—viz., "where there is a very high degree of heart-weakness."

OPHTHALMOSCOPE.—Physics have also furnished us with the ophthalmoscope, an instrument which, besides being invaluable in the recognition of diseases of the eye, has of late years assisted us materially in the diagnosis of intracranial tumours, syphilis, chronic Bright's disease, acute tuberculosis, tubercular meningitis, cerebral embolism, locomotor ataxy, and other diseases which need not here be specified.

Dr. John Ogle was the first physician in this country to introduce the ophthalmoscope into medical practice; and Dr. Clifford Allbutt's book, the "Ophthalmoscope in Nervous and Renal Diseases," has, as Dr. Hughlings Jackson well expresses it, "done more than any other work towards the integration of ophthalmology with general medicine." Dr. Gowers's "Manual of Ophthalmology" (Churchill, 1879) is an excellent representation of what is known on the subject up to the present time. In his address on "Ophthalmology in its relation to General Medicine," delivered before the Medical Society of London, Dr. Hughlings Jackson pointed out how frequently cases of supposed brain disease are indirect effects of anomalies of refraction, readily recognisable by the ophthalmoscope, and how the correction of a hypermetropia or a myopia by appropriate spectacles may completely remove these *quasi*-cerebral symptoms, and save patients from needless drugging with "nervine" and other medicines. These cases show so well the value of a knowledge of physics (optics), not only in the diagnosis of certain disorders, but also in their treatment, that I do not hesitate to quote a passage from the address on this subject:—"Mr. Brudenell Carter," Dr. Jackson says, "has reported a remarkable case of myopia, simulating brain disease, in the eighth volume of the Clinical Society's Transactions. This report should be carefully studied by physicians. The patient for supposed brain trouble took a voyage to Australia, but was no better for it. He was told that he must abandon the idea of carrying on the family business, or of taking any active part in life. This patient was immediately, thoroughly, and permanently cured by the adaptation of appropriate spectacles." Dr. Jackson also relates the case of a medical student who had attacks of vomiting and frontal headache brought on by reading, and on account of which he was obliged to give up work. After travelling abroad for two years, doing nothing towards his career, he fell under the observation of Mr. John Tweedy, and the nature of the affection being recognised, he was fitted with glasses suitable for the hypermetropic variety of astigmatism, and has been well ever since, and graduated at the London University.

The following case, which came under my observation in January, 1879, is one of no uncommon occurrence. A lady who had been ill for some time, and under two medical men, had occasion to consult an oculist for some defect of vision. The ophthalmoscope revealed retinal hæmorrhage, such as is met with in some forms of chronic Bright's disease. The urine was now for the first time tested, and found to contain a considerable quantity of albumen; but, previously to seeing the oculist, renal mischief had never been dreamt of. The lady died about eighteen months afterwards with well-marked uræmic symptoms.

Dr. Gowers¹⁶ relates a case in which the detection of an embolus in the central artery of the retina was the first thing which drew attention to the existence of the cardiac affection from which the patient suffered. The patient applied at the Moorfields Ophthalmic Hospital for a defect of vision, and then she was found to have mitral constriction.

The ophthalmoscope often enables us to detect inherited syphilis, when other indications, such as the peculiar teeth, are absent. The relation of disseminated choroiditis to syphilis is extremely striking and important; and such a distinguished observer as Hutchinson has gone so far as to say, that the patches of disorganisation left by choroiditis are almost as pathognomonic of inherited syphilis as the notched teeth.

Other interesting recent researches in this field of medicine are those of Dr. Gowers on the diminution of the calibre of the retinal arteries in some cases of Bright's disease with increased arterial tension; and those of Quincke, Becker, and Dr. Stephen Mackenzie on spontaneous visible pulsation of the retinal vessels in connexion with aortic regurgitation; and those of Mackenzie and others, on retinal hæmorrhages in connexion with purpura, leucocythæmia, idiopathic anæmia, ague, and diabetes.

Retinal hæmorrhages have also been observed in septiciæmia and pyæmia. In puerperal septiciæmia they almost

invariably occur during the last two or three days of life, according to Litten; and they augur an unfavourable termination of the case.

Another important condition, revealed to us by the ophthalmoscope, is the simple atrophy of the optic nerve—atrophy without precedent neuritis—which is seen in some cases of locomotor ataxy, and which may be of help in the recognition of this disease at an early stage. This simple optic atrophy can be sometimes seen before ataxy begins; and along with absence of the "tendon-reflex," or with the presence of the lightning-like pains, it is an almost certain indication that the disease has commenced.

The recognition of optic neuritis is also of great value both in the diagnosis and prognosis of intracranial tumours.

The ophthalmoscope must, therefore, no longer be regarded as an instrument of use only to the ophthalmic surgeon, but as a most valuable instrument in the detection of many morbid states which come under the notice of the physician.

LARYNGOSCOPE.—Our knowledge of the uses of the laryngoscope in clinical medicine to-day is little in advance of what it was ten years ago. Some new facts have, however, been added to our store of knowledge in this department of medicine.

Owing more especially to the careful observations of Dr. Marcet, we can detect tubercular disease in the larynx before there are any physical signs of its development in the lungs. When laryngeal phthisis is present there is a "whity, milky, probably purulent mucous fluid in the laryngeal cavity." The diagnosis of laryngeal phthisis is of more value in prognosis than is generally supposed, for if phthisis can be detected in the larynx we may be quite sure that the lungs either are, or will shortly become, tuberculous, if not obviously so at the time. It is also a well established fact that those cases of phthisis in which the larynx is early involved are less amenable to treatment than most other cases, and hence we are compelled to give a more gloomy prognosis.

We are also indebted to Dr. Marcet for pointing out the importance of examining the epiglottis with the laryngoscope. Cases of simple and syphilitic inflammation of this organ may be mistaken, as he has shown, for tubercular disease of the larynx, unless an examination is made with the laryngoscope.

In inflammation of the larynx, the laryngoscope helps us to ascertain the presence or absence of membrane, which the report on the subject of croup and diphtheria presented to the Royal Medical and Chirurgical Society by a committee, of which Dr. Dickinson was chairman, has shown to be of the highest importance, both as regards prognosis and treatment. Although the committee were unable to settle the vexed question as to what constitutes croup and what diphtheria, the evidence before the committee led them to the conclusion that most cases of membranous inflammation of the larynx were of a diphtheritic character.

SPHYGMOGRAPH.—In the field of medicine in which the sphygmograph has been used, the harvest has been more abundant than in the case of the laryngoscope, chiefly owing to the researches of Burdon Sanderson having been elaborated by Galabin, Mahomed, and others. In his thesis, read in 1873, for the degree of M.D. in this university, Dr. Galabin, formerly Fellow of Trinity College, corroborated the views of Burdon Sanderson, George Johnson, and others, on the use of this instrument in estimating the amount of arterial tension, as gauged by the height of the tidal or predicrotic wave of a pulse-tracing; and for the first time pointed out that high arterial tension exists in acute as well as in chronic Bright's disease. High blood-pressure gives the earliest indication of the grave series of degenerative changes throughout the body, known as chronic Bright's disease, and may, if neglected, lead to disastrous results both in disease of the arteries and of the heart. High blood-pressure is the cause of all so-called heart-disease in old persons; it is very amenable to treatment, and its treatment is imperatively necessary.

Dr. Handfield Jones¹⁷ has recorded a series of cases in which, without albuminuria or other symptoms of Bright's disease, the sphygmograph has sufficed to diagnose the disease, the high pressure in the pulse being really its pathognomonic symptom.

In a paper published in 1874,¹⁸ Dr. Mahomed tried to

¹⁷ Some Experiences of the Sphygmograph in Medicine, THE LANCET, 1876.

¹⁸ The Etiology of Bright's Disease and the Pre-albuminuric Stage, Transactions of the Royal Medical and Chirurgical Society.

show that a chronic condition of high blood-pressure led to arterio-capillary fibrosis. This view he has further elaborated in a paper in the last volume of the "Guy's Hospital Reports," where he says that the hard pulse—the pulse of high tension—is the sign of Bright's disease; and that it should altogether replace albuminuria, for this is only exceptionally present.

High blood-pressure gives rise to many functional as well as structural disorders. In the paper referred to, Dr. Mahomed described the occurrence of this condition in an acute and transient, as well as in a chronic and permanent, form, as the result of certain blood-poisons, and as an antecedent of kidney-disease. He has also demonstrated its existence in pregnancy, and thus indicated the connexion between pregnancy and kidney disease (so-called), and thus with puerperal eclampsia.

This condition of high blood-pressure appears to be recognisable early in life, before it has given rise to any structural changes, or symptoms, and may be described as depending on the *diathesis*, or less correctly on the *temperament* of the person.

Of the value of the sphygmograph in valvular disease of the heart, experience has shown that it is of use more as an aid to prognosis than to diagnosis; it enables us to gauge the extent of the lesion. It is also very valuable as a guide to treatment, and in watching the effect of treatment; also in estimating from time to time the advance or otherwise of the disease by comparison of tracings taken at different periods.

Dr. Mahomed has elaborated the use of the sphygmograph in the diagnosis of aneurism of the aorta; he has shown that it may in some cases be of value in determining the site of an aneurism, and in estimating the amount of arterial tension present, and the result of treatment upon it. The plan of treatment advocated in aneurism by Mr. Tufnell has for its object the reduction of arterial tension.

The sphygmograph is further valuable as a scientific means of watching the effects of drugs on the vascular system, especially with a view to their use in the treatment of Bright's disease and of aneurism, by reduction of arterial tension. Above all, it is valuable as an educator and interpreter to the finger.

The possibility of recognising Bright's disease in its pre-albuminuric stage by means of the sphygmograph leads me to think, with Dr. Handfield Jones, that this instrument has a great future before it. When people become wise enough to pay their doctors for keeping them in health by periodically examining them to see if there be any abnormal change taking place in their bodies, the sphygmograph must come into general use in our profession.

The remedies for high arterial tension generally are a reduction in the amount of nitrogenous food, purgatives, diaphoretics, bleeding, &c. A milk diet is of the greatest value in some of these cases, as Dr. George Johnson was the first to point out. I have over and over again relieved this condition of the circulatory system by placing patients in bed and on a milk diet. To show the value of bleeding in this condition I cannot do better than quote a case recorded by Dr. Alexander Harvey, Emeritus Professor of Materia Medica in the University of Aberdeen, in his work "First Lines of Therapeutics," of a young lad of eighteen, in whom general anasarca, accompanied by profound coma, occurred rapidly after scarlatina, and yielded at once to general blood-letting—the coma disappearing in ten minutes and the anasarca within twenty-four hours after the vascular tension had been relieved.

As the profession comes more and more to recognise the importance of increased blood-pressure the practice of bleeding must come again more and more into fashion. The *pulsus magnus, durus et tardus*, which the old practitioners invariably bled, was exactly the pulse of high pressure as we now recognise it. There can be no doubt that in the present day we too much neglect venesection. In cases of apoplexy, with increased vascular tension, bleeding is beneficial; and also in uræmic convulsions, which Mahomed regards as probably due to minute cerebral hæmorrhages, produced by increased arterial tension, and not to the circulation of excess of urea or ammonium carbonate in the blood (Frerichs), or to anæmia of the brain caused by spasm of the cerebral arteries (Hughlings Jackson and George Johnson).

Some time ago it was discovered that amyl nitrite and nitro-glycerine have the property of relaxing the arterioles,

and of thus temporarily reducing blood-pressure. This discovery affords a most beautiful instance of what I do not hesitate to call scientific therapeutics, and affords another example that medicine is advancing to the dignity of a science. The drugs I have mentioned are especially suited to those cases in which the heart fails to overcome the great arterial pressure, as, e.g., angina pectoris, and the angina attacks occurring towards the end of chronic Bright's disease. To Dr. Brunton we are indebted for the discovery of the action of amyl nitrite in angina pectoris. In his "Gulstonian Lectures," delivered in 1877, he cites a remarkable instance of its successful administration.

Nitro-glycerine has been shown by Dr. Murrell¹⁹ to have the same physiological action as amyl nitrite, and may be used in the same cases. Its effects are said to be more gradual and lasting; it may, therefore, be taken regularly three or four times a day, and the arteries thus be kept in a constant state of relaxation.

We have now seen how the sphygmograph has not only helped to point out the nature of pathological states, but also indicated the treatment suitable for them. There can be no doubt that this subject of arterial tension is one of the "burning" questions in medicine at the present time, and this must be my apology for having occupied so much time in placing it before you.

One other point of great importance, in reference to albuminuria and arterial tension, which must not be altogether passed over, is the so-called "Albuminuria of Adolescents," which was the subject of a paper by Dr. Moxon, in the "Guy's Hospital Reports for 1878." In these cases of albuminuria, which occur in young men from the age of sixteen to twenty-two, the albumen is not always present in the urine, but intermits; it is generally, however, present in the urine at some period of the day, most frequently in that passed after breakfast. These patients are usually languid, listless, complaining of headache, are anæmic, and "generally out of condition;" but after a variable time, under the influence of tonic treatment, the albuminuria usually entirely disappears, and the patient's health is restored. Now, in these cases of albuminuria, the arterial pressure is quite normal, or low rather than high. I have seen several cases of this description amongst the undergraduates of the university and others, and it is of the utmost importance to recognise them clinically, for the prognosis in them is favourable, and the line of treatment to be adopted the very opposite of that which obtains in cases of albuminuria with high arterial tension. I am disposed to agree with Sir William Gull, that the albuminuria in these cases is due to atony of vessels and nerves. He says that albuminuria occurs in young and growing men and boys almost as frequently as spermatorrhœa.²⁰

There can be no doubt that at the present time physicians do not regard simply the presence of albumen in the urine as so serious a sign as they would have done ten years ago. The late Dr. Murchison regarded some cases of albuminuria as due to hepatic derangement.

I would especially invite general practitioners in medicine to help us to solve the meaning of this intermittent appearance of an abnormal substance in one of the secretions. They have opportunities of watching cases in private from day to day, and of knowing the habits of their patients better than a physician, who is only consulted occasionally. It is of the utmost importance that the question should be settled as to whether these forms of albuminuria are due to removable causes, such as indigestion, &c., or whether, as Dr. Dickinson would have us believe, they represent the initial stages of granular degeneration of the kidney.

ASPIRATOR.—Another instrument of precision for which we are indebted to physics is the aspirator, which has proved such a great boon to the physician and surgeon in the diagnosis and treatment of various diseases, especially of hydatid disease of the liver. This disease is very prevalent in Cambridgeshire. During the eleven years I have been physician at Addenbrooke's Hospital I have treated a considerable number of cases of this disease with the aspirator, and only one has proved unsuccessful, and this by reason of the aspirator never reaching the sac, which had thick cartilaginous walls, although three punctures were made, and in all my cases, save the one just mentioned, the cure has, so far as can be ascertained, been permanent. I am not an advocate for making a permanent opening, unless suppuration has taken place, simply contenting myself with drawing

¹⁹ THE LANCET, 1879.

²⁰ Note to Dr. Moxon, Guy's Hospital Reports, 1878, p. 238.

off nearly, but not quite, all the fluid. My experience does not coincide with that of my friend, Dr. John Harley,²¹ who advocates a permanent opening, and the withdrawal of the hydatids from the cysts, and even of the parent cyst itself. This method was tried in some of my earlier cases, but was found to have no advantages over the simpler method, and occasionally some drawbacks, such as the setting up of a pleurisy or pneumonia, which nearly carried off the patients. Before using the aspirator in cases of suspected pleuritic effusion, hepatic abscess, &c., I now almost invariably make a preliminary exploratory examination with a large hypodermic syringe, which is really a sort of miniature aspirator. I was glad to see the importance of this preliminary test recently brought more prominently before the profession in a paper by Dr. Greenfield.²²

STETHOMETER.—The stethometer, invented by Dr. Ransome of Bowdon is another instrument of precision, of value in the detection of some chest affections. Like the sphygmograph, the stethometer is not of ready application at the bedside, and has consequently not come into general use in the profession. It is capable, however, of rendering important information in some doubtful cases of lung disease. According to Dr. Ransome, it has, in several instances, indicated traces of former lung disease that no physical examination of other kinds could display; hence it is certainly useful in examination for life assurance. Dr. Ransome, in a private note, informs me that he thinks stethometry of chief value in estimating the probable course of cases of phthisis and pleurisy. In the chapter on Prognosis in his book on "Stethometry," he spoke with diffidence on this point; but he is now much more certain of the value of exact measurements in this regard.

SPECTROSCOPE.—Another instrument which promises to be of use in clinical and pathological investigations is the spectroscope, which has yielded some important results in the hands of Dr. MacMunn.²³ By means of this instrument, it is said we can distinguish blood from the bladder or urethra from blood from the kidney, and blood from the stomach from blood from the lungs, &c.

ELECTRICITY.—The application of electricity to the diagnosis and treatment of diseases of the nervous system has been placed upon a much more scientific basis during the last decade. The researches, especially of Professor Erb of Heidelberg, on the quantitative and qualitative reactions of nerves and muscles to electrical currents, which are termed the "reactions of degenerations," are of the greatest interest and value in the diagnosis and prognosis of certain pathological states.

It is not contended for electricity that it alone is sufficient to enable us to diagnose any particular disease of the nervous system, but its reactions, when considered in conjunction with a careful consideration of a case in all its bearings, are often of valuable assistance in forming a correct view of it. Let me cite one or two examples in illustration of my meaning. A patient suffered, among other symptoms, from paralysis of the left leg. The reactions of the nerves and muscles to faradism and galvanism were normal. Now, in paralysis from brain disease, as a general rule, the electrical reactions of muscles and nerves are normal, which is not the case in paralysis from spinal disease or from disease of the nerves and muscles themselves. The case was diagnosed as depending upon cerebral mischief, and, at the necropsy, a tumour was discovered in the right hemisphere, in the posterior parietal region. Again, a patient has right facial paralysis. The response of the nerve to electricity is considerably diminished. This shows that the paralysis has not a central origin, but is due to cold; that the case is one of so-called rheumatic paralysis. The cases might be multiplied in which the diagnosis of a lesion respectively in the brain, spinal cord, or peripheral nerves, can be established by electrical tests.

Again, electricity is useful in helping us to diagnose diseases affecting the various structural elements which go to make up the spinal cord; but we must not place too much reliance upon it, as several of these elements may be affected at the same time, and we may have irritative as well as paralyzing lesions; and this constitutes the great difficulty in the science of electro-diagnosis. Even in some of these cases, however, electricity furnishes us with valuable negative evidence.

Electricity also assists us in distinguishing functional from organic paralyses, and is valuable in the diagnosis of paralysis from lead-poisoning.

The subject of electro-therapeutics is now assuming so much importance, and its proper application is one which involves so many technicalities, that I should hail with satisfaction the establishment of an electrical department, under the direction of a competent person, in connexion with the hospitals of this country, such department being for both paying and poor patients.

I have found electricity of considerable value in some cases of progressive muscular atrophy and of infantile paralysis; and there can be no doubt of its use in removing chronic facial paralysis from cold, and in some cases, of chronic neuralgia. Faradism and galvanism are the forms in which electricity is chiefly used in the present day; but static electricity, produced by the old plate-machine, has recently been found superior to these, in certain cases of hysteria recorded by Vigouroux, Dujardin-Beaumetz, and Erlenmeyer.

The treatment of aortic aneurism by galvano-puncture has met with some success in the hands of Dr. John Duncan, Dr. Simpson, of Manchester, Dr. McCall Anderson, of Glasgow, and others. I must confess I have never had the courage to try it, although I have had two or three cases under my care which might have been regarded as suitable for the operation.

METALLO- AND MAGNETO-THERAPY.—Connected with the subject of electro-therapy are the very interesting investigations of Charcot and others, on the influence of metals and magnets on the human body in cases of hemi-anæsthesia. The subject is not altogether novel, as it was a belief, even amongst the ancients, that metals applied to the body exercised some influence upon the nervous system.

Metallo-therapy has, however, entered upon a new phase since, in 1848, Dr. Burq propounded the two following propositions: first, "That in certain states of the nervous system, plates of metal placed upon the skin have the power of altering general and special sensation and cutaneous vascular supply, and that the susceptibility of individuals to the metals generally used—gold, silver, iron, copper, zinc—varies, a patient sensitive to one metal being insensitive to another; and, secondly, that when it has been ascertained to what metal the individual is susceptible, that metal may be successfully administered internally to cure the morbid state of the nervous system."

In 1876 the Société de Biologie appointed a committee, consisting of MM. Charcot, Luys, and Dumontpallier, to investigate the alleged phenomena, which presented its first report in April of the following year. The cases selected were chiefly those of hysterical hemi-anæsthesia, in which the patients had lost superficial and deep common sensibility, as tested by plunging long needles into the skin of parts usually most sensitive. The senses of taste and smell were usually abolished, and there was dimness of vision, with more or less colour-blindness. The skin was paler on the affected than on the sound side; the temperature also was lower, and the muscular power less. The results of the investigation bore out in every particular Dr. Burq's assertions. The application, for ten or fifteen minutes, of a metallic plate of gold, copper, or zinc—according to the susceptibility of a patient for a particular metal—to the anæsthetic part, restored for a time sensibility in the part. One of the most curious phenomena in connexion with these experiments is what has been called the "transference" of sensibility—that is, a loss of sensibility on the sound side in the parts symmetrically opposite to those in which it has been restored. In two cases of hemi-anæsthesia, dependent upon organic brain disease, the metals restored sensibility to the part affected, and the effect, instead of being transitory, as in hysterical hemi-anæsthesia, was permanent. The committee reported again, in 1878, on Dr. Burq's second proposition: "That the external metallic aptitude being known, the same metal administered internally will determine the same results as its external application." Five cases are recorded in which hysterical patients, sensitive to either gold or copper, recovered sensation on the internal administration of the chloride of gold and sodium, or of the binocide of copper. Very curiously, when the sensation had returned, the outward application of plates of gold or copper produced a relapse of the anæsthesia.

In a case of hysterical colour-blindness (achromatopsy), by the application of gold to the temples, the colours were restored in definite physiological order; and on the occurrence

²¹ See St. Thomas's Hospital Reports, new series, vol. viii.

²² THE LANCET, Nov. 1st, 1879.

²³ The Spectroscope in Medicine. By Charles A. MacMunn, B.A., M.D. 1880.

of a relapse, they were lost in the same order—a circumstance which excludes all suspicion of fraud.

Cases, similar to those reported by the French committee, have since been published by Drs. Anderson, Wilks, Inglis, A. Hughes Bennett, Professor Westphal of Berlin, and others, which leave little doubt as to the genuineness of the facts observed.

"Expectant attention" may explain much, but it does not explain all in these cases. "It cannot account," as the writer of the article on Metalloscopy, in the *Birmingham Medical Review* for April, 1879, justly observes, "for a patient recovering her perception of colours in exact correspondence with physiological law, as related in the second report of M. Charcot's committee. It cannot account for transference—a fact discovered by accident, to the surprise of the observers, and, we are told in one case, the horror of the patient. It cannot account for the positive and constant results of certain agencies and the negative results of others; the different effects of the different metals; of the two poles of the magnet; of the magnet with the circuit open or closed. Such facts as the permanence of anæsthesia, caused by superimposing another metal; the prevention of anæsthesia by the same means; the prevention of anæsthesia by placing another metal on the central side of the first, and the absolute powerlessness of the same metal, when placed on the distal side, are also quite opposed to the same views."

The practical outcome of these investigations is, in the hysterical cases, at present not very great. The restoration of sensation and also of motion by the magnet in some cases of organic origin (cerebral hæmorrhage, alcoholism, lead-poisoning) is, however, a great gain to practical medicine, and "transfer" is very rare in anæsthesia of organic origin.

Thus far, I have mainly endeavoured to show the advantages which have accrued to practical medicine from the use of instruments of precision, for which we are indebted to the science of physics; and perhaps I ought not to conclude without uttering a word of caution, especially to the younger amongst us, not to rely too exclusively upon the information derived from the use of these instruments, to which perhaps there is a great temptation. The knowledge with which they supply us is, on account of its accuracy, of the greatest value, and at present the advance in the recognition and treatment of disease is chiefly due to them; but we must not ignore the aids which stood our predecessors in such good stead—the information with which the physiognomy, especially of patients, furnishes us—the estimation of the nervous element in patients, and the other features of disease recognisable by our senses, which I need not here mention, but which are known to every cultivated physician, and which cannot be measured by any instruments. We must still, therefore, be contented *stare super antiquas vias*—cultivating that "tact" upon which our ancestors mainly relied.

Address in Surgery,

Delivered at the Meeting of the British Medical Association at Cambridge, Aug. 12th, 1880,

By TIMOTHY HOLMES, M.A., F.R.C.S. ENG.,

SURGEON AND LECTURER IN SURGERY AT ST. GEORGE'S HOSPITAL.

AFTER some introductory remarks on the relations of surgery as a science and art to the subjects of study which a university is intended to encourage, and observing that it would be a sorry day for our profession when it was thought to be falling backwards in the estimation of the "liberales" of the nation, the reader continued as follows:—

It would not, I think, be at all difficult to show that both the science and art of surgery have made as great progress in modern days as any of the purely physical sciences, or any of the arts which are the application of those sciences to matter. Last year the Association was favoured by the Orator in Medicine (Dr. Hudson of Dublin) with a *résumé* and criticism of the works of Laennec, so admirably lucid, so full of practical information, as well as of literary research, that it cannot but live in the memory of all who heard or read it. Let me try to give a similar, though of course a far weaker, tribute to the memory of one who has passed

from among us much more recently, who was a former President of this Association, and whose name can never be divorced from the history of the progress of surgery in these islands—I mean Sir William Fergusson.

It is not necessary for me to recall the particulars of the career of one whom most of us knew so well, or to give a catalogue of his works, or of the improvements which he introduced into practice. It will be enough for me to test the effect which his career has had on surgery by the result (as far as has been ascertained hitherto) of that portion of his teaching of which he was with reason the most proud, and which, as I contend, marks a great step in the progress of our art. I mean what Fergusson called Conservative Surgery—the excision of bones and joints. It is nothing to the point to say that Fergusson did not devise any of the operations of conservative surgery, that Park of Liverpool and White of London had excised the knee and the hips long before Fergusson's time, and that both operations had been repeated by other surgeons.¹ Those operations were practically disused. They could, hardly, indeed, have been expected to come into general use before the introduction of anæsthetics. But what Fergusson insisted on was something much beyond the substitution of one operation in surgery for another. It was the great principle of preserving a limb, and, as far as possible, the functions of the limb, whilst eradicating the disease of one of the joints—a principle as applicable to excisions as to amputations; and which, in the hands of later surgeons, will, I have no doubt, limit the use of many of the excisions as much as, when applied by him, it limited the use of amputation. For there is a vitality in all sound principles which not only outlasts the occasion that called them forth, but often renders the first form in which they appear speedily antiquated, and even apparently erroneous.

I am not sure that it will not be so with excisions in the lower limb, nor would it detract in the least degree from Fergusson's merit, in my mind, if it were so; nay, I think it would enhance it. What Fergusson contended for, and what many of his contemporaries were slow to admit, was that the surgeon should propose to himself not merely the cure of the disease, which often is easily within the reach of the amputating knife, but also, as much as possible, the restoration of the limb to its natural functions. That is common sense, you will say, and no discovery. To which I would reply that almost all great innovations in practice are really expressible in terms of the simplest common sense, and may be made to look like truisms; yet in the days I am speaking of, if I may trust my own recollection and a moderately extensive acquaintance with the surgical literature of the period, the principle of conservative surgery was anything but admitted. I can remember being present thirty years ago at the first excision of the knee which Fergusson performed at King's College Hospital, and I recollect the sort of half-anxious interest with which the novel proceeding was looked forward to, and the sort of half disappointment when it was found that the operation was nothing so striking after all—that it was simple, easy, bloodless, and quite within the reach of anyone who chose to repeat it. In those days who thought of laying open the cavity of a large joint—except, perhaps, as a desperate measure in cases of acute suppuration, in which amputation would have been extremely hazardous? Who ever thought of treating diseased joints by incision and drainage, or any of the milder forms of treatment which are now coming into common use? All this is now changed, I admit, as far as the surgery of the knee is concerned, and is perhaps in process of change in the case of the hip; but I am far from persuaded that it is when smaller parts are in question. I have seen many and many a foot amputated that I not only think, but (if such a term be applicable to a future event) *know*, might have been saved by some excision or partial removal of the tarsus. Yet if Fergusson's great principle, that two legs are better than one, be good in the case of the knee, surely the same principle, that ten toes are better than five, may be accepted in the case of the ankle or the tarsus. And the further application of the very same view of surgery is more and more coming into prominence—viz., that by judicious surgical interference more and more cases may be rescued from all mutilation whatever, and the limb be really conserved, unshortened, and in some cases even unstiffened, to bear its owner possibly through some future Peninsular campaign, "to go anywhere and do anything."

¹ See Mr. Jones's paper in the *Medico-Chirurgical Transactions*, vol. xxxvii., page 61.

"I know that it may be said that in this effort to reform the surgery of the joints—i.e., to eradicate incurable disease without removing the limb—Fergusson was not the first, or at any rate not alone. Nor was he.² It is extremely difficult at the present day—ὅτε πάντα δὲ δασταί, ἔχουσι τὴν παράτα ῥέχθαι—for anyone to strike out a path in which no shadow of a suggestion of priority can be claimed for any other wayfarer. So when Mr. Lister's theories of antiseptics and carbolic acid were first broached, who does not recollect how it was said, "Carbolic acid is nothing but phenol, and phenol has been used in France for years"? "Antisepsis is nothing but the prevention of unhealthy inflammation, and that has been the aim of surgery ever since surgery was practised systematically." Yet all this detracted nothing from the merit or originality of the proposal. So I have no doubt it is true enough that every surgeon who ever touched a "bad knee" would have been glad to cure his patient without amputation had he known how. I do not contest that in the excision of the shoulder and elbow Fergusson had models upon which he worked; but what I contend is that he erected all this into a system, and showed the profession what general aim to propose to themselves, and how to pursue it, and, further, that he reintroduced into practice two almost forgotten operations in lieu of amputation, or of the slow decay of chronic disease, which, however they may be superseded in many cases by yet more conservative methods, will always have their application in practical surgery; while the method itself will always be connected with the name of him whom it is my chief desire to celebrate—the great founder of conservative surgery.

Let me now invite your attention to a very humble attempt to estimate the precise value of the two operations so introduced into modern practice. And in making this attempt I shall altogether discard any effort after what is called "statistical accuracy." Surgical operations are steps—very important and decisive steps, it is true, but still only steps—in a surgical process which cannot be estimated unless much more is known about each case than so-called statistics (which in most cases are really only death-rates) can furnish.

It has seemed to me that nothing valuable can be got in this way; but it is a useful inquiry how far the alterations in practice which Fergusson introduced have kept their ground in his own and other large hospitals—i.e., as to excision of the knee; what evidence we have that it has replaced amputation of the thigh—how far it is used as a substitute for the expectant treatment—and what is its value in vicious ankylosis; and, as to excision of the hip, how far it has come into acceptance at all, and in what class of cases it seems useful.

It will be noticed that I confine myself to cases of disease. I have no personal experience of these excisions in traumatic cases, nor do I think that any adequate experience has as yet been acquired in civil practice. There can be no question that Fergusson's object in introducing the operation of excision of the knee was as a substitute for amputation, and he hoped, doubtless, to render amputation as superfluous in disease of the knee-joint as amputation of the arm is in diseases of the elbow.³ A very little experience, however, was quite sufficient to modify any such expectation, and to show that the operation is too dangerous even to come into use under some of the ordinary conditions of disease which are often successfully treated by amputation. I mean especially acute suppuration in the joint, advanced age of the patient, and concomitant constitutional affection. Surgeons were soon agreed that, if the operation were to be used at all as a substitute for amputation, it could only be in early life in chronic disease and in non-tubercular patients. This is equivalent to saying that the operation *per se* is more dangerous than amputation; and, although the fact was warmly contested when excision of the knee was in its infancy, I think no one contests it now. At first, indeed, the matter was argued more after the fashion of the advocate than that of the philosopher. A surgeon who said that excision of the knee is a wiser proceeding than amputation,

was represented as an "opponent of excision," and the controversy was carried on with sneers and insults, which are fit weapons enough in the *forum litigiosum*, but are surely out of place in an inquiry into the best method of curing disease. Happily, however, all this is a matter of the past. Some of us take a higher view of the utility of these operations than others, but few deny that both excision of the knee and of the hip have their place in surgery. All that remains is to ascertain as definitely as possible what that place is.

Now here we perceive a considerable change in the opinions of those surgeons who have practised excision of the knee ever since the introduction of the operation. When first introduced it was, as I have said, intended to supersede amputation in chronic disease; and it soon became clear that it could not do this, but at the same time it was seen that there is another very important aspect of the case—viz., how far excision ought to be used as a substitute for the natural one by ankylosis. You, Sir, have dwelt with unmistakable truth⁴ upon the frequent imperfections in the process of natural cure, and such imperfections must have presented themselves only too often to all of us. We must all have seen cases where, after years of suffering and enforced inactivity, the patient has obtained a reprieve, and has been able to use the limb for a time, then has followed another recrudescence of the disease, and, perhaps, the process has been more than once repeated. Ultimately, with a cumbersome, useless, painful limb, and possibly damaged health, he is glad to be quit of the offending joint, and would submit to amputation readily. In several such cases I have performed excision with great success, and I look on them as amongst the most appropriate for the operation. Hence occurs the question, How far is it justifiable to forestall all this suffering by a resort to excision in certain cases, even though the surgeon cannot say that the natural cure is in his judgment impossible, nor highly improbable? And there is a third class of cases, sometimes difficult to separate from those last mentioned, in which the ankylosis, though complete, is in such an unfavourable position that the limb is useless. Here, again, excision is, in my opinion, a most valuable operation; so that the question as to indications for excision of the knee has been enlarged since the reintroduction of the operation. We have no longer to resolve merely the question of the use of the operation as one of urgency in incurable disease—acute or semi-acute—but also its use as an operation of expediency in defective ankylosis, and in faulty or deformed ankylosis, and, still further, its use as a method of treatment—i.e., as a substitute for the expectant treatment.

Now, since the commencement of this controversy another and a most extensive change has come over surgical practice in the introduction of the so-called Antiseptic treatment. I must not enter on the wide field of discussion which the very name of this subject opens out. Let it suffice to say that on whatever other parts of it doubts exist in the minds of more or fewer of us, none, I think, deny that the excision and drainage of joints is more safe and more successful than we used to consider it,⁵ and that now many cases are brought to an apparently successful issue by means of this method of treatment which Fergusson would doubtless have excised, and which his followers continue to excise. I use the term "apparently successful" advisedly. In fact, in these cases in which the symptoms subside after incision and drainage, and the joint relapses into a quiet state with more or less of mobility, just as in cases of apparent cure by the expectant treatment, the question

² See the very modest statement which he himself makes of his claims in his second lecture on the Progress of Anatomy and Surgery, p. 34, &c.

³ If excision of the elbow has superseded amputation of the arm as a general practice for incurable disease of the elbow, why should not the practice hold equally good in the lower limb? That is a question which I for years put to myself; which I still do, though in a less uncertain mood; and it is a question which I avail myself of such an opportunity as this to put again to myself and the profession.—Lectures on the Progress of Anatomy and Surgery, p. 115.

⁴ When disease has proceeded to such an extent as seriously to alter or destroy the synovial cartilaginous or osseous structure of the joint, it is almost vain to expect that a useful joint can be restored—by which I mean a joint with useful movement, and able to bear the weight of the body well. Indeed, the limited movement which remains is commonly worse than useless: it is mischievous, by entailing weakness, with liability to return of disease, and permitting contraction to ensue. The best result that can take place in such a case is the complete abolition of the joint, with ankylosis of the bones. Even if the limb be bent or otherwise distorted, it is more likely to be useful when ankylosed than if movement continued. Unfortunately, as we know, this result does not very often take place at the knee. As the disease subsides, the articular surfaces become united; and that, perhaps, in parts only, by a soft fibrous medium, which permits some movement, and has little disposition to ossification, even under the long-continued favourable condition of perfect rest. In most of the limbs rendered crippled, useless, and wasted by disease of the knee, some movement of the joint remains—insufficient for any useful purpose, but enough to disable the limb from bearing weight.—(Humphry, On Excision of the Knee, Med. Chir. Trans., iii., 17.)

⁵ See an interesting paper by Mr. J. H. Morgan in the St. George's Hospital Reports, vol. ix., On the Opening and Drainage of Joints.

is, How far the apparent cure is sound and permanent? And it is a question which, for my own part, I am unable to resolve. I have a strong impression that those cases of ankylosis are the soundest which are the quickest and the most complete; and I am not sure that the retention of a certain imperfect movement in the joint is any real benefit to the patient. But on all these points we are totally deficient in any conclusive evidence. Hospitals can come and go, and little is known about them after they once disappear, but I must confess to a certain want of confidence in the permanency of the cure obtained by excision and drainage in a tolerably large proportion of the cases.

But though the treatment by excision and drainage is coming more and more into favour there are many hospitals at which it is untried, or, at any rate, is rarely adopted. So that, I think, we can fairly divide successes at the present day into two classes—viz., those who use excision of the knee chiefly or wholly as a substitute for amputation in certain selected classes of cases of incurable disease of the knee, and many of these use excision little, some hardly at all; and those who use it also as a substitute for the expectant treatment, and in this class are some who use incision far more freely than Fergusson ever did.

TABLE A.—Particulars and Results of Excision of the Knee at the undermentioned Hospitals, in the five years ending 1878.

Hospital.	No. of Cases.	Limits of age.	Result.			General Observations.
			Died.	Failed.	Succeeded.	
King's Coll.	21	7 to 32	2 from pyæmia and tetanus	2	18	The two cases in which the operation is said to have failed were, a total failure in which amputation was recommended, but refused; and one in which the patient was unable to walk without crutches. During the same period there were four cases in which either re-excision or some proceeding for straightening the limb or removing diseased bone was adopted, in all with apparent success.
St. Barthol.	24	2 under 5 years, 2 over 20 years	2, 1 pyæmia, and 1 not stated	7	15	
Guy's	89	Not given	6	10	73	No deaths out of 37 cases in the last two years of the period. The one death was after amputation.
St. George's	4	8 to 21	1	2, both amputated; 1 died	2	
St. Thomas's	62	Early childhood to 40	8	12	42	Of the 12 failures, 4 were amputated. I believe the 8 others are marked either as relieved or uncured.
Manchester	24	As above	1	8	15	All 8 unsuccessful cases amputated; one of these died; no other deaths.
Leeds	21	Do.	3	6	8	Four cases are unaccounted for. The 6 cases were all amputated, and, I believe, all recovered.
	245		23	47	173	Of the 47 failures, I believe 36 were amputated.

Appendix to TABLE A, showing the line of practice pursued at each of the hospitals named.

KING'S COLLEGE.—As a general rule, excisions of the knee are performed here in cases where the limb would otherwise have been amputated; but it is believed that some exceptions have been made to this rule—in cases where prolonged expectant treatment might have led to an ultimate cure of ankylosis. In the great majority of cases marked as successful, the soundness of the bony union after excision has been verified.

ST. BARTHOLOMEW'S.—The operation is sometimes (but rarely) performed as a substitute for amputation—more commonly in order to cut short the disease, which may be likely to last an indefinite time, and then to have a useless limb. It is very seldom resorted to in

acute disease immediately threatening the patient's life. It is regarded as a favourable operation in cases of vicious ankylosis. It is scarcely ever performed after the age of thirty-five.

GUY'S.—The operation is only practised by some members of the staff, and is used chiefly as an operation of expediency in cases which might possibly, after years of waiting, be brought to a more or less successful issue. Sometimes it is undertaken as an exploratory operation, to be followed afterwards by amputation if necessary. It is regarded as almost free from danger, all the cases being treated on the strict antiseptic system.

ST. GEORGE'S.—The operation has been, from accidental causes, very rarely practised during the time under review. It is used as a substitute for amputation in chronic affection of the bones, rather than as an operation of expediency.

MANCHESTER.—At this hospital the operation appears to be used chiefly as a substitute for the expectant treatment. The most favourable cases are those in which no suppurative exists, as in chronic rheumatic arthritis and in vicious ankylosis; next, degeneration of the synovial membrane; next, disease of the cartilages; then affections of the bone; and, least of all, those of disease of the bones, complicated with sinuses. Incision and drainage of joints has much limited the field for excision at this hospital, many cases being by such measures brought to useful ankylosis.

LEEDS.—Much the same observations apply to this hospital. Here also the incision and drainage of joints has been found very successful. Still, excision is freely resorted to in patients free from constitutional disease, young, and not so deeply affected as to necessitate the removal of the growing epiphyseal cartilages.

LIVERPOOL.—The operation seems rarely practised here, and is looked upon with little favour. Rest and extension, with incision and drainage if necessary, are believed able to cure such cases as are curable by excision.

DUBLIN.—The operation is not often practised in the hospitals of Dublin, and has never, as far as is known, been done in private. When used, it seems chiefly to be as a substitute for prolonged expectancy.

Now, how does this matter stand at our great schools of surgery? I propose here to give you a very short and succinct statement of the numbers of patients operated on by excision of the knee at given ages in the following hospitals: King's College, St. Bartholomew's, Guy's, St. George's, and St. Thomas's, Manchester, and Leeds. The ample experience of the Addenbrooke Hospital is contained in the volumes of the "Medico-Chirurgical Transactions," and in papers to which I now need not more than refer. I have also received general statements as to the practice pursued in Liverpool and Dublin, from surgeons of eminence in those cities, but no numerical lists. I shall not go into foreign practice. My impression is, that at Paris, and in France generally, the operation is little practised, from causes that I have already hinted at; and that in Germany, though more extensively employed, it is not a favourite, nor a very successful operation. Possibly things may change if the antiseptic system improves the safety of German hospitals for operative purposes in the future, as it has done in the past. But as yet I prefer to speak of hospitals where the surgeon can operate undeterred by the dread of those diseases commonly (but, as I think, most unjustly) called *hospital diseases*; and wherein, I believe, recovery occurs in about the same proportion of cases as in private houses. In America also the operation, if I have been correctly informed, is not in very common use.

Table A. may be taken as a fair specimen of English hospital practice; and it shows that the operation of excision is extensively used in all three classes of cases; but that the tendency of surgeons in late years has been more to bring the operation into use as one of expediency, or for the purpose of superseding the expectant treatment, than as one of urgency, or as a substitute for amputation. Yet you will observe the very gratifying impunity to life with which the operation has been performed in every one of these hospitals.

There seems no question that the mortality of all surgical operations has of late years greatly diminished. In amputation this has been the case to a very remarkable extent, as the writings of Mr. Callender and others show. The same appears the case also with excision of the knee. Mr. Bryant,⁶ writing in 1876, speaks of excisions as being "seven times as fatal as amputation in young life," meaning below the age of twenty; and says that the operation is too dangerous to be justifiable in childhood. Yet the remarkable fact is on record in the Guy's Hospital Reports, that during the five years ending 1878, eighty-nine excisions of the knee had been performed with only six deaths, and in the two last of these years, during which thirty-seven excisions had been performed, there were no deaths whatever. The explanation of the seeming discrepancy no doubt is, that Mr. Bryant's estimate of the mortality is taken from the experience of former years, while the list in question is formed in a great measure from the practice of one of the surgeons (Mr. Howse) following the antiseptic method in his treatment of the

wound.⁷ Almost equally good results, however, have been obtained without any antiseptic treatment by surgeons who are careful to dress their cases themselves, and to leave the parts long undisturbed. Thus my friend Mr. Gant informs me that of the twenty-five cases in which he has excised the knee, many of whom are adults, only two have died, and one of these deaths was from tetanus, an affection which has no known connexion with the method of dressing the wound. In none of these cases were any antiseptic precautions adopted either in the operation or after treatment. The patients were taken chiefly from the poor of the metropolis, and treated in one of the densest parts of the city in the Royal Free Hospital.

If this improvement in the mortality is found to be permanent it would extend the domain of excision, as against amputation, to the preservation of many limbs, and to the great benefit of the community. But if this is the case, concurrently must proceed another change, which with equal benefit to humanity will limit the application of excision in the one direction as much as it is extended in the other. I mean the change which will apply the method of incision and drainage, or incision and cauterisation, or incision and scooping, to many of the cases now claimed by excision.

In both directions—both where excision is pushed within the domain of amputation, and where milder and less radical measures are substituted for excision, the great idea of Fergusson is carried out—the preservation of the limb and its functions as far as is consistent with the eradication of the disease, which is what he meant by conservative surgery. Even when we set aside his work we are really only further honouring the master.

Speaking from my own experience of the operation, which I may say in passing is not small, I should say that in cases such as are usually reported strumous, where the bones are only superficially ulcerated, in cases of degeneration of the synovial membrane, in cases of limited inflammation tending to necrosis, in cases of abscess in the bone not extending too far from the joint, and in selected cases of rheumatoid arthritis, the operation may be tried in healthy subjects with fair prospect of success, and in childhood especially, without much detriment to the prospect of success in consecutive amputation, should that prove necessary. And as to the utility of the limb, when the process of union goes on rapidly, the limb is usually very strong, good, and useful, even if it be considerably shortened when the patient grows up.

Do not let us deceive ourselves in this matter. Since surgeons still seem to believe that the success of excision at its best is not much better than that of amputation. With no wish to speak disrespectfully of those who may in other departments of surgery have seen far more, and done far more than I have, I cannot but say that this opinion proves that they can have seen little of excision of the knee. It is said that individual successful cases prove little. This doctrine I utterly repudiate. They show precisely what we want shown—viz., what is the best that the operation has to promise if successful. I had the good luck the other day to see a man in whom nineteen years ago I excised the knee for very extensive disease, accompanied by imperfect ankylosis. He was then a child, and it was necessary to remove the whole of both epiphyses. The limb is now shortened seven inches; yet it is so serviceable that he had walked thirty miles in the day a few days before he saw me, without excessive fatigue.

But in what cases we ought to counsel our patients to incur the risk of excision is hard to define. I hope and believe that as the danger of other surgical operations is diminishing under improved methods of treatment, so is the danger of this also, and that the limit of age may be extended, and possibly the operation may be found applicable in future to more acute stages of disease than has been the case in the past.

It is the great length of time which is often required for the natural cure of these affections, when they have been allowed to reach a high degree, and the extreme uncertainty of the result when tested by the stringent conditions of manual labour or service of any kind, that causes the relative frequency of operations for diseased joints in hospital, as compared with private practice. But there is also another view of the matter. Allowing that ultimately, after a long period, ankylosis can be obtained, and the

joint disease be completely cured, is it at no expense to the general health that this has been done? Has the patient's expectation of life been in no respect damaged by months or perhaps years of confinement and inactivity? I think we are fairly entitled to argue that the patients would have had a better chance of reaching a ripe old age had a well-planned surgical operation restored them early to fresh air and the invigorating influences of active life and occupation. For all which reasons it seems to me that the timely excision of the knee is an operation well worth contemplating in cases where the natural cure drags on slowly.

Let me again beg you to observe that these observations apply to cases in which the disease has already reached an advanced stage. We see such cases only too often. A better and more rational system of treating such affections in their early stage would much diminish the proportion of grave maladies of the joints, and render both excision and amputation far more rare in hospital practice.

If this may be accepted as a fair summary of the most recent experience on the subject of excision of the knee, it might be expressed in the following propositions, which I submit to your judgment:—

1. Excision of the knee is one of the indispensable resources of surgery, and is useful in all three classes of cases—viz., in those where, otherwise, amputation would be included; in those where the expectant treatment might succeed, but is dubious, and in cases of vicious ankylosis.

2. As a substitute for amputation it is indicated in early life, and non-tuberculous subjects, in cases of limited caries of the bones, of degeneration of the synovial membrane, and under some conditions of necrosis of the articular surfaces, possibly also of abscess in the ends of the bones.

3. As a substitute for the expectant treatment, it seems to be justifiable, and is extensively used in cases where the patient's circumstances and the slow progress of the case render the surgeon hopeless or very doubtful of recovery with sound ankylosis.

4. It is also frequently used, and is very successful, in cases of vicious or deformed ankylosis.

5. Attempts have been made to limit the place of excision by opening the joint and drainage, and by some other partial methods. These attempts have been fairly successful, especially in cases where the affection is rather of the synovial membrane than of the bones, and they deserve more extensive trial than they seem as yet to have obtained.

6. At the same time the mortality from excision of the knee seems of late years to have been so greatly diminished that, as was fairly hoped, the limit of age which it has been found necessary hitherto to observe may be extended, and that it may be judged prudent to apply the operation to the treatment of the more chronic affections of later life, such as chronic rheumatic arthritis, more extensively than has been done up to the present time.

The figures (Table B) I have quoted show that excision of the hip is extensively practised and is fairly successful, although as to the precise amount of success obtained I fear our hospital records do not yield any trustworthy information, for the definite result of this excision is frequently not ascertained till a period at which the patient has passed out of observation. No doubt many of the cases entered as "recovered" had open sinuses, and were really uncured when the patients left the hospital.

In this excision, even more than in that of the knee, the question between operative treatment and the spontaneous cure is important, and is not very easy to settle. In this case also, even more than in that, the difference between hospital and private patients is conspicuous. Hip disease is anything but uncommon in the children of the wealthier classes. Yet excision of the hip, though not unknown, is very rare, and in the cases in which it is practised in private, it is probably more an operation of expediency than of urgency. Here again the question between the relative value of the cure by spontaneous ankylosis, and that obtained by excision is one of very great importance. My own opinion is strong, that the limb after excision, however successful, is very rarely indeed as useful as it is even after the average cure by ankylosis. Besides which, by appropriate surgical means, and especially by the careful maintenance of extension in the natural position of the limb, a cure can be in most cases obtained which is far superior to that which I have denominated "the average cure." If care is taken from the first to keep the head of the bone in the acetabulum, but not in painful contact with the surface of that cavity, and the limbs at the proper angle

⁷ In the Manchester Royal Infirmary also, where the antiseptic treatment is equally followed, there is only one death out of twenty-four operations.

with the pelvis, ankylosis can usually be obtained without any of that excessive shortening and malposition which are generally the termination of the natural cure.

TABLE B.—Particulars and Results of Excision of the Hip at the undermentioned Hospitals, in the five years ending 1878.

Hospital.	No. of Cases.	Limit of Age.	Result.			General Observations.
			Died.	Failed.	Successful.	
King's Coll.	16	4 to 40	3	5?	8	In 5, sinuses were still open when they left the hospital. The patients, as a rule, were much relieved by the operation. A patient aged 40 died; one aged 39 recovered. The information as to completeness of cure is defective.
St. Barthol.	6	5 to 20	1	—	5?	
Guy's	64	—	8	8	48	
St. George's	2	—	1	—	1	
St. Thomas's	76	1 over 50	17	34	25	Many of those classed as "failed" very probably ultimately recovered with useful limbs; but there is no distinct information. The patient aged 51 died.
Manchester	14	—	3	2	9	In the 2 classed as "failed" amputation was performed; in one successfully; the other is one of the 3 who died.
Leeds	37	1 age 48	8	8	21	The 8 cases of failure consist of 3 in whom amputation was performed, and 5 classed as "not improved." I believe the results in the 3 who suffered amputation are not noted. The patient aged 40 died.
	215	—	41	57	117	

Appendix to TABLE B.

KING'S COLLEGE.—All the operations here seem to have been performed for confirmed caries.

ST. BARTHOLOMEW'S.—This operation finds little favour as a rule, and is seldom resorted to as long as there appears a possibility of recovery by rest, &c. It is resorted to in cases of long-continued suppuration likely to end fatally.

GUY'S.—I am under the impression that in this hospital the cases of excision of the hip are chiefly in the practice of one or two of the surgeons, and that the operation is used at an earlier stage.

ST. GEORGE'S.—Here the operation is a very rare one, being reserved for cases obviously incurable otherwise.

ST. THOMAS'S.—Here, I believe, the operation is practised much more freely, and in earlier conditions of disease.

MANCHESTER.—Here, again, the operation seems to be regarded with little favour, and is used chiefly as a kind of adjunct to the natural cure—i. e., to afford a free opening, and remove great part of the diseased bone, even when the whole disease cannot be extirpated. Consequently the convalescence is very long. Incision and drainage of the joint is well thought of.

LEEDS.—At this hospital the operation has been tried in various ways; at one time, as a last resort, in cases where death was otherwise inevitable; again at an earlier stage of the disease; and again in contrast to other plans of treatment—i. e., expectancy, early excision, late excision, and amputation in advanced cases are being contrasted. Hitherto the experience of the operation has not been favourable.

LIVERPOOL.—The excision of the hip is very rarely practised.

DUBLIN.—In Dublin also the operation is little used. One surgeon—Dr. Barton—reports seven cases, with good results on the whole. Another professor—Bennett—is endeavouring to apply it to the cure of cases in the adult. It seems only employed in cases otherwise hopeless.

Some surgeons seem to think that it is a very common thing to find sequestra in the hip-joint, and I must allow that I have found them repeatedly in performing excision; but I think these were neglected cases, and that if due care be taken of the patient from the beginning of suppuration such extensive disease of the bone will rarely happen. I judge this from the experience of the Hospital for Hip Disease, where it is very rare for sequestra to be formed, or for the suppuration to go on unchecked till excision becomes necessary. It is in the experience of this hospital that we can read, in the plainest possible characters, what ought to be the treatment of disease of the hip-joint in childhood. The treatment pursued at our general hospitals usually fails, because the patient cannot be kept long enough under rest and constant supervision. Rest alone is not enough; a most careful attention to the position of the limb, vigilant watch

for any symptom of the formation of abscess, early opening of any collection which may have formed, and watchful management, are essential to cure; and all this may have to be carried on for many years.

Under what circumstances, then, does excision become necessary, and under what circumstances is it justifiable, though possibly not absolutely necessary?

Let me preface my answer to this question by giving you in a few words the experience of the hospital to which I have just referred; the only one, as far as I know, in this country where the ordinary disease of the hip in childhood is systematically treated from beginning to end. This institution receives cases of hip disease occurring in poor children, who have, therefore, been usually neglected, and in many of whom suppuration either exists or is imminent. Not a few are in an incurable condition when admitted, and it is this class almost exclusively that furnishes the fatal cases. No surgical operations are performed in the hospital beyond opening abscesses. The treatment consists in rest, with careful extension; and the most sedulous attention is given to see that the limb is brought into and kept in the natural position. When this has been effected by properly directed extension, and when all abscesses are in a perfectly quiescent state, the child is allowed to get up, wearing a Thomas's splint. No limit is fixed to the stay of a patient in the hospital, where children are often kept for several years.

Under this treatment the mortality of cases received in an early or curable condition is very small, though a good many of those received in an advanced stage of disease die, chiefly from amyloid degeneration and from tubercular meningitis. Not more than about 4 per cent. are transferred to the neighbouring Hospital for Sick Children for excision. In hardly any cases are sequestra seen to come away from the openings of the abscesses, and the resulting recoveries are with limbs which are straight, strong, and but little shortened, so that the patient can walk freely with the aid of a high boot, and in the best cases with little limping, limbs which contrast very remarkably with the results of excision. The patients are kept under observation for a long time after their discharge, so that the permanence of the recovery can be verified.

The question of the justifiability in the ordinary disease of childhood must depend in a great measure on the opportunities which the patient has of obtaining some such treatment as the above. Morbus coxarius is rarely incurable if taken early. I further believe that the constitutional mischief which so often ends the life of patients with advanced hip disease is usually not the cause, but the consequence, of that disease, and that if we would remove the cause by curing the disease early, there would rarely be any amyloid or tubercular degeneration of the viscera. If this be true, what follows? Why, that if we would or could treat hip disease early, before abscess has formed, by continuous and prolonged rest with extension, the great majority of the cases would recover without any abscess.

There are other and rarer conditions of the hip-joint, such as acute inflammation attacking the epiphyseal cartilage, which have been treated successfully by excision; and there are cases, though at present very few, in which the joint has been successfully excised at a later age for the cure of rheumatoid arthritis.

I would sum up what I have to say about excision of the hip in a very few words, by the simple statement that it ought to be very rarely indeed required, if the disease were treated properly at its commencement. In cases seen at an advanced stage of the disease, it is chiefly when sequestra exist that the operation is necessary, though it may be advisable as a means of shortening the treatment in other cases also, when the patient cannot obtain the prolonged surgical care which is essential to natural recovery.

I have thus tried to give you a general view of the results hitherto obtained from the great revolution initiated by Fergusson in the treatment of diseases of the joints of the lower limbs. The results have not been small, either in the point of view of operative surgery or in that of the preservation of limbs. Operations which used to be considered very fatal here, and which in some foreign countries were given up on account of their mortality, are performed in our hospitals with great success, and indeed are looked on by some surgeons as almost devoid of danger. Many limbs, which thirty years ago would most surely have been amputated, are now preserved in a very useful state; and the domain of conservative surgery has been pushed much further than Fergusson

had done, so that joints are frequently saved altogether which he would have excised. But, after all, much remains to be done. Just consider that I have produced a list showing that, at seven hospitals, two hundred and fifteen excisions of the hip and two hundred and twenty-five of the knee had been performed in five years; whilst probably the total number of such operations performed in private practice in the whole country during the period was less than a dozen; and yet every one would agree that the treatment of these diseases is far more successful in private than in public. What a comment is this on the boasts which we constantly hear of our hospital system, by which we are told that the poor get the same surgical skill for nothing which the rich purchase with large sums! The treatment of chronic diseases in the poor cannot be in any degree satisfactory till such diseases are treated at home; and that the most urgent question connected with our hospital system is how we can rid it of the incubus of the overgrown out-patient departments, which are no necessary part of the system, nor formed any part of it originally, but sprang up gradually as a substitute for the shamefully inefficient medical attendance then furnished to paupers. In order to this end, some efficient system of home attendance must be provided, and for this a scheme has lately been devised, which I hope will be discussed carefully and dispassionately by this Association. But whatever may be the fate of this particular scheme, the general result must be compassed in some way or other if the treatment of these affections is to be in any way really satisfactory.

I have spoken of some of the services which our eminent contemporary rendered to practical surgery and to the surgical professions. Time would fail me even to enumerate the rest, nor is it necessary. His presence has passed away from us too recently for them to have been forgotten even in this crowded time. One more remark may be allowed me. If we are now reaping the fruits of Fergusson's proposals to an extent which he himself hardly contemplated, it is because operations which, when he first ventured upon them, were extremely hazardous,⁸ are now found to be comparatively free from danger. I would claim a share in this happy revolution in practice for many unnamed workers in our hospitals and private practice, and I would remind my hearers that the mortality of surgical operations has been steadily diminishing in the practice of those who do not as well as those who do accept Mr. Lister's teachings. For my own part, I claim to be *nullius in verba magistri*, and I have freely criticised the facts and arguments adduced in favour of the germ theory and the antiseptic system. But let nothing that I have said be taken as implying that I am ignorant of the immense advance in practical surgery which that system has originated, or that I am unwilling to confess how great are the obligations of all surgeons to Fergusson's successor at King's College, Mr. Lister. It is not necessary to believe in all Mr. Lister's theoretical views, in order to admit that no one has had more splendid success in the great general object which he proposed to himself—the diminution of the mortality of surgical operations and injuries—and that no one has better deserved the abundant honours bestowed on him from every quarter, and now I am glad to see from this university also. When that great career has become a thing of the past, and some worthier orator shall discourse on the services which Mr. Lister has rendered to the world, he will be able to appreciate the value both of the theory and the practice. The time has not come, I think, to pass any judgment on the former; but I regard it as my duty, as I am sure it is my very great pleasure, to take every opportunity of saying that the practice which Mr. Lister has introduced has been eminently successful, and has been the chief cause of the great advance which operative surgery has made in recent years. It is the enviable privilege of King's College Hospital to have secured the services of two successive Professors of Clinical Surgery who have done more to advance that highest of all the developments of our art than any other men of this generation. Let us mingle with our reverence for the memory of the dead our gratitude and our best wishes for the living.

⁸ The mortality in Fergusson's hands was fifteen in forty down to the time when he delivered his Lectures on the Progress of Anatomy and Surgery (see p. 118 of that work).

THE Municipal Council of Paris has voted the sum of 1000 francs to the Medico-Psychological Society, for the erection of a statue to Pinel.

THE EPIDEMIC OF FEVER IN SWINEFORD UNION (COUNTY MAYO).

By C. J. NIXON, M.B., F.C.P., &c.,

PHYSICIAN TO THE MATER MISERICORDIE HOSPITAL, DUBLIN, AND
PHYSICIAN IN ORDINARY TO THE LORD LIEUTENANT.

THE Swineford Union, towards which so much attention has been recently directed, is situated at the north-east of Mayo, and is comprised chiefly within the baronies of Gallen and Costello. It is rather highly situated, has a population of about 54,000, an area of some 151,000 statute acres, and is divided into five dispensary districts—viz., Foxford, Kilkelly, Kiltamagh, Lowpark, and Swineford. The climate of Mayo generally, from which that of Swineford does not differ, is remarkably damp, rainy, and cold. This is due to its high mountains, large areas of bog, and its proximity to the sea. The rural districts of the union consist mainly of reclaimed moor or mountain, and wide plains of bog, thickly interspersed in parts with rocky islands. There is, however, nothing in the climate or in the soil which can be said to give rise to endemic disease, and the average death-rate of the union presents nothing exceptional, being as low as 14·8 per 1000 for the past ten years.

Within the limits of a short paper it would be impossible, as it is indeed unnecessary, to deal with points of interest in individual cases of fever. I shall merely direct attention, firstly, to the types of disease met with during the epidemic; secondly, to the constant phenomena or peculiarities which existed in the prevailing fever—viz., typhus; and thirdly, I shall briefly discuss the probable etiology of the latter.

TYPES OF DISEASE MET WITH DURING THE EPIDEMIC.

The chief types of disease met with during the epidemic were simple continued and enteric fevers, diarrhoea and dysentery, and typhus.

The chief features of interest in connexion with the enteric cases were the almost uniform occurrence of epistaxis, the frequency of melæna, and the great emaciation of the patients. One presented the conditions described by Allbutt as a rare sequela of enteric fever—extreme marasmus, sunken eyes, a dry harsh skin, and a state of complete apathy. In almost all the enteric cases rachialgia, severe arthritic, osteal, and abdominal pains were complained of—the three former evidently of a neuralgic character. These, with the usual relapses of enteric fever, have led in some instances to the mistaken diagnosis of relapsing fever. Throughout the union under my own observation there were nineteen cases of enteric fever.

Closely allied to the enteric cases, both as to causation and symptoms, were those of diarrhoea and dysentery. In each it was the rule for all the members of a family to suffer from one or other of these affections, and in all an exciting cause could be satisfactorily traced. A water-supply from a well into which sewage matter of every nature freely passed, collections of all kinds of filth poisoning the air of the huts in which the people live, and a dietary consisting almost exclusively of Indian meal, badly cooked and often used without milk, are, I think, factors quite adequate to produce an outbreak of disease. During my visit to the union I examined 21 cases of diarrhoea and dysentery. The effects of an altered dietary were shown remarkably in the diminution of the number of such cases and in the improvement of those who had been affected. Oatmeal was given uniformly with Indian meal; whilst to those who were ill, flour, milk, rice, arrowroot, and Liebig's extract of beef were supplied. The instructions given by the Local Government Board to supply liberally whatever was required by the sick were fully complied with, and at the time I left the union no fresh cases of diarrhoea and dysentery were reported, and all who had been under treatment were convalescent.

Typhus fever.—Some idea of the extent and severity of the epidemic of typhus fever may be realised from the return of cases admitted to Swineford Fever Hospital from the different dispensary districts and from the workhouse from the 1st March, 1880, when the epidemic may be said to have first manifested itself, up to the 31st July.

Admissions from Foxford Dispensary District	13
" Kilkelly " " "	1
" Kiltamagh " " "	2
" Lowpark " " "	33
" Swineford " " "	39
" Workhouse " " "	8
Total admissions...	96
Typhus ...	84
Enteric or simple continued fever ...	12
Deaths from enteric or simple continued fever	0
Deaths from typhus ...	13

Out of the 13 fatal cases 6 were over fifty years of age. In the entire union, from June 1st, 1880, to July 31st (I select this period as the information which I have obtained relating to it is, I consider, the most accurate), there were 179 cases of fever reported. Out of these, 140 were cases of typhus, of which 19 died, showing a mortality of about 13·5 per cent.

The influence of age on the rate of mortality is partly shown by the following table:—

Deaths from ten to twenty years ...	5
" twenty to thirty years ...	3
" thirty to forty years ...	4
" fifty years and upwards ...	7

I have not been able to procure a sufficiently precise account of the ages of all the persons affected during the epidemic, so I cannot as yet say whether or not the death-rate has been peculiarly high or low at certain ages. The great proportion of cases occurred between ten and twenty years.

PHENOMENA PREVAILING IN THE EXISTING DISEASE.

I shall now briefly direct attention to the symptoms which were more or less constant in their occurrence in the cases of typhus under observation in the hospital, and to those which were anomalous. I shall not allude to the symptoms usually met with in the disease.

Physiognomy.—General absence, except in the aged, of flushed face and congested conjunctivæ.

Eruption.—In 10 per cent. of the cases no eruption could be observed. In one it was distinctly raised through the entire course of the disease, and accompanied by miliary vesicles, which appeared upon the trunk and extremities. The skin in many cases was so dark and bronzed that the eruption was with difficulty discerned. This discoloration (*Vagantenfärbung*) was evidently the result of exposure and want of cleanliness. In two cases, both fatal, large ecchymoses made their appearance upon the back and legs, and after death large black stains upon the trunk were observable. There were, however, no external hæmorrhages in either case. In no case were there signs of scorbutus. As is usual where crisis takes place by sweating, sudamina upon the chest and abdomen were developed. The odour from the skin was most pungent in some cases, and, as a rule, *sui generis*. I believe that from the nature of the food used by the people, and the insufficient attention to personal cleanliness, a peculiar odour from the body is generated quite independently of disease.

Temperature.—Very high temperatures, even in the bad cases, were the exception, the highest temperature recorded amongst all the cases in hospital being 105·2° F.

Circulatory system.—Pulse very markedly and constantly irregular in the serious cases. Heart-sounds of the character usually met with in adynamic typhus.

Digestive system.—One of the most constant features of the epidemic was the condition of the tongue. It was coated with a long, milk-white fur, sometimes dotted at the sides with enlarged red papillæ, and in adults towards the later periods of the disease becoming dry and brown, in a well-defined band in the centre. In children the creamy whiteness continued throughout the fever, without showing any tendency to dryness. Save this, there were no special phenomena referable either to the digestive or urinary system that call for observation. In only two cases were diarrhoea and meteorism present.

Respiratory system.—In old people a marked tendency to death from suffocative catarrh existed. Three patients had well-defined cerebral breathing.

Nervous system.—In a small proportion of cases delirium—typhomania—existed. Four adults died in profound coma. In one case, that of a boy aged twelve, very marked cerebrospinal symptoms manifested themselves—cephalalgia, with constant screaming, cerebral vomiting, and retraction of the head. Under active treatment—leeching the temples,

blistering the nape of the neck, and the frequent administration of full doses of bromide of potassium and antimony—the symptoms subsided and the patient is now convalescing.

Nutrition.—In the great majority of cases emaciation was a prominent feature; this was specially observable in children.

Duration.—The ordinary duration of the fever was fourteen days, but it was prolonged in four cases to thirty-one days. The usual forms of crises were met with, that by sleep being the most common.

Relapses.—Four cases in which a relapse of fever occurred have been noted. In two, a pyrexial attack, lasting some four or five days, seized the patients—in one instance a week, in the other a fortnight, after convalescence from typhus. Both were caused by a surfeit. A third case of relapse of a nature similar to the preceding was traceable to premature and excessive fatigue. In the fourth case, an adult patient had, it is stated, well-marked maculated typhus, from which he recovered and was discharged from hospital. Three weeks afterwards I examined this patient at his own house, where I found him lying. He had at the time the symptoms of typhus in a marked degree, except that there was no eruption observable. The attack lasted for twelve or thirteen days, terminating in recovery.

ETIOLOGY.

I have purposely left the question of the causation of the epidemic for the last, as it is naturally the point upon which information is most desired, not alone for present, but for future guidance. During this and the two preceding years, there has been a steady increase in the number of cases of fever in the Swineford Union, chiefly typhus in type. The Registrar-General's returns show, that whilst in 1875-76-77 the number of deaths from fever throughout the union reached 13, 18, and 16 respectively, in 1878-79 the numbers of deaths were 36 and 48; whilst in this year up to July 31st 37 deaths from fever have been registered, as contrasted with 28 for the same period of last year. Though this return does not indicate any very considerable increase in the extent or virulence of the prevailing fever, it is important to note that during 1879 an epidemic of typhus fever of considerable extent occurred in the union, especially in one of its districts. The medical officer of the district referred to, had under observation nearly 300 cases of fever during 1879, or in the enormous proportion of 1 in 40 of the population, under his charge. During this year the number of cases of fever has been remarkably small, whilst in most of the other districts of the union there has been a striking increase.

I do not consider that this is the place to enter into the consideration of the political or social causes which combine to keep the people of this union in a state of chronic destitution. The union is, I believe, one of the poorest, in Ireland, as a reference to its rates and valuation will show. A moderate increase in the normal state of poverty of the people produces a crisis like that through which they have just passed. A fair estimate of the extent of the destitution which prevailed may be shown from the facts that during the distribution of the charitable funds, relief was afforded to 43,000 persons out of a gross population of 54,000, and that in one parish of the union containing over 1600 families only 100 are above a £4 valuation. That this state of chronic destitution exercises some influence in converting endemic typhus into an epidemic can hardly be doubted. I have already, in a published report, referred to insufficiency of food, or food of an unvarying nature, such as Indian meal, cooked always in the one way, as *predisposing* to the spread of typhus fever, by lessening the resistance-power of the individual to infection. But there cannot, I conceive, be the least doubt of the *exciting* causes of the epidemic in Swineford Union being contagion, and, in the few instances where this could not be traced, overcrowding, favoured by bad ventilation and absence of cleanliness, personal and otherwise.

That the want of the ordinary necessities of life must have been a fruitful source in the propagation of typhus may be shown by taking one circumstance into consideration—viz., want of clothing. In times of distress clothing of all kinds is pawned to procure food. It is then quite usual for a family of five or six persons to sleep in the one bed, owing to the dearth of bedclothes. The habit of the poor people is not to send at once for the dispensary medical officer in cases of illness, except in those of a painful nature. The result is that when typhus attacks an indi-

vidual in a short time most or all of the members are struck down. Amongst the cases brought under my personal observation I have only noted three or four instances where this rule did not obtain; in some cases seven, and usually four or five, members of a family being attacked. I need not point out how greatly this intensifies their distress.

The tendency to the spread of typhus is, moreover, greatly aggravated by the dislike of the people generally to go to hospital, whilst there is no possible means afforded in their single-roomed cabins for even an approach to any measure of isolation. In many of the huts in the rural districts the amount of cubic space allotted to each individual is considerably under 200 cubic feet, whilst the only means for ventilation afforded is by the chimney, if such exist, and the chinks in the door.

The bad sanitary conditions of the rural districts of the union, and the effect they exercise upon the generation and propagation of disease, have been already adverted to. The wretched condition of the people in this respect is not the growth of this year, and, where everything is so defective, I quite admit that sanitary prescriptions seem more or less illusory. But it must be borne in mind that the extreme poverty of the people renders the carrying out, under present circumstances, of many of the most important provisions of the Public Health (Ireland) Act impracticable. Nor could they, if enforced, correct habits more widespread than even the cause which produced them. Any suggestion which I ventured to make in reference to sanitary improvements, or otherwise, were intended merely as palliatives; they were called for in the presence of an epidemic, and I think I may say that their adoption, as far as was practicable, and the facilities of every kind that were afforded for dealing generally with the epidemic of fever, have helped to produce the desired effect.

That some vigorous measures are required to obviate this tendency to recurrent periods of distress and their attendant epidemics must, I think, be obvious to everyone. The public works which are being undertaken will, doubtless, exercise for a time a most beneficial influence in this direction.

I cannot help doubting if those who speak of rooting the people in the soil—people “too thick upon the ground already”—are personally cognisant of the social misery and helplessness of the inhabitants of the rural districts of that part of the west of Ireland which I visited during my recent inspection.

A PUZZLING CASE OF CANCER OF THE LUNG.

BY SURGEON-MAJOR W. CURRAN, A.M.D.

A DELICATE, scrofulous-looking lad of ten was struck on the left side, just outside and below the nipple, on or about the 24th of April, 1879, by the shaft of a grocer's truck, which he was trying to steady from the front while other children pressed it downwards from behind. The blow caused some pain, which was, however, referred at the time to the effects of the strain he sustained on being forcibly raised upwards, and when brought before me, on the first day of the following month, for the swelling that ensued, I regarded the latter as nothing more than an ordinary strumous abscess. I had it poulticed and fomented accordingly; the boy was ordered to be kept quiet in bed, and to take beef-tea and syrup of iron. His temperature was 104° on this date, and the general appearance indicated debility and malaise. The details are compressed to the utmost, to save space; and I refrain, for the same reason, from all collateral comment or comparison.

Finding that the swelling continued to increase, while there was also some fever, I punctured it with the smallest trocar available here, on the 29th of May, and drew from it a few drachms of pure arterial blood. I then informed the parents of the gravity of the case, and added that it might be necessary for me to open the swelling and secure the vessel—assumed at that time, and indeed subsequently, to be one of the intercostals—but they did not relish this proposal, and I did not consider myself justified in enforcing

compliance with it, even if I had the right or power of doing so. I waited accordingly till the Deputy-Surgeon-General of the district came round on his visitation, and then brought the matter to his notice. He appeared to think with me, that one of the vessels of the side, external to the chest, had given way under the strain described above, and the result of our consultations was that “we determined to watch the progress of this swelling, and interfere as soon as it appeared that it was increasing in size, or that its contents were undergoing a degenerative transformation.” The temperature usually stood at 101·3° about this time, while the pulse ran at times up to 130, and he was allowed beef-extract two pots, and port wine two ounces daily.

Kindly aided by Dr. Manifold of Liverpool, I aspirated this tumour on June 14th, and drew from it three ounces of clear, frothy blood. There could be no doubt on this point, for I examined the blood under a powerful lens, and found it to partake of all the usual characteristics of that fluid. He bore the procedure, as well as the chloroform, well; but the gravity of the prognosis was, we both thought, considerably enhanced by the results of our interposition, and my colleague counselled abstinence and gentle uniform pressure to the side. This, however, could not be carried out, owing to the irritability and noisy protests of the lad himself, and meantime, the pulse having run up to 140 while the temperature remained steady at 103·3°, I examined the chest, and found some evidence in it of a localised attack of subacute pneumonia of the left apex posteriorly. No breathing could be detected lower down on either side, and the percussion note was dull in the same quarters. Respiration was, in short, mainly carried on through the right lung, and the heart-sounds were found to be much more perceptible on the right side than they were on the left. There were some threatenings of bedsores; the temperature had fallen to 101·3°, while the pulse varied from day to day, according as he slept or otherwise, and the case looked now more unpromising than ever.

I aspirated the tumour again on the 23rd of June with Dr. Cavanagh of Liverpool, and drew off about three ounces of fluid watery blood. This coagulated after the usual fashion, but presented an excess of white corpuscles, as compared with the former specimens under the microscope, and we finished the proceeding by injecting about half an ounce of perchloride of iron into what we both regarded at this time as a large hæmatocele or collection of bloody fluid. The pulse was 130 the following morning, and the temperature 103°, and I again wrapped the swelling in sheet lead, over which I placed layers of cotton-wool, which were themselves kept *in situ* by a kind of binder or corset we extemporised for the purpose. But whether due to the iron injection or not I could not say; it became so tense and painful as to necessitate the removal of the compress, and the heart was this day found to be clearly displaced to the right. The breathing was found to be quite puerile on the right side, while though all but suppressed in front on the left its character had improved towards the apex posteriorly, and the tension of the swelling was relieved by occasional watery exudations. The temperature remained steadily about this period at 100°, while the pulse fluctuated between 130 and 150; the respiration sometimes reached 40. He complained of a pain in the neck, which was probably due to the increasing size of the tumour, and the skin over the latter was so thin and discoloured as to threaten rupture at any moment.

Fancying that something more might be done for him, or rather reproaching myself for not having interfered more actively before, I asked two friends from the town to see him with me on the 2nd of August, and they, after carefully measuring the growth and examining the lad himself generally, advised me to leave it and him alone. They came to this conclusion chiefly, as I understood, on the grounds that the boy could not safely bear much rough handling, and that the loss of so much blood might prove fatal on the spot. Moreover, nature appeared inclined to open an issue for its more gradual escape, and as regards the measurements just referred to, the left or affected side measured nineteen inches and a half, while the right measured only thirteen. The swelling itself measured loosely around its base some seventeen or eighteen inches, and it appeared on this occasion almost as large as an ordinary fetal head. Other consultations and measurements took place later on, but with the same general result, and as the opinions advanced were either not unanimous or were so tentative and dubious as scarcely to deserve that designation, I refrain from giving them in detail here,

and will only add that the case being henceforth regarded as hopeless, such measures of support and relief, local and otherwise, as were in my opinion best calculated to afford both were unsparingly applied by me. All to no purpose, however, for he lost a considerable quantity of blood from the tumour on the 10th of August, and at frequent intervals subsequently, and the left or affected side was found to measure, on that date, twenty-one inches, while the right only measured fourteen.

The feet began to swell on the 13th of August, at which time the swelling itself measured from above downwards twelve inches and a half, laterally twelve inches, and circumferentially around the base nineteen inches. The urine was free from albumen or other abnormal element, and the side generally exhibited a soft, sloughy, half-putrid appearance. A medical friend, who kindly came some distance to see him with me on the 22nd, surmised that the excrescence now communicated with, if it did not originally emanate from, the chest itself. Nay, he even hinted a suspicion of its being aneurismal; and the displacement of the heart—now of several weeks' standing,—as well as the compressed, inelastic condition of the left lung, lent, it must be allowed, some support to this view. I could not, however, accept it; the more so as the pulse, always quick and irritable, never presented a decidedly hæmorrhagic character, and there was an entire absence of abnormal vascular sound or impulse in the growth. So also was there an entire absence of hereditary taint; while the fact of the blow was obvious and recent, and everything pointed to the effects of this as the cause of his sufferings. The swelling of the feet extended, about this time, up towards the knees, and the superficial veins of the trunk, but especially so those of the left chest, became simultaneously tortuous and dilated. The vessels of the right neck throbbed much more violently than those of the left, and he could not rest long—if he may be said to rest at all—in any one position. His sufferings and irritability, all along very considerable, had ere this quite exhausted the patience of even his parents, and his weakness was now such as to lead to the belief that the end could not be long delayed.

The body gave out a sickly cadaveric odour on Sept. 5th, and his exhaustion and impatience increased apace. The tongue became dry and coated on the same day, but he would take no medicine, and as to a subcutaneous injection of morphia, or other local application, it was quite out of the question. He cried out as I approached him on the morning of the 6th that he was dying, and the general appearance did not belie this assumption. He lost about a pound and a half of bloody fluid from the surface of the tumour on the morning of the 7th, and this appeared to bring matters to a crisis, for the breathing was thenceforth gasping and difficult, and the pulse so feeble and flickering as to be almost, if not quite, imperceptible. Fortunately the sensibility had been so numbed by the bleeding as to minimise the suffering, and retaining his consciousness to the last he died "hard" about 11.45 A.M. of the same date, or within 141 days of the day on which he had sustained the injury alluded to above.

On section twenty-three hours after death the body was found to be extremely emaciated, reduced, in short, to skin and bone, and there was little or no rigor. The feet and legs were both puffy and œdematous, and the skin had sloughed over a considerable portion of the tumour towards its apex. The left or affected side measured from the ensiform cartilage in front to the spine behind, over the tumour, eighteen inches, from above downwards the length of the mass was eleven inches, and circumferentially—i.e., loosely about the base—it measured twenty inches and a half. It had a soft boggy feel, and a flabby pultaceous resistance, and its surface was pervaded by large and prominent veins.

On opening the thorax and abdomen by the usual incision, the left lung, so enlarged as to push the heart over to the right side in front of its fellow, was found to consist of a malignant mass of medullary cancer, which had eroded the bodies of the seventh, eighth, and ninth ribs, and escaped, by the entire destruction of the eighth, through the thoracic wall. A section of it, which Dr. Klein was kind enough to examine for me, "possessed a stroma of thinner and thicker trabeculæ of fibrous connective-tissue, which anastomosed into a meshwork. The meshes or alveoli of this stroma are," he adds, "filled with closely packed nucleated cells. The cell substance is very scarce, while the nucleus is irregular or spherical," and the decomposition of the specimen I sent him precluded any further or more searching examination.

Added to its continuation, which broke down under traction into a grumous and purulent-looking fluid débris, the mass weighed 4 lb. 14 oz., and the right lung was quite healthy. The muscular tissues of the heart were pale and anæmic, and the liver-texture exhibited a perceptibly amyloid reaction. There was no appearance of fat anywhere throughout the body, and the other viscera were free from taint.

Remarks.—Acknowledging with some feeling of compunction, but without any shame, my own gross, palpable, and profound misconception of the "point" of this case *ab initio*, ay, and almost *usque ad finem*, I must observe that I did not stand alone in this respect, and that this was only the third example of its kind that has come under my notice during a professional career that now exceeds twenty-six years. The other two occurred many years ago, one in a London hospital at which I happened to be a clinical clerk, and the other in a soldier at Pembroke Dock, South Wales. The former provoked a good deal of diagnostic refinement and argumentation at the time, but its precise character was, as far as I can now remember, never entirely realised; and my present case elicited at best only a dubious or hesitating adhesion to its nature on the part of one or two of those who saw it. Not so that of the soldier, which was gauged at once through the secondary glandular swellings it produced in the neck. And the other instances of cancer that I have seen during my twenty-three years' service were two of the liver, one of the parotid, and one of the testicle.

Moreover, I was prevented by the boy's waywardness and irritability from thoroughly examining him for many days, I may almost say weeks, before his death. He objected to all interference on our part, nay, indeed, cried bitterly at the mere suggestion of it, and I was afraid he might shriek his life away on the spot. Again, the blood and the blow misled me, as they did others, and we never even suspected that the external tumour was a continuation of the lung. One gentleman did, indeed, feebly hint at its being a hernia of that organ, but the objections to this were overwhelming, and the displacement of the heart was ascribed to effusion from within the chest, or to the access of blood to its cavity from without. The dulness and dilatation of the intercostal spaces were compatible with either assumption, and the persistence of respiration before and behind, lent some support to these views. So also were the anæmia and wasting his frame exhibited. And as to the so-called "cancerous cachexia," or its congener, "that peculiar sallow complexion," which is so characteristic of malignancy, they were simply conspicuous by their absence.

The only case at all resembling it that I can find in the few books at my command occurred in the hands of Dr. Leared, and is reported by that gentleman in the 21st volume of the Transactions of the Pathological Society of London, page 60. From this it would appear that a tumour, "the size of half a goose's egg, bulged from under the scapula on the right side of a man of sixty-eight. The long axis of this growth, which encroached upon the axilla, was perpendicular, and the mass extended two inches lower than the anterior line of dulness. The tumour was somewhat tender on pressure, of firm consistence, and perfectly dull on percussion. Marked dulness also existed over the lung posteriorly from its summit to a line drawn horizontally from the lower edge of the tumour to the spine. The lateral intercostal spaces beneath the tumour were in the natural state, and on section about two-thirds of the upper portion of this lung had been transformed into an encephaloid mass, which it was impossible to remove from the body without disruption. . . . The external tumour was ascertained to be composed of a continuation of this mass, into which portions of the first, second, third, and fourth ribs had been, as it were, fused;" and, except that the base was the seat of the mischief in my case, while the apex was more involved in the other, the resemblance between the two was very strong. The disease appears to have been confined in this also, as in mine, to one lung; and the amount of rib-tissue destroyed, as well as the other general results, "prove the growth to have [had] an intense power of local infection" in both.

Warrington.

THE visit of the Duke and Duchess of Connaught to the North London Hospital for Consumption, which was arranged to be made in the present month, for the purpose of laying the foundation-stone of new buildings in connexion with the institution, has been postponed until October next.

A MODIFIED INFLATER FOR THE MIDDLE EAR.

By EDGAR A. BROWNE,
SURGEON, LIVERPOOL EYE AND EAR HOSPITAL.

THE Politzer method of inflating the middle ear is attended by some inconveniences much resented by children and nervous females. Children especially are apt to bungle over the swallowing, and to suffer from the water being driven backwards into the throat or out by the lips from imperfect closure of the palatal veil. True, we can always inflate an obstinate child's ears when it cries, but we do not always want to be making children cry, and it has seemed to me that a pleasanter process might be advantageously devised.

When we expire forcibly by the mouth, the soft palate is drawn up and the passage of the air outwards by way of the nostrils is absolutely prevented. If, therefore, we conduct the expired air into the anterior nostrils by means of a tube, we shall be forcibly blowing into a closed space, and as the soft palate is drawn up the Eustachian tubes are presumably open. Such is the case. A convenient instrument is made by fitting an ivory mouth-piece to an india-rubber tube four inches long, terminating in Allen's nasal pads. The patient has simply to fit the pads to his nostrils, take the nozzle between his lips, and blow into his own nose. A little teaching is occasionally required. Some patients allow a good deal of windage between the tube and their lips; others ingeniously place the tip of their tongue over the orifice of the nozzle, and only succeed in puffing out their cheeks. Some cannot adapt Allen's pads closely to the nostrils; for them an ivory or vulcanite nozzle, with a rounded end that can be held in the nostril, is preferable. The forcible passage of the air into the tympanum has been verified many times by the diagnostic tube.

The method has the recommendation of extreme simplicity, rendering it widely applicable for home use among patients who require daily inflation. The absence of preparation robs it of half its terrors for children, who can be taught to inflate their own ears as a pastime.

Liverpool.

A Mirror

OF

HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

CHARING-CROSS HOSPITAL.

RUPTURE OF AXILLARY ARTERY DURING REDUCTION OF LUXATION OF THE HUMERUS; DIFFUSE TRAUMATIC ANEURISM; AMPUTATION AT THE SHOULDER-JOINT; DEATH; REMARKS.

(Under the care of Mr. BELLAMY.)

RUPTURE of the axillary artery associated with simple dislocation of the humerus, or occurring during the reduction, is an extremely serious accident, though, happily, rare. In one case in which dislocation of the humerus was complicated by diffuse traumatic axillary aneurism, Mr. R. Adams reduced the dislocation, and then ligatured the subclavian artery. The patient recovered. Most of the cases of rupture of axillary artery during the attempts at reduction have been in dislocation of some weeks' duration. Indeed, it is probable that the rupture of the artery is due to laceration of the adhesions formed around the displaced bone in the neighbourhood of the vessels. In the subjoined case no attempt at reduction seems to have been made for at least six weeks. In that time firm adhesions had doubtless formed. If the statement of the patient may be trusted, the rupture of the axillary occurred during the reduction. Unfortunately the

mode of reduction is not stated. When admitted into Charing-cross Hospital there was only one alternative. The man must be left to bleed to death or amputation must be performed through the shoulder-joint.

For the following notes we are indebted to Mr. Whitehead, surgical registrar:—

J. H—, aged fifty-five, dislocated his right humerus on Dec. 16th, 1879; and in the following month he went to a large metropolitan hospital, where the house-surgeon put him under an anæsthetic and attempted reduction. On Feb. 2nd one of the surgeons made further attempts, and the patient stated that he immediately became aware of a swelling in the armpit. A fortnight after this he was discharged. He had lost sensation since the time of the last attempt. Three weeks after he left the hospital a little bright blood oozed through the skin, and on July 30th he had more severe hæmorrhage, losing about a quarter of a pint of arterial blood, and then the bleeding ceased.

On admission, situated in the region of the right shoulder was a large tumour. The walls were very tense, and pulsating. The clavicle was distinct, and not involved. The pulsation was best felt at the posterior part of the axilla. The arm below was much swollen and waxy; no pulse could be felt at the wrist. At the lower part of the tumour, in the axilla, the skin was dark and sloughy, from which flowed a watery discharge. The tumour was not distinctly circumscribed at its lower margin, and was about as large as a man's head. The patient was anxious in appearance, and stated that he had been rapidly losing health since the appearance of the tumour. He had had no attacks of syncope or breathlessness, and the face was not markedly blanched. Pulse 96; respiration 18. Conjunctiva and mucous membrane pale and anæmic. He had slight cough and watery expectoration.

After consultation with Mr. Amphlett (who admitted the case from his out-patients) and his other colleagues, Mr. Bellamy determined on amputation through the shoulder-joint. This was done by commencing with an anterior flap, from without and *not* transfixing. Although the subclavian artery was most efficiently compressed by Mr. Bloxam, the hæmorrhage on the first sweep of the knife was terrific, the blood coming from the tense sac and from the enlarged vessels behind and below. The second or posterior flap was cut after disarticulation, in a few seconds, and some pounds of clot and organised lymph were removed.

The main trunk, as far as its topographical position should have been, was not recognisable. There was a hard cartilaginous-like tube on the wall of the thorax, throwing a fearful jet of blood, and which, notwithstanding the pressure on the subclavian artery, was secured after great difficulty. After all bleeding points had been secured the flaps were adjusted and the patient removed to bed. Unfortunately, he never rallied, and about an hour afterwards died.

NEWARK HOSPITAL.

A CASE OF QUASSIA POISONING.

(Under the care of Mr. D. T. RECKITT.)

ON June 30th, 1880, Annie B—, a girl aged four years, was taken to the hospital by the mother, who stated that for several weeks it had suffered from prolapsus recti after action of the bowels, and that it had very frequent desire to go to stool, remaining sometimes half an hour on the seat, straining violently. She had never seen any thread-worms, but fancied all her children had them. Suspecting that ascariæ was the cause of the prolapsus, the nurse was ordered at 1.30 P.M. to give an injection of six ounces of simple infusion of quassia. With the exception of a tablespoonful all was retained, and the child taken away. At 3 P.M. the mother returned, saying that the child was only just alive, she having in the meantime taken it to a friend's house. She also stated that in taking it from the hospital it reeled very much, as if tipsy, and that she was obliged to carry it to this temporary lodging. Mr. Reckitt visited it at once, and found it in an alarming condition, reclining on the knee of a woman present. It was ghastly pale; the lips were bloodless, the head thrown back, the surface cold, eyes closed and pupils contracted, with no action to light; respiration inaudible, and the pulse not to be felt. It was quite unconscious.

The feet were placed in very hot water, which immediately roused the child with a violent scream. Some strong brandy

and water was given and swallowed with difficulty, but the pulse returned. The child was kept roused by having the feet placed occasionally in hot water and mustard cataplasms applied to both calves. There seemed to be a strong desire to sleep, when the pulse became much slower and more feeble, so the feet were again put into hot water, and small, but strong doses of brandy were given internally. After an hour and a half the child vomited once, and then seemed a little better, but continued quite unconscious. Half a drachm of ether, one drachm of compound spirits of ammonia, and half an ounce of brandy, diluted with warm water, were injected into the rectum, and retained by means of the finger applied to the anus. This acted most favourably, for the colour returned to the lips and face, the surface became warm, and the breathing and pulse more natural. During all this time, except when allowed to sleep, it moaned very much. The colour, respiration, and pulse being much improved, the child was allowed to sleep. At six the child was roused, and a little brandy was given. At 6.30 P.M., it was conscious, and looked quite well, though sleepy. Some cold milk was ordered. The quassia injection did not act as a purgative, the bowels not having been moved since its visit to the hospital.

Remarks.—From inquiries afterwards it was ascertained that the dispenser had by mistake placed the concentrated infusion in the bottle set apart for the simple infusion, and thus an over-dose of quassia had been given; and added to this, its entire absorption had produced these most alarming symptoms, which, from first sight, seemed to threaten to prove fatal. In this dilemma, and knowing no antidote, but believing its toxic effects to be exerted on the nervous system as a narcotic and depressant, as the symptoms plainly indicated, the hot water was resorted to first to rouse the child, and then stimulants to complete its safety.

BOROUGH HOSPITAL, BIRKENHEAD.

TRAUMATIC CARDIAC HERNIA.

(Under the care of Dr. LAMBERT.)

FOR the following interesting notes we are indebted to Mr. Grenfell Baker, M.R.C.S., senior house-surgeon.

P. R.—, aged forty-eight, was admitted on March 4th, with the following history:—While engaged unloading some bars of iron on board a ship by means of a crane, one of the bars slipped from a height of about ten feet above him, and its point struck him over the region of the heart. The bar was stated to be about twenty-five feet long and three inches broad. He was immediately rendered insensible, and remained in that condition about half an hour, when, having partially recovered consciousness, he was conveyed to the hospital.

On admission he was in a collapsed state, and spoke with difficulty, the effort required for so doing appearing to cause him great pain. Very great pain was complained of over the cardiac region, and on examining this spot comminuted fractures of the second, fifth, and sixth ribs were found. On coughing or deep inspiration, a very prominent bulge occurred over the site indicated. The tumour thus formed extended above the surrounding surface about an inch, and measured two inches across, and beat synchronously with the pulse.

The parts were gently pressed into position, and a shield of tin covered with lint was adjusted over the broken ribs, and firmly strapped to the left side of the chest, and a broad bandage was applied over all. Perfect rest in the dorsal position in bed was enjoined, and frequent small doses of opium given.

No bad symptoms occurred till the fourth day, when the pulse rose from 70 to 100, and the temperature from 98.8° to 102°, and some difficulty in breathing, and pain over the injured parts, were complained of. Auscultation revealed nothing abnormal, and two days later the patient's condition returned to the normal. Three weeks after his admission into hospital the ribs were found to be firmly united, and the heart and lungs appeared to be in a quite healthy condition. The shield was ordered to be worn a fortnight longer, and patient went home in all respects quite well, and he has since never complained of any discomfort referable to his injury.

Remarks.—From the great weight of the bar of iron that

caused the injury in the case, and the height from which it fell, striking the man directly with its point, it appears very remarkable that greater damage was not done than actually occurred. This case also shows that, although the pericardium must have been a good deal irritated, both from the force of the blow in the first instance, and the friction of the broken ends of the ribs against which it pressed when the heart protruded, yet no inflammation or other trouble arose, and the heart itself escaped all injury. The insensibility was very profound and immediate, and lasted nearly half an hour, and the general condition of shock for six hours.

Reviews and Notices of Books.

Contributions to Orthopædic Surgery: including Observations on the Treatment of Chronic Inflammation of the Hip, Knee, and Ankle-joints by a new and simple method of Extension; and Lectures on Club-foot. By JAMES C. HUTCHINSON, M.D., Surgeon to Brooklyn City Hospital, &c. New York: G. P. Putnam's Sons. 1880. — The opening chapters of this book describe a very simple method of treatment for chronic inflammation of the joints of the lower limb at any stage. The objects aimed at are fixity of the joint, extension, removal of the weight of the body, and exercise in the open air. Dr. Hutchinson claims to secure all these advantages by allowing his patients to get up, with a high patten on the sound foot and with crutches. In this way the diseased limb is raised from the ground and the weight of the body removed from it, while its own weight acts as a constant extending force, which can at any time be increased, if necessary, by adding weights to the foot; the spasmodic contraction of the muscles acting on the diseased joint maintains it fixed. Under this treatment it is asserted that pain and swelling subside, and the limb assumes its proper position. For the knee- and ankle-joints light splints of hatter's felt are required to assist the muscles to fix the bones. If the treatment be as successful as it is stated to be, its advantages are very obvious, for it is simplicity itself. We quite agree with the author that the muscles of the hip fix that joint far more securely than any apparatus. The lectures on talipes are very simple and commonplace. More care in revising the proofs would have been an advantage; it is rather too bad to have a woodcut of the os calcis called the astragalus twice over!

House Architecture. By J. J. STEVENSON, Fellow of the Royal Institute of British Architects. Two vols., large 8vo. London: Macmillan and Co. — "To build a house for oneself," says Mr. Stevenson in the opening paragraph of this charming work, "is an excellent education in architecture. By the time it is finished, and the owner has lived in it, he feels how much better a home he could build with the experience he has acquired if he had to do it over again. While the work is going on his attention is called to questions he had never thought of before, which are now of the greatest interest to him. He examines the houses of his friends, and discovers features in them which he wishes, when too late, he had introduced in his own plans. The designs are altered, and the cost increased. His taste in architecture and his ideas about planning are changed by his new experience, the building is too far advanced to adopt improvements, and the house which he had hoped would be perfect is a source of trouble and disappointment." From a writer who holds so justly sympathetic a view of the troubles and disappointments of the householder—heedless of the experiences of his fellows, particularly of those pounds, shillings, and pence experiences which have recently been so pathetically set forth in the columns of *The Times*—some help ought to be obtained in minimising the difficulties which make house-building one

of the most perplexing and aggravating of enterprises. And it must be confessed that Mr. Stevenson's work will do much [to smooth the path of the unhappy individuals who cannot resist the temptation to meddle with bricks and mortar. It is also of interest for the information it gives as to architecture in relation to house-building, and from the excellent manner in which it treats of the principles of house-planning. It is a work to delight the eye, as well as to improve the mind, from the beautiful manner in which it is illustrated, and the goodness of its typography. The entire "getting-up" of the work, indeed, does honour to Messrs. Macmillan's press, and to the artists who have been engaged in its production. The greater part of the work is necessarily devoted to architectural details, but so much of it as is particularly given to the more strictly sanitary considerations of heating, water-supply, and drainage, is sound in principle. This is especially noteworthy, as it must be confessed that architects are too commonly deficient in knowledge on these important points—a knowledge on which the comfort and health of the inmates of a house are largely dependent. We commend this work most heartily to our readers, not only for the special knowledge it contains, but also for its general interest on a subject which appeals more or less to everyone.

The Therapeutics of Gynecology and Obstetrics. By W. B. ATKINSON, M.A., M.D. London: Baillière, Tindall, & Cox. —This work only calls for brief notice. It professes to give a summary of the methods now adopted in the treatment of the diseases of women. Its plan includes a synopsis of the diagnostic points of a disease, a description of the various methods used with a view to cure, and a *résumé* of the remedies employed. The synopsis of diagnostic points is short, and of no particular value. The descriptions of the methods of cure form the chief part of the work. These are given usually in the words of authors who have written upon the subject. Indeed, the work has been made up from the writings of authors whom the editor is pleased to call "distinguished contemporary specialists." If the work will serve no other purpose, it shows the unscientific, chaotic condition of the "therapeutics of gynecology."

Transactions of the American Gynecological Society. Vol. IV. 1879.—This volume is quite up to the average of its predecessors. All the papers in it are contributed by American physicians, except one, which is by Mr. Spencer Wells. This is a case of removal of both ovaries for dysmenorrhœa (Battey's operation), and illustrates well the difficulties of the operation, and the accidents that may befall a most experienced ovariotomist. Several questions of the greatest interest are discussed in the volume, of which intra-uterine medication, introduced by Dr. White and Dr. Batley, and prolapse of the ovary, by Dr. Mundé, may be more especially mentioned. Dr. Reeves contributes a very interesting case of extra-uterine pregnancy, which was cured by the application of electricity. A paper by Dr. Van de Warker on "The Relation of Symptoms to Versions and Flexions of the Uterus" leaves the subject in as unsatisfactory a state as ever. The volume contains also an interesting paper on Justo-minor Pelvis, by Dr. Lusk; one on Chronic Inversion of the Uterus, by Dr. Byford, in which the author reverts to Dr. Tyler Smith's plan of restoring the inverted organ by means of pressure, exercised by an elastic bag introduced into the vagina. At the end of the volume is a valuable index to the works published on gynecological subjects during the previous year.

MESSRS. W. J. ADAMS & CO., of Fleet-street, have issued a sixpenny *Improved District Railway Map*, which cannot but be found extremely useful to persons who have to travel much about the great city.

ENTERIC FEVER IN TROPICAL CLIMATES.

To the Editor of THE LANCET.

SIR,—I am glad to observe that the question of "enteric" fever in India continues to obtain attention, and as I believe, from the discussion which has already taken place on this subject, that the differences of opinion regarding the disease so called are really more as to its name than its reality, I propose, if you please, to briefly comment on the substance of a letter regarding it, which appeared in THE LANCET of 31st July, 1880.

What, then, is the precise sense in which the term "enteric" is applied by the writer of that letter to the fever in India which he describes? If to a fever the result of endemic and climatorial influences acting upon particular diatheses, and individual conditions,—the fever itself becoming in its course complicated with intestinal, that is, *enteric* ulceration,—there is no question that such a species of fever does occur among British soldiers in that country.

But inasmuch as the *definition*, according to which my inquiries were conducted, was "a specific fever with enteric ulceration, due to the presence of filth in air, earth or water," not one of the cases, the reports of which were brought before me, as a matter of fact came up to that definition.

In the same letter, reference is made to certain temperature standards as diagnostic of "enteric" from malarial fevers. In my special reports from Madras, copies of which I had the honour to transmit to you, not only do the standards of temperature charts which I give in the first of these documents differ absolutely from each other, but the charts of individual cases given in my second report are in complete disaccord with each other, as they are with the *standard* given in your correspondent's letter. And so, with the other phenomena of individual cases given in my reports, they are in disaccord with those recorded in the same communication.

Your correspondent alludes to "post-mortem appearances pathognomonic of enteric fever." So far as the extracts from authorities and writers given in my reports justify a conclusion, that conclusion is that in fatal cases of fever due to *pythogenic* causes, there are no post-mortem appearances of a nature beyond such as exist in fatal cases of non-specific fevers due to endemic and climatorial causes in India; also, that appearances undistinguishable from them occur in other diseases than fever, and as results of certain poisons.

Your correspondent admits that it is hard to obtain positive evidence as to the pythogenic nature of *enteric* fever in India. With reference to the cases recorded in my reports, I remark again, that, by the showing of individual medical officers, no such evidence was actually demonstrated, although often assumed, to the relative omission of due consideration, I fear, of such general conditions of climate, season, and "endemic" influences as were actually the cause.

As I have observed in my reports, the circumstance that the relative mortality by fever in India has of late years increased, and that too since the more general spread of the *pythogenic* theory as against the *climatorial*, indicates that the time has fully arrived for a reconsideration of the subject with reference, at least, to British troops in that country.

Yours faithfully,

Cambridge Gardens, W.

C. A. GORDON, Surgeon-General.

THE "City Press" records the presentation of a testimonial to the senior medical officer of the City of London Infirmary, consisting of an elegant silver salver, which bore the following inscription: "Presented to Charles Hope Buncombe, F.R.C.S., by the officers and assistants of the infirmary of the City of London Union, August, 1880." The address bore the signatures of the whole staff. The following is the inscription: "To Charles Hope Buncombe, Esq., F.R.C.S.—We, the undersigned officers and assistants of the Infirmary of the City of London Union, beg to offer you our sincere congratulations on the dismissal of the unfounded charge of manslaughter brought against you; and as a slight memento of our sympathy for the anxiety and annoyance you have passed through, we ask your acceptance of a silver salver, with our best wishes for your future health and happiness."

THE LANCET.

LONDON: SATURDAY, AUGUST 14, 1880.

THE trial of PLEASANCE LOUISA INGLE, a nurse of Guy's Hospital, for the manslaughter of LOUISA MORGAN, a patient under her care, is happily without precedent, and we have the authority of Sir H. HAWKINS, the presiding judge, for stating that a hospital nurse has never before been tried on a charge of criminally neglecting a patient. Medical practitioners have often been compelled to undergo a trial for manslaughter, but in such cases any nurses who may have been implicated have been considered merely as the instruments of their chief's treatment, and not themselves responsible. This trial has taken place, not probably because the nurses of the present day are either more or less humane than their predecessors, but rather because one who is the representative of a vicious "system" (so-called) of nursing, has discovered too late that those who assume the dignity of responsibility must be prepared for the consequences of their assumed position.

The facts of the case are simple enough. The deceased, LOUISA MORGAN, was admitted to Guy's Hospital on June 9th, 1880, under the care of Dr. PAVY, who considered her to be suffering from consumption, affecting chiefly the left lung, and hysteria. On or about June 25th it was directed that she should be got up, in order that she might not become weaker. On July 2nd she complained of pains in the left leg, and on July 5th she had an evacuation of the bowels in the bed. This was the *vera causa* of the trial. INGLE, about 8.30 on the morning of July 5th, asked CROCKETT, the "sister" in charge of the ward, if she might give MORGAN a cleansing bath, as she had soiled the bed in the manner stated. Deceased was made to walk to the bath-room in her night-gown and boots about 8.45, and at 10.15 she was still in the bath-room. It was conclusively proved that for a great part of this time she was sitting in an almost empty bath, with water nearly cold (the "hot" water being only tepid at that hour of the morning) "nearly covering her hips." It was proved also that on her way back from the bath the deceased dragged one leg, and that the prisoner "jumped" the deceased, and handled her violently, saying, "It is obstinacy; you can walk if you like." On July 5th Dr. PAVY saw the patient three times. On the first occasion, between three and four, he was "struck by her altered appearance." She was feeble, cold, and shivering, and made a disconnected statement as to the treatment she had received, and cried and sobbed a good deal. At the second examination, Dr. PAVY found bruises on her body, on both arms, and abrasions on the skin. At night her condition was unaltered. On Thursday, July 8th, the symptoms of tubercular meningitis were fully established, and on July 22nd LOUISA MORGAN died.

The questions for the jury to decide were two in number. 1. Had the prisoner, by administering the bath in the manner described, been guilty of "gross and culpable" misconduct? On this head they had presumably

no difficulty in coming to a conclusion in the affirmative, for witnesses on both sides admitted that such a bath was unwarrantable, and indeed it would have been unwarrantable to have administered such a bath in such a manner to a healthy woman. And to a woman suffering from tubercular disease, no matter of what organ, such a bath would be a grave source of danger. 2. Had the bath hastened the patient's death? "If," said Sir H. HAWKINS, "it was accelerated by a single day, that in the eye of the law would be manslaughter as much as if the death had been accelerated by years." Seeing that the only medical witness for the defence (Sir WM. GULL) admitted that the giving of such a bath to a patient with the symptoms presented by the deceased would be "most improper," and that the only possible reason for this opinion would be the danger of aggravating the disease and accelerating its termination, the jury naturally came to the conclusion, in the absence of any difference of opinion between the medical witnesses as to the main point at issue, that the prisoner had been guilty of manslaughter. She was accordingly sentenced to three months' imprisonment without hard labour.

The defence was singularly lame and impotent. It consisted in an endeavour to show that the prisoner was warranted by Dr. PAVY's view of the case in doing what she did, and that it would not have been grossly culpable to have treated an hysterical woman in the way described. Dr. PAVY's diagnosis was proved to have been from the first one of "phthisis," a diagnosis which the post-mortem proved to be correct. Dr. PAVY said that the deceased had some "hysterical symptoms," but there was no evidence that he had ever regarded hysteria as anything more than quite a secondary element in the case, or that he had given the least countenance or encouragement to any such brutal and obsolete treatment as that pursued by the prisoner. Sir WILLIAM GULL's evidence was clearly intended by Sir JOHN HOLKER to produce the impression that Dr. PAVY's view of the case was not a correct one, or at least less correct than that which would have been taken by Sir WILLIAM GULL, who figured before the jury as a prophet of past events, a *rôle* which it is easy enough to play. But there was no evidence whatever that Dr. PAVY's view was ever anything but correct, for up to July 2nd there had been no symptoms of brain mischief. On that day there was pain in one leg, a subjective phenomenon to which no physician of large experience would pay any great amount of attention. Dr. PAVY did not see the patient again until July 5th, and in the interval there had occurred the involuntary evacuation, the dragging of one leg, and the bath, and from that time the character of the case was clear. There can be no doubt that the brain mischief had begun before the bath was given, but the elements for a diagnosis clearly did not exist before July 5th, on which day the criminal act of the nurse took place. The post-mortem showed old and recent tubercular disease of the brain; to what extent the bath and its attendant excitement had contributed to the establishment and aggravation of the latter was the point most difficult to determine, and one concerning which no wise man would, we think, be inclined to speak dogmatically.

THE lamentable occurrence in Guy's Hospital has served to bring into light again certain clinical and pathological

problems, which are of grave importance, not merely with regard to the present case, but to many other like cases. The case seems to us to afford another illustration of the great difficulty which attends the recognition of the initial symptoms of cerebral tuberculosis, and the need of further study of the causes which excite or accelerate the progress of the disease. Setting aside all the other points which may be raised with regard to the case, and the various opinions which have been expressed upon it, we shall endeavour briefly to discuss it from a clinical and pathological point of view, and try to arrive at an independent opinion as to its clinical history. This we can unfortunately only do upon very incomplete data, for the entire clinical and pathological record has not been published. It is due to the eminent physicians who have expressed different opinions upon the case, and to the profession at large, that this record should be published in full at as early a date as possible, in order that a correct judgment on the points at issue may be arrived at.

The points which seem especially to require consideration are—(1) What was the condition of the patient previous to the giving of the bath on July 5th, and how far was her condition calculated to excite any suspicion of cerebral affection? (2) Did the giving of the bath produce or merely coincide with the onset of graver cerebral symptoms? (3) Is there any reasonable ground for a belief that it excited or intensified the more acute cerebral inflammation which caused the patient's death?

The main facts of the case are already before our readers, and we will restate only such as may require to be emphasised.

The patient, LOUISA MORGAN, a married woman twenty-six years of age, was admitted, on June 9th, to Guy's Hospital, under Dr. PAVY, with consumption associated with hysterical symptoms. From the history it appeared that she was married at an early age, had one child about a year afterwards, had since suffered from symptoms of pelvic inflammation, though whether of the nature of pelvic cellulitis, ovarian abscess, or what not, we are not told. The lung disease did not appear to be advanced or active, but there were considerable weakness and irregular slight febrile temperature, pointing to some progressive tuberculosis. But for about a month, from June 9th to July 5th, there were no other notable symptoms beyond those described as hysterical. The question of the nature of these hysterical symptoms becomes important in the light of the subsequent events. They appear to have consisted in a disinclination to exertion, complaints of vague wandering pains in the limbs, for which no cause could be discovered, and now and then some transient sense of weakness in one or other limb, equally inexplicable by her general condition. It is not surprising that these symptoms, lasting as they did for some weeks, with no definite cerebral symptoms, should have led to the supposition that they were of a "hysterical" nature. After all, hysteria is a term which is very loosely used, and is often employed to denote merely a certain combination of defective will-power, and a tendency to exaggerate slight symptoms, which are common enough in sickly women. There are few medical men, we imagine, who do not very frequently speak of such a condition as "hysterical," but who would draw a sharp line between a "hysterical patient" and a patient with hysteria. It is easy to be

wise after the event, and to discern in these vague symptoms the indications of a cerebral disease which was discovered after death, but we have no evidence that there was anything upon which to ground a diagnosis at the time. Indeed, we may go further, and say that a very large number of cases of chronic tuberculosis affecting the cerebral hemispheres are not only not diagnosed, but that they may give rise to no appreciable symptoms. And it is incredible that in a hospital like Guy's, which abounds with acute clinical observers, such symptoms should not have been detected or suspected had they existed in any marked degree. At the same time it must be allowed that there is often in the general condition, the facial expression, and the mental attitude of the patient, a ground for suspicion and anxiety such as appears to have been felt in this case, apart from any declared symptoms, and that the commencing mental inertia and torpor, simulating wilful obstinacy, especially if combined with pain in the limbs, hyperæsthesia, or temporary weakness of one limb, are always to be regarded with suspicion.

Coming now to the time of the bath. It appears that this was given in consequence of the patient having fouled the bed. It is almost clear from the way in which this was treated by the nurse, that it was regarded as merely an exaggeration of a wilful, obstinate, and careless condition which had previously existed, and which she regarded as deserving of punishment. It is strange indeed that no one of the nurses or the sister of the ward should have seen in this a grave symptom of cerebral disease. Apart from involuntary defecation in some cases of diarrhoea in phthisis, or some local disease of the rectum, we are not aware that this would be likely to occur in such a patient except as the result of cerebral or mental disease. If there were evidence that such an occurrence had previously been reported, or having occurred, had failed to be reported, a grave oversight on the part of the sister or the house-physician must be assumed; but there is no hint that such was the case. We may rather regard it as the crucial point of the diagnosis, which would declare plainly that the vague symptoms previously observed were really indicative of grave disease of the cerebral hemispheres, such as was actually found to exist after death, unless, indeed, there was local mischief in the rectum connected with the pelvic abscess.

Turning now to the condition at the time of and after the bath, and the question how far the latter may have excited or accelerated the acute inflammation, we find that the patient evidently underwent a very severe shock, both mental and physical. Terror and anxiety were combined with a prolonged exposure to one of the most powerful depressants known; with the manifest result of a collapsed physical condition, added to a state of anxiety and fright. But it may well be asked whether this could possibly cause acute tubercular meningitis, and whether in the present case there is any reason to believe that it actually did so. As regards the possibility, it must be allowed that we know very little of the exciting causes of tubercular meningitis. There is, however, a gradually accumulating mass of evidence that both local and general conditions may determine the incidence of tuberculosis on a particular organ or part of an organ, and there is no reason to believe that the brain is any exception to this rule. If, for example, in a

patient with slowly-progressing tuberculisation of the lung, there is by any means excited an acute inflammation, this is very apt to be accompanied or succeeded by especial deposit of tubercle in that part; it may become, in fact, either a tubercular inflammation, or may tuberculise instead of resolving. The immediately exciting causes of tubercular meningitis have been very incompletely studied, but no fact seems better established than that the inflammation is often quite disproportionate to the amount of tuberculosis, and that it often appears to be rather a sequel to, than a concomitant of the latter. Cases occur to our mind in which the symptoms certainly appeared to be directly excited by some exposure to cold or mental shock. There is therefore some ground for the belief that these may have been operative in the present case. But does the clinical evidence bear out this view? If it is urged that the carelessness about the evacuations was a symptom of acute tubercular meningitis, it would of course be idle to seek any subsequent cause. In the absence of evidence of other brain disease this might perhaps be fairly alleged, but the more chronic tuberculosis appears to be a sufficient and more probable cause, though the symptom is rare in both forms. It is stated also that no more definite symptoms of inflammation appeared for three days afterwards, during which time the temperature continued low, and the patient apparently under the influence of a mental shock. Death did not occur until sixteen days after the bath. In the absence of fuller information we cannot follow the case. It would be of great value to know what the course of the symptoms was, in order to judge how long the active symptoms were in progress. But having in view the great variety in the course and duration of tubercular meningitis, we should hesitate to draw any absolute conclusions. The duration, indeed, is often very much shorter than fifteen days from the first declared symptoms, a fact which favours the view that the onset was excited by the bath. It would, however, be very difficult to allege with certainty that the bath was the exciting cause of the meningitis, or that it might not have occurred without its influence. The direct evidence of the marked change in the patient's condition is here of value in forming an estimate of the probabilities of the case.

If it were not travelling somewhat beyond the immediate questions at issue, it would be of interest to consider the various modes of manifestation of acute tubercular meningitis in the adult. The distinction drawn between the results of chronic tuberculisation, yellow tubercle nodules in the cerebral cortex, or more rarely in the more central portions of the brain, and acute meningitis, usually of the base, is not always sufficiently borne in mind. The diagnosis of the more chronic form is, we do not hesitate to say, judging from the recorded experience of many physicians, a matter of the greatest difficulty. Such cases, especially when in the adult and affecting the cerebral hemispheres only, have been diagnosed as syphilitic, as pachymeningitis, as acute meningitis, or chronic rheumatic meningitis, even by the most able physicians. On the other hand, in a not inconsiderable number of cases of acute tubercular meningitis, the earlier symptoms are purely mental, and very frequently simulate hysteria or hysterical mania, the mental symptoms being far more predominant in the early stages in adults than in children. We have known a case to be regarded as

one of hysteria till within twelve hours of the fatal issue. Such facts should lead to caution, both in making a diagnosis and in expressing an opinion as to facility of diagnosis in any particular case.

It cannot be disguised that the professional aspects of the case REGINA v. INGLE are very grave and call for serious, albeit strictly impartial, consideration. The appeal now lies formally to the Censors' Board of the Royal College of Physicians, but that body has, on former occasions, scarcely shown the wisdom, tact, and independence which would entitle it to the implicit confidence of the profession at large, and the case must therefore be judged by another tribunal—namely, medical opinion. Looking at the matter from this point of view we cannot but feel that the questions at issue between Sir WILLIAM GULL and Dr. PAVY are of a nature to require very careful but exhaustive handling. The broad facts are fairly before us, and we see no reason to withhold an expression of opinion which may or may not accord with that formed by the College of Physicians, but will, we believe, be that at which the profession ultimately arrives.

The first question that arises is whether the step taken in this most deplorable case was determined upon at a formal meeting and after a general consultation of the medical staff, or was the independent act of Dr. PAVY, who considering the circumstances found himself unable to give the usual certificate of death? Looking to the exceeding magnitude and importance of the medico-legal issues to be raised, we think it was due to the hospital as a medical institution, and the profession as represented thereby, that a previous deliberation should take place. The need of such a precaution has been made painfully evident by what has ensued. For example, if there had been a preliminary consultation, no question could possibly have been raised at the trial or elsewhere as to the character and value of the clinical notes of the case and the record of the post-mortem examination, upon which the conflicting opinions expressed were based. It should have been clearly settled at the outset whether the documents to which we allude were or were not the private property of the physician in attendance on the case. If they were regarded as private, we are at a loss to understand how they came to be placed before any members of the staff without the consent of the physician to whom they belonged. If, on the other hand, it was held that these records were the property of the hospital, then they must be assumed to have been at the disposal of the governing authority of the hospital. It argues a surprisingly strange state of matters that so simple a point as this should be involved in obscurity. Either there is a clinical record kept in each case, to which the governors may have access—although it is difficult to divine for what purpose the lay authorities of a hospital can need to refer to a medical and technical report—or the papers were the property of Dr. PAVY alone. If they belonged to the hospital, the governing body of the institution had certainly a right to submit them to whom they pleased, and particularly to the consulting officers. If they were the private property of the physician to whose case they related, and were to be used in evidence at the trial, they ought to have been submitted to both sides previously. It is a rule of practice in courts of law, and one which ought to be observed in all

these matters, that the papers which relate to a dispute are either "put in" or not quoted. The opinion given in evidence by Sir WILLIAM GULL was based solely on the data supplied by these papers, which he seems to have seen without the knowledge of the physician in charge of the case, and the profession should be informed as to their nature.

The appearance of Sir WILLIAM GULL in the witness-box, in a position even seemingly antagonistic to the medical staff, is greatly to be regretted. Such a spectacle would probably have been prevented by a general consultation. Sir WILLIAM is the senior consulting physician to the hospital, and as such holds an office the first and principal obligations of which are towards the working staff. Nothing short of a subpoena—unfortunately compelling the intervention of a consulting officer as a witness to give critical evidence on the work of his colleagues—could, in our judgment, have justified his appearance before the Court. Once in the box, it is easy to see that he must speak the whole truth, and therefore state fully and clearly his views. The question in which the profession has an immediate interest is whether the data upon which Sir WM. GULL arrived at a conclusion, differing widely from that of the physician who had seen the case, were of a nature to compel the line of conduct he pursued. It must be conceded that a physician can be ruled only by his own judgment in the opinion he forms of a case, and his own conscience must determine the course he takes in expressing that opinion. We have no right, and certainly no desire, to obtrude considerations of professional interest or etiquette between conscience and conduct; but if ever there were circumstances in which a physician so placed must see cause to question his sense of duty, those by which Sir WM. GULL found himself encompassed when he opposed his judgment (of a case he had not seen, on the ground of the report of a post-mortem examination at which he had not been present) to that of the physician—a colleague and a man of acknowledged eminence in the profession—who had treated the patient and personally examined her body, were of that character. Look at the matter as we may, it is impossible not to feel that the conviction that there had been an error in the diagnosis of this case must have been *very strong indeed*, and the pressure of duty to humanity and justice—a pressure we distinctly recognise and respect—must have been exceedingly great to satisfy a man of high and honourable instincts that duty compelled him to a course from which every other feeling must have recoiled.

We have no wish to over-estimate the obligations of professional etiquette. There may clearly be circumstances amid which such considerations must sink into comparative insignificance. Still less would we willingly say anything, or pursue a line of argument, which might seem to treat the inter-relations of members of the medical body as of a nature to override the paramount claims of public duty; but it is not expedient that professional obligations should be lightly set aside. It will be necessary to hear more of this matter than we have yet heard before a definitive judgment can be pronounced; but the opinion of the profession must be the ultimate court of appeal, and by the unwritten law of the medical body as interpreted by the common-sense instinct of its individual members the final award will be made. If, in the course of the inquiry which must ensue, the relations,

obligations, and responsibilities of a consultee—whether in relation to the governing body and medical staff of a hospital, or to the family and ordinary medical attendant of a private patient—can be more clearly defined than they seem to be at the present moment, good may come out of evil, and this we are convinced will be a result over which every one interested in, or concerned with, this most painful controversy must find occasion to rejoice.

OUR readers may remember that last year the Select Committee of the House of Commons on Medical Bills were disappointed in not receiving the evidence of Mr. BRADFORD, the courteous representative of the Apothecaries' Company in the General Medical Council. Mr. BRADFORD was indisposed, and unable to give his evidence. The circumstance was the more to be regretted as several witnesses, while admitting that the Society had done good in the past, had advocated the view that it was no longer necessary in the economy of things, that it was decidedly superfluous, and its further continuance, with a seat at the Council, scarcely defensible. Yet every Englishman is interested in the defence set up for an old institution. Though we are a progressive people, we like to see a good fight made by the friends of what is established and incorporated. Hence it is gratifying to us to be furnished with a copy of the evidence which Mr. BRADFORD intended to have given before the Committee, in refutation of adverse evidence given by various witnesses. The reasons for excluding the Society from further representation in the Medical Council, and excusing it generally from further work in the medical examining system, were briefly these:—1. That there was a sufficient number of examining bodies without it, and that it was unjustifiable to ask that it should be maintained in perpetuity. 2. That room was needed in the Medical Council for the direct representation of the profession, and that one way of creating such room was by discontinuing the representation of certain bodies, including that of the Apothecaries' Society. 3. That the Apothecaries' Company was ceasing to be a licensing body. 4. That the Society was more or less a trading company.

The evidence before us, which we may hope will one day next session be actually put before a Select Committee, is not a satisfactory or convincing refutation of the arguments of those who seek to elevate and simplify the organisation of the examining bodies and to improve the constitution of the Council. In effect, it aims at proving two points: First, that the Apothecaries' Society, as such, never was a trading company, though it allowed some of its members, formed into a copartnership, to carry on for their personal benefit the business of chemists and druggists in the name of the Society. Admitting this, it must yet be conceded that the Society was in close contact with trade; the more so as, under the deed of the Joint Stock Company, it was required that its business should be conducted by thirty shareholders, all of whom were to be members of the Society or Corporation, and practising apothecaries, and eight of whom were to be members of the Court of Assistants (the governing body of the Society or Corporation). Besides this, the Master and Wardens of the Society were, in addition, *ex officio* members of the Committee of Management. Surely all this was sailing very near the *trade* winds. It

will be seen that we have used the past tense, for in a note added it is said that "since the evidence was prepared, the United Stock of the Society of Apothecaries has (from circumstances in no way connected with the question raised before the Select Committee) been dissolved. *The relation therefore (the italics are ours) hitherto subsisting between the Society and that body has entirely ceased.*" We congratulate the Society on the cessation of a relationship that was decidedly objectionable. The coincidence of this cessation with the public objections to it is curious, but we must accept the assurance that it is accidental.

The other objection which it is attempted to refute in the evidence is that "the Apothecaries' Company is fast ceasing to be a licensing body." Mr. BRADFORD'S answer is this: "As a matter of fact, the average of licences granted by the Society between 1870 and 1879 was about 213 annually, showing the Society to be numerically the second licensing body in the three kingdoms." The objection is put in too strong language, which always tends to defeat the object in view. Nevertheless, it probably remains true that the Apothecaries licence is not in so much demand as it used to be, and it certainly is true that there is no reason in the public interest, as there is none in public law, why men entering the profession should ally themselves with a Society which reminds us of a somewhat low conception of the medical function, and of a time when the body of the profession was thought to be of a different brand from that of the consulting class. We willingly admit that the Society has done good service, and did at one time the work of the College of Physicians, because that College, as it does yet sometimes, conceived very erroneously and inadequately of its great duties. But seeing that the Colleges are now driven by the force of public opinion to higher conceptions of duty, and that medical men now aim at being not "apothecaries," but veritable physicians and surgeons, and seeing further that the Apothecaries' Society cannot, by the very terms of its own creation, give a perfect examination, we can certainly perceive no adequate reason for the further continuance of the Apothecaries' Society as an examining body, with a seat in the Council.

Annotations.

"Ne quid nimis."

TYPHUS IN IRELAND.

IN another part of THE LANCET we publish an important paper from the pen of Dr. Nixon, on the epidemic of "Fever" in the Swinford Union, County Mayo. It must be obvious to those who give careful attention to Dr. Nixon's statements that the Government has been perilously near to the point of committing, if it has not actually to some extent committed, the blunder which converted the famine in Southern India into so awful a disaster—namely, underrating the effects of chronic starvation upon the distressed communities in Ireland. The condition of the patients suffering from "fever" as described by Dr. Nixon, and the number and peculiarities of the cases of diarrhoea and dysentery in the union, prove that although deaths from *starvation* may have been staved off, it by no means follows that the hardly less considerable and not seldom fatal mischief arising from chronic starvation has been obviated.

The conditions under which typhus and enteric fever are

observed in the union (apart from the immediate distress) are such as to give rise to the gravest considerations. They are conditions by no means limited to this particular district of Ireland. It is difficult to realise a state of existence which at the best is barely distinguishable from a condition of chronic starvation, and circumstances of housing and habits of domestic life which are revolting in their disregard of what we look for amidst a civilised community. The endemicity of typhus and enteric fever in the district, as described by Dr. Nixon, is the normal result of such conditions. When last we referred to this subject we spoke of the application of the provisions of the Public Health Law to Swinford Union and districts similarly situated in despairing terms. Dr. Nixon's paper does not permit us to regard the subject from a more hopeful point of view, but it enables us to form a juster estimate, perhaps, of what is needed if we look for a better sanitary future of the districts referred to. Obviously no merely palliative measures, such as have been chiefly in view, or measures determined solely with regard to the present distress, can be regarded as sufficient. What is needed is the institution of measures founded upon a comprehensive view of the requirements of the districts, and an administrative organisation which can be depended upon for carrying them out with certainty, however slowly, and with due regard to the impoverishment of the people and their rooted habits: a hard and it may be a thankless task, and one which looks to the future rather than the present—a task which has regard to the next generation and even to the generation following.

Dr. Nixon's paper further suggests a question for our consideration in England which is worthy of immediate consideration, and which we commend to medical officers of health. The migration of labourers from Ireland to England in the autumn still continues, although in less proportion than was the case when machines had not invaded agricultural regions. Swinford contributes a considerable number of labourers to our harvest fields, and it is well that the medical officers of health of our western ports and rural districts should be alive to the probability of the labourers from the districts in Ireland where typhus now exists bringing the disease in their train.

THE METROPOLITAN WATER-SUPPLY.

THE report of the Select Committee on the expediency of acquiring on behalf of the inhabitants of London the undertakings of the existing metropolitan water companies, has been published. It leaves the question pretty much as it was before the late Government took it in hand, deciding against the provisional agreement with the water companies, which they had promoted, and making certain suggestions which we should venture to term crude, if crudeness dare be inferred of the proceedings of a committee of selected members of the Legislature. They hold it expedient that the supply of water to the metropolis should be placed under the control of a Public Body, to be created for the purpose, and which shall represent the interest and command the confidence of the ratepayers. This public body they think should, in the absence of a single municipal body, which could undertake the duty, include elements derived from the Metropolitan Board of Works, the Corporation of London, and representatives of those districts beyond the limits of the metropolitan area to which the companies distribute water. But this body, besides having to look to a greater efficiency, economy of water-supply, and equality of charge than now exist, will have to give regard to arrangements for extinction of fire, and the making of better provision for the health of the community. Nevertheless, no suggestion as to the manner in which this new body is to secure competence in its judgment on the complex question of health is made, and the

Committee repeats the common politico-social blunder which is perpetrated on the assumption that everyone is fitted to express an opinion and act upon it in regard to such a matter. The Metropolitan Board of Works, as now organised, is notoriously incompetent to deal with health questions, and the Corporation, although capable of dealing with questions of health within its municipal limits, is scarcely fitted to deal with such questions as they affect the whole metropolitan area.

The new public body formed would be called upon to consider first how it should proceed about what it was created for. It might adopt various courses with this object. The Committee tells us, it might proceed by regulation of the powers of the existing water companies, as in the case of gas-supply; or by the introduction of an independent water-supply; or by the purchase of existing undertakings. In either case Parliament would have to intervene by giving statutory powers other than now exist. In short, we must begin again at the beginning, and, whether we like it or not, settle matters with the existing water companies before we can take a single certain step in advance. Moreover, the question has as yet been raised only as regards now existing London and its environs. But these change every year, and each year adds to the difficulties of the question to be solved. And if our readers would learn what the future question of the water-supply of the metropolis and its dependencies is likely to be, let them turn to a most thoughtful and instructive article on the subject by Mr. F. R. Conder in the present month's number of *Fraser's Magazine*.

THE STARVATION CASE AT HASTINGS.

EMILY SCOTT, a schoolmistress living at Hastings, was convicted, at the Central Criminal Court, on Saturday, August 7th, before Sir Thomas Chambers (the Recorder), of withholding food from her servant, Eleanor Houseman, aged fourteen, whereby her life was endangered, and she had suffered bodily harm. She was sentenced to two years' hard labour in the House of Correction. The history of Eleanor Houseman is inexpressibly sad, and proves the correctness of the trite saying, that "truth is stranger than fiction." The child is illegitimate, was born somewhere in the north of England, and lived with a Mrs. Crosby, of Scarborough, until she was twelve years old. Early in the year 1878 Mrs. Crosby placed Eleanor Houseman in the train at Scarborough, and she was received at King's Cross by a Miss Jackson. Mrs. Crosby stated in evidence that the girl left her house "because a Miss Jackson wanted her;" she had never seen Miss Jackson; she did not know what became of the child's mother; she had never seen the child's father. Thus this unhappy foundling, scarcely twelve years old, was sent into bondage among strange people in a strange land. She first lived with Scott at Dulwich, in 1878, twenty pounds being paid with her, on the understanding that she was to be made a servant or a governess according to her capacity. Scott moved to Sandwich in 1879, and subsequently to Hastings, where the alleged crime was perpetrated. It appears that at first the poor child associated with the other children of the "school," but was afterwards banished to a garret because she stole food, and henceforth became a miserable little drudge. That she was practically starved was conclusively proved. She was fed principally upon porridge, which was often mixed with cod-liver oil, and sometimes with charcoal; but nothing seems to have been too nauseous to repel the craving appetite of the child. The room in which she lived was cold, and on a bitter day in February she was seen cleaning windows with nothing on but a chemise and pinafore. It was proved by Dr. Ashenden, and confirmed by Dr. Parsons, that on February 28th of this year, Eleanor Houseman was reduced by this treat-

ment to a very critical and dangerous condition. She was thirteen and a half years old, and weighed 35 lb.; was pinched and emaciated, and covered with chilblains, some of which "broke," and led to sloughing of the toes and necrosis of the phalanges. Scott expressing herself as unable to provide proper nourishment, the girl was removed to the infirmary, Dr. Ashenden humanely supplying some necessary medical comforts, and luckily for Miss Scott this timely care and treatment saved the life of the child, who rapidly gained flesh, and on July 7th of this year weighed 83 lb., having gained rather more than 5 oz. per diem for 129 days. In defence it was urged that Miss Scott was very poor, and that the diet of herself and her scholars was scarcely any better: "But," said the Recorder, "poverty was no excuse, as the workhouse was always open for her to shift her responsibility upon." It was also urged that the child's critical condition was due to hectic fever, brought on by the wounds on the feet, but the Recorder very properly urged that "the proof of illness was in the remedy applied. The child was starved, but with food rapidly recovered. Physic was necessary for the diseased, but food was necessary for the famishing, and food, and food alone, was administered to her, and nothing else was required." Of the justice of the conviction and sentence there can be no doubt. The reflection which forces itself upon us is that it would be a great gain to the public and the cause of humanity if the care of foundlings and orphans were to some extent controlled by the State. Poor Eleanor Houseman has been treated with no more consideration than if she were one of the lower animals, and to all practical intents and purposes she was sold into bondage. A solemn duty rests, we think, with the public at large, to render the recurrence of such a scandal as this impossible. Surely it is time that those who make a business of receiving children who are repudiated by their parents should be licensed and supervised, in some such way as are those who receive lunatics and others who cannot take care of themselves. From an economic point of view it is everybody's interest that these unhappy waifs and strays should, if possible, be trained and developed into useful citizens, and not be allowed, by a course of starvation and ill-treatment, to become a burden to others either in workhouses or prisons.

NERVE INFLUENCE ON THE TISSUES.

SINCE the year 1869 Dr. Brown-Séquard has noted the power possessed by the central nervous system, under the influence of certain irritations, to arrest the nutrition in different tissues and organs. The maximum arrest of the interchange between the tissues and the blood is produced by a puncture near the point of the calamus scriptorius, but it is also caused by stimulation of other parts of the cerebro-spinal centre, and even of the sensory nerves. After fatal injuries which cause death by sudden arrest of these interchanges, and arrest of the respiratory and cardiac movements, there are no convulsions, the blood in the veins is red, the temperature of all parts of the body rapidly falls; the functions of the spinal cord, of the nerves, and of the muscles are maintained for a long time, and cadaveric rigidity and putrefaction set in late. He has lately found that the medulla oblongata and spinal cord possess so powerful an influence on the interchanges of material of the body that the arrest of these can be produced by merely flexing suddenly the head upon the thorax. Two effects can then be observed—(1) the blood in the veins, previously dark, becomes almost immediately bright red; (2) the temperature of the animal falls. In addition, considerable apnoea comes on. The apnoea would cause the blood in both arteries and veins to become darker, but in spite of this influence the blood, even in the veins, becomes lighter. Dr. Brown-Séquard has often observed this phenomenon in cases of apnoea,

with or without cardiac syncope, produced by irritation of the cerebro-spinal centre of the pneumogastric nerve, or of the ganglia of the abdominal sympathetic. It may be asked, however, whether the effect of the injury to the medulla on the colour of the blood is not due to the stimulation of the alleged vaso-dilator nerves? The following observation disproves the hypothesis. When there is an arrest of the interchange of material between the blood and the tissues, the vessels, instead of being dilated, present a notable diminution of calibre. Dr. Brown-Séquard found that in an animal in which the dorsal spinal cord had been divided irritation of the medulla and spinal cord, such as will cause the effects above described, produces these everywhere, except in the parts which receive their nerves from the portion of the spinal cord which is separated from the brain. Hence it is certain that the effects are produced through the agency of nerves coming from the medulla or cord and acting upon the tissues.

THE CASE OF JOHN WAKEFIELD.

JOHN WAKEFIELD, aged twenty-eight, a labourer, "well instructed," was put upon his trial at Derby on July 28th last, before Baron Huddleston, for the wilful murder of Eliza Wilkinson. The deceased was nine years old, and on April 26th went out hawking comb-boxes with her sister, aged sixteen. Having sold twelve out of fourteen boxes, the sisters separated, and the younger was never seen alive again, but was found shortly afterwards dead, with her throat cut, in one of the houses at which she had presumably called to try to sell a box. The man, having committed the murder, gave himself up to the police. There was no motive alleged for the crime; there had been no attempt to rape the deceased, and there was no evidence that the prisoner had ever seen the deceased before committing the act of murder. The theory of homicidal impulse was put forward for the defence, but the judge in his summing up did not countenance it, and the jury returned a verdict of wilful murder without leaving the box. Sentence of death was passed in the usual form; but while the judge was visibly affected, the prisoner maintained the indifference and unconcern which had characterised him throughout. Not a single witness was called to speak to the prisoner's previous life or history, and he appeared to be perfectly unknown to everybody except the police, who had, it seems, no knowledge of him until the morning when he gave himself up on a charge of murder. The only legitimate presumption in such a case as this is that Wakefield was the victim of an insane impulse, and the burden of proof certainly lies with those who would maintain that his act was a criminal rather than an insane one. The public have a right to be informed of the antecedents of this man, who is reported to be "well instructed." Where do his family live? For whom has he laboured? Is it certain that he has never shown any previous symptoms of insanity? Is he epileptic? These are questions which every humane person would ask before consigning him to the gallows. But they never have been asked (judging from the report of the trial in the *Derbyshire Advertiser*). The prisoner, during the three months of his imprisonment, merely said, with regard to his "crime," that he had "nothing to say"; and he would have been completely undefended at his trial had not the judge on the previous evening arranged with a junior counsel to undertake the defence. One witness only was called for the defence—namely, Mr. Baker, the surgeon to the Derby Gaol; and this gentleman (as he informs us himself) was merely called (and called against his wish) because he happened to be in Court, and the counsel overheard him making some remarks to a friend about "homicidal impulse." Baron Huddleston said that the theory of uncontrollable impulse was "fanciful and imaginary," but said

that all prisoners appeared in the dock charged with similar crimes "because they had not controlled their passions." What passion had Wakefield failed to control? His calmness throughout, and the absence of direct evidence, seem to prove that the passion which he had failed to control was not anger. It certainly was not *lust*. It was proved not to be *avarice*. There was no evidence that it was *jealousy* or *revenge*. The theory of an uncontrolled passion is, to say the least, fully as imaginary and fanciful as that of an uncontrollable (we do not say uncontrolled) impulse. If a man is to be hanged for not controlling his passions, it should be known precisely what were the passions which he failed to control; and, failing this information, we hold that the execution of Wakefield will be a judicial murder of a most flagrant kind.

THE INTERNATIONAL CONGRESS OF HYGIENE OF TURIN.

THE programme of the International Congress of Hygiene at Turin is fixed as follows:—Monday, September 6th: Solemn inaugural meeting, in presence of King Humbert. Speeches will be made by Senator Ferraris, Magistrate of the city; Dr. Fauvel, President of the French Committee; Baron Maydell, of St. Petersburg; Dr. Finkelnburg, of Berlin; Dr. J. G. Jaeger, of Amsterdam; Dr. J. Felix, of Bucharest; and by other delegates on behalf of their respective countries. The report of the Executive Committee will then be read, after which they will proceed to the election of the members to form the Commission empowered to draw up the regulations for the prize of 35,000 francs to be given in 1882 to the author of a useful book on "The Hygiene of Rural Populations," and the Commission to examine the subjects of discussion presented *extra ordinem*. On Tuesday 7th, Thursday 9th, Friday 10th, and Saturday 11th, sittings of the sections in the morning, and general meetings in the afternoon. Wednesday 8th, excursion. Thursday 9th, meeting of the International Association on Drinking Water; communication by M. J. G. Jaeger. Saturday 11th, final meeting. Sunday 12th, excursion to Milan, to witness an experiment in cremation.

DISEASED CATTLE FROM ABROAD.

OUR correspondent at Birkenhead writes:—The s.s. *Iowa*, from Boston, has lately landed 804 head of cattle alive and one dead at this port. Forty-three died during the passage across and were thrown overboard. On beginning to slaughter it was found that some of the cattle were affected with splenic fever. Two carcasses were seized for this cause on the 7th inst., and six more on the two following days. An order to destroy the eight carcasses was on the 9th applied for and obtained. Several of the animals now in the lairage already show signs of the disease, and the slaughtering is being proceeded with under the supervision of the officers of the sanitary authority. The fever appears to be of a mild type, there being no carbuncles, abscesses, or erysipelas. Some of the animals, however, have shown marked head symptoms, and there appears to be no doubt about the malady being really *sang de rate*.

MULTIPLICITY OF THE SPINAL GANGLIA.

THE ganglia upon the posterior roots of the spinal nerves are invariably described as single. A subject has been met with by Dr. Leo Davida of Pesth, in which some of the lumbar ganglia were double instead of single. This observation led him to investigate the condition further, and he has found a similar condition in two other bodies. In some of these the ganglia were treble instead of single. In the first body, that of a man twenty-three years of age, the first, second, third, and fourth lumbar ganglia were double on the

left side, but on the right only the third and fourth. In most the ganglia were quite separate, in some they were connected by a grey commissure. The largest was three millimetres in diameter. The posterior root, two millimetres above the ganglion, divided into two, one for each ganglion. There was a difference in the size of the roots corresponding to the size of the ganglia. In the second body, that of a man forty-five years old, on the left side the first four lumbar ganglia were double, and the fifth was treble. On the right side the first two were double and the last three treble; one of the sacral ganglia was also double. In some instances the three ganglia were quite separate, in others they were united by grey commissures. In the third body, that of a man thirty-two years of age, the third, fourth, and fifth lumbar ganglia were double on the left side, the second, third, fourth, and fifth on the right. As these were the only bodies examined, and the condition was found in all, the conclusion was drawn that duplicity of some of these ganglia is the normal condition. The point certainly deserves the attention of anatomists.

DR. TANNER'S FAST.

THE forty days' fast of "Dr." Tanner was completed on Saturday last without any evil result. It is at present impossible to say what conclusions—if any—can be drawn from it as a scientific experiment, for in spite of the assertion that some of the most eminent physiologists and physicians of New York were convinced of the reality of the fast, there are many points in the statements as to the actual observations during the fast, which tend to throw doubt upon its genuineness. It is impossible to draw any scientific conclusion from the details which have been given in newspaper telegrams, some of which are evidently the work of a very ill-informed person. Thus in one telegram we meet with the statement that on examination of the blood it was found that the red corpuscles rolled together into heaps, which is not an unusual phenomenon, and that they were much crenated, which is a condition easy to produce in careless examinations. We shall await the full record of the experiment—if such it can be called—before we attempt to form any conclusion. We are strongly of opinion that the conditions under which it has been made will deprive it of what little value it might otherwise have possessed.

ROYAL COLLEGE OF SURGEONS.

IN the notice of the meeting of the Council of the Royal College of Surgeons last week it should have been stated that Mr. Le Gros Clark's retirement from the Court of Examiners arises from the expiration of his term of office and his desire not to seek re-election. Mr. Savory's second term of five years as member of the Court has also expired, but he desires re-election. For the vacancy caused by Mr. Le Gros Clark's retirement Mr. Christopher Heath and Mr. Jonathan Hutchinson have been nominated.

THE FRENCH ACADEMY.

THERE was some surprise evinced a few days ago, at the distribution of rewards for virtue, to hear Mons. Sardou, who said: "Virtue is no longer in fashion as it was in 1782, when Monthyon founded these prizes. Virtue!—the nineteenth century scarcely practises it, and does not extol it at all. Its philanthropy takes a different pass. It is no longer the virtuous who interest us, but the criminal. A new philosophy, claiming to be based on science, sees in man nothing but a combination of matter, and declares that his morality depends only on the perfect equilibrium of his organs; and this doctrine having many partisans among medical men, it is not surprising if it sees in humanity only patients. The theory is very precise."

THE GOVERNMENT AND THE ONE-PORTAL SYSTEM.

IT will be seen from our report of the meeting of the British Medical Association that it has been announced there that the Government had decided to bring in a Bill to institute one compulsory qualification for the United Kingdom. We are sorry to have to contradict so good an announcement, but we have authority for saying that it is, up to this time, unfounded.

AT the Leeds Assizes, at the close of an action against the Lancashire and Yorkshire Railway, in which the plaintiff recovered £500 damages for injuries received, Mr. Justice Stephen paid a high compliment to Dr. Clifford Allbutt, Mr. Scattergood, and Mr. Wheelhouse, the medical witnesses engaged in the case. He said he was in the habit of hearing medical evidence in all parts of the country, and Leeds was the only town where he never heard those unseemly disputes between the legal and medical professions which occurred at other places. Here there was a certain number of gentlemen, the leaders of the medical profession in the great School of Medicine in Leeds, who had set an admirable example for many years past of truth and candour and straightforwardness in the witness-box, and he was happy to see that their example was being followed by the younger members of the profession. When a man really tried to tell the truth, the whole truth, and nothing but the truth in plain and simple language, notwithstanding what consequences might be drawn from it, and whether he was called on the one side or the other, bullying in court and things of that kind ceased at once. He hoped that such a state of things might long continue in Leeds, and be imitated in other towns.

THE following extract from the latest report of Mr. Holmes, the Vaccination Officer of Leeds, is worthy of reproduction:—Of 2978 births returned by the registrars for the half-year ending Dec. 31st, 1879, 2627 were registered as successfully vaccinated, 2 were insusceptible, 280 died unvaccinated, 17 were postponed by certificate as sick, 7 were returned to the vaccination officers in whose districts they had gone to reside, 43 were not found, and 2 of the parents were fined for non-compliance with the Act of Parliament. The number vaccinated gives a rate of 88·2 per cent. of the births, and 97·3 of the living children. This is the highest rate yet obtained. Not one child was returned as having suffered from small-pox; 9·4 per cent. died without having had the operation performed upon them.

THE out-patient work of the Newcastle-upon-Tyne Dispensary having largely increased within the last few years, the members of the existing honorary medical staff have found themselves quite unable to cope with the great amount of work thrown upon their hands. The committee therefore, at a special meeting held on Thursday the 5th inst., decided to appoint an additional physician, and generously proposed in future to present each member of the staff with an honorarium at the end of the year.

AN International Congress was held on the 2nd inst. at Brussels, under the presidency of the Count of Flanders, to consider various questions relating to the use of alcohol. The Congress was promoted by French and Belgian societies having as their aim the strict limitation, if not the entire suppression, of the employment of the agent save as a medicine.

M. TRELAT, Professor of External Pathology of the Faculty of Paris, has been transferred to the chair of Clinical Surgery, vacant by the death of Professor Broca.

ON Friday, the 30th ult., the treasurer of the Westminster General Dispensary, Gerrard-street, Soho, entertained, at Willis's Rooms, the medical officers and committee, and after dinner presented to Dr. Waite, the senior physician, a handsome testimonial from the committee and governors, in recognition of his valuable services, on his resigning office after a period of thirty years.

It may be interesting to some of our readers to learn that a committee has been formed at Oxford to collect subscriptions from those who wish to testify their sympathy with Professor Mommsen in the recent great calamity which has befallen him. Subscriptions may be paid to the "Mommsen Fund," at the Old Bank, Oxford.

THE governors of the Royal Berkshire Hospital, Reading, have, it is stated, resolved to provide additional accommodation for the patients. It is intended to expend £10,000 for this purpose.

THE King of Italy has conferred on Dr. Julius Althaus the brevet and insignia of a Knight of the Order of the Crown of Italy.

THE death is announced of Professor Hebra, the distinguished dermatologist of Vienna.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Caistor Rural Sanitary District.—Dr. Alexander Cameron's report for 1879 is the first general report he has had to make, and it refers to ten months only of the year to which it relates. The district is an extensive one, ranging from ten to sixteen miles in different directions from Caistor as a centre. Dr. Cameron's duties during the ten months he had held office in the year had been chiefly devoted to making himself acquainted with the wants of the district, and in initiating and organising systematic measures for its sanitary supervision. His report may be divided into two parts, the first of which is occupied with observations on deficiencies in the law relating to sanitary authorities, and particularly to deficiencies, as he thinks, in the powers they exercise; the second to observations on particular sanitary requirements of his district, and the way in which they should be met. To our mind the second part is infinitely the more interesting and instructive, and we shall trust to hear much more of Dr. Cameron with reference to the subjects of which it treats, and his mode of treating them. Amendment of the law is a very complicated subject, which demands other considerations than those which immediately present themselves to the medical officer of health, and at least its consideration should be deferred until there has been opportunity of testing by experience what can be done with the not inconsiderable powers which the law already gives to local authorities. As a rule, sanitary authorities have shown themselves too little disposed to use their existing powers to make it probable that the Legislature would be eager to increase them largely. With respect to the second part of Dr. Cameron's report it deserves particular notice for the desire that it manifests of studying and dealing in detail with the sanitary defects of rural places, and removing these without having recourse to comprehensive and expensive schemes of engineering and water-supply. We are not prepared to say that his suggestions for obviating excremental and slop-nuisance about houses in rural districts are the best conceivable; but we feel that the habit of thought which he displays in endeavouring to find solutions in detail for the particular difficulties he wishes to have abated is one which requires more cultivation than it has

yet received among the medical officers of health of rural districts. Those who are familiar with the report of the Local Government Board on the means of removing excremental nuisances in towns and villages cannot but feel that there is much more to be done in abating such nuisances in rural districts than has yet been done without the introduction of costly engineering schemes. Dr. Cameron evidently has his own views on this matter; they are clearly of a nature which we desire to see more of; and we shall look with interest for his further experiences.

Dr. Cameron's report gives a curious illustration of the sanitary (or rather insanitary) management of workhouses. He includes in his report an account of the evil hygienic state of the workhouse of the district, and of presumed fatal consequences to some of the inmates therefrom. He notes, moreover, an outbreak of puerperal fever in the workhouse—the nurse of the surgical wards being also the nurse of the lying-in wards!

Birmingham.—Dr. Alfred Hill's report on the health of Birmingham for the quarter ending July 3rd, 1880, shows a birth-rate of 41·6, as compared with 42·8 and 40·2 in the second quarters of 1878 and 1879 respectively, and a death-rate of 19·1 only, as compared with 25·06, 21·35, and 22·04 in the spring quarters of 1877, 1878, and 1879 respectively. There was a great diminution in the mortality from the zymotic class of diseases, the deaths from the seven principal zymotic diseases numbering only 178, as compared with 265 in the second quarter of 1879. The diminution of the mortality from zymotics was observed in each of the diseases in the class except "fever" and diarrhoea. The most fatal of the zymotic diseases was whooping-cough (56 deaths, as contrasted with 122 in the corresponding quarter of 1879); and diarrhoea came next in order of fatality (47 deaths, as compared with 42 in the spring quarter of 1879). The work of privy-transformation seems to be proceeding steadily in the town, as at the end of the quarter it would appear that there were 32,520 privies on the pan-system.

Belfast.—From the report of Dr. Browne, medical superintendent officer of health, presented to the Belfast Town Council last week, we learn that the number of cases of zymotic diseases reported by the medical officers of the several dispensary districts during July, were remarkably few, fifteen cases only having been reported during that period. The total births registered in the four weeks amounted to 508, and the deaths to 359, showing a natural increase in the population of 149. The average death-rate for the month was 27·95 per 1000, calculated on the census of 1871, but on the corrected population it was 22·0.

THE VACCINATION ACTS AMENDMENT BILL.

The Vaccination Acts Amendment Bill has at length been thrown overboard, and the work of the Legislature to this extent lightened—an extent small indeed, if measured by the size of the Bill, but great if regarded from the point of view of the dissatisfaction the Bill gave rise to, and the discussion which was threatened upon it. It would have been mere folly to have persisted with it in the face of the evidence against an alteration of the law of the sort it proposed, supplied by that most excellent of vaccination officers, Mr. Holmes of Leeds, in a recent report presented by him to the Board of Guardians there. Our contemporary, the *Yorkshire Post*, in printing this report, observes that it may please Mr. Serjeant Simon, M.P., to exhibit the neighbouring borough of Dewsbury as a place which prefers a loathsome disease to compulsory vaccination; but that when he couples Leeds with Dewsbury in that preference, he libels Leeds most grossly, as the evidence of Mr. Holmes most fully shows. We print elsewhere a portion of Mr. Holmes' report.

IMPORTATION OF SMALL-POX.

The local journals contain a report of the landing of a small-pox case at Bristol from a vessel bound to Gloucester, and of comments of the Sanitary Authority thereon, which seem to us to betray considerable confusion as to their duties under the circumstances. We have more than once had occasion to observe the imperfect ideas the local authorities of seaports have of the quarantine laws on the one hand, and the powers for dealing with infectious diseases on the other; and we are of opinion that the Local Government Board should take some steps to enable these authorities to see their way more clearly in a complex and not easily understood matter. Between the Quarantine Laws

and the Public Health Laws local authorities are apt to fall to the ground.

DUBLIN COW-POCK INSTITUTION.

During the year ending 31st of last March, 2910 applications were received from medical officers of workhouses, dispensaries, and public institutions, private practitioners, &c., for lymph; and 15,493 points and 2869 tubes charged with lymph were distributed. During the same period 2174 vaccinations were performed at the institution in Sackville-street and the branch in York-street, Dublin.

The report by Dr. Mouat and Mr. Courtenay Boyle on the Infectious Disease Hospital of the Colchester Union is not of a favourable character. The inspectors say, "The hospital is too near to both the workhouse and the outside dwellings to be safe; it is not sufficiently isolated, has no proper separation of the sexes, is approached twice a week by a large number of persons, many of whom are women and children who can hold conversation with the fever patients, and it is administered in an extremely imprudent and dangerous manner." The guardians appear to be willing to set about providing another building which shall be free from these serious objections.

The Guardians of the North Dublin Union have appointed a committee to carry out one of the three principal recommendations made by Dr. MacCabe, Local Government Board Inspector, in his half-yearly report on the sanitary condition of the workhouse—viz., that a small farm should be taken, upon which sheds shall be erected for children, who would there have good air and receive an agricultural training. The other two suggestions—namely, the erection of a small-pox hospital and the enlargement of the workhouse, will be dealt with at a future meeting.

The Royal Assent has been given to an Act entitled the Dagenham and District Farmers' (Optional) Sewage Utilisation Act, and which authorises the formation of a company for the delivery of metropolitan sewage to the occupiers of about 9000 acres of land on the Essex side of the Thames, between Barking and Wennington. Farmers and market gardeners will receive sewage only as they require it, hence the term "optional" in the Act.

The Greenwich Board of Guardians have agreed to a report of their Finance Committee, in which it is recommended that medical officers residing outside their districts be reappointed from time to time, the letter of the Local Government Board, suggesting that such officers be appointed permanently, notwithstanding.

Mr. P. A. Taylor gave notice in the House of Commons on the 10th inst. that early next session he would ask leave to bring in a Bill to declare it inexpedient and unjust to enforce vaccination, under penalties, upon persons who regard it as unadvisable or dangerous.

The Local Government Board has called upon the Medical Superintendent of the Holborn Poor-law Infirmary, at Upper Holloway, to resign his appointment.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

The fatality of infantile summer diarrhoea showed a further increase last week, but for which the rate of urban mortality would have been exceptionally low. In twenty of the largest English towns, estimated to contain in the middle of this year seven and a half millions of persons, or nearly one-third of the entire population of England and Wales, 4741 births and 3431 deaths were registered last week. The births were 444 below, whereas the deaths exceeded by 156, the average weekly numbers during 1879; the deaths showed a further increase of 78 upon the comparatively low numbers returned in recent weeks. The annual rate of mortality per 1000, which had slowly increased in the five preceding weeks, from 18.9 to 23.3, further rose last week to 23.9. During the past five weeks of the current quarter the death-rate in these twenty towns has averaged 21.4 per 1000, against 25.2 and 17.7 in the corresponding periods of 1878 and 1879. The lowest death-rates in the twenty towns last week were 16.9 in Bradford, 18.2 in Newcastle-upon-Tyne, 18.8 in Bristol, and 19.2 in Sunderland. The rates in the other towns ranged upwards to 24.5 in Bir-

mingham, 24.8 in Brighton, 26.2 in Liverpool, 28.4 in Manchester, and 30.6 in Salford. The zymotic death-rate in Liverpool and Salford showed a considerable excess; but the high death-rate from all causes in Manchester does not appear to have been due to the same cause.

The deaths referred to the seven principal zymotic diseases in the twenty towns, which had steadily increased from 406 to 884 in the eight preceding weeks, further rose last week to 996. These included 711 from diarrhoea, 99 from scarlet fever, 80 from whooping-cough, and 50 from measles. The annual death-rate from these seven diseases averaged 6.9 per 1000 in the twenty towns; while it was but 3.5 and 3.7 in Newcastle-upon-Tyne and Bristol, it ranged upwards to 10.0 and 12.1 in Leicester and Salford. Scarlet fever was proportionally most fatal in Norwich, Sunderland, and Salford; whooping-cough in Liverpool, and measles in Leicester. No less than 12 of the 14 deaths referred to diphtheria occurred in London. Small-pox caused 2 deaths in London, but not one in any of the nineteen large provincial towns. The number of small-pox patients in the Metropolitan Asylum Hospitals, which had been 200, 198, and 178 at the end of the three preceding weeks, had further declined to 143 on Saturday last; 15 new cases were admitted to these hospitals during the week, against 22 and 16 in the two previous weeks. The Highgate Small-pox Hospital contained 7 patients on Saturday last.

The fatal cases of diarrhoea in the twenty towns, which in the seven preceding weeks had steadily increased from 51 to 577, further rose last week to 711, of which 367 occurred in London. The annual death-rate from diarrhoea averaged 4.9 per 1000 in the twenty towns; it was equal to 5.2 in London, and to 4.7 in the nineteen provincial towns. The diarrhoea death-rates ranged in the several towns from 0.9 in Sunderland, and 1.4 both in Newcastle-upon-Tyne and Oldham, to 7.3 in Brighton, 7.4 in Portsmouth, 7.6 in Leicester, and 8.1 in Salford. Diarrhoea fatality showed a decline in Brighton, but had increased in most of the other towns.

The deaths referred to diseases of the respiratory organs in London, which had been 161 and 200 in the two preceding weeks, declined again last week to 175, but exceeded the corrected weekly average by 27; 100 resulted from bronchitis, and 47 from pneumonia. The annual death-rate from diseases of this class was equal to 2.5 per 1000 in London; it was 3.9 in Liverpool.

HEALTH OF SCOTCH TOWNS.

In eight of the largest Scotch towns, having an estimated population of rather more than a million and a quarter persons, the annual death-rate averaged 19.8 per 1000 last week, against 20.6 and 18.4 in the two preceding weeks; this rate was 5.1 below the average rate in the twenty large English towns. The rates in the eight Scotch towns ranged from 13.4 and 15.6 in Dundee and Perth, to 22.1 and 38.2 in Aberdeen and Paisley. The fatal cases of the seven principal zymotic diseases in the eight towns were 125, against 107 and 117 in the two preceding weeks; they included 61 from diarrhoea, 18 from scarlet fever, 15 from whooping-cough, 15 from measles, 13 from fever, 3 from diphtheria, and not one from small-pox. The annual death-rate from these seven diseases averaged 5.0 per 1000 in the eight towns, against 6.9 in the large English towns; the excess in the English towns was entirely due to the greater fatality of infantile diarrhoea. The zymotic death-rate in the Scotch towns ranged upwards from 0.7 and 2.0 in Greenock and Aberdeen, to 8.0 and 9.6 in Leith and Paisley; the excess in Leith was mainly due to scarlet fever, and in Paisley to diarrhoea and whooping-cough. The fatal cases of diarrhoea in the eight towns, which had been 39 and 59 in the two previous weeks, further rose to 61 last week; the annual death-rate from this disease, however, did not average more than 2.5 per 1000, whereas the rate in the English towns averaged 4.9. The highest rates from diarrhoea were 3.5 in Glasgow, and 5.3 in Paisley. Eleven of the 15 fatal cases of measles occurred in Glasgow, as also 9 of the 15 deaths from whooping-cough. Of the 18 fatal cases of scarlet fever 9 were recorded in Glasgow, 5 in Edinburgh, and 4 in Leith. The 13 deaths referred to fever corresponded with the number in the previous week, and included 6 in Glasgow, 3 in Edinburgh, and 2 in Dundee. The deaths attributed to acute lung diseases (bronchitis, pleurisy, and pneumonia) were 67 in the Scotch towns last week, against 69 and 59 in the two preceding weeks; the annual death-rate from these diseases was equal to 2.7 per 1000, against 2.2 in London. The causes of

90, or 18 per cent., of the 491 deaths registered in the Scotch towns last week were uncertified; in the English towns the proportion of uncertified deaths did not exceed 2 per cent.

HEALTH OF DUBLIN.

The annual death-rate in Dublin, which had steadily declined in the eight preceding weeks from 42·5 to 28·2, rose again last week to 35·2, and was higher than it has been in any week since the middle of June. During the past five weeks of the current quarter the death-rate in the city has averaged 31·0 per 1000, against 21·9 in London, and 17·7 in Edinburgh. The deaths in Dublin included 43, or 20 per cent., which were referred to the seven principal zymotic diseases, against numbers declining from 53 to 35 in the five preceding weeks; 6 resulted from small-pox, 7 from measles, 11 from scarlet fever, 5 from whooping-cough, 5 from fever, 9 from diarrhoea, and not one from diphtheria. The annual death-rate from these seven diseases was equal to 7·1 in Dublin; it was 7·3 in London, and 5·4 in Edinburgh. The fatal cases of small-pox were somewhat less numerous than in recent weeks, but 42 have been recorded since the end of June. The deaths from scarlet fever, measles, and diarrhoea exceeded those returned in recent weeks, while those of whooping-cough and fever showed a decline. The fatal cases of diarrhoea, which had been 4 and 5 in the two previous weeks, further rose to 9 last week, but the death-rate from this disease was considerably below the average rate that prevailed in most of the large English towns.

PORTUGUESE MORTALITY STATISTICS.

Since the beginning of the year official weekly mortality statistics have been issued for Lisbon and Oporto. These weekly returns, which we believe are the first that have been issued in Portugal, are very simple in form, but they afford the means of calculating the rate of mortality prevailing in those cities. The population of Lisbon with its immediate suburbs is given as 225,152 persons, and during the first quarter of this year the deaths registered were equal to an annual rate of 30·4 persons living. For comparison with this rate it may be stated that the annual death-rate during the same period was equal to 27·3 in London, 34·9 in Paris, 25·7 in Berlin, 30·9 in Vienna, 52·0 in St. Petersburg, and 46·4 in Rome. So far as may be judged from the returns, the excess in Lisbon during the first quarter of this year was mainly due to the exceptional fatality of lung diseases. The deaths from zymotic diseases included 20 from typhoid fever and 33 from diphtheria. We regret to see that at present these returns give no information as to the birth-rate in Lisbon, or of the ages of the decedents.

HEALTH MATTERS GENERALLY AT HOME AND ABROAD.

THE HYGIENIC ASPECTS OF THE DE LESSEPS CANAL.

The proposed maritime canal across the isthmus of Panama, should the project of M. de Lesseps be carried into effect, will, according to Dr. G. Halsted Boyland of Baltimore, prove hardly less important to the hygiene than to the commerce of the districts it will traverse. The works of the canal will, it appears, drain some of the most malarious and swampy localities in the tropics; and in this way, and by the air-channel created on the surface from the junction of the two seas, we may anticipate a marked diminution of the unwholesomeness of the localities and of the conditions which favour the development of yellow fever there. Dr. Boyland has set out his argument at length in the *Baltimore Independent Practitioner* for last month, and so enlists the interests of hygienists in this second great project of M. de Lesseps for uniting two oceans.

DIPHTHERIA IN RUSSIA.

Reports from the government of Koursk state that from the 1st (13th) January to the 1st (13th) May of the present year 4607 cases of diphtheria had occurred in the government. In December, 1879, there had been 77 cases, making a total of 4686 cases from the beginning of the outbreak, of which 1307 had been fatal. The disease had chiefly prevailed in the southern and south-eastern districts of the government, the northern districts having suffered only slightly. The Red Cross Society, by its indefatigable activity, had helped greatly to arrest the ravages of the malady.

From the 1st (13th) May to the 1st (13th) July of the pre-

sent year 247 villages of the government of Poltava had been infected with diphtheria. On the 1st (13th) May there were 125 persons ill of the disease, and in the course of the month 859 cases occurred, of which 301 ended fatally. The sanitary detachments engaged in combating the epidemic had experienced considerable difficulty in disinfecting infected houses, and it appeared that the priests encouraged the people to resist their efforts.

FLESH FOOD *versus* CATTLE DISEASE.

The House of Commons by a large majority, on the 6th inst., supported the action of the Privy Council in the maintenance of restrictions on the importation of cattle from America. Mr. Arthur Arnold's motion for removing these restrictions was negatived, on division, by 194 to 20. The question at issue was one of considerable complexity. The restrictions increase the cost of meat to the consumer in a most undesirable manner; but if they are not maintained we have no security against the introduction among our herds of fatal epizootics, and of lessening still further an already seriously diminished stock from the ravages of these maladies. To ensure a present relief in the cost of animal food, it is argued, we should be lessening our future home resources, and our last state would be worse than our first. The logic and the prudence are, doubtless, both right; but let us hope some intermediate method may be discovered by which logic and prudence on the one hand, and the food wants of the community on the other, may, if not fully reconciled, be brought into closer approximation.

A Committee appointed by the Minister for Home Affairs to regulate the prisons of Russia has reported upon the necessity of organising a system of statistics applicable to prisons, no statistics having hitherto existed with regard to them. The Committee draws a distinction between the medical and sanitary statistics of prisons and prisoners, the former being prepared solely to show the medical history and incidence of the different diseases which may occur, and as they affect individual prisoners; the latter having for object to show the relations of these diseases to the prison community as a whole, and to the conditions under which they arise. The Committee recommends that in future the medical officers of prisons shall be instructed to occupy themselves specially with the preparation of sanitary statistics in place of medical statistics—in other words, that the records they keep shall have reference not only to the clinical nature, the medical treatment of cases and the results, but to the probable causes of the sickness, and their removal.

A report was presented to the London School Board on the 5th inst. on an examination of girls in board schools for certain prizes offered by the National Health Society. The report contained abundant illustrations to show that a reasonable acquaintance with writing, spelling, and understanding English had not been considered a necessary preliminary for the scholars entering upon the rudimentary study of animal-physiology and becoming candidates for the prizes to be given for proficiency in the subject.

The Vaccination Act, 1880 (India), received the assent of His Excellency the Governor-General on the 9th July, 1880, and was promulgated for general information in the *Gazette of India* for July 10th, 1880. We reserve an analysis of this Act for another occasion.

The purity of the water-supply of Plympton continues to be an undecided question with the authorities of the Union. Analysts and sanitary inspectors are still at variance on the subject, and report different results.

A hospital for infectious diseases, built upon a site given by the Grand Duchess Catherine Michailovna, was opened at Oranienbaum, in presence of her imperial highness, on the 25th ult.

A HERBALIST and his wife, of Crewkerne, Somersetshire, were tried and convicted at the Central Criminal Court on the 6th inst. for murder in an attempt to procure abortion. The case was removed by writ of *certiorari* from the Somersetshire Assizes. The jury recommended the prisoners to mercy. A case of the same kind was tried at the Stafford Assizes on the 4th inst. In this case also the prisoner was found guilty of murder and sentenced to death.

MEETING OF THE BRITISH MEDICAL ASSOCIATION AT CAMBRIDGE.

OVER four hundred members of the Association arrived in Cambridge before Tuesday evening, many of whom attended the service in King's College Chapel, after which the Bishop of Ely preached before the Association. The Senate House was well filled at 8 P.M., to hear the President's address (printed in another part of our present issue); but owing to the large size of the hall, and the rather low position of Dr. Humphry, he could not be well heard. Those who were fortunate enough to be within the reach of his voice expressed their warm appreciation of the address by frequent cheers. A cordial vote of thanks to the President for his address was moved by Dr. Husband, of York, seconded by Professor Lister, and carried by acclamation. A similar compliment was then paid to the retiring President, Dr. O'Connor, of Cork, who was elected a Vice-President of the Association. Dr. A. Carpenter, President of the Council, then moved the adoption of the Report of the Council of the Association, but was neither allowed to read the Report nor make any remarks thereon, there being an evident desire to repair to Caius as soon as possible. The Report was adopted, and then some regulations for the conduct of the annual meetings, drawn up by the Committee of Council, were proposed for adoption. Dr. Norman Kerr moved an amendment, to the effect that in future the price of the annual dinner ticket should not include any charge for intoxicating liquors. He took this step, he said, in the interests of justice and fair-play, and not from any other motive. He strongly asserted that it was unfair to tax abstainers for the potations of others. His amendment was seconded by Professor Macnaughton Jones, of Cork, and was supported by several other members. Ultimately, to meet various minor objections, the original regulations were adopted, and Dr. Kerr's proposition was moved as an original motion, in the form of an instruction to the Council of the Association, and with the substitution of the word "wine" for "intoxicating liquors." This was carried with scarcely a dissentient vote. The Association and some of the lady visitors then adjourned to Caius Dining-hall for tea and coffee, which proved hardly large enough for the crowd that pressed in. This closed the formal proceedings for the evening; but as many of the colleges are entertaining the doctors it is too much to assert that the members of the Association then dispersed.

The reception room was at the Town Hall, the large hall being used as the general museum, where there was a good display of surgical instruments, drugs, &c., and the members were introduced to the charms of that invigorating but not intoxicating beverage *zoedone*.

Business began again at eleven on Wednesday in the Senate House with the Address in Medicine, by Dr. Bradbury (printed elsewhere), followed by the special grace for honorary degrees.

It was what is known as a "scarlet day," and the bright dresses of the ladies, and the scarlet robes of the doctors, added considerably to the effect of the scene. Precisely at 12.30 the Vice-Chancellor entered, and the Public Orator then gave a Latin oration, and presented the following gentlemen for the honorary degree of LL.B.:—Prof. Brown-Séquard, Dr. Donders, Dr. S. D. Gross, Sir William Jenner, Sir William Gull, Sir George Burrows, Mr. W. Bowman, Rev. S. Haughton, Mr. Lister, Dr. D. O'Connor, Mr. J. Simon, and Dr. Andrew Wood. The Undergraduates in the gallery maintained their reputation for warmth of their reception, and also for discernment of popular feeling, for the cheers that greeted Sir William Gull were for some time threatened to be drowned in hisses and groans, and calls for Dr. Pavy. Perhaps the most striking part of the ceremony was the ability displayed by the Public Orator, who had to make a laudatory address in good Latin to each of the graduates, which must have been no easy matter, as they were all members of one profession.

At five o'clock Mr. C. Stanford gave an organ recital on the famous instrument in Trinity College Chapel, which was not so largely attended as it deserved.

At nine o'clock the members of the Association and other visitors began to assemble at the Fitzwilliam Museum, at the invitation of the President of the Association. Dr.

Siemens undertook to light the Museum with the electric light, which gave a very brilliant effect to the gathering. In addition to the various valuable and very interesting art-collections which enrich this museum, music was provided, and many enjoyed strolling through the adjoining grounds of Peterhouse, which were very prettily illuminated.

Medicine Section.

The address on Medicine, on Wednesday (printed elsewhere), which inaugurated the proceedings in the Medical Section at the Cambridge meeting, while not pretending to a high scientific value, was one of undoubted utility. Medical science advances by many channels. It is essential that from time to time its paths and progress should be depicted. Few members of the profession have opportunity, and fewer still have leisure, to keep abreast of the fast-moving wave of knowledge, and such a summary as that which Dr. Bradbury furnished of the positions gained by the advanced guard of medical science is convenient and useful. Instruments of precision have revolutionised many branches of scientific work. They substitute the definite for the vague, the precise for the uncertain. Rough observations are confirmed and corrected, and new facts are ascertained. The microscope and, in its simple use and complex methods, the sphygmograph, the ophthalmoscope, the laryngoscope, and other instruments, have not only given us certainty where conjecture was the only guide, but they have yielded new facts in the special departments which they subserve, and have supplied most unexpected information in regard to diseases with which their use had apparently no connexion. That the position of an aneurism of the aorta could be revealed by a pulse-tracing or an inspection of the throat; that a tumour of the brain, or disease of the kidneys, could be discovered by looking into the eye, are facts which not long ago would have been received with positive incredulity. However familiar these and other observations of like character may be to the well educated members of our profession, there are not a few to whom they are still scarcely within the range of intelligent comprehension. Thus Dr. Bradbury's summary of the information which instruments of precision have furnished us, if rarely rising to an original level, and occasionally accepting somewhat uncertain facts, will still be of service to a large number of those who heard or will peruse it.

The attractions in the several sections of the Association were so far coincident in their influence as to lessen the interest of some of the discussions. In the Medical Section Dr. Bristowe supplied an able *résumé* of the facts of hysterical anaesthesia as they had come under his notice, but was unfortunately prevented, by time limitation, from entering on the still more interesting question of their nature. The scope for discussion which his address furnished was correspondingly limited, and the section was thus left in doubt of the significance to be attached to some points on which he especially insisted. The variation in the symptoms, the fact that the several sensory functions are variously affected, and that heat and cold may be felt when large surfaces are involved, and may not be felt when they affect small areas, are facts of much interest as regards the nature of the pathological change. The similarity of the anaesthesia of organic and of functional origin is a point which is of less practical than theoretical importance, for it is seldom that any difficulty of diagnosis between the two presents itself; and certainly such difficulty will rarely occur with the unfrequent choreic and diphtheritic anaesthesia, on which Dr. Bristowe laid rather too much stress. Some interesting facts, positive and negative, regarding the action of metals, were supplied by Dr. Bristowe and other speakers, especially by Dr. McCall Anderson and Dr. Hughes Bennett. Several of these cases were of a most interesting character, and demonstrated at once the truth and fallacy of the well-known statements of French observers. They comprised the alleged influence of surface applications, and illustrated the caution with which conclusions from them must be drawn. Metals were effective in some cases, ineffective in others; while in some of those in which their influence was most marked, non-metallic applications had an equal action. The rational scepticism of several speakers with regard to the connexion of the hysterical manifestations with disorders of the organs of generation found an extreme exponent in Dr. Matthews Duncan, who quoted, with expressions by word and gesture of lively contempt, the statements of M. Charcot on this subject, and doubted absolutely the reality of the alleged ovarian symptoms. Few speakers shared his

scepticism in an equal degree. Dr. Barlow believed that he had actually felt the enlarged and tender ovary even in young children, and Dr. Gowers stated that he had found marked tenderness in one ovarian region in at least half the cases of hystero-epilepsy, and pointed out the difference which national temperament probably exerts on the manifestation of hysteria, and the caution necessary in criticising by the light of English observations, the statements of observers abroad. The observations of Dr. Barlow on hysterical phenomena in young children were of much interest, although, as Dr. Gowers pointed out, the phenomena are not surprising when we consider how active the emotional condition of children is. Both he and Dr. Hughes Bennett attributed more weight to the cerebral influences in the production and removal of anæsthesia than previous speakers had ventured to assign. Dr. Paget, indeed, found more difficulty in comprehending the reappearance than the removal of anæsthesia under the influence of metallic application on the theory of expectant attention. The fact seems to be not difficult of explanation when we remember how potent an agent in the production of anæsthesia is the search for its existence. Altogether the debate was of considerable interest. It supplied abundant confirmation of the main facts, which have been brought forward by the investigations at the Salpêtrière, and it showed anew with what caution we must receive the conclusions which have been drawn too hastily from the facts observed.

Not the least interesting feature of the discussion was reserved for its close. Dr. Brown Séquard, who had been engaged elsewhere, entered after it was over, and gave, at the wish of the meeting, a description of the facts which he has ascertained relative to the transfer of anæsthesia and hyperæsthesia consequent on hemi sections of the base of the brain and spinal cord. These facts are already familiar to our readers. They suggest how large a share inhibition may play in the production of the symptoms of organic lesions, and how the mechanism of these may really be identical with that which gives rise to the symptoms of functional disturbance. A description, by the same investigator, of the results of his study of the subject of unilateral convulsions, and the similar conclusions which he has drawn from them, brought the afternoon's occupation to a close.

Surgery Section.

The proceedings were opened by a very able and eloquent address from the President of the Section, Mr. N. S. Savory, who took for his subject "Constitutional Disturbance"—a fitting prelude in every way to the important discussion on the local treatment of wounds that followed. "While Hunter, Abernethy, and Travers, and surgeons of their day held that the illness produced by local mischief was evolved through the nervous system, the knowledge more recently acquired of what is now known as 'blood-poisoning' threatens to exclude the older view altogether. In reality both these forms of constitutional disturbance occur, and although often confused, it is important to distinguish them. In all differentiated animals there is a correlation or co-ordination of parts well expressed by the term 'sympathy'; and as the grade of development rises, or as specialisation of function is further carried out, this sympathy becomes more thorough, more intimate and intense, and in man has been carried to an extreme. Although the sympathy between certain organs is greater than in others—e.g., uterus and mammæ—and may be called 'special,' there is yet no sharp line of distinction between these and others. This sympathy is established by means of the nervous system, and its maintenance is the largest and most universal office of that system. But the blood is a more universal, perhaps more subtle and more obscure, agent of sympathy. We may, therefore, well speak of constitutional disturbance through the blood, seeing in what terrible forms the affection known as blood-poisoning may present itself. In the worst examples the blood is so profoundly changed that it kills before local changes supervene, while in milder cases its effects are even more obvious by reason of the various local effects which may be found scattered over the body. But from these cases where there is some poison introduced from without we pass by insensible gradations to others in which the pyrexia, &c., are the simple result of a local inflammation. If it be true that normal nutrition and healthy blood are mutually dependent, there can of course be no disturbance of nutrition without some equivalent affection of the blood and some corresponding disturbance elsewhere. The local mischief may through the blood disturb the whole system or only

some one or two of its organs which eliminate the unhealthy matter from the blood, or upon which, for some particular reason, the burden of the mischief falls. Systemic infection in this way is far more frequent than is generally supposed, and no form of mischief can be, strictly speaking, limited to any single part. Thus, who has not been conscious, during work in the dissecting or post-mortem room, of the contact and penetration of the volatile products of decomposition? The nausea or faintness produced passes away and is forgotten, until, after many hours it may be, the peculiar odour is recognised in the excrement, the breath, or the perspiration, the different channels of elimination being employed in different individuals. The poison in this case enters the blood through the unbroken mucous membrane. But in the practice of surgery we are all familiar with instances of local sympathy through the nervous system, of pain, discomfort, or disturbance of function produced in one part by irritation of some form in another. We all remember the pain in the glans penis from vesical calculus, of pain in the testis from stone in the kidney, and of pain referred to the inside of the knee in disease of the hip; and there is often more pain in the parts affected by sympathy than in those directly disturbed. Hunter remarked that such local sympathies are often not reciprocal. Through these simpler phenomena it is not difficult to pass to the larger and more complex ones of general disturbance through the same channel. In a case of continued toothache, the pain, at first limited to the diseased tooth, spreads to adjacent ones, then to the jaw, and by and by radiates over the whole side of the face and head. Such pain as I am now referring to is often spoken of as due to 'reflex action'; it is entirely a matter between sensory nerves; it is a transference of an impression from the central extremity of one sensory nerve to the central extremity of another sensory nerve, and so gives rise to the sense of pain in the part to which that nerve is distributed. But such action may lead to disturbance in the nutrition of the part, and to further changes, which surely must be attributed to the influence of the vaso-motor or trophic nerves. The constitutional disturbance which results when the products of inflammation are bound down by a fascia or by bone, must be provoked through the nervous system; and the term constitutional irritation is not inappropriate for this kind of disturbance. The local irritation which gives rise to this is almost always accompanied by pain. Pain alone may even kill, and by itself may produce grave constitutional disturbance; more often it forms but a part of the local irritation, and pain and sympathetic disturbance are not always proportional. While both these forms of constitutional disturbance are marked by fever, inappetence, and malaise, in the more active forms of blood-poisoning, there are added rigors, with great and sudden rise of temperature, followed by profuse perspiration; and, if the case lasts long enough, congestion, inflammation, or even suppuration in various parts, and the febrile symptoms generally are more marked. In the one form the patient is rapidly destroyed, in the other he is slowly worn out. While then these two forms of disturbance can be clinically distinguished in practice, the question is not always simple, for both causes of disturbance may be at work in the same case. The local mischief which leads to the formation of unwholesome fluids will produce irritation of the nerves, and the fever will be the result of the two affections; and even when only one of these two causes is in operation at the onset it must tend sooner or later to induce the other. But although this combination necessarily occurs as a rule, no doubt, in the vast majority of cases, one of these two great forms of constitutional disturbance stands out from the other so marked in its features that practically it may be considered as the single source of mischief."

Sir HENRY THOMPSON introduced a discussion on Lithotripsy at a Single Sitting. Within fifteen months he had had fifty-six cases of stone in the bladder; six were treated by lithotomy, with one death; two by lithotripsy at several sittings, and forty-eight at one sitting, with two deaths. The results show that the new operation of Bigelow lessens the risk of lithotripsy, and leaves the bladder in a sounder condition than the old method. He summed up by saying that it was now more than ever important to settle the size and nature of the stone to be treated, and it was necessary to adopt the size of the instruments employed to the particular stone to be crushed. The use of any large and unwieldy instruments greatly adds to danger attending removal of small stones. We are not justified in removing all stones by lithotripsy; some must

be reserved for lithotomy. The new operation also is more difficult, and requires greater care than the older plan. Mr. Sympton read an account of a case of stone in the bladder with a sequestrum for its nucleus. Mr. Cadge noticed that many of Sir H. Thompson's cases had not been really removed at one sitting, but at two, and that the majority of these were small stones, the average weight being about two drachms, and he therefore doubted whether the results are better than were otherwise obtained. Before Bigelow's operation the tendency of all surgeons, he thought, including Sir H. Thompson, was to lessen the applicability of lithotripsy, and at present he was doubtful whether the new operation would enlarge the scope of lithotripsy. He was himself conscious of having made one mistake, having crushed in a case in which lithotomy was really required. The choice of operation was still the great difficulty. Bigelow's operation was quite as dangerous as the old plan. Sir H. Thompson had had two cases of severe cystitis, and he had heard of one other follow it, that he thought could have been avoided by more gentle and shorter manipulation. Mr. Wheelhouse thought that if lithotripsy was decided upon, it was better to do it at one sitting. Mr. Reginald Harrison and Mr. F. Gordon concurred. Sir H. Thompson in reply, stated that the largest instrument he had ever used was the size of No. 18; it was his hope and conviction that some day no large stones would be met with.

The discussion on the "Treatment of Wounds" was then introduced by a paper on the application of the antiseptic method in cranio-cerebral lesions, by Dr. G. YEO and Dr. FERRIER. These gentlemen used monkeys for their experiments, as most resembling man, and they were treated as nearly as possible like man. In the lower animals operations on the meninges almost always set up uncontrollable inflammation, and only one of the animals used for Dr. Ferrier's well-known experiments escaped. In the present series of experiments the scalp was purified with a solution of pure phenol (1 in 5). The spray was used in all but four cases; no drainage was employed; horsehair sutures were used. The trephine was used to inflict the injuries. Protective was found to be absolutely necessary to prevent irritation. The gauze dressings were sealed and protected by flexible collodion. In the first case operated on the dressings were displaced, and violent and fatal inflammation ensued. Of the four cases without the use of the spray, when the meninges were freely washed with phenol lotion (1 in 20), one recovered with signs of slight irritation, one died suddenly from hæmorrhage into the fourth ventricle without any signs of inflammation, and two others recovered, but there was slight superficial ulceration of the scalp. The total results were seven deaths out of twenty-six cases, but of these three were killed by cold, one of them living thirteen days, and one died from chloroform. Of the three others one died from hæmorrhage, one from shock, and only one from inflammation, and that was the one where the antiseptic method was discontinued—the first case. Of twenty-one that lived long enough for inflammation to set in, twenty, that were treated antiseptically, recovered without signs of inflammation; the one which was not thus treated died with intense encephalitis.

Mr. McVAIL followed with a paper on "Ten Years' Surgery in the Kilmarnock Infirmary." The period chosen extends from the opening of the hospital to July, 1880. The method adopted in this hospital by Dr. Borland is as follows:—No water or liquid of any kind is used; the blood is carefully mopped up with cloth rags; silk ligatures are employed; the flaps are kept open till all hæmorrhage has ceased and the surface is glazed over, they are then accurately united by silk sutures and adhesive plaster. The "dressing" consists of a single piece of lint smeared with lard, over which is a light covering and a bandage. This is generally removed in two or three days, and a little serous fluid is found. The dressing is usually renewed every two or three days, and if any antiseptic fluid is employed, great care is taken to dry the part thoroughly. In cases of compound fracture, the wound is covered over and the hæmorrhage stopped by a pad of dry lint. When there is much discharge, this dry dressing of course necessitates frequent change. Mr. McVail first compared Mr. Borland's results with those of Dr. Cameron, in the Royal Glasgow Infirmary.

In 4 years, ending December, 1878, 50 deaths in 1706 cases : 2.9 per cent. (Cameron.)

In 10½ years, ending July, 1880, 33 deaths in 1429 cases : 2.3 per cent. (Borland.)

In 2 years, ending December, 1878, 23 deaths in 878 cases : 2.6 per cent. (Cameron.)

In 4½ years, ending July, 1880, 9 deaths in 828 cases : 1.08 per cent. (Borland.)

In 1 year, ending December, 1878, 9 deaths in 505 cases : 1.79 per cent. (Cameron.)

In 2½ years, ending July, 1880, 0 deaths in 421 cases : 0 per cent. (Borland.)

Taking now the results of five years and three-quarters of Lister's practice in the Edinburgh Infirmary after the introduction of the spray, it appeared that in 33 cases of compound fractures and 72 severe injuries there were 4 deaths, while Borland had 28 major compound fractures without a death, and 4 deaths in 145 severe injuries. In primary major amputations Lister's and Borland's mortality were nearly alike; in the secondary major amputations Lister's mortality was 7.8, which, excluding cases unsuited for operation, was reduced to 4.8. Borland's was 3.7. In other operations Lister's was 3.9, Borland's 1.2. Borland had treated 181 cases of ulcer without a death, and the wonderful freedom from septic influence exhibited by ulcers was surely opposed to the germ theory. In all the groups of cases which could be compared, Borland's results were superior to those obtained by Lister. There had been a mortality of .3 per cent. from so-called hospital disease, one case of erysipelas, which did not spread to any other patient, one of pyæmia, and one of doubtful nature, while Lister had a percentage of .7 in 845 cases.

Professor LISTER, after replying to one or two criticisms of Mr. McVail, went on to remark that every good surgeon is an antiseptic surgeon, and that all the recent improvements in surgery had been improvements in antiseptic surgery, such as the frequent changing of dressings and poultices, drainage, dependent openings, the open treatment of wounds, pure ventilation, and even the judicious selection of cases, as a failure in the emunctories implies a difficulty in getting rid of septic material. But it is only lately that surgeons have aimed at asepsis or the total exclusion of septic elements. The difference between a simple and compound fracture was the best of all examples of the great importance of asepsis. It was really marvellous that the system has such a power of getting rid of septic elements, for they abound at the orifice of any gland in the body. Professor Lister then detailed the results of some experiments performed on August 4th, 1880. He drew from the jugular vein of an ox just killed some blood into a bottle, purified by heat, and from this charged twenty-four 2-oz. bottles similarly purified, and sealed them with cotton-wool caps; the operation was conducted antiseptically. They were all kept at a temperature of 98.5° F. With six of these bottles nothing else was done, and on opening one of these on August 11th, no change was perceptible in the blood, which had simply an odour of the cowhouse. On August 7th he happened to have an extremely putrid lipoma, and he dipped one end of a fine wire into its juice and then touched the serum in one of these same six bottles with the point of wire, quickly closing the bottle again. Next day there was a great alteration in its appearance, and in two days it was very offensive with swarms of bacteria, both granules and bacilli. These results showed that blood does not spontaneously putrefy, and that putrefaction is a fermentation. In the other eighteen bottles ordinary tap water was introduced: into twelve before coagulation had taken place, and into the other six after that event. The following table will facilitate reference:—

Amount of water introduced.	Bottles.			
	Before coagulation.		After coagulation.	
1 m. ...	A.	B.	...	C.
2 „ ...	D.	E.	...	F.
4 „ ...	G.	H.	...	I.
8 „ ...	K.	L.	...	M.
16 „ ...	N.	O.	...	P.
32 „ ...	Q.	R.	...	S.

Taking the latter first, after two days bottle S showed changes in the serum, which was crimson and full of minute very delicate, long bacteria, in pairs, and dense clumps, but there was no odour beyond that of the cowhouse. Two days later still, C was unchanged; no organisms. F, serum dull crimson colour, roast beef-like smell, bacteria of different kinds in it. I, no alteration in appearance, no smell, no organisms. M, pale brown serum, no abnormal odour, a very delicate branching fungus found. P, serum smelt like

mouse's urine; very delicate bacilli. These results were quite unexpected, for it is difficult to get even one-hundredth part of a drop of water free from organisms. They show that blood serum is not a favourable field for the growth of these organisms. There may be organisms present without any smell, as these experiments show; indeed putrefaction may even destroy very deadly organisms. Septicity must, therefore, include other than putrefactive changes. In the other bottles none, save Q and R, showed any change, nor were organisms present in them. Here, then, we find that organisms introduced into blood before coagulation are hindered by that blood from developing, and so septic matter introduced, mixing with the blood in a recent wound, is far less likely to do harm than if mixed with the serum, which soaks through a dressing. The coagulated blood can protect itself. Bacteria also cannot develop in concentrated solutions of albumen, and the dry dressing is therefore antiseptic, but I believe that the use of a chemical antiseptic agent is a better means of obtaining the same end. At any rate I would urge every surgeon to use some external antiseptic dressing. What form it should take must be a matter of individual conscience. The blood clot must be preserved, for if undisturbed it behaves like a healthy tissue, while if disturbed it excites putrefaction in its vicinity. A still better plan, however, is to keep the septic organisms out altogether, and not trust simply to preventing their development; the more perfectly I keep them out the more successful my practice becomes. In regard to the spray, which is the one drawback to the so-called antiseptic method, I think there is evidence that it is effectual. In empyema, for instance, without it the germ-laden air continually passing in and out of the pleura must excite putrefaction, but when the spray is used we find no such result, and the discharge becomes serous and gradually ceases. Chiene's experiments again show its utility, and my own conviction about it is such that I cannot omit it. I have now one further point to allude to. I lately removed a loose cartilage from the knee-joint of a man thirty years of age, and introduced a drainage-tube. Next day there was great pain, fever, and then rigor. In two days there was suppuration in the joint and abscesses in the vicinity; but there was no smell in the pus. I opened the joint on the opposite side, put in another tube, and ultimately the joint was saved, although the abscesses around it are not yet quite got rid of. On examining the pus I found an organism like the bacterium lactis, and Dr. Chiene found that he could not cultivate it in either meat or cucumber infusion. Here was evidently a result due to some oversight. And after some consideration I believe I solved the problem. When the drainage-tube is lifted out of the antiseptic fluid, it is lifted into common or pure air, and it is easy to see how organisms could be thus introduced into a wound through the interior of the tube. That this does not more constantly happen is due to the holes in the tube allowing the spray to get in, and to the flow of fluid through the tube when it is first introduced pushing out the air in the tube. To obviate this source of danger, lift the tube out into the spray, or hold it lengthwise in the spray, to cleanse its interior. I have often been struck with the fact that the typical results of antiseptic treatment have not been met with so uniformly since the introduction of drainage-tubes; and, at any rate, since I have given attention to this point, I have had more success in my practice.

Dr. BASTIAN.—As Mr. Lister bases his treatment on the germ theory of disease, one point in reference to that demands prompt settlement, and that is whether there are or are not organisms or germs pre-existing in healthy tissues or fluids. Lister says "No." The most recent evidence on this point is that of Chiene, who removed an organ of a recently-killed animal and placed it in some sterile infusion of cucumber, using, of course, full antiseptic precautions. The fluid remained without contamination, and there were no organisms in the tissues. I should like to know more on this point, and I should wish to challenge Mr. Lister to allow me to take part in such an experiment, and to examine the tissue myself to see if organisms are not present after some days. If organisms were to be found their presence could be explained by stating that they pre-existed, or that they developed after death. I cannot conduct the experiments alone, as if I found the organisms it would be attributed to my want of skill in the antiseptic details, but nothing would give me greater pleasure than joining Mr. Lister in such a research.

Mr. DARBY.—I question this germ theory of disease, for we live among germs, and every breath of air we draw is laden with them. Again, there is no fair analogy between the dead tissues of Lister's experiments and the living tissues treated by the surgeon. Although he had had charge of a hospital of 400 beds in Ireland, where the poor use dressings of rancid lard and cowdung, he had never seen a case of septicaemia, and did not believe there was such a thing. Putrid blood does not circulate in the living body.

Mr. ERICHSEN.—The treatment described to-day by Mr. McVail is that uniformly adopted by Lister, and with the best possible results, and I know none preferable to it, especially when the surgeon is removed from centres where every resource is at hand. Primary adhesion, Sir, is not exactly a modern invention, but men educated within the last ten years express the utmost astonishment at hearing it spoken of as a common occurrence years ago. In truth, all we know of that process we owe to John Hunter. When, however, antiseptics were introduced surgeons, from a desire to save their patients all pain, came to put up their wounds in the operating theatre, and the serum which is necessarily poured out accumulated in the wounds, sometimes decomposed, and often led to ill results. We owe much to Lister for the introduction of antiseptic surgery, though I was astonished to hear everything, even the proper selection of cases, spoken of as a detail of antiseptic surgery. As I understand it there are three principles of antiseptic surgery. 1. The first is the use of the spray to prevent the intrusion of germs during the infliction of a wound. Mr. McVail's statistics show that this is not necessary, wounds may be left open for hours, and then when brought together will close without any pus being formed; in harelip, cleft palate, and cataract we constantly see wounds so uniting although especially subject to adverse influences. 2. The second principle is the covering in of the wound to filter the air, in the form of the dry dressing—masses of lint or cotton-wool—it has given me most excellent results. But are the germs likely to do more harm? In the operation for fistula in ano, and in lithotomy antiseptics cannot be used, and who has seen mischief arise from septic influence? What we see in these cases is altogether inconsistent with our dread of the intrusion of germs into healing wounds. 3. The third principle is one that I consider all-important—it is drainage, the keystone of all treatment. Chassaignac's invention is the greatest advance in the treatment of wounds made in the present century. There are two evils, however, connected with antiseptic surgery. One was suggested afresh to mind by your very able and eloquent address: I think it has a too great tendency to narrow men's attention to local treatment to the exclusion of the due consideration of the constitutional condition; and I think also that it has tended to the hygienic improvement of hospitals, for it remedies the evils of badly-built and arranged hospitals when our true course would be to construct and manage them in accordance with our advancing knowledge of hygienic laws.

Professor MACLEOD (Glasgow) thoroughly believed in Lister's treatment, and acted in the faith of the germ theory, as any one who wished to carry out the practice must. Having seen the practice in the Glasgow hospitals before and after the introduction of Listerism, he must bear emphatic testimony to the great change for good that had taken place. But antiseptics cannot do everything, and some of the improved result is due to improved methods of arrest of hæmorrhage, drainage, rest, and more careful attention to many local and constitutional details. For the arrest of hæmorrhage he preferred well-prepared catgut, or carbolised silk cut short, and could not wish for anything better than these. It was very important to see that drainage was complete, and by gravitation, and it was better to have several short tubes than one large one, so placed that when in bed the wound drained. Since 1874 he had had under his care in the Western Infirmary 729 cases of injuries and operations (excluding lesser ones) with a mortality of 3·3 per cent. All the cases were treated antiseptically.

Mr. LUND.—Putrefaction is impossible without bacteria, and it is putrefaction we have to dread. Every case of septic poisoning is the result of auto-inoculation, and we ought for this reason to centre all our attention upon the local treatment.

Mr. JOHN WOOD.—The power of the blood to resist putrefaction depends upon the vital power of the blood, and it is to this that we have to look in the large number of our cases. But the class of persons who make the difference between a percentage of 3 and 7 of deaths are those requiring [the

very greatest skill of the surgeon; and here the antiseptic treatment is useful in saving a certain number of people who would otherwise succumb. It also extends the aim, scope, and value of surgery. There are operations now justifiable which are too risky to be otherwise undertaken, though I by no means intend to justify many of the recent developments of operative surgery; for a single case of death after an avoidable operation goes far to neutralise the benefit of 100 successes. I myself have done about 300 cases of the radical cure of hernia, and about 50 under antiseptics, and among these have not seen a bad symptom even; but then I never operate unless the patient is otherwise healthy.

Mr. LISTER replied, that the good results obtained in the operation for harelip were undoubtedly due to the antiseptic action of the living tissues. He should be sorry to think that antiseptic treatment led to neglect of constitutional treatment, or of hospital hygiene, but it certainly improved the latter in one important manner, for it now was no longer necessary to have all the windows of a ward open through the winter, and to kill a few patients by pneumonia and pleurisy to save the many from pyæmia. After much careful work he hoped he had at last discovered a way of preparing catgut, which ensured its not softening too soon, or remaining rigid too long; but until he was certain that this was so, he should not publish the method.

Pathology Section.

The Pathological Section held its meetings in the new museum buildings, and there was in connexion with it an exhibition of pathological drawings and specimens, and of microscopic specimens. Amongst the latter were especially noticeable several beautiful series of specimens by Dr. D. J. Hamilton, of Edinburgh, illustrating his researches on the nature of phthisis and tuberculosis of the lungs, of which an account was given in a paper before the section, and also of tumours and cirrhosis of the liver, &c.; Dr. Dreschfeld, of Manchester, had some specimens of fibroid phthisis; Dr. Leech, of Manchester, a series of sections of glomerular nephritis; Mr. Frederic Eve showed the gradual transition of ichthyosis into epithelioma, and there were various other preparations and sections. There was an excellent series of micro-photographs of the brain and spinal cord, by Dr. Deecke, of New York, and of the blood by Dr. Woodward, of Washington, U.S.A., both shown by Dr. Clifford Mercer; and Dr. Greenfield exhibited micro-photographs of anthrax organisms. Of bone diseases there were series of preparations of artificial necrosis, contributed by Professor Busch, and diseased bones from syphilis by Mr. Jonathan Hutchinson, and Dr. Barlow. On the whole, the exhibition of specimens, though not large, was very select and interesting.

The section began its work with the consideration of the influence of the injuries and morbid conditions of nerves on nutrition. The attendance was very good considering the somewhat abstruse and difficult nature of the subject. The discussion was opened by Mr. Jonathan Hutchinson, who took a somewhat negative side of the question, generally opposed to the idea of the trophic function of nerves. Mr. Hutchinson illustrated his views from a large number of diagrams. Commencing by drawing attention to the fact that the nervous system regulates the supply of blood and nutriment, he suggested that the changes due to the derangement of these must always be eliminated before assuming a direct action of the nervous system on morbid change. Moreover, it must be allowed that the sensory nerves may act as indirect exciters, stimuli conveyed by them causing reflex circulatory changes limited to their area of distribution. As illustration of the cases which do not justify the conclusion drawn from them, he cited Mr. Hilton's well-known case in which gangrene in the parts supplied by the ulnar nerve occurred in a limb, when arterial supply was also occluded. Spasm of the vaso-motor nerve would therefore be an added cause, not the sole cause, and this would form no evidence of direct action in the nutrition. In the same way some cases of so-called *digiti mortui*, and similar gangrene might be induced by irritation conveyed from the sensory to the vaso-motor nerves in a reflex manner. In other similar ways fallacies might occur from not recognising the part played by similar reflex excitation. Another fallacy was that of not recognising simple local causes.

Ophthalmology Section.

In the Ophthalmological Section the morning was spent in testing the perception of colour of numerous members of the

Association, and at least one case of deficient perceptivity was noted.

At two o'clock the proper business of the Section was commenced by Mr. Bowman, who stated that he had prepared himself to make a few observations of an introductory nature in regard to Glaucoma, which was the subject that had been selected for discussion, but finding that there were several papers on the subject by different gentlemen well qualified to deal with it, he thought he should do better to postpone what he had to say till after those papers had been read. He accordingly called on Mr. Priestley Smith, who had a paper on the Pathology of Primary Glaucoma. Mr. Smith was understood to say (though in the after debate he rose several times to correct misrepresentations) that in primary glaucoma there was a diminution of distance between the cornea and the lens, and that this was due to an enlargement of the lens, an enlargement that progressed with the advance of age; so that at that period at which glaucoma was most common, the increased size of the lens (photographs and specimens of which were exhibited) the margin of the iris was pressed against the cornea, and the communication between the aqueous and the canal of Schlemm—the drainage tube of the eye—was practically shut off. Dr. Brailey, in a very excellent speech, gave the results of his numerous dissections and examinations, all tending to show that the cause of glaucoma is some disturbance in the balance of pressure between the aqueous and the vitreous, which again is referable to some obstruction of the drainage system of the eye. From the pathology, the discussion wandered into the treatment of the disease, and Mr. Walker, of Liverpool, advanced the filtration theory as an explanation of the good effects of iridectomy, after which speeches were made by Mr. Cowell, Mr. Vose Solomon, and Dr. Argyll Robertson, each speaker advocating his own special method of operative procedure. Professor Donders, who had been a patient listener, was then called upon by the President, but confessed his inability to deal with the subject. Many more facts he contended were required before any conclusions of a satisfactory nature could be drawn in regard to the nature of glaucoma. As to Priestley Smith's suggestion of the increase in the size of the lens, he thought the lens ought to be weighed as well as measured, and he made a valuable suggestion to the effect that an injection of the vessels should be, if possible, obtained. The President then made some remarks, showing clearly enough that the pathology of glaucoma has still to be worked out.

Mr. Couper then read a paper on rapid Dilatation of the Lachrymal and Nasal Ducts, by means of large Probes, a method which was endorsed by several subsequent speakers. We noticed M. Landolt, M. Warlomont, Mr. Critchett, Dr. Wolfe, and many English ophthalmologists. The meeting was exceedingly well attended. M. Landolt exhibited a new speculum.

The third general meeting of the Association was held at ten o'clock on Thursday morning in the Senate House. Various reports were adopted. The place of meeting for next year was named but not settled; Brighton was mentioned. It was announced that the Government had decided to bring in a Bill to institute one compulsory qualification for the United Kingdom. Mr. Holmes delivered the Address in Surgery, which was well received. A vote of thanks to the orator was proposed by Sir H. Thompson, seconded by Mr. Cadge. The President then handed the Medal of the Association, presented for conspicuous merit, to Dr. Acland to convey to Dr. W. Farr. In well-chosen words he expressed the regret of all present at the enforced absence of Dr. Farr, and the high esteem in which he is held by the profession, and the great value of his work to England and the whole world. About 800 members took part in the proceedings of this day.

THE SERVICES.

LIST OF MEDICAL OFFICERS SERVING IN AFGHANISTAN.

OUR correspondent with the army in Cabul has furnished us with a list of medical officers of the Army at present employed with the army in Northern Afghanistan. In the present state of affairs this is of considerable interest. At the time of our correspondent's despatch, the medical details of the Kandahar division were not complete, but we hope to receive them by an early mail.

Northern Afghanistan Field Force.

Principal Medical Officer—Deputy Surgeon-General A. Smith, C.B.

1st Division (Sir Frederick Roberts).

Deputy Surgeon-General—H. B. Hassard.

Surg.-Major W. F. Rutledge in medical charge G-3 R.A.

Surgeon E. H. Févre " 6-8 R.A.

Surg.-Major R. Lewer " 9th Lancers.

" C. A. Atkins " } 72nd

" G. T. Langridge " } Highlanders.

" " " " } 92nd

" S. B. Roe " } Highlanders.

" E. Hopkins " }

" W. F. Bennett " }

Surgeon J. F. Williamson } Field Hospitals.

" H. Cotton " }

" H. C. Kirkpatrick " }

2nd Division (General Ross, C.B.)

Deputy Surgeon-General J. A. Hanbury.

Surg.-Major E. Footner in medical charge 6-11 R.A.

Surgeon J. J. Greene " 12-9 R.A.

" P. J. Macquaid " 67th Regiment.

Surg.-Major J. Ekin " 2-9th Regiment.

" J. Fleming " }

" G. Evatt " }

" G. W. MacNalty " } Field Hospitals.

Surgeon P. Connolly " }

" J. Brodie " }

3rd Division (General Hills, V.C., C.B.)

Brigade-Surgeon—R. W. Meadows.

Surgeon A. W. Carleton in medical charge A-B. R.H.A.

" F. W. Trevor " G-4 R.A.

Surgeon-Major S. G. White " 11-11 R.A.

Surgeon S. H. Carter " 60th Rifles.

Surgeon-Major C. W. Watling " 59th Regt.

Surgeon-Major W. S. Whylock " }

" E. C. Markey " } Field Hospital.

" J. H. Moore " }

Surgeon A. W. Browne " }

Kuram Force.

Principal Medical Officer—Deputy Surgeon-General A. J. Dale, Indian Medical Service.

Surg.-Major W. O'Halloran in medical charge E-3 R.A.

" T. W. Patterson " 1-8 R.A.

Surgeon R. H. Quill " C-4 R.A.

Surgeon-Major R. Jackson " 2-8 Regt.

" W. M. Harman " 85th Regt.

Surgeon P. G. Jones " Detachment

" " " Rifle Brigade.

Surgeon-Major J. Wright " }

" J. J. O'Reilly " }

Surgeon W. Donovan " } Field Hospital.

" J. C. Dorman " }

" J. Boulger " }

" P. H. Johnston " }

Khyber Line Force (General R. Bright, C.B.)

Deputy Surgeon-General A. M. Tippetts.

Surg.-Major T. Oughton in medical charge 11-9 R.A.

" W. J. Rainsford " C-3 R.A.

" W. W. Kenny " L-5 R.A.

" Major R. W. Davies " 6th Drag. Grds.

" W. Morris " 1-5th Fusiliers.

" R. C. Eaton " 1-18th Regt.

" D. A. S. Thorburn " 2-14th "

" W. F. Burnett " 1-25th "

" W. Creyk " 51st "

Brigade-Surgeon A. Guthrie " }

Surg.-Major A. G. Bartley " }

" J. W. Loughheed " } Field Hospitals.

" J. A. MacCracken " }

Surgeon J. A. Goomley " }

" J. Pedlow " }

" F. A. Davey " }

INDIAN MEDICAL SERVICES.

We are glad to learn that the Marquis of Ripon intends to institute an inquiry into the grievances of the Indian Medical Service. Whatever difference of opinion there

may be as to the manner in which the abolition of the dual administrative staff has been effected, there can be none as to the existence of real grievances in the scale of pensions for the medical officers, the relative rank of the juniors, the niggardly share in the distribution of honours, and the system of allowing officers to decline promotion for the purpose of retaining lucrative appointments. The Marquis of Ripon is practically well qualified to adjudicate upon such questions from his long experience in the War Office, and his knowledge of the requirements of the Army Medical Service. We entertain strong hopes that he will be able to overcome some of the difficulties which have arisen in the working of the new system, and to place the Indian Medical Service on a more satisfactory footing. Of one thing we are well assured, that he will endeavour to do justice to the two medical departments without favour or partiality.

INSPECTION OF THE ARMY HOSPITAL CORPS AT ALDERSHOT.

Sir William Muir, Director-General of the Army Medical Department, accompanied by Surgeon-General William Munro, C.B., and Captain Pringle, A.H.C., made an official inspection of the Army Hospital Corps Depot and Training School, on Friday last. The depot numbered 250 strong, and was drawn up under the command of Surgeon-Major Sandford Moore. The class of young medical officers, who have lately passed through Netley, and who have been for the last two months undergoing instruction in ambulance work, were also inspected, and put through "stretcher drill" by the instructors. After the inspection, the Director-General and his staff were entertained at luncheon by Surgeon-General Shelton and the officers of the Army Medical Department, in their new messroom in V Lines.

DEATH OF SURGEON C. H. MURRAY, H.M. INDIAN MEDICAL SERVICE.

We regret to announce the death, on the 10th July, at Peshawur, East Indies, of Surgeon Charles Herbert Murray, M.D., of the Bengal Medical Service. Dr. Murray obtained his commission as recently as March in last year, and has fallen a victim, at the early age of twenty-five, to the deadly climate of the Peshawur Valley.

ADMIRALTY.—Deputy Inspector-General of Hospitals and Fleets Charles MacShane has been placed on the retired list from the 7th inst., with the rank of retired Inspector-General of Hospitals and Fleets. Staff-Surgeon Fleetwood Bucke has been appointed to the *Kingfisher*; Surgeons J. Dudley to the *Iron Duke*, for Yokohama, sick quarters; A. MacKinlay to the *Mosquito*; J. O'Callaghan to the *Warrior*; William Putsey to the *Alexandra*; J. T. W. S. Kellard to the *Himalaya*; Robert Bedford to the *Duke of Wellington*, for Haslar Hospital.

Dr. Eaton, of the 16th Native Infantry, while proceeding on duty with a detachment of the Scinde Horse was fired at, on the 6th July, by a party of Pathans, near the Chuppar Mountains, and had his horse killed under him.

PARIS.

(From our own Correspondent.)

THE proposal which was mentioned in THE LANCET of February 28th, that the State should make provision for the wives and families of medical men who shall die from disease contracted in the exercise of their profession, has not met with the approval of the present Minister of the Interior. After the Commission appointed by the Chamber of Deputies to examine into the question had reported in its favour, the matter remained with the minister, who has now written a letter to the president of the Commission of petitions which embodies his views. This document is too long to transcribe *in extenso*, but the principal arguments against the measure are directed against the parallel which the petitioners sought to institute, between the physician who loses his life by disease communicated to him, from his patients, and the soldier who dies for his country on the field of battle. "Medical men," says M. Constans, "are not servants of the State like soldiers, and consequently the

State owes them no pecuniary reward. It is a principle of law that pensions are only due to those citizens who have devoted their lives to the service of the nation, and in an exclusively public interest. If pensions were to be awarded to the widows of medical men and gratuitous instruction to their children, they could not be refused to nurses and hospital attendants; and, indeed, there would be no reason why the survivors of any person whose life had been sacrificed in the pursuit of a useful profession should not claim State aid on the same grounds. The exercise of medicine," continues the minister, "is generally lucrative (!), but like all others it has its dangers. It is the business of those who are interested to guard against the possibility of accident by assurance." But whilst the right of the medical profession to State aid is denied, it is admitted that it has a serious claim upon the benevolence of the State. M. Constans points out that his department has often relieved the necessities, and that the Minister of Public Instruction always looks favourably upon applications for bursaries when coming from the children of deceased medical men. The letter terminates with a recommendation that the Ministers of Agriculture and of Finance be consulted by the Commission.

The Academic Council of the University of Montpellier has given its decision in the case of M. Amagat, the *agrégé* who was the instigator of the recent disturbance in the Faculty of Medicine there. By twenty-three votes against one the following judgment was pronounced:—The Academic Council, blaming severely M. Amagat, decides that he shall be removed from the post of *agrégé* of the Faculty of Montpellier; he will, consequently, be struck off the list of *agrégés* of the said faculty; decides, moreover, that he be allowed to retain the title and emoluments of an *agrégé*, and that, as such, he shall be left at the disposition of the minister." It is most likely that M. Amagat will be appointed to a similar position in another university. The secrecy observed by MM. Pasteur and Toussaint, with regard to their processes for communicating modified diseases to fowls and cattle, to protect them respectively against cholera and charbon, has created great dissatisfaction in scientific circles; and some critics say that MM. Pasteur and Toussaint have been premature in publishing their "marvellous, mysterious, and miraculous results." At the last meeting of the Academy of Medicine, M. Bouley announced that the Academy of Sciences had been authorised by the latter to open the sealed envelope which had been deposited there, and which contained an account of the method. The protective virus used by M. Toussaint for inoculating animals with a modified disease, is carbonous blood, which has been defibrinated, and then raised to the temperature of 55° Centigrade. This destroys the bacteria which it contains. This blood inoculated upon a healthy animal produces a local disease, which does not extend its manifestations beyond the lymphatic ganglia. Twelve days after inoculation the blood of the animal experimented upon is no longer favourable to the multiplication of bacteria; and in the first cases so treated three months have elapsed, and the animals still remain refractory to repeated inoculations with the most virulent virus.

A provincial practitioner, Dr. Gerlié, has related to the Academy of Medicine how he traced a case of ringworm to the shop of a barber in his village. It had been brought there by the barber's son, who went to a school at some distance where there were twenty other children with the same affection, which had probably been imported into the school by a boy whose father had cut his hair with the same clippers he used for his horses. In consequence of Dr. Gerlié's discovery the hair-cutter's shop was deserted by his customers, and its proprietor retorted by placarding abusive notices concerning the doctor about the town; which the municipal and police authorities refused to remove. These would seem to be matters of purely local interest, but Dr. Gerlié has written a brochure on the subject, which the Academy has recommended to the attention of the Minister of the Interior, and a vote of felicitations has been passed by the venerable company "to the courageous doctor who did his duty in such difficult circumstances."

At a recent meeting of the Society of Biology, MM. Bourneville and d'Olier made a communication upon the physiological action of bromide of ethyl, or hydro-bromic ether as it is called in England. This agent was administered in five cases of hysteria occurring in male subjects at Bicêtre, and in some cases at the Salpêtrière. It caused a cessation of convulsive phenomena, and in two cases a

rapid transition from "clownism" to delirium. In epilepsy, when given during the tonic period, it produced muscular resolution in a few seconds, in three instances; in other cases the duration and intensity of the convulsions seemed to diminish, and in some it had no effect whatever. Of ten epileptic patients submitted to treatment by the daily inhalation to anæsthesia of bromide of ethyl, five have been improved during the two months which the experiments have extended over; they have gained from two to eighteen pounds in weight, and the number of fits have decreased considerably; in one instance, forty-one less in June than in May, and twenty-one less in July than in June.

MEDICAL NOTES IN PARLIAMENT.

In the House of Commons on Thursday, the 5th inst., a petition was presented from Lurgan Union for alteration of the law relating to lunatics and paupers. A return, moved for by Professor Thorold Rogers, was presented, giving the number of applications made under the Medical Officers' Superannuation Act (England) to Boards of Guardians for superannuation allowances, &c.—Mr. Ritchie asked the Secretary of State for the Home Department whether his attention had been called to the case of George Lamb, who was convicted at the Thames Police Court of exposing for sale unwholesome meat and fined 2s. 6d.; and, if so, whether he has thought it necessary to ask for some explanation from the magistrate of what seems so inadequate a punishment for so serious an offence.—Sir W. V. Harcourt had made inquiry, and found that this was not a serious case. The defendant had six tins of Australian meat in his possession, which were unfit for human food, but he placed the meat aside on discovering its condition, and did not sell any of it. The magistrate was inclined to dismiss the case, but decided to impose a nominal fine, so as not to encourage carelessness in such matters.—Mr. Dawson gave notice of the following questions, to ask the Chief Secretary to the Lord Lieutenant of Ireland, whether he is aware that one gentleman, Dr. E. A. Rawson, holds the following appointments in Carlow—viz., (1) surgeon to the Militia (entailing occasional absence); (2) surgeon to County Infirmary; (3) physician to Fever Hospital; (4) physician to Workhouse; (5) consulting sanitary officer: and that, whilst holding all those appointments, he has been recently sanctioned as substitute during leave of absence, to Dr. M'Dowell, who holds the following positions:—(1) physician to the Dispensary; (2) surgeon to various Police Stations; (3) registrar of births and deaths; (4) medical officer of health; (5) public vaccinator: and whether such an arrangement meets with his approval.

On Friday, Mr. Robert Fowler asked the Under Secretary of State for Foreign Affairs, whether Her Majesty's Government have taken any steps to put an end to the interference, on the part of the Japanese Government, in the drug and chemical trades, which was the subject of a memorial, signed by several influential firms, to Lord Salisbury in August last. Sir C. Dilke said a copy of the memorial was sent to Her Majesty's *chargé d'affaires* in Japan, with instructions to take such action as might be necessary for the protection of the importers of drugs, in case there should be proper grounds for the interference of Her Majesty's Government.

On Monday, a petition was presented for the restoration of a faculty of medicine to the University of Oxford. The County Court Jurisdiction in Lunacy (Ireland) Bill was brought down from the Upper House and read a first time. In reply to Sir S. Northcote, Mr. Dodson intimated that the Vaccination Acts Amendment Bill would not be proceeded with. Later in the sitting the order of the second reading was read and discharged, and the Bill was formally withdrawn. Mr. Hopwood asked the President of the Local Government Board, by whose authority a "Note" was appended of information not ordered by this House to the Return on Mortality (General and Infant), dated the 16th day of June, 1879. Whether the Note is not misleading, as it compares the epidemic years 1838-42 with years consisting of epidemic and many non-epidemic years, and omits the years 1843, 1844, 1845, and 1846, which

were non-epidemic years altogether; and whether he will give consent to a return of deaths from small-pox for England and Wales during the years 1843, 1844, 1845, and 1846. Mr. Dodson said the Note was appended by authority of the late Registrar-General. Its object was not to mislead, but to show the average rate of mortality over the whole series of years for which the information was available. The years 1843-1846 had been omitted because the cases of death from small-pox during that period had not been classified. Mr. Corbet put a series of questions—which appeared in last week's LANCET—with reference to the superannuation of medical officers of lunatic asylums in Ireland. Mr. Forster replied, that the English Act of 1862 did fix fifteen years as the minimum period for pensioning officers of lunatic asylums in England, but it did not prescribe that after that period of service they should be entitled to pensions equal to two-thirds of their salaries. In Ireland, these officers were regarded as civil servants, and their superannuation was regulated on the principle of the Superannuation Act of 1859. They must have served forty years to become entitled to a pension equal to two-thirds of the salary. The Government were entitled to add a number of years to the service of any officer having special professional qualifications. He could not state at present that he would bring in a Bill to increase the allowances of officers of lunatic asylums in Ireland. He must have some information that the ratepayers would be willing to bear the increased cost. Perhaps the honourable member would bring in a Bill himself.—During a discussion in Committee of Supply, on convict prisons, Mr. Sullivan complained of the want of independent medical inspection, and wished the Government to revert to the old system, whereby the highest local medical authorities were engaged as medical superintendents, and were free from any control of the prison authorities. They could go in and inspect the prison when they pleased, and the results of that independent inspection were very satisfactory. But, owing to their probing too much into prison management, they were now excluded, and the health of prisons was dependent upon medical officers who were not independent. Mr. Peel and Sir R. A. Cross defended the present system, and maintained that the existing medical supervision was efficient.

On Tuesday, Mr. Forster, replying to a question by Mr. Meldon, which we have already published, said it was the fact that the medical officer of the Crossgar dispensary district, in the union of Banbridge, having, after forty years' service, applied for superannuation, on the ground of broken-down health, the guardians refused to add to the rates by granting any such retiring allowance. It certainly was a case of great hardship, but the Irish Local Government Board had no power to interfere. This question of superannuation of medical officers was one that demanded the attention of the Government, and if time could be found amidst their other pressing business he hoped it would be dealt with.—The following notices were given: Mr. Wm. Corbet, to ask the Secretary to the Treasury, with reference to the diminution of the salaries and expenses of hospitals and infirmaries in Ireland in 1879 by the large sum of £3369 1s. 3d., as shown in the abstract of an account just issued, whether he can state the names of the hospitals and infirmaries in which reductions have been made, the amount of such reductions, and the cause thereof. Mr. Wm. Corbet, to move for a return showing, in tabular form, the number of insane persons under the jurisdiction of the Court of Chancery in Ireland, where at present located, the amount annually expended on their support and maintenance, and the total annual income of each. Mr. P. A. Taylor, to move next session, "that, in the present unsettled condition of medical opinion in regard to the safety of using ordinary humanised lymph, as also of the safety, effectiveness, and practicability of the use of animal vaccine, it is, in the opinion of this House, inexpedient and unjust to enforce vaccination under penalties upon those who regard it as unadvisable or dangerous."

On Wednesday, Mr. Grantham had the following question on the paper, but owing to the absence of Lord Hartington it was deferred:—To ask the Secretary of State for India, if he will inquire of the proper authorities in India, and report to the House early next session, whether by the report of a medical board, dated September 5th, 1868, signed Surgeon-Major Peskett, Surgeons Lowdell and Condon, and Assistant-Surgeon Walsh, at Mynee Tall, Captain Chatterton was not recommended to take twelve months' leave of absence, for the purpose of returning to England to undergo an opera-

tion—viz., the division of the left tendo Achillis, on the ground that it was not safe to perform the operation in India. Whether Surgeon-Major Powell, acting as garrison surgeon in Fort William, Calcutta, did not afterwards, in April, 1869, confirm the above recommendation on the same ground. Whether the only report on which the despatch of January 5th, 1869, ordering the compulsory retirement of Captain Chatterton, was founded, and which practically alleged that he was shamming, was not that made in November or December, 1868, by Assistant-Surgeon MacDermott, who was shortly afterwards removed from the medical charge of that and other cases previously under his care. And how it was that Captain Chatterton was dismissed the army in April, 1869, on the report of an assistant surgeon, when Captain Chatterton was acting on the reports of more eminent surgeons, made both before and after the report of the assistant surgeon.

On Thursday, Mr. Pugh asked the Secretary of State for India, whether the Orders of the Governor-General of India, No. 13, of January 3rd, 1880, Military Department, and No. 150, of March 13th, 1880, Home Department, do not contravene the provisions of s. 56 of the stat. 21 and 22 Vic. c. 106, in that they alter the terms of service, and the title to pay pensions, allowances, privileges, and advantages as regards promotion of the officers of the Indian Medical Service. Whether such orders are not so far illegal and void. And, what redress it is proposed to grant to such officers of the Indian Medical Service as have already been prejudicially affected by the operation of these orders, and what steps it is proposed to take to prevent their further operation. Lord Hartington was unable to say whether the orders in general contravened the provisions of the statute. He had, however, sent a despatch to India containing a report of a deputation he received some time ago, in which the complaints on behalf of the service were fully stated, and requesting the Government of India to give him an early and full statement of their views on the subject. Captain Home asked the Secretary of State for War whether he will consider the case of Surgeons Major of Household Cavalry, who have paid for their commissions and are now, under warrants issued subsequent to their appointments, compulsorily retired at the age of fifty-five years without compensation; and whether these officers, being debarred from promotion to the rank of Deputy Surgeons General, might not be allowed to serve until they reach the age of sixty, so as to prevent their being placed in a worse position than the medical officers throughout the rest of the Army?—Mr. Childers replied that this was the first time he had heard of the existence of the purchase system amongst the medical officers of the army, and he could not undertake to recognise it. He would look into the subject of the second question, but he very much doubted whether the medical officers of the household cavalry had any claim to more favourable treatment.—Mr. Forster, replying to the question by Mr. Dawson, above printed, said Dr. Rawson held all the offices named by the hon. member; but the third, fourth, and fifth, all required the sanction of the Local Government Board. No regulation was broken by his holding all those appointments, and the duties were not more than one man could properly discharge. The appointments held by Dr. McDowell were those usually filled by dispensary medical officers. The Dispensary Committee allowed Dr. Rawson to act for him for one month from the 20th July. There was very little illness in the workhouse or in the fever hospital, the district was generally in a healthy state, and the Local Government Board, having consulted their inspector, saw no objection to the temporary arrangement proposed. The Board had received no complaint as to the manner in which the duties connected with the workhouse hospital and dispensary district had been discharged.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—At a meeting of the Council on the 5th inst., the following gentlemen, having been elected Fellows at previous meetings of the Council, were admitted as such, their diplomas of Membership bearing date respectively Feb. 8th, 1837, and May 4th, 1836:—

Haward, Edwin, M.D. Edin., Harley-street.
Underhill, William Lees, L.S.A., Tipton, Staffordshire.

At the same meeting the following gentleman was elected a Fellow, his diploma of Membership bearing date Dec. 2nd, 1842:—

King, Jasper Rumbold, L.S.A., Milksham, Wilts.

The Library and Museum of the College will be closed on Wednesday, Sept. 1st, and be reopened on Friday, Oct. 1st.

[The sixth name on our list, published last week, of gentlemen admitted Members on the 30th ult., should read—"Hart, Alfred Paul, M.B. C.M. Aberd., Norwich."]

UNIVERSITY OF LONDON. — The following candidates have passed the recent First M.B. Examination:—

ENTIRE EXAMINATION.

FIRST DIVISION.

Back, Herbert Hatfield, St. Bartholomew's Hospital.
Berry, Harry Poole, Guy's Hospital.
Beverly, John Metcalfe, Owens College.
Booth, Edward Hargrave, Guy's Hospital.
Brooks, Walter Tyrrell, King's College.
Carter, Thomas Edward, St. Bartholomew's Hospital.
Collier, Joseph, Owens College.
Cooper, George Frederick, St. Thomas's Hospital.
Dingley, Edward Alfred, University College.
Ellison, John Clement, St. Bartholomew's Hospital.
Evans, Charles Silvester, St. Thomas's Hospital.
Horrocks, William Heaton, Owens College.
Jones, Charles Montague Handfield, St. Mary's Hospital.
Lister, Joseph Herbert, Guy's Hospital.
Martin, Sidney Harris Cox, B.Sc., University College.
Moline, Paul Frank, University College.
Overend, Walker, B.Sc., St. Bartholomew's Hospital.
Price, John Alfred Parry, Guy's Hospital.
Shove, Edith, London School of Medicine for Women.
Spicer, Robert Henry Scanes, B.Sc., St. Mary's and Guy's Hospitals.
Stephens, Lockhart Edward Walker, Guy's Hospital.
Thomson, St. Clair, King's College.
Tunzelmann, Edward Waldemar von, University College.
Voisey, Clement Bernard, Owens College.
Wilkinson, William Camac, B.A. Syd., University College.
Worthington, Sidney, Guy's Hospital.

SECOND DIVISION.

Adams, William Cooode, University College.
Batten, Rayner Derry, St. Bartholomew's Hospital.
Beavor, Hugh Reeve, King's College.
Berry, James, St. Bartholomew's Hospital.
Bertram, Benjamin, St. Bartholomew's Hospital.
Campbell, Harry, St. Bartholomew's Hospital.
Cook, Augustus Henry, University College.
Cunnington, Cecil William, King's College.
Davies, William Thomas Frederick, Guy's Hospital.
Day, John Roberson, University College.
Elgoud, Charles Reginald, University College.
Faulkner, Joseph, St. Bartholomew's Hospital.
Gray, John Alfred, St. Bartholomew's Hospital.
Halliburton, William Dobinson, B.Sc., University College.
Kealy, John William Gregory, King's College.
Lewers, Arthur Hamilton Nicholson, University College.
Lynam, Robert Garner, King's College.
Marsh, Nicholas Percy, St. Bartholomew's Hospital.
Nicholson, John Williams, Guy's Hospital.
Norvill, Frederic Harvey, King's College.
Parkinson, Charles Joseph, Owens College.
Pike, Charles James, University College.
Porter, Guy David, King's College.
Rabbeith, Samuel, King's College.
Scott, Bernard Charles, Middlesex Hospital.
Waugh, Henry Dunn, B.A., B.Sc., University College.
Wilson, Arthur Henry, Royal Infirmary, Liverpool.
Wood, Louis Edmund, St. Mary's Hospital.

EXCLUDING PHYSIOLOGY.

FIRST DIVISION.

Eady, George John, King's College.
Parry, Robert, Guy's Hospital.
Payne, Charles Alexander, St. Bartholomew's Hospital.

SECOND DIVISION.

Dent, Harry Lord Richards, King's College.
Fox, Robert Fortescue, London Hospital.
Richmond, Charles Ernest, Owens College.

PHYSIOLOGY ONLY.

SECOND DIVISION.

Dingley, Arthur William, University College.

APOTHECARIES' HALL. — The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Aug. 5th:—

Bousignac, Joseph Ludovic, Trinidad, West Indies.
Eminson, T. Benjamin Franklin, Scotter, Lincolnshire.
Faithfull, Robt. Lionel, 23rd-street, New York.
Farebrother, Wm. Arthur, Winchester-street, Pimlico.
Legge, Wm. H., Queen Anne-street.
Mahomed, Arthur G. Sulman, St. Thomas's-street.
Richards, Wm. Blagdon, Picton Castle, Carmarthen.
Weston, George Edward, Bognor, Sussex.

The following gentlemen also on the same day passed their Primary Professional Examination:—

James Callaway, St. Bartholomew's Hospital; Matthew Gunning Clark, St. George's Hospital; Herbert J. Dyson, St. Mary's Hos-

pital; Edalji R. Dadachauji, Grant Medical College, Bombay; Wm. Alexander Hepburn, Aberdeen University.

At a Court Meeting of the Master, Wardens and Assistants of the Society of Apothecaries, held on the 3rd August, 1880, the following gentlemen were elected members of the Court of Examiners for the ensuing year: Dr. Robert Hunter Semple, Dr. Charles Taylor, Dr. John Randall, Dr. Joseph Samuel Lavies, Dr. John Sherwood Stocker, Henry Bullock, Esq., Dr. John Charles Thorowgood, Dr. Robert Fowler, Dr. William F. R. Burgess, Dr. Frederick John Hensley, Dr. George H. Savage, Dr. Henry Radcliffe Crocker, Thomas R. Wheeler, Esq., Secretary to the Court of Examiners.—At the same Court the following gentlemen were elected Examiners in Arts for the ensuing year: Charles Edward Armand Semple, M.B., B.A., Cantab.; Herbert William Page, M.B., M.A., Cantab.; W. Peregrine Probert, M.A., LL.D., Cantab.; Thomas R. Wheeler, Esq., Secretary to the Board of Examiners.—At the recent examination for the Prizes in Botany given annually to medical students by the Society of Apothecaries, the successful candidates were: 1st, Joseph Baldwin Nias, student of St. Bartholomew's Hospital, the Gold Medal; 2nd, Alfred Mason Vann, student of King's College, London, the Silver Medal and books.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—

At a meeting of the Court of Examiners held on the 26th ult. and following days the undermentioned obtained the diploma in Surgery of the College:—

John Leslie Barrington, Joseph Boyd, Luke Brady, James Stewart Brooke, Humphrey John Broomfield, Augustus Jas. Arthur Brown, Walter John Clarke, Jas. Nagle Cleary, Robert Cochrane, Abraham Lyndes Connellan, Edmund Corcoran, Thomas Corcoran, John Geo. Cronyn, Edmond Francis Flynn, Charles Herbert Ford, William Fottrell, Thomas Mark Gallaber, Fitzgerald Isdell, James Alfred Johnston, Thomas Samuel Lacey, Francis Joseph Lambkin, John Lilly Lane, Peter Edmund Lemass, William Cuthbert Lucas, Saml. Foster Longhead, John Low, Jas. Patrick Mackin, Patrick Andrew M'Dermott, John Barry Moylan, George Cathcart Monray, Richd. Francis O'Brien, John O'Halloran, William Watson Pike, Patrick Henry Rochford, John Goodwin Shea, William Patrick Stanners, Thomas Stanton, James Steel Swain, Samuel Malemoir Thompson, William John Trotter, Henry Lloyd Whitestone.

A DRUGGIST of Broadway, Deptford, has been fined £5 and £1 costs for having mixed with tincture of quinine certain ingredients so as to injuriously affect the quality or potency of the drug.

THE returns of the Inspectors of Mines show that out of 18,795 persons employed about metalliferous mines 2193 are women and girls, and 317 boys whose ages range between eight and thirteen years.

Medical Appointments.

Intimations for this column must be sent DIRECT to the Office of THE LANCET before 9 o'clock on Thursday Morning, at the latest.

BARTLETT, J. H., L.R.C.P. Ed., L.F.P.S.G., has been appointed Medical Officer to the Porlock District of the Wilton Union.
BERKART, Dr. J. B. (late Assistant-Physician), has been appointed Physician to the City of London Hospital for Diseases of the Chest, Victoria-park, vice Dr. S. Ward, deceased.
BOVILL, Mr., has been appointed House-Surgeon at Guy's Hospital.
BRICKWELL, B. A., M.R.C.S.E., L.S.A.L., has been reappointed Medical Officer of Health for the Amersham Union. £100 per annum.
BROWN, W. P., L.R.C.P. Ed., L.R.C.S. Ed., L.S.A.L., has been appointed House-Physician to the Bradford Infirmary, vice Willmot, resigned.
BULLOCK, J. E., M.D., has been appointed Resident Physician to the Bishop's Down-grove Spa and Hydropathic Sanatorium, Tunbridge Wells.
CALCOTT, G. W. B., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer to the Barnwell and Benefield Districts of the Orsett Union.
CROOK, Mr. J. S., has been appointed House-Surgeon at Guy's Hospital.
CROSSLEY, J. P., L.R.C.P. Ed., L.F.P.S.G., has been appointed Medical Officer to the Workhouse of the Sunderland Union, vice Foote, resigned.
DAVIS, R. T., L.R.C.P. Ed., L.F.P.S.G., has been appointed Medical Officer to the Bonvilstone District of the Cardiff Union.
DENT, C., F.R.C.S.E., has been appointed Surgeon to the Belgrave Hospital for Children, vice Stirling, resigned.
ERSKINE, J., M.D., L.R.C.S.I., has been appointed Medical Officer to the South-West District of the Parish of St. Luke's, Chelsea.
FOSTER, W., B.A., M.R.C.S.E., has been appointed Dispensary Surgeon at the Bradford Infirmary, vice Brown, resigned.
HAY, W. A. E., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer to the Cross Keys Friendly Society, Bridport.
HEATH, R. E., M.D., has been appointed Honorary Surgeon to the Torbay Hospital, Torquay, vice Pollard, resigned.

JOHNSTONE, J. C., M.B., C.M., has been appointed Assistant-Physician to the Royal Edinburgh Asylum, Morningside.

KIDD, P., M.A., M.B., M.R.C.P.L. (late House-Physician and Demonstrator of Practical Physiology at St. Bartholomew's Hospital), has been appointed Assistant-Physician to the City of London Hospital for Diseases of the Chest, Victoria-park, vice Dr. Berkart, promoted.

KIDD, P. H., M.B., C.M., has been appointed Junior House-Surgeon to the Carlisle Dispensary, vice Dr. Paterson, resigned.

LANE, Mr. W. A., has been appointed House-Physician at Guy's Hospital.

LEACH, Mr. J. C., has been appointed Public Analyst for Blandford.

LEDIARD, H. A., M.D., F.R.C.S., has been appointed Surgeon to the Cumberland Infirmary, vice Macdougall, resigned.

MORGAN, Dr. W., has been appointed Public Analyst for the County of Glamorgan.

OSBORN, S., F.R.C.S., has been appointed Honorary Surgeon to the Metropolitan Convalescent Institution at Walton-on-Thames.

PATTINSON, Mr. J., has been appointed Public Analyst for the Borough of Gateshead, vice Edger.

POLLARD, W., F.R.C.S.E., has been appointed Consulting Surgeon to the Torbay Hospital, Torquay.

RAKE, Mr. B. N., has been appointed House-Physician at Guy's Hospital.

RUDDIN, G. M. A., L.K.Q.C.P.I., L.R.C.S.I., &c., has been appointed Surgeon to the Teignmouth, Dawlish, and Newton Infirmary, vice H. J. Edwards, resigned.

SCOTT, Mr. A., has been appointed House-Physician at Guy's Hospital.

SMITH, W. F. E., M.B., C.M., has been appointed Medical Officer to the Wildon District of the Orsett Union.

STOCK, Mr. W. F., has been appointed Public Analyst for the County of Durham, vice Edger.

STREET, A. F., M.A., M.B., M.R.C.S.E., has been appointed House-Surgeon at the Royal Infirmary, Manchester.

THOMAS, Mr. W. J., has been appointed Public Analyst for the County of Glamorgan.

VACHER, F., F.R.C.S., L.R.C.P., has been appointed Public Analyst for the Borough of Birkenhead.

WATTIE, A., M.A., M.B., C.M., has been appointed Assistant Medical Officer to the Crumpsall Workhouse, Manchester.

WHITE, Mr. W. H., has been appointed House-Surgeon at Guy's Hospital.

WILMOT, T., L.R.C.P.L., M.R.C.S.E., L.S.A.L., has been appointed House-Surgeon to the Bradford Infirmary, vice Roberts, resigned.

METEOROLOGICAL READINGS.

(Taken daily at 8 a.m. by Steward's Instruments.)

THE LANCET OFFICE, August 12th, 1880.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radiation in Vacuo.	Max. Temp. Shade.	Min. Temp.	Rain fall.	Remarks at 8.30 A.M.
Aug. 6	29.64	S.	63	62	85	72	61	..	Hazy
" 7	29.62	W.	63	58	98	68	52	..	Fine
" 8	29.68	WNW	63	56	102	71	53	0.18	Raining
" 9	30.02	N.W.	62	57	104	78	51	..	Hazy
" 10	30.33	W.	65	59	110	82	54	..	Hazy
" 11	30.25	E.	69	60	111	80	61	..	Hazy
" 12	30.21	N.E.	63	59	105	75	57	..	Overcast

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

We cannot prescribe, or recommend practitioners.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET to be addressed "To the Publisher."

A MEDICAL TRIAL AT THE ANTIPODES.

A CASE has been tried at the Supreme Court, Melbourne, in which one of the surgeons of the hospital of the town, Dr. Stirling, had to answer the charge of unskilful treatment of a stung middle finger of a patient. The damages were laid at £500. It appeared that Dr. Stirling incised the injured finger, and after several weeks the cuts healed, leaving the hand partly disabled. All the professional testimony seems to have been favourable to the propriety of the treatment adopted. The injury was inflicted nine days before application was made for surgical relief, and the finger presented on examination a swollen and inflamed appearance, deep fluctuation existing along the member back and front as far as the palm. The patient had been sleepless for several nights, and there was serious constitutional disturbance. The Judge summed up strongly in favour of the defendant, and (says the *Australian Medical Journal*) "the jury returned a five-sixths verdict for him. As usual in such cases, the plaintiff is unable to pay the costs of trial, and therefore, though Dr. Stirling won his cause, he will be put to considerable expense." The unanimity of the professional witnesses in this case is gratifying, and we hope is not singular at the Antipodes.

Vertebrata should apply to the Secretary of the College.

ADVICE AND MEDICINE FOR SIXPENCE.

To the Editor of THE LANCET.

SIR,—The strictures of the *Chemists' Journal*, quoted in your issue of July 24th, may in some few cases be deserved; but I am sure the stock-in-trade of a dispensary doctor differs very little, if at all, from that of the more orthodox practitioner. Some man, I am sorry to say, think more of saving their own pockets than of restoring their patients' health; but their judgment is swift, as people, finding little benefit from their medicine, go elsewhere. On the other hand, a man giving good drugs and good advice will make a fair profit even if he charges sixpence only for medicine and advice. His expenses being small, he can, and ought to, afford his patients good drugs. Opening my day-book at random, I find the following contained in the mixtures given:—Dec. aloes co., tinct. nuc. vomica, tinct. capsic., liq. morp., pot. bromid., pulv. rhei, tinct. ferri, tinct. bellad., æther sulph., ol. cajuput, &c. I might add several more; but I hope these will show you that all dispensary doctors are not deserving of being classed with "quacks," for I cannot think that I am alone in trying to do my utmost for my patients.

Yours truly,

L.S.A., L.F.P.S.G., &c.

London, July 27th, 1880.

PERUVIAN BARK.

MR. CLEMENT R. MARKHAM is, we hear, about to publish "A Popular Account of the Introduction of Peruvian Bark into British India and Ceylon," accompanied with information of the extent and progress of the cultivation of the drug. We need scarcely say that the name of the author affords a guarantee of the value of the forthcoming work.

Partner.—A little more should be charged for club and union practice; but how much must depend on local circumstances, best known to the parties immediately concerned.

A. C., (Queen's-grove.)—Apply to Messrs. Corbyn, Pharmaceutical Chemists, Holborn.

Births, Marriages, and Deaths.

BIRTHS.

BOLTON.—On the 20th ult., at Kustendjie, Roumania, the wife of A. Irwin Bolton, M.B., A.B. T.C.D., Medical Officer to the Danube and Black Sea Railway Company, of a son—Aby Bourne Corner.

BRUCE.—On the 2nd inst., at Norland-square, Holland-park, W., the wife of Peter Bruce, M.R.C.S.E., of Valparaiso, of a daughter.

DAY.—On the 3rd inst., at Clayton House, Chapel-street, Pentonville, N., the wife of W. Henry Day, L.R.C.P., of a daughter.

FAUSSET.—On the 6th inst., at Tamworth, the wife of Herbert J. Fausset, M.D., of a daughter.

HARRIS.—On the 6th inst., at Upper Berkeley-street, Portman-square, W., the wife of Dr. Vincent Harris, of a son.

PIGGOT.—On the 4th inst., at Beckenham, Kent, the wife of Allen Piggot, M.R.C.S.E., L.R.C.P., of a son.

THOMPSON.—On the 8th inst., at Cranley-place, South Kensington, the wife of R. E. Thompson, M.D., of a son.

MARRIAGES.

HORSFORD—SPARKHALL.—On the 5th inst., at St. Mary Abbott's, Kensington, Joseph Alphonse Horsford, M.R.C.S.E., of Long Melford, Suffolk, to Ada Mary Sparkhall, of Ashbourne House, Holland-road, daughter of the late John Sparkhall, Esq.

LEECH—TOMMAS.—On the 10th inst., at St. Cuthbert's, Birmingham-heath, by the Rev. W. H. Yarleton, M.A., Vicar, Henry Richard Leech, L.R.C.P., L.R.C.S., only son of Henry Leech, of Nantwich, to Catharine Elizabeth (Katie), eldest daughter of Robert Tommas, of Winsor-green.

RICE—HARDWICKE.—On the 11th inst., at St. Stephen's, Tonbridge, George Rice, M.R.C.S.E., L.R.C.P., of Derby, to Constance, youngest daughter of Eugene Hardwicke, Esq., of Tonbridge.

SMITH—GRAHAM.—On the 6th inst., at Mossknow, Dumfriesshire, H. Fowle Smith, M.D., D.I.C., of Waterside, to Clementina Mary, youngest daughter of Colonel Graham, of Mossknow.

SPURGIN—PARKINSON.—On the 5th inst., at St. Mary's, Islington, Thomas Spurgin, M.R.C.S.E., L.R.C.P.E., of Moreton Ongar, Essex, to Anne Andrew, eldest daughter of Samuel Parkinson, Esq., of Canonbury, London.

DEATHS.

BIDDEN.—On the 29th ult., at Hull, R. C. Bidden, M.R.C.S.E., aged 71.

BOSWELL.—On the 20th ult., at Upper Norwood, William Boswell, Esq., M.D., F.R.C.S.I., of Quebec.

BEVAN.—On the 1st inst., at Rickingham, Suffolk, T. K. Bevan, M.D., son of the late Venerable Archdeacon Bevan, Vicar of Carmarthen.

DRYSDALE.—On the 7th inst., at Hillend, Linnithgowshire, John Drysdale, M.B., L.R.C.S.E., F.R.P.S.E., late of Uphall.

WILLIAMS.—On the 6th inst., at his residence, Hayes Lodge, Cheltenham, William White Williams, M.D., F.R.C.P., late Medical Superintendent of the County Lunatic Asylum for Gloucestershire. Friends will please accept this intimation.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

JUSTICE TO ONE'S LOCUM TENENS.

A CORRESPONDENT, opportunely, and in a good but somewhat too long letter, claims a little more justice, if not generosity, for *locos tenentes*. He complains that practitioners nearly always underrate the amount of work to be done by a locum tenens. His instances are striking: "Not a confinement in the month may mean six, eight, or ten; four or six people a day to see may mean an average of thirty." Our correspondent once had a principal who "hoped he would go out often to croquet and lawn tennis, to tea, and for the evening," when often he did not return from his second round till 8 P.M., there being then many callers." It is certainly but fair that on the master's side there should be great candour. As it is the season when practitioners sigh for faithful representatives in their absence, and when they are often disappointed, we admit the plea of one who for many years has acted in that capacity. A little more justice and generosity on the part of principals would perhaps produce a little more faithfulness on the part of assistants and *locos tenentes*.

TREATMENT OF SCARLET FEVER BY WARM BATHS.

To the Editor of THE LANCET.

SIR,—In December, 1869, whilst we were experiencing a very severe epidemic of scarlet fever, there appeared in THE LANCET a reprint of a letter by Dr. Charles T. Thompson, strongly advocating the use of warm baths in this disease, and stating that he had pursued the practice for fifteen years, and had never lost a patient.

In consequence of this communication, I commenced this practice ten years ago, and have followed it from that time to the present. At first I order the patient to have three warm baths daily, to be kept in from three to five minutes, rapidly dried, wrapped in a blanket, and returned to bed. As the disease subsides, I reduce the baths to two or one daily. I find that—1st, it brings out the rash; 2nd, reduces the temperature; 3rd, soothes the patient; and when this treatment has been adopted at the onset, I have as yet not lost a single patient.

In one case the warm bath was objected to till the child had been ill some days, and this case, and this alone, proved fatal.

My friend Dr. Alfred Hollis, of Freshwater, has told me of the great comfort he himself experienced from warm bathing when suffering from the disease; and, of course, in the treatment neither medicine proper nor good nursing is precluded.

Some of my readers may recollect a case of small-pox published by the late Dr. Stokes, of Dublin, where the warm bath proved singularly beneficial, and who doubted not that the mortality in small-pox hospitals would be greatly diminished by the use of the bath. The case I refer to was that of a medical student, in which "the pustulation was almost universally confluent; the purulent matter highly putrescent; the hæmorrhagic state developed; the body one universal ulcerous sore, and the blackness of the worst purpura developed; the odour of an intensely pungent and offensive character, which seemed to pass through the bystander like a sword. Stimulants alone, freely and constantly employed, seemed to preserve the patient alive. The pulse was rapid, weak, and intermittent, and for several days life was despaired of. At this juncture Dr. Stokes happened to describe the case to his colleague, Mr. Smyly, who suggested the trial of the warm bath. Pillows were adjusted in one, the patient placed in it, and the effect was instantaneous and marvellous. The delirium immediately ceased. The patient exclaimed, 'I am in heaven! I am in heaven! Why didn't you do this before?' He was kept at least seven hours in the bath, brandy being freely administered, and removed to bed. The bath was repeated next day, after which he fell for the first time into a tranquil slumber. From this time recovery was progressive."

This may seem a digression; but the treatment of another of the exanthemata by similar means is not inapposite.

My ten years added to Dr. Thompson's fifteen make twenty-five years' experience of a treatment which I can confidently and heartily recommend.

Yours truly,

W. VAUDREY LUSH, M.D., &c.,

Weymouth, July, 1880. Physician to the Dorset County Hospital.

HOMBURG.

To the Editor of THE LANCET.

SIR,—The season at Homburg has commenced auspiciously, so far as the German and French visitors are concerned, and the Elizabeth Brunnen has many visitors in the early morning to receive its refreshing water. There is, however, a lack of well-known English faces, and many attribute this to the rumours of disease being in the town. Such rumours are false. Homburg was never healthier, as official records and medical testimony show. More, the sanitary arrangements of the best hotels are equal to those at home, and superior to any other Continental watering-place I have seen. Cases of sporadic disease occur everywhere, but that fever, diphtheria, or any other zymotic disease exists is untrue, and it is a pity that unfounded suspicion should prevent those who would otherwise do so paying their annual pilgrimage to the most charming of all "health retreats."

As this is my fourth season at Homburg, I may be presumed to know the town well, and I consider it right to tell, through your columns, my professional *confrères*, not to be frightened to advise those requiring it to come here as of old.—Your obedient servant,

Homburg, Aug. 4th, 1880.

MATTHEW CHARTERIS, M.D.

THE INDIAN MEDICAL DEPARTMENT.

To the Editor of THE LANCET.

SIR,—The recent changes in the Indian Medical Department have caused much anxiety to all its members, and if the Government of India wish the service not to become unpopular they will have to take some steps to remove the present state of discontent. I will confine my remarks to the subject as it affects the officers who have entered the service since 1864. The more senior officers have different grounds of complaint.

1. Under the new rules, all chance of rising to be the head of the service in the military branch has been taken away.

2. The chances of rising to the administrative appointments of either a deputy surgeon-general or surgeon-general have been greatly diminished, there being now only eighteen of these appointments instead of twenty-six. The grant of this rank to five sanitary commissioners, under certain rules, does not make up to the service for the loss of the eight appointments.

3. Junior officers are kept too long on the unemployed rate of pay of their rank after passing the vernacular test. If they are posted to "officiating appointments," they draw a little more, but they do not, as a rule, for many years draw pay equal to the scale laid down in the Memorandum supplied to each candidate at the India Office.

4. Junior officers who have no regular appointments are often detailed to work in appointments for which there are no allowances fixed by regulation, and consequently are kept on the unemployed pay of their rank.

5. Officers of the Indian Medical Department only rank as lieutenants for the first six years of their service, and draw a lower rate of pay than the officers of the Army Medical Department while at Netley.

6. There is no grade of brigade surgeon in the Indian Medical Department.

7. There are not sufficient officers in the Indian Medical Department for the work, and even the authorised establishments are not kept up to their full strength as they ought to be.

8. The regulations regarding leave and furlough, as laid down in the Memorandum, are not acted up to, and it will never be possible to carry them out unless more officers are employed. Furlough, except on medical certificate, has only existed in name for many years, and privilege leave can scarcely ever be obtained.

9. One effect of the department being kept so short-handed is that junior medical officers are moved about from station to station far more than is either good for them or the service.

10. In the Memorandum before referred to, the minimum rate of pay laid down for an officer to draw on furlough is £250 per annum. This is not carried out, as junior officers going home on sick leave draw less than that amount.

11. The rates of pensions contrast unfavourably with those of the Army Medical Department, and are so low that officers, unless they have saved a good deal of money, will find it impossible to retire on them. Government ought to grant the Indian Medical Department at least the same rates of pension as those of the Army Medical Department.

12. The appointments to be held by the commissioned officers of each branch of the service (Bengal, Madras, and Bombay) ought to be clearly defined, and the Government of India should insist on their being filled up, in accordance with this rule, by officers of the branch to which they belong, unless under any extraordinary circumstances.

13. The rule that has been laid down by the Government of India regarding the employment of others than commissioned officers in appointments sanctioned for commissioned officers ought to be insisted on.

14. The step of honorary rank on retirement should be given after twenty instead of twenty-five years' service.

15. The question of honours and decorations is a delicate one; but surely more officers of the Indian Medical Department than those who have been decorated have earned them.

16. If these difficulties were removed, the Indian Medical Department would still remain the most popular of the medical services. None of the others can offer the same prize to young medical men. The Indian Government in most cases acts fully up to its promises. When it does not appear to do so, as in some instances I have pointed out, it is, I believe, because the subject has not been properly brought forward by the departmental authorities. There is no medical service in which a man is so well treated if his health breaks down, or he becomes unfit for further service in India.

17. I have not attempted to touch the subject of organisation; but it seems to me curious that the Government of India offer the same pay &c. to natives of this country and to country born men as they do to Europeans, when they could get the same class to serve them for much less.

18. If they did decide to have Europeans only in the commissioned ranks, would it not be far better and more economical for them to fill up all the Indian appointments, both military and civil, by volunteers from the Army Medical Department? In such a case the medical department in India should be under the Indian Government, as the officers of the Royal Engineers serving in India are at present.

I am, Sir, your obedient servant,

Madras Presidency, June 16th, 1880.

AN OLD SUBSCRIBER.

THE POTATO.

WE have already (THE LANCET, July 24th) had occasion to refer to the conclusions of the Select Committee appointed to inquire into the best means of diminishing the frequency and the extent of failures in the potato-crop. The report of the Committee, with the evidence given before it, has now been published, and forms a Blue-book of exceptional, we might say of painful, interest having regard to the part which repeated failures of the potato-crop have played in the health-history of the sister kingdom, and the part which the last failure is now playing. The scientific evidence tendered to the Committee puts the reader in possession of the existing state of our knowledge regarding the disease, which proves at times so fatal to the plant, and the agricultural evidence tends to show in what direction effort must be made if we would hope to diminish the ravages of the disease in the future. This would appear to be by the continuous search for and cultivation of new healthy stocks; and the Agricultural Societies of the United Kingdom and Ireland failing to undertake this task, the Committee are of opinion that it should be entered upon by the Government.

THE BLOOD IN ANÆMIA.

To the Editor of THE LANCET.

SIR,—In your columns of July 17th, in a communication from Dr. Hunt on the Blood in Anæmia, the following passage occurs: "Not unfrequently have I examined the blood of young girls attending my out-patient room, expecting to find a marked diminution in the number of the corpuscles, and to my surprise found it normal or nearly so." The following read in connexion with the foregoing passage is, I think, of interest:—

Last spring I had under my care a patient in whom by exclusion the diagnosis of a cancerous enlargement of the liver had been arrived at. Many of the positive signs of cancer were absent or difficult to perceive. The patient, who was suffering from intense anæmia, anorexia, and feebleness, asked me to accompany him to Europe. In Marseilles, after several consultations with M. le Dr. Combalat, Chirurgien-en-Chef des Hôpitaux, who was loth to admit the diagnosis of cancer, M. le Dr. Girard, Médecin-en-Chef, was asked to meet us both in consultation. After a careful examination and review of the history of the case, they jointly expressed the opinion that the case was one of pernicious anæmia, and that the enlargement of the liver was consequent on this. If, however, this was not the disease, the case must be one of cancer. A numbering of the blood-corpuscles was made by my friend Dr. Charles Livon, acting Professor of Pathology in the School of Medicine at Marseilles, with the result that, out of a mean of five observations, the cubic millimetre contained 5,765,156 red blood-corpuscles.* The hæmacytometer used was that of Nachet. Both of us were astonished at this result in a patient who presented all the signs of anæmia in the most marked degree, judging by the colour of the mucous membranes and nails.

At the next consultation, Drs. Combalat and Girard were equally struck by the result, to such an extent that they wished to have a second numbering made by another observer. Unfortunately I was unable to find anyone else in the town who could undertake this. I may add, however, that I myself was present at the numbering, and made one observation myself, which was quite in accordance with the mean of Dr. Livon's observations, which were made on two successive days at four in the afternoon and eleven in the morning respectively.

Ten days later the patient died, and at the autopsy mesenteric cancer was found, with deposits in the liver.

It appears, then, that pallor of the mucous membranes and nails may be caused by three things: (1) A diminution in the number of red blood-corpuscles; (2) a diminution in the quantity of hæmoglobin; (3) an increase in the number of white blood-corpuscles, as in leucocythæmia. To these, I think, a fourth might be added—viz., a diminution of the normal volume of blood for the weight of the body; the diagnosis of this could be established by the exclusion of the other three. The expression "anæmic condition" ought not to be understood to convey anything more than pallor of the mucous membranes &c., and, according to the observations of Dr. Gowers, Dr. Hunt, and those here narrated, cannot express *per se* a deficiency of blood-corpuscles.

I am, Sir, your obedient servant,

Cairo, Egypt, July 24th, 1880. T. E. MACLEAN, M.B. Lond.

G. P. R.—The meeting of the American Association for the Advancement of Science will take place at Boston on the 25th of August.

Constant Subscriber.—We cannot depart from our rule.

A HINT.

To the Editor of THE LANCET.

SIR,—Phthisical subjects often experience great benefit from a long sea voyage. Fresh sea-air is probably the main medicine; but at a time when antiseptic inhalations are being favourably employed in the treatment of phthisis, it may be well to inquire whether the presence of large quantities of tar may not exercise a favouring influence. That the air of a ship is thoroughly and permanently impregnated with this antiseptic material, our noses can testify.

I am, Sir, yours truly,

Clifton, Bristol, Aug. 7th, 1880. GEORGE BUDD, Junior.

* The mean number of white blood-corpuscles in the cubic millimetre was 7382.

GUY'S HOSPITAL.

To the Editor of THE LANCET.

SIR,—Whilst heartily sympathising with the tenour of your leader of August 7th, called forth by the recent lamentable occurrence at Guy's Hospital, may I be permitted to utter one word of protest. It appears that while nursing sisterhoods have come under your just censure, the very principle of ladies acting as hospital nurses has been included in the general condemnation. You desiderate for the patients of our hospitals "a fair number of women of their own class, trained to do their business as nurses at the bidding of the medical officers," and elsewhere you allude to "a corps of women who, in all the energy of their discontent at the natural subordination of their sex, have seized on nursing as a sphere for the vent of their emotional natures." I am unable to acknowledge the justice of these observations. Let the authority of THE LANCET be directed against the ecclesiastical element, which has with malign influence mixed itself with hospital nursing, and which finds expression in the terms "sister," "sisterhood," but do not let it be used to discourage ladies from entering on a life-work essentially feminine, and in which education and refinement so materially and beneficially contribute to efficiency as in nursing. The evils complained of do not originate in the fact of the nurses being ladies, but in the fact of their being united into sisterhoods, and invested with a kind of corporate authority—an authority which, when combined with ecclesiasticism, gives rise to the most noxious developments.

My personal knowledge does not extend to other Scotch schools; but, as regards Edinburgh, I can state, from ample experience as a student and house-surgeon, that the lady nurses in the infirmary there are the greatest possible blessing, alike to patients, students, and teachers. They combine intelligence, refinement, and kindness in a manner almost unknown among the nurses of an earlier date. They exercise a distinctly good influence in the wards, and their general efficiency and skill is in the highest degree satisfactory. This testimony will be corroborated, I believe, by everyone acquainted with the Edinburgh hospital. But the Edinburgh nurses are not sisters. They have neither power nor inclination to control either the medical treatment of the patients or the arrangements of the hospital. They belong to no organisation, and are subject alone to the authority of the medical officers. In a word, they are simple hospital nurses, with the difference that they are ladies. Were the metropolitan hospitals as happily situated, we should hear less of the encroachments of "sisters," and THE LANCET would not find it necessary to discountenance ladies in the adoption of a profession for which they are so eminently suited.

I remain, Sir, yours &c.,

Weston-super-Mare, Aug. 8th, 1880. ROBERT ROXBURGH, M.B.

To the Editor of THE LANCET.

SIR,—In a report of the Committee of the Governors of Guy's Hospital appointed to inquire into the nursing difficulty, it is recommended that once a month, or oftener if necessary, two members of the medical staff be invited to attend the Committee, with the view of deliberating on any matters relating to the medical and nursing arrangement; that in any difference of opinion, the views of the medical staff, as well as those of the Governors, be recorded in the minutes. The Committee believe that the above arrangement would be a help to the Treasurer and Governors, "and at the same time it would afford the medical staff an opportunity (the want of which they have felt) of personally coming in contact with the Governors." In how many of our hospitals have the medical staff been entirely ignored in the management of those institutions completely dependent on medical services for their success and utility?

Yours &c.,

F.R.C.P.

August 10th, 1880.

To the Editor of THE LANCET.

SIR,—Referring to the recent unfortunate occurrence at Guy's Hospital, would it not be useful to elicit the opinions of medical officers of other hospitals whether it is desirable to put the name of the disease on the bed-head ticket of the patient? Yours faithfully,

August 10th, 1880.

HOSPITAL PHYSICIAN.

To the Editor of THE LANCET.

SIR,—I observe that Mr. Francis Wilson, in his evidence at the trial, stated that the prisoner, Louisa Ingle, was "the daughter of a surgeon in good practice." This is not correct, at least as respects this country, my brother and I having been the only persons of that name on the Medical Register for nearly twenty years, and she is no relative of ours. Yours truly,

Cambridge, August, 1880.

ROBERT N. INGLE, M.D.

DRUNKENNESS OR APOPLEXY?

To the Editor of THE LANCET.

SIR,—On August 5th, at 8.30 P.M., I saw a woman at her own house. She was lying on the floor of her room, occasionally breathing stertorously; both pupils widely dilated, the right most so, the left contracting feebly; when the candle was brought close, the right totally insensible to light. She was quite unconscious. Her husband said she had been drinking brandy freely for a week. I had attended her frequently for the effects of her drinking bouts, but had never seen her unconscious before. About twelve o'clock she came round, and in twenty-four hours she was all right. I confess I was in a difficulty about the diagnosis.

Yours obediently,

Wansford, Aug. 7th, 1880. FERGUS M. BROWN, L.R.C.P. Ed.

Address in Physiology,

*Delivered at the Meeting of the British Medical Association
on Aug. 13th, 1880,*

By MICHAEL FOSTER, M.D., F.R.S.,

PRÆLECTOR OF PHYSIOLOGY IN TRINITY COLLEGE, CAMBRIDGE.

MR. PRESIDENT AND GENTLEMEN,—When I took the invitation to deliver the Address in Physiology out of the hands of your Council, it was in my mouth sweet as honey, as, I suppose, my predecessors in this honourable position know; but bitterness came when I began to consider what I should say. While pondering over the choice of the words which I might address to you, I began to be haunted with a fundamental question. On the background of my dim and obscure thoughts, there stood out, with vivid and importunate distinctness, the sentence, *What is this Physiology* which is to form the subject of the address? And I felt that no words would be given to me until I had framed some satisfactory answer to this initial question.

Looking around for a firm basis to start from, we find it admitted on all hands that physiology is a branch of the science of living beings. Looking more closely into the matter, we find that all living beings are capable of being studied under two aspects. In the first place, they possess characteristics of form—external and internal, superficial and deep—which distinguish them from things which are not living. In the second place, they act upon, and are acted upon, by the world around them in ways which are not possible to lifeless things. The former considerations supply the basis of the science of morphology; the latter, that of physiology proper. All living things may be studied independently from either of these points of view. Were it possible to arrest for a while, without collapse, the multitudinous movements of the universe, were the whole sum of things to fall into a sleep deeper than that fancied by the laureate in his poem of the “Day Dream”—a sleep deeper than this, namely, one which also stayed all growth and stilled the molecular whirlpools of the tissues,—were all things to be fixed in immovable rigidity, as by a sudden petrification, there would still be ample material for collecting data and elaborating laws of form, distinguishing the things which we now call living; there would still be scope for the morphologist, though, in the absence of all action, the physiologist would be without employ. Conversely, we can readily imagine a state of things in which the pulses of the movements of a living being might be investigated, the products of chemical activity determined and measured, its actions and reactions studied, though itself was never seen, and its outline and structure remained unknown. Such a condition would exemplify a physiology existing without any corresponding morphology.

Here, probably, some one will object that form is an essential factor in many physiological problems; that, for instance, in the movement of a limb, the character of the result is determined by the relative positions of the bones, tendons, and muscles. That is undoubtedly true; and the same objection may be urged in reference to many other physiological problems. But it is also true that the distinguishing token of the movement of the limb of a living being—that which differentiates it from the movement of the limb of a dead machine—is the fact that the movement is brought about by *muscular contraction*; that mysterious molecular changes in a peculiar tissue, and not the burning of fuel in a furnace, or the falling of water from a height, or the blasts of the wind, supply the energy of the movement. The true physiological problem involved in the swinging of an arm is how it is that certain muscles suddenly grow short, and not the problem how that shortening manages to produce the particular movement in question; the latter problem might occur in any dead machine, and is a purely mechanical problem; the former is the only one distinctive of the living being, and, for its solution, study of form, so far, has given us no help.

The two branches—morphology and physiology—run their several courses along lines which at present seem parallel; No. 2973.

I say, at present, because we can even already see that in the future they will converge and meet. The science of morphology will receive the crowning of its edifice when the forms of living beings can be fully explained by the action of the environment on the living substance; and the science of physiology will similarly be perfected when the actions and reactions of a living organism can be predicted from the molecular structure of its constituent tissues, just as now the superficial character of some of its motions can be explained by the mere mechanical relations of its constituent parts. But that time is still far distant, and we may at present rest content with the view that physiology is the study of the actions and reactions of living beings; and the instance I gave just now of the movement of a limb may be taken as a type of all physiological problems. Whatever action of living organism we examine, whether of a vegetable or of an animal, be it a matter of the circulation, or of digestion, or of the nervous system, or what not, we find that the problem suggested by that action is incrustated, it may be, with a shell (sometimes thick and hard to crack, sometimes thin and easily brushed away) of questions of a purely mechanical or physical or chemical nature—questions which might present themselves in reference to any action of either living or not living matter; but that within the shell there is the kernel question; and that, whether it be the construction of a muscle, or the molecular changes of a secreting cell, or the molecular agitations of an excited nerve, is the true physiological question—the question which cannot be studied elsewhere than in a living frame, the question towards the solution of which knowledge of form and shape (short of molecular construction) gives little or no help; the question of all importance, the answer to which comes reluctantly and slow. But it has long ceased to be the guiding idea of physiologists. It received its death-blow when Claude Bernard made known the fact that in the liver, that organ of which we were previously content to say that its function was to secrete bile, a mysterious formation of glycogen took place; and all modern inquiry sets its face more and more away from such a view.

The animal body may, indeed, as a whole, be likened to a machine, inasmuch as it is full of intricate and delicate harmonies of checks and counterchecks, whereby the turmoils of its molecular agitations, the swift whirling of its inner wheels, are cunningly adapted to work out the smooth result which we call healthy life. The animal body, moreover, is full of deftly built machines; it is studded with bits of apparatus—mechanical, hydraulic, optic, acoustic, and the like. But the physiologist who is pressing forward to the solution of the wider problems opening up at the present time before him no longer enters on his work in the spirit of one who, placed in the midst of a collection of ingenious inventions, sets himself to discover the purpose and working of each; on the contrary, he becomes day by day more convinced that the key which will unlock the mysteries of life is an understanding of the broader laws of that conflict of atoms which is going on in every tissue; that perpetual building up and breaking down; that molecular strife which appears now as the piling up of material in growth, now as the rush of a secretion, or the shock of a muscular spasm, or the thrill of a nervous impulse. Whatever part of physiology he may take up, sooner or later he finds himself face to face with problems of this kind, compelled to desert the question of special function, driven to search into the more general characters of living matter. The physiology of function and organ forms but the outer court of the science itself. The discovery that the secretion of gastric juice is the function of the stomach, of the gastric glands, of the central cells of those glands, is hardly more than the prelude to the inquiry into the nature of those changes in the protoplasmic network of the cell, whereby, amid the coming and going of granules, the shrinking and swelling of the cell, the crumpling and unfolding of the nucleus, water containing salts and the mysterious pepsin trickles into the lumen of the gland; and that search leads the inquirer away from the gastric cell to the parotid or the lachrymal, and from that to the hepatic cell, and thence to the renal, and before long possibly he will be seeking an answer to his question of the gastric gland by knocking at the door of the muscular fibre or the retinal epithelium. The discovery that the function of the gastric juice is to digest proteids is but the first step of the inquiry, What is the nature of proteolytic digestion? and that leads away to a far-reaching search into the structure of the proteid molecule and its relation to cyanic radicals. The discovery that the function of the cerebellum is to co-ordinate

movements thrusts us at once into a quest after clearer notions of the nature of co-ordination, and that beckons us on to studies of the molecular oscillations which we call sensory and motor, and these bring us back again to the muscular fibre, and then to the simpler protoplasm of the undifferentiated cell.

I might multiply to weariness illustrations such as these of the tendencies of modern physiology. I will, however, content myself with pointing out that these extensions beyond simple organ and function are not mere idle speculations. It little boots either the sick man or the sound man to know that the function of the stomach is to secrete pepsin, or of gastric juice to digest proteids, unless he be master of the conditions affecting the character of the secretion or the potency of the juice. And these extensions I am speaking of are simply efforts to understand these very conditions, to explore the laws by virtue of which the amount and character of each drop of juice which falls into the cardiac pouch is determined by the vibrations of a cerebral cell, or the labours of the hepatic tissue or the temperature of the cutaneous nerves.

But if this conception of physiology be admitted a most important deduction follows—no less a one than this, that all distinctions between pathology and physiology are fictitious and unreal. Indeed, if we even simply look at the matter from an *à priori* point of view, we must arrive at a somewhat similar conclusion. For what should we say of the kindred science of meteorology if it were divided into a normal science of bad weather, and an abnormal separate science of fine weather? Undoubtedly there are bad days and good days; there are happy conditions which we may call health, and there are unhappy conditions which we may call maladies, and the one may present superficial problems which are absent from the other; but directly we leave the outside of each, directly we attempt to grapple with the fundamental questions lying at the bottom of each set of conditions, we find we are in each case struggling with the same things. Thus, as an example, if there be one word which is more clearly the “note” of pathology than any other it is the word “inflammation.” So long as the questions about inflammation were of the outside, of the shell only, so long a cabalistic doggerel *tumor, turgor, rubor, et dolor*, formed the centre for the pathologists’ discussions, so long as the physiologist was content to tarry in the mere mechanical problems of the circulation, each might fitly go on his own way heedless of the other’s doings. But directly the pathologist puts to himself the question, What are the processes which lie at the bottom of, which are the causes of, this *tumor* and *turgor*? directly the physiologist began to ask himself, What are the fundamental laws governing the capillary circulation—each found himself working at the other’s problem. It was as a physiologist, working by methods only physiological, that more than a quarter of a century ago, one who has since achieved the highest renown as a practical surgeon, but whose career physiologists selfishly deplore as having withdrawn from their midst a puissant captain—I mean Joseph Lister—carried out those remarkable researches which opened up an epoch, on the one hand, as regards inflammation, on the other as regards the circulation. It has been through methods purely physiological at the hands of Cohnheim, and others, that our knowledge of inflammation has since been advanced. On the other hand, the physiologist who is inquiring into the abstruse problems of the capillary circulation, finds that the only path to progress lies through the study of changes of a more or less inflammatory nature, naturally occurring or purposely induced. And what I have said of inflammation may also be said of other so-called morbid processes; indeed, of all the phenomena, both structural and dynamical, of disease. The famous cellular pathology is in reality a physiological essay; and for these many years past the progress of pathology has been marked by investigations, pathological it may be in name, but physiological in scope and method.

The view, then, which I would venture to urge respectfully on your serious attention to-day is, that physiology is not a collection of curious problems concerning the living organism in an abstract ideal condition called health; it is not simply the answer to a series of questions, what is the normal function of this and that organ? Fundamental as distinguished from superficial physiology, it has before it the task of investigating the elementary properties, we might say the molecular movements,

of living matter (including matter which is becoming alive, and that which is ceasing to live), those movements, the varied combinations of which come to light in the effects which we may, if we like, call functions. In this investigation it recognises none other than the superficial distinction between the normal and the abnormal, the healthy and the diseased; it joins hands with pathology for its aims, its subject matter, its methods are the same. Both are sciences partly of observation, partly of experiment; that is to say, while both find a certain amount of material on which to work in phenomena which present themselves without interference on their part, whether it be the phenomena which, running easily in the grooves of the universal machine, we call normal, or in the irruptive, troublous, often times horrible phenomena of disease, which an older writer, in prophetic irony of the humanitarian schools of to-day, once called nature’s experiments—while both, I say, find often times food enough for reflection in the events which nature herself brings before them, both find themselves helpless to gain the solution of their problems, unless they themselves intervene and directly bring about the state of things which they desire to study. The physiologist in his daily walk, or the pathologist in the hospital ward, observes an incident, and at once sees that a variation in that incident will afford a complete or partial solution of the phenomena. If he goes into the laboratory, he may artificially produce that variation while the problem is still fresh, still troubling his mind. Otherwise he must wait, carefully storing up in his mind the memory of the incident and its suggestions, till in some other walk or ward he meets with the desired variation; he may not meet it till old age has dimmed his memory and enfeebled his mind, or he may never meet it at all. It may be granted that generations of alert, active-minded men, ever observing, ever recording, ever reading and making use of the records recorded, might in the long course of ages have an opportunity of observing, as natural occurrences all the phenomena of living beings, including everything that may be brought to light by laboratory experiment, for nature is a relentless, untrammelled vivisector, and there is no secret of the living frame which she has not and will not, at divers times, lay bare in misery and pain. This may or might be granted, but life is short, and how long would the search be which thus waited at every step for nature’s signal? Life is short and also painful, and even on mere so-called humanitarian grounds we may refuse to sit still as fatalists, and let the pain and wrong of life accumulate till nature in some wayward mood does for us the experiment which we might ourselves do to-day.

A physiology and pathology founded on observation alone may not be impossibilities; but that progress of science which is demanded by human needs, and which at even its best is slow, is impossible without experiment.

If what I have urged be admitted, then it is obvious that the pathologist—and I need hardly say that by the pathologist I mean the inquirer, the investigator—will do well to get himself early trained in physiological studies. He will thereby not only learn under simpler conditions the methods and the means of which he will hereafter make use, but he will be practised in the solution of problems identical in absolute nature with, but of an easier type than those to which he may afterwards direct his labours. Conversely the physiologist, though his own narrower field affords material ample enough for his best energies without his ever leaving it, is unworthy of the name if he affects to despise or neglect evidence because it is of pathological origin.

I may, perhaps, to some of my hearers appear to be threshing well-trodden corn. They are willing at once to admit as a commonplace truism all that I have urged. But, if what I have said be so commonplace in words, how is it when I look around it does not appear to me to be so commonplace in deed? I speak under correction, but surveying our numerous medical schools, reading our medical literature, and watching the results of medical inquiry in this country, I cannot avoid the conclusion that pathology, as commonly understood amongst us, too often either means a barren discussion of the doctrines of the schools, verbal disputes better fitted for the dialectic energy of the leisurely school-men of old than for the practical needs of our busy age, or is regarded as identical with a pathological anatomy, in which a luxuriant, I might, perhaps, say a rank growth of facts and minutiae, cultivated for the sake of their clinical importance, has choked the tender plant of rational, i.e., physiological—interpretation.

If what I am urging is a truism, if it be acknowledged on

all hands that pathology is an experimental science, which, though entering on its inquiries from a somewhat different standpoint, and seeking the solution of questions arising on the somewhat different combinations, deals with the same fundamental phenomena as physiology, uses the same methods, works in the same spirit, and in the end resolves the same problems, where, I would venture to ask, are the pathological laboratories fitted with due appliances, where researches in this science are being carried on? Is it not the case that England possesses at this moment just one institute devoted to pathological inquiry, and that placed under such unfortunate conditions that lately the choice of a director had to be decided on other than scientific grounds. Thanks to the foresight and the insight of John Simon, the sinews of war have not been wanting to young inquirers; but surely if the profession does recognise the need of the real study of pathology, every school of medicine should take its share of labour, and not leave almost the whole task of it at the uncertain bidding of a Whig or a Tory Government, whose ways, however admirable in other respects, are not altogether the ways of science.

If physiology be such as I have so feebly attempted to portray, I trust I shall not be considered as abusing the honourable position in which you have placed me to-day, if I venture now to offer a few remarks on the relation of this physiology to the medical profession at large. Nay, rather I feel encouraged to do so by the reflection that it is the consciousness of the prime importance of physiology to medicine which has led our authorities to place the address in physiology on a level with those of the master arts of medicine and surgery.

Of the relations borne to physiology by those members of our profession who are actively engaged in the investigation of disease, to the professional pathologists, so-called, whether they happily can give their whole time to laborious investigation, or snatch moments for inquiry from the midst of practical duties, I need say nothing. It will be clear that I recognise them as brother physiologists in deed if not in name.

Nor need I tarry to speak of those who, having achieved high success, and, resident in this or that metropolis, live among the latest results of science, and can keep themselves abreast with the progress of physiology by spending an occasional hour at a society, or utilising the opportunities of their dinners and their clubs; nor of those younger men who, placed in much the same position as that of their chiefs save that their success is still in the future, hold free converse with the younger workers in science. I desire, rather, to say a few words on the relation of physiology to the great backbone of our profession (for ours is a vertebrate body), the general practitioners scattered all over the United Kingdom, those who, above all others, bear the heat and burden of the medical day.

Such men have little time for prolonged inquiry. They are not pathologists in the sense in which I have used that word to-day. Far be it from me to depreciate in any way the intellectual value of the healer's calling. Happily, the phenomena of disease are so many and diverse, that it is impossible for the art of medicine ever to become a mechanical routine for curing patients by rule of thumb. Happily, even the most obscure practitioner in the most secluded village is driven to reflect, is forced to take his patient's case in hand as a scientific problem to be solved by scientific means. The salt which secures our profession its savour is the fact that every doctor worthy of the name is stimulated by the facts of his daily life to reason on their why and wherefore, to cultivate a real spirit of pathological inquiry. But his inquiries, save in a few rare cases, are inchoate and fragmentary. It is not in his power to carry out the tedious, the time-consuming, the continued investigations by which even nature's meanest secrets have to be wrung from her. His researches and reflections are rather salutary, inasmuch as they maintain the high spirit of his calling, than fruitful, by reason of the abundance and value of their results.

It is in reference to the practitioner, not as a pathological inquirer, but as a busy healer of the sick, that I would venture to put the question, What has he to do with physiology?

Looking at the matter from one point of view, the answer might seem simple and ready enough—"Nothing at all." I can easily imagine a practitioner who learnt his physiology twenty or thirty years ago, listening while some eloquent young physiologist of a few years' standing explained his views concerning this or that abstruse physiological con-

tion, and the reasons of his divergence from his German brethren, and then going away and reporting to his brother practitioners, "It was all Greek to me; you and I have no more to do with such stuff as that than we have with four dimensions in space, or the inflections of the Telugu tongue." And yet, under another aspect, a quite different answer, it seems to me, has to be given. I spoke just now of the practitioner as a virtual, though not a professional, pathologist. His daily practice is at every step determined by pathological doctrines. Whether we admit it or not, we are all of us, as intellectual beings, the puppets of theories and beliefs; all our actions which do not spring from passion or instinct are the outcome of dominant views. Both the ignorant and the learned are thus alike governed. The village nurse opposes, and often circumvents, the doctor, on the strength of theories which a study of her nomenclature reveals to be broken traditions of the advanced pathological teaching of a century ago; the so-called "practical" man is the most abject slave to theory of all, for his theories are unknown tyrants, hidden from himself. The hand of the practitioner, even the most empirical, is, directly or indirectly, guided by pathological views. His results will, in the long run, be successful in proportion as his views are in accord with those of nature; and assuredly the satisfaction in his calling will be the greater in proportion as an increasing mastery over the rational interpretation of morbid phenomena transforms his daily tasks from a dull routine into scientific inquiry and intellectual effort.

But there are doctrines and doctrines. Not every view which is put forward is true, and even those views which hold a central truth often present a thick crust of error. Biology, moreover, like other sciences, is not an edifice built up by adding brick to brick, the older courses remaining as they were laid to form the support of the later ones. It may rather be compared with the growth of an animal through metamorphosis, but a metamorphosis more protean than that of any living thing. The butterfly is often more like the grub than is the finally accepted form of a doctrine to the crude shape in which it was first put forth. It is not easy to grasp the essential feature of a doctrine as it passes through its several phases; and not once or twice, but often, the creature has been confounded with its envelope, and the last integument treasured as the body itself.

Not only are there shortcomings and errors even in the views advanced by men most competent by their training and their talents to make known their results, but theories and doctrines are promulgated by men who have little or no fitness for the task. No one can study our medical literature for any length of time without observing that again and again some hybrid pathological or physiological theory is thrust upon the world; a hybrid gained, it may be, by fertilising with the pollen of false observation or deduction a true physiological doctrine; a hybrid, like other hybrids, of showy character, destined to win for a while public favour, but, like other hybrids, destined after a while to wither away without producing fruit. Knowledge is doubtless increasing; but errors are likewise abundant. How is the practitioner, living often in isolation, obliged to trust in the decisions of his own judgment? How is he to guard against delusive views?

I was urging just now the fundamental identity of pathology and physiology. No serious advance is made in physiology which is not sooner or later translated into the language of pathology. No real independent advance is made in pathology which does not either show itself to be in accordance with the solid nucleus of sound physiological doctrine, or compel the current physiological teaching to widen its doors and admit a new truth. The best test of a new physiological doctrine is that, if true, it will in nearly every case, when properly applied, help to solve some hitherto insoluble pathological problem. The best criterion of a pathological doctrine is that it will stand the ordeal of searching physiological criticism, and show itself in accord with the trustworthy results of independent physiological inquiry. And possibly no function of physiological science is more important than this of serving as a touchstone by which to try the value (whether they be true or false) of the pathological theories which flutter down on the face of our medical literature thick as the falling leaves of an autumn day. But what is this to the active practitioner? Am I urging that those few golden moments of leisure with difficulty wrung from a hard day's work, which are not given up to the study of pathology itself, should be spent in poring over miserable physiological books? Hardly, though I

think I am not overstating the case when I say that many a practitioner, when he has come to maturer years, arguing to himself somewhat in the line which I have taken to-day, strives by private reading to revive that knowledge of physiology which he neglected, or for learning which he had scanty opportunities in his youth; desirous of some firm standpoint to serve as an outlook over the flood of the new pathology, he seeks to be informed concerning the teachings of modern physiology. But is it not also true that, when he takes up current physiological literature, he finds it to a large extent written in what has to him become almost an unknown tongue? Though a good deal may be old and familiar, a good deal more is new and strange. He remembers, perhaps, hearing in his youth some of the things of which the writers make so much; but he also remembers that, hearing them, he judged them to be subtleties or novelties, interesting doubtless to the lecturer, but not likely to be made the subjects of questions in the examination-room; certainly having no relation whatever to the practical career before him, and therefore matters which might fitly be dismissed from his mind. Now he is chagrined to find that the refinements, the ingenious speculations, the heated controversies of the physiology of his youth, at his lecturer's enthusiasm, over which he used to smile with the smile of practical wisdom, have become the corner-stones of important doctrines of to-day, and form the supporting structures of acknowledged—even of fashionable—pathological views. But it is now too late for him to retrace the long and time-consuming steps of physiological study; he must rest content with a narrower sphere, a more restricted horizon.

This desire of the practitioner is, I take it, an approval and practical proof of the soundness of the argument which I am venturing to urge, with deference, on my present audience; and which may be more succinctly formulated in some such way as this. Pathology, that is, the rational, the scientific, interpretation of the phenomena of disease, is not only the necessary basis for the rational art of healing, and, as such, most to be cultivated by those who are seeking the advance of our profession, but is a no less necessary part of the intellectual equipment of every practitioner who is unwilling to remain a mere machine for the application of therapeutic agents in a dull inanimate way. But the salutary use of pathological doctrines implies the possession of a critical power, so that the false may be sifted from the true; and the building of this critical power, without which each new pathological discovery or conception becomes a sharp two-edged instrument, cutting the hands of him who would attempt to use it—becomes a "will of the wisp," leading into bogs of error—is one of the chief functions, and, for the active practitioner, the most important function of physiological study. This, at least, is the conclusion forced upon us, if we admit what I have attempted to urge to-day—that pathology is a special development of physiology. For physiology, when we attempt to distinguish between the two, is the older, more general study. It deals with simpler, less intricate phenomena; its conclusions are wider and broader, less likely to be disturbed by the perturbations of practical demands, or to be confused by a temporary and delusive practical success. The phenomena on which its doctrines are based are always at hand, and may be called up for demonstration at any time and any place. Each new pathological doctrine, in turn, when it becomes stamped as true, is received into the common body of physiological teaching. And we have every reason to think that, as in the past, so in the future, the truths of physiology will serve, on the one hand, as the starting-points of pathological inquiry; and, on the other, as a tribunal before which each new pathological theory must at its birth be tried.

Two conditions, however, must be observed if the study of physiology is to bear this fruit of critical power. First, the study must be carried on in early years, while the medical mind is being formed, and not left to the chance leisure moments of a busy life; secondly, the study must be an adequate one, having for its end this very object—the acquisition of critical power.

Within the last few months there has passed away from our midst a man who, great in many things, was perhaps especially great as a teacher of physiology. I need hardly say I speak of William Sharpey. And if it be asked what it was that made Sharpey's teaching so successful, I think this answer might be made. It was not the eloquence of his words, or the fluency of his speech. It was not the profusion or the beauty of his stained sections and preparations, nor the exactness, success, and multitude of his lectures, experi-

ments, and demonstrations. It was not that he poured out upon his audience all the treasure of physiological knowledge with which his remarkable memory was stored, for he often withheld much that another might have given. Nor was it because he avoided doubt and confusion by teaching only that which had been ratified by nine years' keeping, for he often expounded to his class the very newest discoveries, and worked his way through many a tangled discussion. It was rather, as I have ventured to say elsewhere, that his method was to lay before his hearers, in plain straightforward language, just how the thing appeared to himself, describing the facts with scrupulous accuracy, putting down the arguments as they were arrayed before his own reason, and leaving on the students an impress, sometimes strong, sometimes feeble, according to the nature of the material, of the working of his own mind. In this way it came to pass that his hearers, often unknown to themselves, not only acquired that superficial knowledge of physiological facts and doctrines which will pass muster at an examination, and serve other similar subsidiary purposes, but also acquired the art of physiological reasoning, and caught the true spirit of physiological judgment. And this I take to be the true end of all physiological teaching for the medical man—training of his mind into good habits of physiological criticism, the building up of a physiological judgment. As we all know, each learning has its own logic—to think in chemistry is not the same thing as thinking in biology. A man may be an accomplished mathematician, or a profound theologian, or a great scholar, and yet may speak words of foolishness when he goes out of his way to pronounce opinions on biological problems. In order to pass a sound judgment on the phenomena of living beings, a man must have become familiar with these phenomena, and have accustomed his mind to the workings of their problems.

The value of physiology as a study preliminary to practical medical education is not, I would venture to urge, to be gauged simply by the consideration that a knowledge of broad physiological facts is a necessary antecedent to any intelligent comprehension of the nature of disease and the rules of the medical art, important as that consideration may be.

Something of more value than a bare knowledge of facts may be gained by adequate physiological teaching, the formation of the physiological mind, which, if there be any force in the arguments I have advanced to-day, is also the pathological mind.

But it is obvious that, if this view of physiology be admitted, the teaching of physiology must not be confined to the mere didactic exposition of the more generally received dogmas, to the thumbing of some physiological horn-book. The student must be brought face to face with the problems of the science, and be trained in the method of their solution. And from this point of view, these discussions and controversies and speculations, which are often made a reproach to physiology, have a value of their own.

If physiology be considered as mere positive knowledge of direct practical utility, it may seem a waste of time that the student should spend any days of the few months at his disposal in such recondite or disputed matters as the phenomena and nature of a nervous impulse or a muscular contraction, the action and reactions of vaso-motor machinery, the molecular changes of the secreting cell, and the like.

But the question assumes a different aspect when the teaching of physiology is looked at from the point of view of training. The problems involved in the matters of which I have spoken are types of the pathological problems with which he will have to deal in after-life, and the solution of which will determine his practice for the better or for the worse. By being trained in ways of physiology, in which the materials for observation are ready at hand, and experimentation comparatively facile, his mind will become moulded to a just and critical appreciation of pathological doctrines; he will have put into his hands, so to speak, an intellectual sieve, by which, even in after years, he will be able to sift the chaff of medical literature from the grain—even in after years, for the critical faculty will remain long after the facts on which and by which it was formed have grown dim to memory or vanished quite away.

Moreover, it must be remembered that the physiology which he learns in the first two years of his medical study is that which must last him his lifetime. He cannot again, in maturer years, sit day after day at the feet of the lecturer, or again work in the laboratory. The physiology which he

learns must be of the kind which will wear, and no physiology will wear which is not worked into the mind of the learner. If the student be merely taught in didactic fashion the current physiological dogmas of the day, if these be simply packed away into his memory in more or less artistic manner, with the view of easy reproduction in the examination-room, they will soon forsake him, even if he does not leave them behind him in the ordeal, liberally exchanging his physiology for his diploma, and when, in after years, he strives to grasp the physiological basis of some pathological doctrine, which demands the entire reversal of his previous practice, he will find an impassable gulf between the physiology of his youth and that which he desires to comprehend.

Whereas, if he had entered into the true spirit of physiological study, had laid hold of physiological methods, had risen to a comprehension of the real meaning and true value of physiological dogmas, he would find a genetic continuity between the doctrines of successive generations, and enter easily into even the newest conceptions of his time. Nay, rather he would promptly recognise, in the dominant teachings of the day, views familiar to him as the subject of what, in his youth, practical minded people derided as idle and transcendent speculation or profitless controversy. For physiology, in spite of the feebleness of its workers, in spite of the obstacles which block its way, and the restrictions which cripple its efforts, is a progressive science. True, it seems to be for ever casting its skin, but that very exuviation is a sign of the growth. I dare say, to some of my hearers, many of the questions which are agitating physiologists at the present day may seem idle and transcendent questions, nor would it be easy to point out the practical utility of such themes as, whether electric currents are naturally present in nerves and muscles at rest; whether, in the typical cell, there exists a meshwork continuous with the meshwork of the protoplasmic cell-body; what are the exact changes induced in proteid matter by the action of trypsin and the like; and it may seem sheer cruelty to demand that the student, into whose few years of study so many new and strange topics are crammed—a few years of study, moreover, the commercial profit of which, in after life, does not promise a very heavy percentage of profit on money invested—should be parried with these and similar questions.

And yet, not by any spirit of prophecy, but in simple reliance on the abundant analogies offered by the progress of our science, it may be safely predicted that the solutions to these questions, or to questions equally transcendent and idle in their present aspect will become part and parcel of the pathology of the future; and will, in perhaps not so very many years, help to form the equipment of the obscurest village practitioner.

But I hear some one asking, In thus demanding for the medical student larger and fuller teaching of physiology, are you not adding a new burden to a creature this long while already overburdened far too much? By no means. No one opinion do I hold more strongly than this, that our youth, not medical only, but of all kinds, having been for many years past over-examined, are now year by year being more and more over-taught; and one of the most urgent needs of medical education seems to me to be, not a multiplication, but a simplification, of medical studies. And, if a wider scope is to be given to physiology, something must be given up to afford the necessary room. Much might be done by clearing away with a bold hand the traditional encumbrances whose uselessness is acknowledged by many, if not by all. Others have argued more forcibly than I can do against the practice of compelling the student to spend precious hours in acquiring knowledge which might admirably qualify him as buyer to a wholesale drug-house, or which might stand him in good stead if it fell to his lot to settle in practice in the wilds of Africa, and against introducing into a professional examination scraps and fragments of such studies as comparative anatomy, which ought to find their place only in preliminary studies, if at all. I would, however, to-day be hardy enough to spend the few moments left to me in attacking a tradition more honoured than any of these.

I think I am not overstating the case when I say that, in the two years (or less than two years) which the medical student devotes to studies other than clinical, some 60 or 70 per cent. of his time—in some cases even more—is spent on the study of topographical anatomy. That study may be regarded in two lights—as a discipline, and as practical useful knowledge. The late Dr. Barks, in a remarkable

introductory address which he delivered at University College, London, many years ago, insisted most strongly that its value as a discipline was far higher and more precious than its direct utility; and I imagine that the more one reflects on the matter, the more clearly this will appear. The details of topographical anatomy have this peculiar feature, that, though they can only be learnt with infinite pains and labour, unlike other things hard to learn, they vanish and fly away with the greatest ease. I would confidently appeal to my audience of practical men, how much of that huge mass of minute facts, which in their youth they gathered with so much toil, remained fresh in their minds two years after they passed the portals of the college; and how much now remains to them beyond a general view of the parts of the human frame, and a somewhat more special knowledge of particular regions, their acquaintance with which has been maintained by more or less frequent operations. I would confidently ask them what is the ratio, in terms of money or any other value, which the time spent in those early anatomical struggles—say over the details of the relations of the several parts of the forearm—bears to the amount of that knowledge remaining after twenty, or ten, or even five years of active practice, or to the actual use to which that knowledge has been put.

No, it is as a discipline, and not for its practical utility, that anatomy has been so useful; and this, indeed, may frequently be recognised in the questions set at examinations. When the candidate is expected to describe, within the error of a few millimetres, the structures traversed by a bayonet thrust obliquely through the neck, or is invited to reproduce written photographs no less exact of the parts which, from skin to skin, underlie a triangle or quadrangle drawn in ink on the front or back of the thigh, it is clear that the examiner has in view, not the needs of practical life, but an easy means of testing the proficiency of the student in mnemonic gymnastics; and of its value as a discipline there can be no doubt. In past years it has served as the chief culture of the medical student—as the chief means by which the rough material coming up to our great medical schools were trained to habits of accuracy, of exactness, of patient careful observation; and their memories strengthened by exercise for the subsequent strain which would have to be put upon them by more strictly professional learning. In this aspect, the very sterility of the subject was a virtue. The mere fact that the separate details seemed to hang loosely isolated in space, held together by no theory, no ideas, inasmuch as it made the learning a harder task, increased its disciplinary value. Most wisely did the leaders of our profession insist that no trouble or expense should be spared to afford the neophyte this preparatory scientific training; and that, as far as examinations and the like can go, no pains should be spared to compel him to avail himself of the opportunities offered. Indeed, viewed as a branch of education, the machinery of anatomical instruction has for many years past been excelled by none, if it has been equalled by any.

It must not, however, be forgotten that at the time when our anatomical teaching was instituted, not only did not the student in most cases come to the hospital a raw lad, whose only chief intellectual training had been the mechanical routine of an apprentice's duties, but no other subject matter was available as a means of discipline for a moment comparable in value with anatomy. All things suffer change. Is that which was best twenty or thirty years ago to be considered always as best? Whether the student serves an apprenticeship or no the struggle for professional existence renders it every day more and more incumbent that he should, before joining the profession, receive an adequate training in physics and chemistry, whereby he gains a discipline identical, up to a certain point, with that of anatomy, for who dare deny the value of physics as a training for accuracy and patient observation, or of chemistry for equal accuracy and mnemonic practice; and when he has joined the profession he must, in addition to his anatomical studies, traverse the ground of a portion at least of that physiology which the progress of events has transformed into something hardly recognisable as the lineal descendant of physiology two generations ago. His time, in fact, in the initial years of study is divided between two chief subjects—*anatomy and physiology*. The one is a limited subject, which long ago reached perfection. For years it has been admirably taught, carefully protected, zealously defended, and its power is dominant in the council boards of the profession. The other is a broader, an almost unlimited subject, restless, fermentative, slowly, though surely, settling down

into a body of admitted proven doctrine. For years it, as a younger brother, has had little of the fruition of power; it has had to sit in the lower seat, and has too often been imperfectly and badly taught, and in a still more imperfect way examined.

It would be foolishness to maintain that physiology taught in a fragmentary, make-shift, at times injudicious manner, its study carried on in a corner, without due appliances, at scanty moments snatched from other labours, can for a moment be regarded as an adequate preparatory discipline for the complex duties of the profession. But if there be any truth in what I have urged to-day, then I would make bold to affirm that if physiology be served in the future with half the zeal with which anatomy has been served in the past, if it be taught seriously and thoroughly, if the study of physiology be allowed to mean that the student should be really made to comprehend the conclusions at which science has arrived and is arriving at concerning the phenomena of living beings, to understand the trains of reasoning which have led to those conclusions, whatever habits of accuracy and of patient observation, whatever strengthening of the mind is gained by anatomy can be gained by physiology too.

Were time long enough, and means ample enough, I would above all things desire that the demands of anatomy should be maintained with all their present imperiousness and importunity; nay, more—I would gladly make it incumbent on every practitioner that every one year in seven he should return to the dissecting-room and revive his knowledge and rejuvenate his scientific instincts by twelve months spent again in anatomical studies; but since it is clear that the grasping necessities of our time, which are unceasingly narrowing us in as the bounds of science widen, will not permit an equal and contemporary development of these two great initial studies, I would, in all respectfulness, urge that it will be in the long-run best for the profession if the present relations of the two are reversed, and anatomy made secondary to physiology.

And if what I have advanced be true, that physiology well and carefully taught (and I fully admit the immense responsibility which, in such a case, will rest on the teacher to take heed that the study is a serious one, and does not degenerate into a peep-show play with stained sections, or a tedious trifling with reagents and recorders, test-tubes and tambours) is in disciplinary worth the equal of anatomy, if we add to this the consideration that beyond all doubt the former engenders habits and strengthens faculties, which the latter does not touch—habits and faculties which are in repeated, in constant, demand in daily profession; the habit of reasoning securely on data of mixed and uncertain value; the faculty of struggling to a right conclusion out of the confusion of conflicting facts and views; and the reflection that it is possible to be a most accomplished anatomist, and yet remain in almost complete ignorance of other sciences, while physiology is so bound up with physics and chemistry that to know the one is to have learnt the others, there cannot, I humbly submit, be much doubt as to the justice of my position.

In conclusion, I feel that I owe my audience some apology for the words which I have spoken. I fear that I have taken an undue, a selfish advantage of the honourable position in which I have been placed to-day to set up my horn on high. While the only excuse which I have is a love of the science to which I have given my life, a love strong enough to raise a zeal perhaps not according to knowledge. I would also venture to remind you that we physiologists, who are every day becoming more and more separate, but who, I trust, will never be estranged from the practical callings of the profession, are a folk not only few but feeble; and I pray you not to measure the strength of our science by the paucity and weakness of its followers. Our lot is at present a hard one; outlaid by the law of the land, our chief token of blessedness is that men and women, some of them representative and distinguished, revile us and say all manner of evil against us; many even of our own brethren of science stone us, or pass us by. To ourselves there is little help: it is to you, the great medical profession, we look for aid and support; and, as our guardians, I pray you patience, for having laid before you something of our hopes and our wants.

A MEDICAL STUDENT, a son of Dr. Roughan, Local Government Board Inspector, was drowned in the Corrib last week.

ABSTRACT OF AN

Address

DELIVERED AT THE OPENING OF

THE SECTION OF PSYCHOLOGY,

*At the Meeting of the British Medical Association,
at Cambridge, August, 1880.*

By J. CRICHTON BROWNE, M.D., LL.D., F.R.S.E.,

LORD CHANCELLOR'S VISITOR OF LUNATICS.

CIRCLES OF MENTAL DISORDERS—MODERN NERVOUS DISEASES.

ACCORDING to the latest official returns there were, on Jan. 1st last, 71,191 lunatics, idiots, and persons of unsound mind in England and Wales, 9624 in Scotland, and 12,819 in Ireland, making a grand total of 93,634 persons labouring under mental diseases or defects in Great Britain and Ireland. But this grand total, we must recollect, represents only certified or officially recognised lunatics and idiots, and corresponds with an inner circle of insanity, marked off by an arbitrary and somewhat shifting line, and outside of which lies a second circle, embracing a multitude of persons who are subject to no legal restraint, but still come to a large extent under medical supervision, and cannot be shut out from any scientific survey of insanity. Within this second circle—the crazy circle, I should be inclined to call it—fall lunatics whose mental disease, although patent enough, is of so inoffensive a kind that it is not thought justifiable to interfere with their liberty; lunatics whose mental disease is concealed, and lunatics whose mental disease is of a partial character, and is not, perhaps, popularly regarded as mental disease at all. Here we have instances of incipient insanity that has not yet expanded into dimensions that are perceptible to the eye of the law, and of chronic insanity that has crept out of its range of vision, and hosts of eccentric, half-mad, crackbrained, and imbecile persons, who move about in every grade of society. No census of the population of this second or crazy circle has ever been attempted, but that it is very great may be inferred from a number of circumstances. The late Premier told us that he had to keep a capacious bag for the crazy correspondence from presumably sensible people that was constantly pouring in upon him; and the Astronomer Royal, we are informed, has a row of pigeon-holes, in which are stowed away the mad communications as to perpetual motion, the squaring of the circle, and other obscure problems, that reach him daily from unappreciated lunatics. Our courts of justice are but too often engaged in investigating crimes committed by indisputable lunatics, whose insanity was not noticed until it culminated in violence or fraud; and our coroners can tell a dismal tale of the consequences of mental disease that has never secured official recognition. There are now upwards of one thousand seven hundred suicides in England and Wales annually, and of these not more than thirty occur amongst registered lunatics of all classes; but in at least three-fourths of these one thousand seven hundred suicides, as appears from evidence given at the inquests, there were distinct signs of mental unsoundness preceding, often for considerable periods, the act of self-destruction; and, as suicide is but the crowning expression of melancholia of a certain intensity, and is only resorted to by a small percentage of those who suffer from mental dependency, the fact that not fewer than one thousand three hundred suicides of unregistered insane persons take place in England and Wales yearly reveals great unfathomed depths of mental unhealthiness in our community. And the experience of medical men also points to vast reserves of hidden and unauthenticated insanity. Of the patients whom they are called on to certify insane a large proportion have been more or less mentally deranged for months, or even years, before the date at which legal or medical intervention is deemed requisite; and of the patients who seek their advice for merely bodily ailments a certain number prove to be unmistakably mad, even when they are figuring as useful members

of society, and are unsuspected, save by their nearest relatives, of any mental taint.

With the view of obtaining an approximative estimate of the contents of the crazy circle, I some time ago asked a few of my friends, both lay and medical, to scrutinise for me their own acquaintance, and to jot down, firstly, the number of acknowledged lunatics within that acquaintance, whether in asylums, boarded in private houses, or at home; and, secondly, the number of individuals included in it who, although not certified or acknowledged lunatics, are still held in general estimation to be *non compos mentis*—eccentric or half mad. Well, the result of that inquiry was that, within its range, the half mad were to the mad as two to one; from which we should have to conclude that there are at the present time upwards of 180,000 occupants of our crazy circle in the United Kingdom. Now, I am not inclined to adopt or defend that computation, nor to attach undue importance to an inquiry so trivial in character and so beset with sources of fallacy. I only refer to it as affording some corroboration of the belief that there is much unrecognised insanity in the country, and that the crazy circle is densely populated.

But if we had summed up all the constituents of the crazy circle surrounding the circle of recognised insanity, we should still not have exhausted the material with which medical psychology is concerned; for beyond the crazy circle there lies another and an outer circle, which may be named neurotic, and in which are assembled the sufferers from all forms of nervous disease that are not necessarily accompanied by mental disorder, but that must be placed in the same category with insanity, and that in many instances tend towards it. These are epilepsy and paralysis, locomotor ataxia, and every sort of spinal mischief, neuralgia, hysteria, chorea, and, indeed, the whole order of nervous diseases, which, it need scarcely be said, are widely prevalent amongst our population. The returns of the Registrar-General, which are unavoidably most imperfect on this point, show that nearly 70,000 deaths are attributed to nervous disease in England and Wales each year; and as these diseases are not all acute in their course, and are sometimes much protracted, this rate of mortality betokens that the number of persons afflicted by them and living at one time must be very considerable.

In the three concentric circles that I have enumerated, the insane, the crazy, and the neurotic interchange, and circulation is of course perpetually going on. They are incessantly agitated by centripetal and centrifugal and rotatory currents. A person who has been simply neurotic becomes suddenly insane, and rushes into the central circle; a certified lunatic recovers partially, and, being emancipated from restraint, steps into the crazy circle; and a crazy being, with occasional acute exacerbations of his craziness, requiring temporary asylum treatment, oscillates between the crazy and the insane circles. And, as I have already hinted, these circles are not sharply demarcated from each other. On the contrary, the whole mass of mental and nerve disease is finely gradated from the centre to the circumference, and the lines enclosing the circles into which it is for convenience divided are drawn in an arbitrary manner, and are not by any means fixed and immovable. Hence the difficulties that arise in determining whether the contents of any of the circles are increasing or diminishing, for the shifting of the containing line in the slightest degree would obviously altogether vitiate any comparison of the quantity of the contents of any two circles at two periods, one before and the other after the shifting. With reference to the insane circle, it is alleged that its radius, which is really the definition of insanity, is of an elastic nature, and has been stretched in modern times so as to comprehend much that formerly belonged to the circle of craziness. And thus an explanation, that will not seriously alarm us, is offered of the startling fact that the number of our registered lunatics and idiots has nearly doubled itself in the last twenty-one years, having increased from 37,762 in 1859, to 71,191 on the 1st of January last. Under the influence of the lunacy laws, we are told, and of a more liberal popular conception of insanity, a considerable belt of what was formerly the crazy circle has been annexed to the insane one; and this annexation, together with the enlargement of all the circles in proportion to the increase of the population, will account for its strangely increased dimensions and for the enormous increment of lunatics and idiots with which we have now to deal. For my part, I am not able to credit this flattering tale, nor to perceive any proof that the definition of insanity has been

extended in the manner alleged; but I cannot pause here to examine this vexed and entangled question by the old methods. I desire rather to call your attention to the dimensions of the outer, or neurotic, than to those of the inner, or insane circle; and in doing so, I may, perhaps, throw some light on the dispute as to the real or fictitious character of the enlargement of the latter. For probably a certain proportion is maintained between these two circles. Many nervous diseases lead up to and eventuate in mental derangement, and the *neuroses* of one generation are not rarely the *insanias* of the next. We should expect, therefore, that any marked increase or diminution in neurotic affections would be followed, after a time, by a corresponding rise or fall in the rate of prevalence of affections of the mind.

Well, the fact seems to be that neurotic affections are increasing and multiplying on every hand. Dr. Beard, an American physician, who has studied the subject with much ability, maintains that an entirely new state of the system, a morbid nervousness, unknown to the ancients or to the fathers of medicine, has developed itself amongst his countrymen during the last half century. This state declares itself in neuralgia, sick-headache, dyspepsia, hay-fever, and, above all, in neurasthenia or nervous exhaustion; and Dr. Beard appears to think that this it is that has set its stamp upon bodily configuration—making the Americans taller, thinner, and lankier than their original stock in England and Germany. The indications which he adduces of the unprecedented nervousness of the inhabitants of the United States, when that nervousness has not mounted into actual disease, are their increased sensitiveness to cold and heat, rendering them unable to live with comfort in rooms of a temperature lower than 70° F., their greatly augmented susceptibility to the action of stimulants and narcotics, the customary doses of which have had to be universally reduced in modern times, the premature decay of their teeth, and their utter inability to digest pork, which their grandfathers partook of in large quantities with impunity. From his own observations, and from the information which he has obtained from old and experienced physicians, and from medical literature, Dr. Beard unhesitatingly concludes that all nervous diseases are on the increase in America, that many bodily diseases are assuming a nervous or asthenic type, and that nervous exhaustion is so common that it must be regarded as a distinct disease of which there are several varieties.

In this country nervousness has not certainly obtained the ascendancy that it is represented by American physicians to have secured at least in certain districts—notably in the Northern and Eastern States—on the other side of the Atlantic. And yet we are not without evidences that nervousness—that is to say, the nervous temperament and diathesis—are much more common in these islands than they used to be, and that in some respects we are approaching the state of matters that exists in America. It has even been maintained that in bodily habit our people are visibly adopting the style of Brother Jonathan, and that fat people are less numerous, and thin people more numerous, in the well-fed classes of society, than was formerly the case. Allowing, it is said, for the effects of changes in diet, and for the deceptions which changes of costume, like that from crinoline to tying-back and jerseys, may create, it is still manifest that our nation is growing thinner as a whole, and that plumpness is giving place to elegant attenuation. I dare say many of us recollect Hawthorne's description of a middle-aged Englishwoman as she appeared to him in 1863. "She has an awful ponderosity of frame," it ran; "not pulpy, like the looser development of our few fat women, but massive, with solid beef and streaky tallow, so that (though struggling manfully against the idea) you inevitably think of her as made of steaks and sirloins. When she walks her advance is elephantine; when she sits down it is on a great round space of her Maker's footstool, where she looks as if nothing could ever move her." That was a coarse and ungracious caricature to come from a pen, usually so dainty and kindly, as that of Hawthorne; but it would, I think, give comparatively little offence if published now, compared with the storm of indignation that greeted it at the date of its appearance, and simply for the reason that there would be less truth in it. Very stout women, even middle-aged, are, I fancy, less frequently met with than they formerly were; while our young women, although, happily, far from rivalling the slimness of American girls, are, on the average, probably thinner than their grandmothers were at the same age. If this is so, we can only

attribute the change which has taken place to the influence of the conditions of modern life upon the nervous system, and through the nervous system upon the nutrition of the tissues. The female sex is of nervous temperament as compared with the male sex, and Laycock used to say that feminine and nervous were synonymous terms. It is, therefore, in women that we should expect to find the earliest and most marked manifestations of changes in the nervous system, influencing nutrition, like those just alluded to, and also of changes establishing greater susceptibility in sensory perception, which has also been pointed to as a sign of the growing nervousness of the age. Our refined and nicely discriminating nerves, it has been asserted, cannot, without discomfort, endure the strong impressions that give to coarse nervous organisations only an agreeable stimulus, and hence the substitution in modern decorative art of delicate combinations and neutral tints for the glare of primary hues—orange, and red, and purple—which were in vogue in days less nervous than ours.

All this, however, is somewhat problematical, and we are not without more definite proofs that nervousness is increasing amongst us. What might perhaps be regarded as the best of all proofs of that proposition—an increase in the rate of mortality from nervous diseases, the results of nervousness—cannot be adduced in its support, for the returns show that nervous diseases, as a whole, were as fatal twenty years ago as they are now, and that the number of deaths ascribed to them has fluctuated very little from year to year. But it is to be borne in mind that the death-rate from nervous diseases, as officially set forth, is but a fallacious guide to any estimate of their prevalence, for a large number of the victims of nervous disease succumb to intercurrent maladies, which are registered as the causes of death; and nervous diseases might be disseminating themselves widely amongst us, while nothing in the death-rate gave token of the process. Then analysis of the return of deaths due to diseases of the nervous system reveals that while that return, as a whole, has undergone little change, very remarkable changes have taken place in the items of which it is made up. A great reduction has taken place in the number of deaths ascribed to "convulsions," a term which used to cover a multitude of infantile ailments—many of them not nervous at all—and which is still too indiscriminately applied, while a compensatory augmentation has taken place in the number of deaths ascribed to other and less obscure diseases of the nervous system, about which there could be no mistake. As, then, owing to increased care and skill in diagnosis, a large number of deaths which were formerly improperly classified under diseases of the nervous system, are now classified under other headings, and as, notwithstanding this, the death-rate from diseases of the nervous system remains the same, we are entitled to conclude that there has been an increase in the death-rate from nervous diseases, although this is not apparent on the face of the return.

It is not, however, in connexion with the death-rate due to diseases of the nervous system themselves that the increasing nervousness of this country is most clearly evinced. That comes out most distinctly in connexion with the prevalence of other diseases not called nervous, but containing a powerful nervous ingredient. In diabetes the nervous system plays an important part, and the highest authorities are agreed that it is often brought on by mental anxiety and distress, or by sudden fear and shock. Well, diabetes is advancing with rapid strides in this country. In the year 1863 it caused twenty-seven deaths in every hundred thousand persons living; in the year 1878 it caused forty-three deaths in every hundred thousand living, having advanced steadily year by year in the interim. Dr. Pavy, who speaks from a unique experience, and with unsurpassed insight, is satisfied that these figures cannot be explained away by supposing that there is a more painstaking search for, and a readier recognition of, the disease nowadays than of yore. He believes that the disease is decidedly more common than it was, and he attributes its greater prevalence to the increased wear and tear of these times. Kidney diseases, including under these nephritis and Bright's disease, have also advanced rapidly in recent years, having caused 338 deaths in every hundred thousand persons living in 1878, against 215 in the same number living in 1863; and in kidney diseases, we are now taught to believe, conditions of the nervous system are often involved. Dr. Clifford Allbutt has shown that mental worry is the chief cause of granular kidney; and, Dr. George Johnson, while not agreeing with Dr. Allbutt on this point, holds that there is a real etiologi-

cal relation between mental anxiety and some cases of albuminuria, and that mental emotion often aggravates chronic renal diseases. Heart diseases are year by year advancing all along the line, and particularly in their neurotic wing. They caused 909 deaths in every hundred thousand persons living in 1863, and 1373 deaths in every hundred thousand living in 1878; and the movement must be traced, in part at least, as Dr. Quain has pointed out, to the operation of the conditions of modern life, through the nervous system, upon the organs of circulation. The deaths due to aneurism, which in my experience is as much connected with mental as with physical strain, have increased in proportion to the deaths from heart disease. Rheumatism, in which there is unquestionably a nervous element, and gout, the neurotic character of which has been ingeniously vindicated by Dr. Duckworth, are both much more fatal than they were twenty years ago.

But without any increase in the death-rate from diseases in which there is a nervous element, or from nervous diseases themselves, it is still possible that the latter might be multiplying amongst us in a disastrous manner. For there are diseases of this class which do not shorten life. They cause chronic invalidism; they cripple power, and mar usefulness; they spread wretchedness around; they embitter existence; but they do not curtail it. Indeed, it might be argued that a few mild types of nervous disease are favourable to longevity, by imposing on those whom they afflict a strict regard to health, by withdrawing them from participation in pursuits that are beset with risks, and by creating a state of system that is indisposed to acute inflammatory attacks. Many observant medical men are of opinion that cases of the minor nervous affections, about which no statistics are available, of hysteria and fidgets, herpes zoster, and urticaria, writers' cramp, and sick headache, are now studded over practice with a profusion that was formerly unknown. Premature baldness is far more frequent than it used to be. Early decay of the teeth occurs in the rising generation with painful frequency. Annual holidays have become a necessity instead of a luxury. A new literature of neurology has sprung up of late years. New hospitals dedicated to the treatment of nervous diseases have been established; a new set of specialist physicians have adopted that line of practice. The consumption of neurotic remedies, of morphia, hyoscyamus, conium, chloral, the bromides, arsenic, strychnia, and gelseminum, is enormously on the increase, as is also the consumption of neurotic beverages like tea and coffee, and of that great nerve sedative, tobacco.

These facts and considerations, and many more of like import which might be placed before you did time permit, seem to warrant the inferences that nervousness and nervous diseases are increasing in this country, that the neurotic circle is enlarging out of proportion to the increase of the population, and that the crazy and insane circles, which draw from it the bulk of their constituents, are also probably enlarging in a manner disproportionate to the increase of population.

To inquire fully into the causes of this increase of nervousness and nervous disease would be to enter on an investigation of great interest, but of vast extent. They may all, however, be summed up under—first, the increasing complexity of the nervous system, and, second, the increasing complexity of life. Neural development is still going on in the brain. It is not improbable that that organ is increasing in size in our race, and, of course, an addition to its weight that would be imperceptible in the scales might be of profound import in relation to its functional activity. But without increasing its size the brain may elaborate its structure by putting forth new gyri, deepening its grey matter, developing new cells, and laying down new commissural fibres, to an incalculable degree; and this much is certain, that whatever their nature be, organic processes are going on in the brain, by which new impressions and new modes of action are registered and transmitted from one generation to another. Thus it is that we, who are of the latest birth of time, inherit something from all past ages—a legacy which is paid not only in wealth of printed books, in cultivated continents, in multitudinous cities, in opulence of arts, in obedient armies of machines and scientific instruments, but in the finer architecture of our brains, in the enrichment of our nervous systems, in new phases of intelligence, and even new proclivities to disease. For it would seem that subtlety of the higher nerve-centres brings with it instability, and that as brain-substance grows finer in texture, it becomes more explosive in nature.

"Intelligence," says Herbert Spencer, "is the adjustment of the inner to the outer relations." If, then, the outer relations become more numerous, complex, and heterogeneous, the process of adjustment must become proportionately more difficult and hazardous. And our outer relations have surely grown numerous, complex, and heterogeneous in modern times. Our environment has grown varied and intricate; and our environment it is that contains these conditions of modern life, which, acting upon complex and subtle nerve-centres, cause our increased nervousness and increased liability to nervous disease. On every class, and on all ages, the pressure of modern life puts a severer tension. Competition waxes keener; the struggle for existence grows more exciting; and that this struggle involves danger is certain, for statisticians tell us that annuitants, clergymen, and the well-to-do classes who have to take no thought for the morrow, live longer than shopkeepers, artisans, and labourers, who have to contend for daily bread. In this struggle men find it to their advantage to crowd into towns, and Mr. Bright looks forward to a gradual diminution of the rural, and an increase of the urban, population. Well, it is in towns that nervousness and nervous diseases most abound, their growth being encouraged apparently by the excitement of town-life, by the absence of the refining and tranquillising influences of nature, and by the relaxation of those social restraints which conduce to rectitude of conduct in villages and small communities.

Address

DELIVERED AT THE OPENING OF THE

SECTION OF OBSTETRIC MEDICINE,

*At the Meeting of the British Medical Association in
Cambridge, August, 1880,*

By W. S. PLAYFAIR, M.D., F.R.C.P.,
PRESIDENT OF THE SECTION.

GENTLEMEN,—The majority of you are doubtless engaged in the active practice of the profession in all its branches; and I may confidently appeal to you to say whether the subjects coming under this Section do not only form a large part of your daily work, but, if it be not the case, that they give rise to more anxiety, and involve a deeper sense of responsibility, than perhaps any other part of your calling. If this be so, I hope you will agree with me that it is a matter of urgent importance that sufficient attention should be given in our medical schools to the training of those who are about to enter the ranks of the profession in subjects which form so large a part of their future work. Unfortunately, there is a universal consensus of opinion on the part of those who are best qualified to judge on this point—that is, those who are responsible for the teaching of midwifery and its cognate subjects—that the present arrangements of the examining boards are lamentably inadequate for the purpose. I do not think that I am entering on topics inconsistent with the work of this Section if I say a few words on this question. It is, indeed, only by bringing the defects that exist in our present course of education as regards the teaching of obstetric medicine prominently before the profession, and thus ventilating and agitating this important topic, that any real reform can be hoped for. It so happens that those who are responsible for the arrangement of our curricula and for drawing up our schemes of examination, have themselves no practical knowledge of the subjects, and may fairly be assumed to be entirely ignorant of the enormous strides that obstetric medicine has made since they themselves were students. The General Medical Council, and the board for preparing a scheme for conjoint examination, do not contain any practitioners who are specially devoted to the teaching or practice of obstetrics. There are on these bodies many eminent surgeons and physicians, but not a single obstetrician; and it is not, therefore, surprising that our special subject should be entirely neglected. I can give you no better evidence of this assertion than the fact that in the scheme of study recently prepared by the delegates of the

various examining bodies, in which it was proposed to remodel the present curriculum, while only forty lectures, extending over three months, were devoted to the whole vast subjects of midwifery, the diseases of women, and the diseases of children, two separate courses of six months each, were rendered compulsory for what is called practical medicine and surgery; that is, the examining of urine, the use of the microscope, bandaging, and the like—all very useful, no doubt, in their way, but which it is simply ludicrous to compare for a moment to the subjects coming under the head of obstetrics. Nor can it be pleaded that this neglect in giving effect to an urgently needed reform is the result of ignorance of the requirements of obstetrics; for the strongest possible representations have been made to those in authority. In 1868 all the teachers of midwifery in the metropolis signed a memorial to the General Medical Council, setting forth how impossible it was for them to do justice to their subjects in the short course of lectures allotted to them; in 1869 a deputation from the Obstetrical Society of London waited on the Home Secretary for the same purpose, and that body has memorialised the General Medical Council twice, in 1868 and 1879, and all without avail.

Now, what is the practical outcome of the existing state of things? Of course, medical students naturally devote themselves with most ardour to those branches of education which they are led to believe are most important, and, when they find obstetrics and gynaecology relegated to a summer course, they very reasonably suppose that they can well afford to neglect them. Moreover, those who do follow the teaching of their professors with some degree of attention have only a garbled and mutilated epitome of midwifery proper presented to them; for what human being can possibly accomplish the impossible task of doing more than that in forty lectures, while gynaecology cannot even be alluded to? It is really lamentable to think of the hundreds of men who are launched into the daily work of practice with such preparation as this, and of the infinite suffering and misery which their ignorance, for which they cannot fairly be held responsible, may cause. To those on whom is imposed the impossible task of teaching midwifery under such conditions the question is of vital moment. We may remonstrate; we may disclaim responsibility; but the fact remains, that we are the men to whom the students look for instruction. And when, being men with consciences, we reflect on the risk to life and the damage to health that may follow, we cannot, I am sure, but feel it to be our duty to protest as strongly as we can. It was only the other day that the Fellows of the Royal College of Physicians, assembled in Comitia, found it necessary to complain of the ignorance of the candidates who applied for the College licence on topics connected with practical obstetrics. I have had the honour to examine for that licence, and I know that the complaint was not unfounded. But what remedy did they suggest? It is hardly credible, but it is a fact, that all they proposed was to issue a circular to the teachers of midwifery, begging them to pay more attention to the teaching of obstetrics; while at the same time they rejected a motion, proposed by Dr. Barnes, and seconded by myself, that they should recommend an extension of the period of instruction to six months. In the face of the repeated assertion of the metropolitan teachers of midwifery that they could not possibly teach their subject in the time allotted to them, such a circular was a manifest absurdity, and could have no possible effect but that of demonstrating the ignorance of those who proposed it.

I do not think that a meeting such as this can do anything to enforce the needed reform; but the opinion of the profession at large is, beyond doubt, a great power; and therefore I have ventured to trespass on your patience by referring to this topic, since it is one which must interest you all, especially such of you as have sons or relatives who are to follow your steps; and I feel confident that, if due pressure be applied, both to the examining bodies and by your individual advice to the members of the Legislature with whom you may have influence, in the new scheme for conjoint examination which must ere long become law, the due claims of obstetrics will no longer be so unfairly overlooked as has hitherto been the case.

And now, gentlemen, having ventilated a pet grievance of my own, I shall not occupy your time further by any introductory remarks on the work before us. You will, I am sure, agree with me that the Section is peculiarly fortunate in having Mr. Spencer Wells to introduce that on gastrotomy.

Only a few weeks ago he performed his thousandth ovariectomy; and, having accomplished that astonishing feat and won for himself undying fame as the practical father of abdominal surgery, he may well turn his energies into a new direction, and reap fresh laurels in developing a comparatively new and untried branch of operative skill. It is not to be expected that an operation requiring so much manipulative dexterity can ever be widely performed; nor are the cases in which it is even to be contemplated of anything like the frequent occurrence of those requiring ovariectomy. Still, it is a matter of primary consequence that its indications, risks, and methods should be thoroughly and closely studied; and I anticipate that the discussion about to be commenced will naturally increase our knowledge of the subject.

The second topic we have selected for discussion is of scarcely less interest, and, bearing in mind that it treats of the best means of dealing with emergencies that may happen at any moment in the practice of anyone of us, of still greater practical importance. I know of nothing in practice more trying, and more requiring cool judgment, than a sudden and severe attack of post-partum hæmorrhage. Fortunately, modern science places at our disposal means of arresting hæmorrhage and of obviating its effects, such as the injection of styptic solutions, the use of hot-water irrigations, and the hypodermic injection of ergotin and sulphuric ether, which were unknown to our predecessors, and with regard to which much remains to be learnt.

In addition to these subjects of debate, we have a superabundance of most valuable and interesting papers on questions of great importance.

ON THE ANTI-MALARIAL ACTION OF THE CHINCHONA COMPOUNDS.

By T. J. MACLAGAN, M.D.

(Concluded from p. 215.)

THE theory of the mode of production of any disease which most commends itself to us, is that which best explains the whole of its phenomena. The view that malarial poisons are minute organisms is the only one which seems to afford even a reasonable explanation of the natural history and course of the fevers to which they give rise. It is with reason, therefore, that we accept the view that such is the nature of the poisons of intermittent and remittent fever.

The chinchona compounds cure these fevers. How do they do so?

There are two ways in which the curative effects of quinine in ague may be produced: either the quinine may so act on the system as to render it insusceptible to the action of the ague poison; or it may so act on the ague poison as to deprive it of its power of affecting the system. In other words, the action of quinine is either on the system, or on the poison. Let us inquire which it is. And first let us take its action on the system.

Quinine in large doses (10 to 30 grains) possesses in a remarkable manner the power of lowering the temperature of the body when unduly elevated. How it exercises this power is not known.

It has been supposed to be due to a special action of the quinine on the nervous centres: and if we recognise the existence of a special thermic centre regulating the distribution of heat, as the vaso-motor centre regulates the distribution of the blood—a supposition in favour of which much might be said—this explanation is to be regarded as a very feasible one.

Binz thought that this effect of quinine was to be explained by its lessening the ozonising power of the blood, and so checking oxidation. All that we really know, and all that concerns us at present, is that quinine in large doses lowers febrile temperature. What we have to consider is whether or not its curative effect in intermittent fever is due to this property, or to some other and special remedial action.

In virtue of its febrifuge properties quinine has been administered in all febrile ailments. It was at one time claimed for it that it possessed the power of cutting short typhus. More recently it has been claimed for it, as for other febrifuge remedies, that it exercises a distinctly cura-

tive action in typhoid fever, and shortens the duration of that malady. But this conclusion is not supported by the evidence.

There is no proof that quinine either shortens the duration or lessens the danger of either typhus or typhoid fever, or that it exercises a distinctly curative and curtailing effect in any other form of fever than intermittent and remittent.

The point is one which could be easily proved, and would long ago have been proved had the facts been as some have stated them to be.

I have frequently given quinine in large doses in all febrile ailments. My experience entirely coincides with that of Murchison, who says, with reference to both typhus and typhoid fevers, that he had "seen no evidence that at whatever stage it was given it shortened the course of the disease or diminished its danger."

With the exception of the external application of cold, quinine given in large doses is the most powerful febrifuge remedy we possess. There is probably no febrile ailment in which it would not pull the temperature down. But in every such ailment, except intermittent and remittent fevers, this depression is temporary. While the temperature is lowered by quinine, the morbid process which constitutes the disease still goes on; by and by the anti-pyretic effect of the drug passes off, and the disease runs its course uninfluenced by what has taken place.

So it is with all the continued and communicable fevers. Quinine has no power to arrest their course. Where there is trouble or danger from mere elevation of temperature, it may do good by lowering this; but there its usefulness ceases.

In intermittent fever the case is very different. Here the quinine actually cures. It puts a stop to the whole morbid process, and all that constitutes the disease; and it does this so constantly, so speedily, and so certainly, and its beneficial effects are so lasting, that one cannot fail to see that they are altogether peculiar, and altogether different from those got from its administration in other febrile ailments. That the action of quinine in arresting the course of intermittent fever is not to be explained solely by its febrifuge properties is further shown by its power of preventing such fever. Given during the intermission, it prevents the fever from coming on. Taken regularly by those living in malarial districts, it prevents them suffering from the action of the poison of intermittent fever. It exercises no such action in any other febrile ailment.

Besides its febrifuge property, quinine possesses no other special action on the body by which its curative effect in ague can be explained. This property does not account for its remarkable power of arresting the progress, and guarding against the occurrence, of that disease. We are thus forced to the conclusion that the curative effect of quinine in intermittent fever is not to be explained by any action which that drug exercises on the system.

The only alternative view is that it acts on the poison of intermittent fever, and deprives it of its power of affecting the system. There are two ways in which quinine might deprive the ague poison of its morbid action: it might supply to the poison the second factor requisite to its propagation, and so prevent it taking this from the system; or it might simply destroy the poison. The first is extremely unlikely. Indeed, it is difficult to find anything to say in support of it, except that it is possible. It is not at all certain that such an action might not be accompanied by considerable disturbance. But even if it were not, it could scarcely result in a cure of the disease. It would simply lead to the continued development of the ague poison during the whole period of the administration of the quinine, and to an outbreak of the disease when the drug was stopped. For the large quantity of poison which, on this view, would necessarily exist in the system at that time, would find there the material necessary to its growth and propagation, and consequent morbid action, just as it would have done had quinine never been given.

The view that quinine acts by destroying the malarial poison has much more to commend it. Regarding this poison, as we do, as a minute organism, there is nothing improbable in the view that quinine should exercise a destructive action on it; for we know from the elaborate investigations of Binz that quinine possesses in a remarkable manner the power of destroying many minute organisms, and arresting processes dependent on their growth and propagation.

It thus consists both with what we believe regarding the ague poison, and with what we know of the action

of quinine, that the latter should have the power of destroying the former. It is scarcely necessary to point out that the possession of this power would quite explain both the prophylactic and curative actions of quinine in intermittent and remittent fever. That such is really the mode in which quinine acts in these maladies seems to me in the highest degree probable.

We were led to consider this mode of action by the failure of the only alternative mode—viz., its action on the system—to explain the curative effects of the drug. We are led to adopt it by finding not only that it explains that action, but that this explanation consists with all that we believe regarding the nature of the ague poison, and all that we know regarding the action of quinine on minute organisms, such as we believe the ague poison to be.

But, it may be said, if quinine owes its curative effects in intermittent and remittent fevers to its power of destroying minute organisms, why is it only in these maladies that this curative power is manifested? There are many other ailments which are believed to be produced in the same way; but in not one of them does quinine have the same power of arresting the morbid process.

In the natural history of minute organisms there is no fact better established than that such organisms are possessed of specific differences, of whose existence their external form gives no evidence. Two organisms may be indistinguishable from each other by the highest powers of the microscope—so far as can be made out by such examination they are identical. But it may be found that the one flourishes under conditions which are fatal to the other. In the case of parasitic organisms this is specially observed; each has its own habitat, in which alone it flourishes, and in which other and similar organisms die.

Again, an agency which destroys one organism may have no effect on another, though the two may be apparently identical. A remedy, therefore, which cures one disease by destroying the organism which gives rise to it, does not necessarily cure all diseases owning an allied causation. Hence quinine may cure intermittent and remittent fevers by destroying the organisms which produce them, without having a similar destructive effect on the organisms which give rise to diphtheria, small-pox, scarlatina, typhoid fever, &c.

Organic poisons possessed of specific differences may have these differences manifested not only by the different effects which they produce on the system, but by the different effects which other agencies have on them.

The fact that quinine does not shorten the duration of all diseases caused by the propagation of minute organisms in the system, is no proof that it does not owe its power to cut short intermittent and remittent fever to its destructive action on the organisms which give rise to these maladies.

The fact that it does cut short these fevers is to be accepted as a hopeful indication that other remedies may be found capable of exercising a similarly beneficial effect on other fevers whose course we are now powerless to control.

It is in the recognition of this view that lies the main hope for the future discovery of remedial agencies specially adapted for the cure of various maladies which nowadays the careful physician leaves to run their natural course; knowing, as he does, that he is powerless to shorten it, and that unnecessary medication is apt to be injurious.

EXTRA-PERITONEAL OVARIOTOMY.

By W. A. MEREDITH, M.B., C.M.,

ASSISTANT-SURGEON TO THE SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.

THE following case is remarkable, and, I believe, unique, as offering an example of a completely extra-peritoneal ovarian cyst. I have myself seen but one other at all resembling it¹ in nearly three hundred abdominal sections at which I have assisted; and Mr. Thornton's much larger experience tallies with my own in this respect. I have in vain searched through the Transactions of the Medico-Chirurgical, the Pathological and the Clinical Societies, for a record of any similar case, and none of the best-known authorities on

abdominal tumours, whose works I have been able to consult, make any mention of such a condition.

M. M.—, a delicate-looking woman, aged twenty-seven, came to me at the out-patient department of the Samaritan Hospital about the middle of May last, complaining of abdominal enlargement. She gave the following history:—Menstruation occurred for the first time shortly after her marriage, at the age of twenty-four, three years and a half ago; the flow, which was scanty, recurred at irregular intervals on seven or eight occasions during the first two years of married life, but for the past eighteen months she had seen no further signs of it. She had never been pregnant. About a year and a half ago, in the beginning of 1879, shortly after the last appearance of the menses, she first noticed some increase of size in the abdomen, and was troubled with “dragging” pains in the left side. The swelling, after steadily increasing for some weeks, suddenly began to diminish, and entirely disappeared in the course of the next few days coincidentally with the passing of a considerable quantity of clear pale urine. From this time she enjoyed her usual health until about six months previous to her visit to the hospital, when, shortly before last Christmas, she noticed that her abdomen was again enlarging; the swelling, which steadily increased, had latterly been accompanied by a return of the old pain in the left side, and further by considerable discomfort from flatulence.

On examination, I found that the abdominal enlargement was evidently due to the presence of a cystic growth.

The patient was admitted into the Samaritan Hospital a fortnight later, on June 2nd, when the following notes were made of her condition:—“The abdomen is pretty uniformly distended by an elastic, indistinctly fluctuant, tumour, which reaches upwards to about midway between the umbilicus and the xiphoid cartilage. There is no perceptible downward movement of the upper border of the cyst on deep inspiration, and palpation conveys the idea that the growth is closely adherent anteriorly to the abdominal wall. Fluctuation, which was tolerably evident when I first examined the patient a fortnight ago, is now less distinct, and with doubtful limits, owing probably to increased tension. The percussion note is quite clear over the epigastrium, and this resonance extends in the mid-line downwards as far as to the umbilicus, or rather below it. A clear note is obtained on percussion far back in the right lumbar region, but the left flank is absolutely dull. The girth at the umbilical level measures 30 in. On pelvic examination, the cyst is felt very distinctly in front of the cervix. The sound passes 2½ in., showing the uterus pressed backwards in the hollow of the sacrum, with much impaired mobility.”

The following diagnosis was made:—“Broad ligament cyst, with very broad and close attachment to the right side of the uterus, and extensive parietal and intestinal adhesions in the abdomen.”

On June 15th the patient was operated on by my colleague, Mr. Thornton. On making the usual incision in the median line midway between the umbilicus and the pubes, the tumour was at once exposed, after dividing the linea alba, and was found to be everywhere covered by loose vascular connective tissue. After vainly endeavouring to find a way into the peritoneal cavity, Mr. Thornton tapped and emptied the cyst, which he then tried to enucleate from its capsule, but unsuccessfully, owing to the extreme thinness of the cyst wall. Attempts were next made to invert the cyst by pulling upwards the deep and hinder part of the inside of the sac, in order to effect an opening through its base into the pouch of Douglas; but each attempt merely opened up successive layers of vascular areolar tissue. The uterus could be plainly felt through the cyst wall, apparently closely adherent to its capsule; and coils of intestine were also clearly distinguishable. Below the cyst could be felt a mass of small cysts and solid tissue—evidently the right ovary. No trace of the left ovary could be made out.

Having ligatured and cut away two portions of the capsule, Mr. Thornton gradually succeeded in enucleating the remainder with the contained bunch of cysts and the right ovary, until he came down upon an attachment to the right cornu of the uterus; here he transfixed and tied, cutting away the ovary, and the remains of the cyst, leaving a very short pedicle, in which was seen included the cut end of the Fallopian tube.

On examination subsequently, the parts removed were found to consist of an extremely thin-walled multilocular cyst, partly encapsuled in loose connective tissue, and having an enlarged cystic ovary closely adherent to its base.

¹ The details of the case referred to are to be found in the twenty-ninth volume of the Transactions of the Pathological Society for 1878, 145.

The patient had some slight elevation of temperature during the first three or four days after the operation, but otherwise progressed without a bad symptom. The sutures were all removed at the first dressing on the tenth day, when the wound was found perfectly healed, and she left the hospital on the twentieth day.

The details of the operation leave no doubt as to the truly extra-peritoneal nature of the cyst, inasmuch as all attempts made to open into the general peritoneal cavity, either by passing the hand upwards over the upper margin of the tumour, or by endeavouring to effect an opening through the base of the cyst into Douglas' pouch, failed entirely in effecting their object. When attempting the former procedure, Mr. Thornton came upon the cæcum and vermiform appendix completely enclosed in loose vascular connective tissue, and closely applied to the cyst wall. This condition of things was evidently due to the adhesive inflammatory action set up in its immediate neighbourhood by the rapidly growing cyst.

With regard to the question of the mode of development of this tumour, I believe the following to be the true explanation of its origin:—The cystic disease commencing in the outer end of the ovary (whether from a distended Graafian follicle or as the result of an epithelial ingrowth, it is not at present my intention to discuss), probably gave rise to the formation of a true ovarian cyst, lying at first encapsuled in the cellular tissue between the layers of the broad ligament. In the subsequent course of its growth this cyst, distending the layers of the broad ligament, continued to develop in the direction of the least resistance—viz., more or less directly outward—until having reached the seat of reflection of the parietal peritoneum, it gradually opened up the layer of subperitoneal cellular tissue which lies beneath the transversalis fascia lining the abdominal wall, and thus came to constitute a truly extra-peritoneal tumour.

ON SCLEROTOMY.

By C. BADER,

OPHTHALMIC SURGEON TO GUY'S HOSPITAL.

CONTINENTAL oculists, especially De Wecker of Paris, restrict sclerotomy to certain forms of glaucoma. In course of time the operation will, I believe, be adopted in every case of glaucoma. Already von Graefe has been struck by the favourable course of iridectomised glaucomatous eyes with a cystoid cicatrix.

When iridesis was the fashion, leakage of the aqueous chamber beneath the conjunctiva and decrease of tension was one of its undesired consequences. Many sclerotomised patients state that excitement, sleepless nights, grief, &c., which before the operation produced hardness of the eyeball and obscuration of sight, since the existence of staphyloma of the conjunctiva (leakage after sclerotomy) gives rise to a sensible increase of staphyloma, but no more to obscuration of sight.

If, a considerable time after the operation, a vascular zone surrounds the base of the staphyloma the prognosis is not so favourable. De Wecker and others do not make a sub-conjunctival sclerotic flap. It seems to me that the more we secure a staphyloma of the conjunctiva, and through it a leakage of the aqueous chamber, the better. No repetition of the operation will be required if leakage exists.

The incision through the sclerotic should be made close in front of the insertion of the iris, whether the iris be in contact with or adherent to the cornea, or in its normal position, or displaced backwards. Our knife should be guided by our knowledge of the place of insertion of the iris in health; whether the iris be cut through or be displaced beneath the conjunctiva, no heed need be taken, provided the sclerotic be divided in front of the insertion of the iris.

Cases in which the iris had been perforated during sclerotomy seem to recover more rapidly than others; cutting too far backwards through the ciliary region may lead to shrinking of the eyeball.

An important point in the after-treatment is to explain to the patient the necessity for binding up the eyes without exercising pressure upon the eyeball. A soft, black silk

bandage suffices, it gives the patient a sense of security, and excludes light.

Case of Dr. Henry Pain of Cardiff (published with his permission).—Dr. Pain, aged sixty-three, consulted me on Oct. 6th, 1879, for glaucoma in both eyes. He had previously been seen by other oculists. Right eye: tension + 1; bare perception of light with nasal portion of retina; optic disc whitish, apparently swollen; the retinal veins full in the disc and retina; cornea clear; good aqueous chamber; pupil somewhat dilated; fixed media slightly turbid.

Left eye: tension + 2; retina sensitive to light throughout; optic disc deeply cupped, pink; retinal vessels very thin in the disc and displaced; spontaneous pulsation; remainder like right eye.

The patient, highly myopic, had suffered five years ago from albuminuria. I advised sclerotomy at once. On Oct. 10th the doctor consented, and both eyes were operated on under the anæsthetic. The eyes were kept shaded without pressure upon eyelids. He left London Nov. 13th, with good leakage and tension below par.

April 19th, 1880: Tension below par; corneæ clear; pupils drawn upwards; left iris well pushed into the bulging conjunctiva; media clear; optic discs pale-pink, flat; no trace of cupping—i.e., no trace of displacement of retinal blood-vessels in their course across the disc. Perception has returned to the entire right retina, and even large objects can be recognised.

Left eye reads well without glasses No. 2½ of Snellen's type at four inches.

Finsbury-circus, E.C.

A CASE OF

FATAL ULCERATION OF THE DUODENUM, PRODUCED THROUGH SCALDING BY HOT WATER USED AS A HÆMOSTATIC.

By J. R. GREENWOOD, M.R.C.S.

In February, 1880, I was consulted by J. H—, aged forty, a commercial traveller, relative to an epitheliomatous growth on the penis, which he stated had first made its appearance some two years before, since then he had suffered considerable pain. The glans and prepuce were now completely lost in a large mass of ulcerated warty granulations, which constantly discharged a thin sanious fluid, having a most offensive odour. There was very slight glandular enlargement, and the patient experienced little, if any, difficulty in passing his water; he stoutly denied ever having had syphilis, but owing to the presence of some very suspicious scars on his legs and thighs, I felt much inclined to doubt his statement. I strongly advised him to let me amputate the penis before the growth should have invaded any more of its substance, but it was some weeks before I could obtain his consent.

On the 29th of March, the patient being brought fully under the influence of bichloride of methylene, administered by my father, I amputated the penis about an inch beyond the pubes in the usual manner, leaving the urethra projecting slightly beyond the dorsum. The patient passed a good night after the operation, and when I saw him the next morning was in a very satisfactory condition. During the morning, however, I was suddenly summoned to him, and when I arrived found him bleeding profusely from the wound; as he was rapidly becoming collapsed, I despatched a messenger to my surgery for some perchloride of iron, and in the meantime endeavoured to check the hæmorrhage *secundum artem* by cold water and vigorous pressure. When the perchloride of iron arrived I found—as has usually been my experience with this much-vaunted styptic—that it was of absolutely no avail in checking the hæmorrhage. Matters had now reached a crisis when it suddenly occurred to me to employ the method advocated by Mr. Keetley, of St. Bartholomew's Hospital, of sponging the bleeding surface with hot water; I did so, and in a very short space of time had the satisfaction of seeing the bleeding entirely cease.

My pleasure at this fortunate result was destined to soon change into a feeling of anxiety, for when I visited

my patient at night he complained of great pain and uneasiness in the part, which decidedly wore a very unhealthy appearance. The next day I found that he had passed a very bad night, a hypodermic injection of morphia which I had administered the previous evening having afforded him very little relief, whilst one or two small sloughs had made their appearance on the surface of the wound. When I dressed the parts again at night the prognosis was still more grave, for the sloughs had greatly extended, and now threatened to involve the remains of the penis. Early next morning I was sent for in a great hurry, as he had been suddenly seized with acute pain in the abdomen with vomiting. I found him with feeble pulse, cold extremities, anxious countenance, and temperature 101° F. The bowels were also confined. As the vomiting was persistent I gave him an effervescent mixture with hydrocyanic acid and ammonia, also castor oil to relieve the bowels. When I called again towards the evening peritonitis was evidently present, although there was complete absence of the characteristic drawing up of the knees. The bowels were still confined, and I twice used turpentine enemata to relieve a distressing tympanites which, from its amount, evidently interfered with respiration. The sloughs had now extended to the scrotum and skin over the pubes. Temperature 102.5° ; pulse 130. The next morning I found that he had had no sleep owing to the intense pain, vomiting still continued, and the peritonitis was well marked. Temperature 105.8° ; pulse 148. I now began to suspect some intestinal lesion (probably obstruction), and consulted with my father as to the best course to take; we eventually decided to operate for the relief of the supposed obstruction without delay, as the patient was now (3.30 P.M.) in a very precarious condition, the temperature having steadily risen to 106.3° . On returning to the patient's house half an hour afterwards to perform the operation we found that he was just dead. It appeared that he had suddenly started up in bed a few minutes before, gave a kind of gasping shriek and fell back dead.

With some considerable difficulty I obtained permission to make a post-mortem examination, and on opening the body forty-eight hours after death the appearances were as follows: Heart hypertrophied, weight 18 oz., valves healthy; firmly adherent pale clots in all the cavities and extending into the great vessels. Lungs much congested and cedematous. Bronchial mucous membrane red and thickened. On opening the abdomen a large quantity of opaque greenish stinking fluid escaped; a large pale clot was seen lying near the duodenum, on pulling which aside a rent through the peritoneum was discovered, near the head of the pancreas. On opening the duodenum a deeply-indented elongated ulcer with a well-defined margin, about an inch long and half an inch broad, was seen. It commenced half an inch from the pylorus, the gastro-intestinal mucous membrane being otherwise healthy. All the coats of the intestine were destroyed, so that the pancreas formed the base of the ulcer, whilst the pancreatico-duodenal artery, from which the clot proceeded, was distinctly seen crossing it. The visceral layer of the peritoneum was everywhere vascular and opaque, the parietal layer being coated with soft lymph. The rent into the peritoneal cavity was close to the margin of the ulcer, and doubtless took place when the patient shrieked out immediately before death, since none of the contents of the duodenum had escaped. The liver weighed over five pounds, and was gorged with bile. Spleen large and soft. Extensive granular degeneration of both kidneys was present. From the condition of the penis and scrotum it was evident that had the patient survived a short time longer they would have entirely sloughed away, leaving the pubes completely denuded.

The patient's wife was positive that up to the time of seizure he had never complained of any abdominal uneasiness, and the question therefore arises, To what was the duodenal complication attributable? From some hitherto unexplained cause *burns* often occasion duodenal ulcers: now I am of opinion that my patient received as great a shock to the system as a burn would have occasioned from the scalding produced by the application of the hot water to such a recent wound; the general condition of his internal organs being, moreover, in a most unsatisfactory state to resist such a strain at the time. In the absence of all proof to the contrary, it appears to me I have good ground for assuming that scalding by the hæmostatic itself—which undoubtedly caused the sloughing of the wound—was also the cause of the ulceration of the duodenum.

Canonbury-square, N.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proæmium.

GUYS' HOSPITAL.

RUPTURED HÆMATOCELE OF THE TUNICA VAGINALIS;
INCISION; CASTRATION; RECOVERY: REMARKS.

(Under the care of Mr. R. CLEMENT LUCAS.)

The following report is from notes taken by Mr. C. J. Griffiths. The case was dressed by Mr. Marsh.

J. R—, aged sixty-three, was admitted on Dec. 9th, 1879. He was a labourer employed in gas-works, and had been a free drinker. He said that forty years ago he had a hernia on the left side, which became strangulated, and was operated upon. Since then he had worn a truss continuously. He gave a somewhat indefinite account of the previous condition of his scrotum, but it would appear from what he said that it was generally large, that it swelled at night time, and was larger on the right side than on the left. He had never been tapped.

On Friday, Dec. 5th, he felt ill and giddy, and was troubled with flatulence. On the 6th, when at his employment he perceived that his scrotum began suddenly to swell, and he was compelled to leave off work. The scrotum continued to increase in size during the whole of the next day, and on the evening of the 9th he was conveyed in a cab to the hospital, not being able to walk.

When admitted the scrotum was enormously distended, tense, and of a dark, purplish-red colour. The swelling was about the size of a man's head. Mr. Clement Lucas, who was called to see him, determined to operate at once, as there was evident danger that the scrotum might slough. Chloroform having been administered, an incision six or eight inches in length was made from the neck to the base of the scrotum. A large quantity of blood was found extravasated into the cellular tissue of the scrotum, after which the tunica vaginalis remaining distended behind was carefully incised. The vaginal sac was found greatly thickened, in parts atheromatous, and contained calcareous plates. Its cavity was distended by old and recent blood-clot. An attempt was then made to dissect away the thickened and degenerated tunica vaginalis, but this being found impossible, the testicle with its coverings was removed after a stout ligature had been applied. The operation was performed under carbolic spray, and antiseptic dressings were afterwards employed.

The patient suffered very little from the effects of the operation. His temperature remained normal until the 12th, when it rose in the afternoon to 101° F., but soon fell again to normal.

He went on satisfactorily with the exception of a little constipation, and on the 22nd the wound had a healthy granulating surface, with slight discharge.

On Jan. 7th the patient was allowed to get up for a short time. His general health was good. He ate and slept well, and his bowels were regular.

By Feb. 4th the wound had healed, and the patient left the hospital.

Remarks by Mr. LUCAS.—This case was exceptional, and difficult to unravel clinically, but the operation served to clear up its pathology. The patient's history was scarcely trustworthy, for he at first said there was no previous swelling, then admitted that there might have been. The result of the operation proved conclusively that an old hæmatocele had long existed, and it was by the giving way of this that the enormous extravasation occurred. The original cause might have been a long-forgotten blow, or possibly it might have commenced insidiously from the rupture of a degenerate vessel. However this may be, the immediate cause of his seeking advice was more evident. A new outflow had taken place into the cavity of the tunica vaginalis, and the walls of this being degenerated, yielded to the increased

pressure, so that the blood, after distending the vaginal sac, became extravasated into the cellular tissue of the scrotum.

The treatment adopted may require explanation, and it may be questioned whether removal of the testicle was necessary. I contend that it was advisable. The patient was old and degenerate. His scrotum had been enormously distended, and contained, after incision, much blood liable to decompose. The old hæmatocele sac was of cartilaginous consistency through the greater part, and calcareous in patches. A like condition was found in the tunica vaginalis testis. To have left this sac after incising it, and turning out the clots (the ordinary operation in a young man), would have exposed the patient to great risks of sloughing, or, at best, to prolonged suppuration. I determined, therefore, to clear the scrotum of degenerate material, and place the patient in the more favourable condition for recovery. A stout ligature was accordingly placed round the cord, and the right side of the scrotum was swept of its contents. The wound was kept antiseptic, and the patient recovered without a single drawback.

ENCYSTED HÆMATOCELE; INCISION; RECOVERY.

The following case is reported by Mr. F. A. P. Knipe, and was dressed by Mr. George Flower.

T. G—, aged thirty-two, by trade a carpenter, was admitted on Oct. 19th, 1877. He was of delicate constitution, and had suffered from pleurisy and winter cough. Three years previous to admission his scrotum began to swell on the right side, and at the end of twelve months it had attained considerable dimensions. He sought advice at the hospital, and was tapped, several ounces of fluid being withdrawn. At first all seemed well, but the swelling soon recurred, and in a few months it was as large as before. He was first seen by Mr. Lucas on Oct. 18th, when a pyriform swelling was observed on the right side of the scrotum. The apex of the cone was formed by the testicle lying at the bottom of the scrotum, and the swelling expanded above that organ. The history and appearance pointed to encysted hydrocele, but the tumour was found to be opaque. As it was clearly a tumour containing fluid, it became a question whether the opacity was due to a thickening of the walls of the cyst or to the extravasation of blood into it. To determine this the cyst was tapped, when a dark-brown fluid escaped, resembling blood which had undergone degenerative change.

On Oct. 23rd the swelling had increased again since the tapping, and was now very tense, hard, and fluctuating. The patient was placed under the influence of chloroform, and Mr. Lucas made an incision into the anterior wall of the scrotum, above the testicle, and found a cyst, the walls of which were about three-quarters of an inch in thickness. This cyst was laid open, when about four ounces of a chocolate-coloured, murky fluid and clot escaped. The operation was performed under carbolic spray, and the cyst was filled with gauze steeped in carbolic oil.

Next day the patient felt ill and had great pain in the abdomen. Pulse 98; temperature 100° 3'. The bowels were confined. Ordered fifteen drops of tincture of opium and half an ounce of castor oil at once, and a calomel and hyoscyamus pill at night.

Next day he was better, but still complained of pain in the abdomen. The bowels had not acted. The wound was dressed and looked well. Pulse 100; temperature 99° 8'.

On the 26th the bowels acted and the patient felt easier. There was not much pain in the wound. Tongue furred. Pulse 84; temperature 99° 8'.

On Nov. 2nd, although the spray had been used at each dressing, the discharge was offensive. Temperature normal.

On the 10th, the wound having been allowed to close in too rapidly, it was opened up, and a drainage-tube was introduced.

The patient remained in about the same condition, but on the 26th Mr. Lucas, not being satisfied with the drainage, made a counter-opening at the back of the scrotum, and passed a drainage-tube through.

On Dec. 17th the drainage-tube was gradually withdrawn, and the wounds were now completely healed, but some thickening of the skin of the scrotum remained.

He was discharged well on Dec. 22nd.

Remarks.—Encysted hæmatocele is of less frequent occurrence than hæmatocele into the tunica vaginalis, and it is liable to be mistaken for soft-growing tumour. The previous tapping in this case was probably the cause of the extravasation into the cyst, which was situated (as usual)

above and behind the testicle. Encysted hæmatocele ought not to be mistaken for hæmatocele into the tunica vaginalis, as the position of the testicle in the former can always be made out, whereas in the latter it is obscured; but in operating I have known the position of the testis sometimes ignored, and the organ divided in two by the incision intended to lay open the sac.

The treatment adopted in this case of laying open the sac, and causing it to granulate from the bottom, is the only one that can be relied upon, for tapping is almost invariably followed by re-extravasation.

The process of cure was somewhat delayed by removing the gauze too soon from the interior of the cyst, in consequence of which the edges closed in, and pus became retained; but the re-establishment of free drainage was quickly followed by an improvement in the patient's condition, and he left the hospital completely cured.

MANCHESTER ROYAL INFIRMARY.

ANEURISM OF THE LEFT SUPERFICIAL FEMORAL ARTERY;
LIGATURE OF EXTERNAL ILIAC; HÆMATURIA;
INCISION INTO SAC; SECONDARY HÆMORRHAGE;
GANGRENE OF TOES; RECOVERY.

(Under the care of Mr. HEATH, Senior Surgeon.)

FOR the following notes we are indebted to Mr. J. Sutcliffe, M.R.C.S., late house-surgeon.

E. B—, aged forty-five, was admitted on January 2nd, 1880, suffering from aneurism of the left superficial femoral artery. His family history good. He had himself always enjoyed good health, had no syphilitic taint, had always lived fairly well, and had not been accustomed to take spirits. At his trade as a rivetter he had had to stand all day and work with a hammer weighing six or seven pounds. During the last year, however, he had been a labourer, which had necessitated the lifting of heavy weights. About four months before admission he felt an aching pain in his thigh and shortly afterwards discovered a small tumour at the site of the aneurism. The pain continued for about five weeks, when it ceased for three weeks, and then returned. During all this time the tumour gradually grew larger; in the three weeks before admission it increased in size more than it had done during the whole of the previous three months.

The tumour, which presented all the characters of an aneurism, was very large, the circumference appearing to be about fifteen inches and a half, and was situated on the front and somewhat to the inner side of the thigh two inches and a half below Poupart's ligament. Compression by means of shot bags was tried but without avail, and considering the large size of the aneurism it was decided not to persevere with it, but to proceed at once to operation. On the morning of operation his temperature, pulse, and urine were all normal.

On Jan. 16th the external iliac artery was ligatured under the carbolic spray. Very little blood was lost; the artery was tied with a silk ligature, the ends of which were cut off short. A horsehair drainage was used, and the edges of the wound were brought together with silk sutures; the mode of dressing was Lister's. The limb was enveloped in lint and flannel bandages, and hot-water bottles were kept constantly in the bed. Several doses of Battley's mixture were given during the day and night.

On the 17th the urine was black, due to carbolic poisoning, but was free from albumen. The urine still black next day, and contained a large quantity of blood. A diuretic was ordered, and by the 22nd the urine was clear and free from blood.

On the 25th his bowels were open, with the aid of an enema, for the first time since the operation. The wound was regularly dressed at intervals of three or four days.

On Feb. 8th the wound was quite healed. Pulsation had not returned in the tumour, which was only very slightly diminished in size.

On the 16th the patient complained of painful throbbings in the tumour, which was somewhat discoloured, and in which fluctuation could be detected. Temperature 101° F. Under the impression that the sac was suppurating, it was next day laid open, when three or four ounces of fluid blood and blood-clots were evacuated, but no pus. A drainage-tube was inserted, and Lister's dressing was applied.

He did well until the 25th, when at about 9.30 he felt as though something had given way in the tumour, and there was at the same time an immense gush of blood from it. A tourniquet was applied over the femoral artery above the tumour, and the hæmorrhage at once ceased. The patient became blanched, almost pulseless, and very much depressed. Twenty drops of ether were injected subcutaneously, and in about fifteen minutes another ten drops. He then revived; colour returned to his lips, and the anxiety of countenance passed away. The tourniquet was kept tightly applied for about two hours, when it was carefully slackened and left loosely upon the limb without any hæmorrhage taking place. He was kept pretty well under the influence of opium for several days. There was no recurrence of the hæmorrhage; the wound healed from the bottom, and was completely closed on May 1st. Gangrene of the toes commenced on February 29th, but did not spread beyond the two inner toes.

He was sent to the Cheadle Convalescent Hospital on May 12th.

Reviews and Notices of Books.

Elements of Chemistry: Theoretical and Practical. By WILLIAM ALLEN MILLER, M.D., D.C.L., LL.D. Revised, and in great part rewritten, by HENRY E. ARMSTRONG, Ph.D., F.R.S., Lec. Chem. Soc., and CHARLES E. GROVES, F.C.S., Lec. Inst. Chem. Part III. Chemistry of Carbon Compounds, or Organic Chemistry. Section I. Hydrocarbons, Alcohols, Ethers, Aldehydes, and Paraffinoid Acids. Fifth Edition. Longmans and Co. 1880.

FOR years past we have had no large text-book of organic chemistry, and the want has been very keenly felt. Miller's third volume was in its day sufficient for most students, but it has long been out of print, and the rapid current of discovery swept completely past it years ago.

A new edition must, of necessity, be almost a new book, and the task of preparing it was one of such labour, and required such peculiar qualifications, that few chemists would have cared to undertake it. It is very fortunate that the work has fallen into such good hands as those of Messrs. Armstrong and Groves, each of whom, in addition to his reputation as an investigator, is known as a careful and diligent student of current scientific literature.

As the title-page announces, the present volume of over 1000 pages only deals with a part of the whole subject, and a second is promised, which can hardly be smaller than the first. Some four-fifths of the present is new matter, and so complete is the change of plan that the old book can hardly be recognised. This was, of course, unavoidable, and, indeed, the arrangement originally adopted was never a good one. The modern classification is familiar to every chemist, but some sensible modifications have been introduced. The hydrocarbons may be said to form the starting-point, for the cyanogen group belongs rather to the mineral than to the so-called organic department of chemistry. The hydrocarbons are arranged in series, beginning of course with the paraffins, and with each series the haloid and nitro-substitution compounds belonging to it are included, wisely as we think. This, with introductory matter, takes us through 400 pages. Then follow the alcohols, with the phenols and carbohydrates, the ethers, the aldehydes, the ketones, the quinones, and the acids related to the paraffins and such like hydrocarbons. Towards the close of the volume we find an account of the ingenious hypothesis of Van't Hoff and Le Bel in regard to the cause of isomerism.

Altogether the book, as far as it goes, is an admirable theoretical manual, and will be simply invaluable to those who enter on the fascinating study of theoretical organic chemistry. But we cannot help noticing that the practical character of the book has to some extent suffered by the change. The experimental details are in many cases far too

brief, and some bodies of great practical importance, such as the fats, wax, and spermaceti, the drying oils, and the green resins, are very slightly noticed. In fact, theory has, in not a few cases, crowded practice out of the field. Oddly enough, we have not been able to find any account of the mineral salts of the alcohol radicals. Where, for example, is ethylic silicate?

A CHEMICAL LUNG.

ON Wednesday last, Dr. Richard Neale, in the presence of a number of engineers, including the manager of the Underground Railway, and other scientific men, gave an interesting and, as far as it went, successful demonstration of a scheme to purify the foul air of tunnels, mines, cabins, churches, theatres, hospitals, and other buildings. The proposal is, we believe, a novel one, and promises to create a new era in ventilation. Nearly all attempts hitherto made to purify the air in crowded buildings have been mechanical, and have consisted of driving out the foul air by currents of fresh air. Dr. Neale's proposal, on the other hand, is a chemical one, and is designed to destroy the poisonous gases. It is not, of course, intended to supersede ordinary ventilation by currents, but rather to act as an auxiliary. The essence of the scheme is the adoption of some simple chemical facts. As the lungs of living beings appropriate oxygen and give off carbonic acid gas, Dr. Neale proposes to make a "chemical lung" which will appropriate carbonic acid and sulphurous gases from the air containing them, without yielding any products in exchange. The air in the tunnels of the Underground Railway was referred to as a conspicuous and well-known example of impurity irremediable by mechanical means. The principal deleterious gases in this instance are carbonic acid and sulphurous gases and carbonic oxide. All these, but especially the two former, may, Dr. Neale maintains, be easily got rid of by chemical means. By mixing a solution of sulphurous acid and water in a flask, Dr. Neale made an excellent imitation of the air at the Baker-street or Portland-road station. He then added a small quantity of solution of caustic soda, and agitated the flask briskly for a few seconds, and immediately the sulphurous smell was abolished. Into the same flask a current of carbonic acid gas was next passed, so that a lighted taper introduced into the flask was at once extinguished. After a few shakings a lighted taper was again introduced and burnt with a bright steady flame, showing that the soda had taken up the acid. Similar experiments were made with solutions of caustic lime. Dr. Neale said the facts illustrated in these simple experiments formed the basis of his scheme for purifying ordinarily impure air. As regards the Metropolitan and other underground railways, the locomotive engines might, he said, be supplied with a tank containing a strong solution of caustic soda or lime, through which the smoke should be made to pass before being discharged into the outer air. By this means the carbonic acid gas and the sulphur would be eliminated. The carbonic oxide would require to be dealt with in another way, which need not now be explained. In order to attain further purification of the air in the tunnel, each train might be furnished with a truck open at both ends, and appropriately fitted with trays or other contrivances for holding solutions of lime or soda. As the train progressed air would rush through the tanks or trays, and be robbed of its carbonic acid and sulphur in its course. The proposal is as happy as it is ingenious. It further commends itself on the grounds of simplicity and cheapness. It only remains for those concerned, and we would especially indicate the directors of the underground railway and the managers of theatres, to manifest a proper public spirit, and fairly test its practicability. There should be no insuperable difficulty in putting it to a practical test. Meanwhile, we shall watch with interest any attempts that may be made to carry out the idea in detail.

THE LANCET.

LONDON: SATURDAY, AUGUST 21, 1880.

MR. HOLMES made a wise choice of his subject for the Address in Surgery at the meeting of the British Medical Association at Cambridge, whether we regard it as merely commemorating the work of FERGUSSON, or as a contribution to the surgical therapeutics of chronic disease of the knee and hip. The question discussed was the utility of excision of these joints, and Mr. HOLMES is of opinion that while "excision of the knee is one of the indispensable resources of surgery," excision of the hip may be avoided by sufficiently careful and prolonged treatment by rest, extension, &c. On the surface this opinion appears to be a contradiction; for in etiology, pathology, and course, chronic disease of the knee closely resembles that of the hip, and the treatment by counter-irritation, extension, position, rest, opening of abscesses, incision, and drainage, is far more easily applied to the knee than to the hip, while the exact condition of the structures of the joint is more readily ascertained in the knee than in the hip. Why, then, if milder measures properly carried out will obviate the necessity for excision of the hip, do they fail in this respect when applied to the knee? Mr. HOLMES replies that the prolonged illness in cases of disease of the knee has a permanently injurious effect upon the general health, but he forgets to notice this point when urging that sufferers from morbus coxarius should be kept in hospitals or under palliative treatment for many years even. Nor has the experiment been carried out in regard to the knee so notably as is the case with the hip; had it been so we believe there would have been some striking results to record. But the real point of the case does not lie here. Mr. HOLMES clearly showed that the natural ankylosis of the knee is produced very slowly, with danger, and is usually imperfect, and then a constant source of danger, while the result of excision is a rapid, firm, and serviceable ankylosis. Excision of the hip always leaves a weakened limb; at the best the patients can never stand or hop on it, while the limb after spontaneous cure is firm, very useful, and with care can be got in a natural position. It is the difference in the ultimate result of the excision of the two joints that must always make surgeons set a different value upon them. Could we by excision obtain firm bony ankylosis of the hip, the operation would be more nearly parallel to that of the knee. But we must go still further, and express our belief that excision of the knee will soon become far less frequent in our hospitals; the joint is so easily dealt with by milder means that we are sure great advance will be made in this direction. We are referring now not only to incision and drainage of the joint, but to incision and drainage of the bones; a well-planned operation which will relieve the tension in the cancelli, and allow the inflammatory exudation contained in them to escape freely is, we are confident, destined to supersede to a large extent removal of the bones. There is one very obvious fallacy in Mr. HOLMES'S statistics that we must point out: it is that

they make no mention of the number of cases of disease of joints not excised in the various hospitals selected. Thus we learn that while 89 cases of excision of the knee were performed in Guy's Hospital in five years, only 24 were performed during the same period in St. Bartholomew's. For a study of the real value of the operation we require to know what became of the cases in St. Bartholomew's Hospital that would have been excised had they happened to enter Guy's. Did they recover? What was the condition of the limb? How long were they detained from work? In what number was amputation found necessary? We cannot but quote Mr. WOOD'S very needful caution that one death from an avoidable operation more than compensates for 100 successes. Here it is that we want more information, and it is of the character that is most difficult to obtain. We trust the Committee of the Clinical Society appointed to report on excision of the hip may be able to clear some of the ground.

Of Mr. W. S. SAVORY'S address we need say but little. It was characteristic, clear, eloquent, and useful rather in calling attention to points already known, but apt to be overlooked, than in recording anything new. Of the three discussions at the Surgical Section that on the Treatment of Wounds was first in order, and should have been first in importance, but unfortunately Mr. LISTER absorbed a giant's share of the time, and rather diverted the meeting from the practical side of the question. We wish that this, like the other discussions, had been opened by one rather than by three papers; not that we could have well spared either of the three, for they were all of them valuable. Mr. McVAIL is to be congratulated on the splendid statistics he was able to present, and they thoroughly support Mr. ERICHSEN'S assertion that the antiseptic treatment has nothing new in kind of result to show, though possibly in *uniformity* of result it may hope to have when perfected. Any comparison of the results of Dr. YEO'S and Dr. FERRIER'S experiments on monkeys is vitiated by the fact that they were undertaken for totally different purposes. Dr. YEO concentrated his attention on the healing of the wound, Dr. FERRIER was absorbed in watching the results of certain brain lesions, and we must therefore accept any comparison between them with caution. But Dr. YEO'S results are so striking that they form a strong piece of evidence of the value of Listerism. The experiments described by LISTER are so simple and yet so important that the wonder is they have not been formally made before. We say "formally" advisedly, for every one of LISTON'S and BORLAND'S cases—only to name them—that healed by first intention, notwithstanding prolonged exposure to germ-laden air, was in truth such an experiment. But those who remember how often and loudly it has been proclaimed in high places that an organising blood-clot is the greatest triumph of antiseptic surgery and a totally novel fact, will be amused to hear from the distinguished apostle of asepticism that it is the most natural result in the world, for coagulating blood prevents the growth of the all-mischievous germs, and even blood serum is not a good medium for their development. Nature indeed seems well able to wage war against these minute enemies; it is only when she is handicapped by bad health, bad hygiene, or bad surgery, that she proves unequal to it. Mr. WOOD well expressed the

truth when he said that the majority of cases of operation get well without Listerism, but that it saves the lives of a small percentage, who, without such assistance, are unable to withstand the germs. In saying this we are not detracting from the value of the antiseptic treatment; to save even 3 per cent. of lives is well worth all the trouble it may entail, and it must be of service to correct the gross exaggerations sometimes propounded by the younger disciples of LISTER whose ardour is not sufficiently tempered by experience. The pretensions unwisely urged on behalf of it have really been the great hindrances to the more general adoption of the antiseptic treatment. If now we have reached this point, that living tissues, including blood-clot, are themselves powerfully antiseptic, and can further show that this antiseptic property is in direct proportion to the vitality and general nutrition of the tissues, the issue will be narrowed down to one of actual statistics, and it will remain for Mr. LISTER to show results better than those, say, of the Kil-marnock Infirmary. Mr. LISTER has stated that he has found it difficult to obtain even a hundredth part of a drop of common water free from germs, and if this be so it is evident Dr. BORLAND'S success cannot be due to absence of these ubiquitous pests. Good as are these results, however, we cannot but cling to the opinion that a system of chemical asepticism, either LISTER'S or some modification of it, will yet give a more uniform success. But in view of the latest revelations it is rash to affirm that external chemical germicides will be more efficient than means to assist or increase the aseptic activity of the living tissues themselves. The contest is definitely transferred to this field, and the issue will certainly be of great moment to surgical science.

THE important question of cephalic temperatures, and especially of the degree to which they may be taken as indicative of changes in the temperature of the brain, has lately been the subject of renewed investigations in both France and Italy. In the former, M. FRANCOIS FRANK has communicated to the Société de Biologie an important paper on the subject. His direct experiments on the thermal conductivity of layers of bone and skin of the same thickness, show that the two tissues oppose a notable, although unequal, resistance to the transmission of changes of temperature; the bone has an insulating power much greater than the skin. For instance, if the temperature on the deeper aspect of a lamella of bone three millimetres thick is raised one degree, there is no change in the temperature of the other surface, which can be recognised even with a sensitive thermometer registering twentieths of a degree. With two degrees Centigrade of elevation of the temperature of the deeper surface, that of the other side presents only a doubtful rise of $\frac{1}{10}^{\circ}$; with three degrees, $\frac{1}{5}^{\circ}$; with four degrees, $\frac{1}{4}^{\circ}$; and with five degrees, only $\frac{1}{5}^{\circ}$. With a layer of skin of the same thickness, the difference between the temperature of the two surfaces is a little less, although still very marked. How much more considerable must the difference be when two osseous and a cutaneous layers are interposed, and the elevation of temperature of the deeper aspect is only one or two degrees. Experiments on living animals confirm these conclusions. If the inner surface of the wall of the skull of a curarised dog is warmed by means of a sinuous leaden tube, introduced through a trephine

opening in the skull, a thermometer maintained in contact with the shaven skin on the exterior does not rise until the temperature of the inner surface has risen three degrees. The same is true if the inner temperature is raised by injecting water at a temperature of 106° by means of a fine syringe. These negative results, by ordinary thermometry, have been confirmed by thermo-electric observations. An elevation of one degree of internal temperature does not affect the thermo-electric apparatus on the exterior, while an elevation of two degrees causes a deviation of the needle which corresponds only to $\frac{1}{10}^{\circ}$ C. From these facts it is evident that the cerebral temperature must rise to 42° C. (107° F.) in order to cause a surface elevation of $\frac{1}{10}^{\circ}$ to $\frac{1}{5}^{\circ}$ C. What, then, must be the rise to produce a surface elevation of one, two, or three degrees, as alleged in some recent observations? How could the function of the cortical regions of the brain be maintained with a temperature so excessive, and how could such a rise of temperature be explained? Simple afflux of blood would not account for it, since in health the temperature of the aortic blood is nearly that of the surface of the brain. It may be said, however, that the working brain produces heat, just as does any other organ, and BERNARD and SCHIFF have shown that this is actually true. But the elevation in temperature of the venous blood coming from the brain amounted to no more than a fraction of a degree, and is wholly inconsistent with such an elevation as would be necessary to cause the rise alleged to have been found at the surface of the skull.

What, then, becomes of the facts recorded by such observers as BROCA, P. BERT, HAMMOND, LOMBARD, and others? All observed that the superficial temperature of the skull rose in a notable degree under the influence of certain functional stimuli. Is the observed rise to be ascribed to the elevation of the cerebral temperature, or to the variations in the superficial circulation, or to the vascular dilatation, often so conspicuous, in the superficial vessels of the head? It is certain, at any rate, that the results of pericranial thermometry must be received with considerable caution. But what is to be thought of the system of cerebral thermoscopic localisation lately brought forward by M. AMIDON, to which, and to its doubtful value, we alluded a few weeks ago? The observations of M. FRANCOIS FRANK, which we have just described, render the alleged facts of M. AMIDON scarcely worth discussion. We may, however, mention some further facts which M. FRANK brings forward against even its possibility of truth. The statements of M. AMIDON assume: (1) the independent activity of a number of areas in the cortex cerebri—an unproved assumption; (2) the production of a quantity of heat in each of these points greater than the facts mentioned above allow us to admit; (3) the ready transmission to the surface of these local changes in temperature—another point which is contrary to the experiments now described. Supposing, however, that all these assumptions are granted, M. FRANCOIS FRANK urges that it seems still impossible to admit that an elevation of temperature can be produced in a circumscribed spot in the brain, and be transmitted through the skull and skin to the surface, without being propagated to the adjacent parts of the brain. And yet this assumption is absolutely necessary to make the alleged results significant. What evidence does experiment

give upon this point? If a lamina of cerebral substance a few millimetres thick is placed with one of its surfaces upon warm metal, it will be found in a short time that the heat has passed through the tissue, and with very little loss. The brain-substance is, unlike many animal tissues, a very good conductor of heat. If a cube of cerebral substance be taken, three cubic centimetres square, and the centre of the mass is heated one, two, or three degrees by means of an injection of warm water, or by a minute tube through which water passes, each surface of the cube rapidly rises in temperature, without, however, attaining that of the centre. If, in a living animal, one of the cerebral hemispheres is warmed by a coiled tube of lead, the opposite hemisphere, examined at a distance of four centimetres from the source of heat, presents a rapid elevation of temperature. These facts demonstrate that the cerebral substance is so good a conductor that it seems impossible that an elevation of temperature produced on a given point can remain limited thereto without being propagated to adjacent parts of the brain. The precise deductions, founded on the principle that an elevation of the cerebral temperature remains so localised at the point at which it is produced that it can be recognised in the corresponding limited area on the surface of the skull, seem to fall to the ground.

The researches of FRANCOIS FRANCK receive a very interesting and timely confirmation in some observations by Professor MARAGLIANO, of Genoa, which are published, strange to say, in support of the value of the pericranial temperature as evidence of that of local regions of the brain. The method employed was to fix three thermometers upon the skull of a female subject at points at which the thickness of the bony skull and soft tissues varied from 10 mm. to 11 mm. The cavity of the skull was then filled with water at 60° C. (142° F.), the external temperature being 6° C. (43° F.). The heat of the water within the skull, ascertained by a thermometer inserted through a hole, was compared with that of the surface every two minutes for a period of three hours. The difference between the temperature in the interior and on the surface was always from 2° to 4° C.—i. e., from 4° to 8° F. After the water in the interior had cooled down to 25·7° C., the temperature of the surface being 24·4° C., warm water was substituted, so as to raise the internal temperature to 38·2° C. The temperature of the surface continued to rise for a quarter of an hour, and then had only attained a temperature of 29·8° C.—that is, that under the conditions of the experiment, the elevation of the temperature of the interior of the skull, 23° F., only raised that of the surface 9° F.

Among the curious inconsistencies of pericranial thermometry which should of itself suggest the existence of a source of error, is the average temperature which has been given by different observers, and which varies from 93° F. to 97° F. It is evident that many conditions come into play of which a very imperfect account has yet been taken. That there are variations in different parts of the head in individuals, and under varying circumstances, is unquestionable, but it seems probable that these depend rather on the conditions of the abundant blood-supply to the scalp than on changes in the temperature of the brain.

We may point out another consideration which makes the ready transmission of temperature through the skull scarcely

conceivable. The summer sun acting on the head, either directly or through a dark-coloured hat, often renders the scalp so hot that the hand can hardly bear to touch it, without any disturbance of the cerebral functions. If changes of temperature readily permeate the skull, the cortex of the brain should be similarly heated, a supposition which is quite inconceivable.

A LARGE party, consisting in part of deputations from several important towns, paid a visit of inspection on the 20th ult. to the sewage-works of the Native Guano Company, at Aylesbury. Heavy rain had fallen recently, and the torrent of storm-water which came down deranged the process somewhat, and caused it to be seen at its very worst. This, however, can hardly be regretted by the managers, as the trial, severe as it was, was not unsuccessful.

The sewage-treatment adopted at Aylesbury is the well-known A B C process. The town contains 8000 inhabitants, and we are informed that at ordinary times the sewage of this population passes through, and is treated in the works, but the tanks having been constructed for a different purpose are insufficient during seasons of flood. The greater part of the sewage was indeed passing direct to the river at the time of our visit.

As the sewage enters the works it is mixed with clay and charcoal suspended in water. The latter is a waste product from prussiate of potash works, and replaces the blood formerly used. After a short flow, sulphate of alumina is added, and the whole then passes, perfectly deodorised, through three settling tanks, whence the effluent water runs to the river. The precipitated matter is from time to time removed by pumping, partially dried by a filter-press, and afterwards more completely by artificial heat. We observed no important alteration in the process since our last visit, and it seems to have attained its final development. It has been before the public for some years, has been studied carefully, and criticised repeatedly, and we ought therefore to be able to form a fair estimate of its chances of general adoption.

To begin with, let us state the sanitary advantages of the process. They are many. The sewage is disposed of without nuisance, or possible danger to health. The effluent water is clear, free from smell, innocuous to fishes, and in every way fit to be thrown into a river, although of course unfit for drinking purposes. It is, in fact, said to be well within the standard of purity proposed by the Rivers Pollution Commissioners, and we can readily believe the statement. Then, again, and this is a point of vast importance, the process really does recover from the sewage, and so ultimately save from the sea, manurial matters of high value to the land. Finally, the works occupy but little space, a consideration often of paramount importance in neighbourhoods where land is dear.

Turning to the extremely important element of cost, we regret to find that the evidence submitted by the Company is less ample than we could have wished. The statistics of the Aylesbury experiment, which has now lasted for several years, would be very interesting, and ought surely to be published, for it is impossible to suppose that the directors do not know how much the ten tons per week of manure

which they are said to produce really cost them. We can, indeed, understand that the Aylesbury works, being intended partly for experiment and partly for demonstration, would not exhibit fairly the working cost of the process. But due allowance for the accidents of the present position could easily be made, and an estimate formed which would at any rate give some idea of the financial merits of the process.

One single estimate of the working cost of the A B C process has been laid before us. It relates to the experiments at Leeds, which appear to have been satisfactory. For this town of some 300,000 inhabitants, the chemicals used seem to have cost from £8000 to £10,000 per annum, say £30 per 1000, certainly not an extravagant amount. The working expenses are not given in detail, but they can hardly have been large, and although the effluent water was not quite so good as it should have been, it was not unfit to be thrown into an ordinary river. It is, moreover, believed that the cost of the chemicals can be reduced, which would permit the use of larger quantities with corresponding benefit to the effluent. We are inclined to think that the quantity of chemicals used at Aylesbury is much greater than at Leeds. It is evident that more detailed and exact statistics are urgently wanted.

But while we press this part of the case, we do not wish to exaggerate its importance. The sewage question is one of the utmost difficulty, and the solution which is best for one place may perhaps be practically impossible in another. In many places, perhaps in most, sewage irrigation, facilitated if possible by the diversion of storm-water, and united with intermittent downward filtration, is, we still believe, the best and most economical process. But it cannot be denied that irrigation is in some cases attended with very great difficulties, and in such cases some method of precipitation must sooner or later be adopted. Sanitary authorities have learnt, or will soon learn, that town sewage is not, as they once fondly dreamed, a valuable property, but a nuisance, the removal of which is apt to entail considerable expense. If the Native Guano Company can show that the remedy which is offered, and which is undoubtedly efficient, is available at a moderate cost, they will have no lack of customers.

We have said nothing of the inherent value of the manure obtained by the process. That it has some value is certain; that it is worth the price now asked for it is open to question. The value is easily measured, and is, in fact, the simplest element in the whole question. The Leeds Sewage Committee believe that if the manure is saleable at £1 per ton, it will pay expenses. When chemical manures rise in price, as to all seeming they must, the value, whatever it may be, will increase, and it is by no means impossible that the process may ultimately prove directly profitable.

A CIRCULAR has been issued by the committee of the East London Hospital for Children, which was a short time ago removed from Ratcliff-highway to new and specially erected premises at Shadwell, announcing the necessity of closing the institution for two months. The reason given is that "the condition of the drainage has been found, on careful examination, to be dangerous to those residing on the premises.

Annotations.

"Ne quid nimis."

DR. MICHAEL FOSTER ON PHYSIOLOGY.

ONE of the best addresses delivered at Cambridge last week was that on Physiology by Michael Foster, which we print in full in our present number; and this indeed was to be expected from the man who has created a physiological school in that city, surpassed by none in this country and in nowise inferior to any of the most renowned on the Continent. Ten years ago physiology was taught in Cambridge only so far as the opportunities afforded by anatomical lectures permitted. Those lectures were delivered by Professor Humphry, and there were probably few men who, ten years ago, knew more of the current physiology than he, or who was better able to give point and interest to anatomical lectures by applying the facts he was engaged in teaching to the elucidation of physiological theories. About this period, however, the then recent introduction of recording instruments, the delicate apparatus employed by Ludwig and his school in their experiments, together with the great advances that had been made in histology and histochemistry, all tended to make physiology a special pursuit which could no longer be followed by the anatomist, and still less by an anatomist who was chiefly engaged in studying the relations of anatomy to surgery. With great liberality Trinity College endowed a chair of Physiology, which it presented to the University at large, and with singular good fortune obtained the services of Michael Foster. The work required was by no means new to him, and it was thoroughly congenial to his disposition. He had long been assistant to Dr. Sharpey, whose loss we have recently had regretfully to notice; and like all earnest workers, he rapidly surrounded himself by a little band of disciples, who are now themselves going out into all lands to teach the lessons they have learnt at the feet of the master. It is a matter of interest, therefore, to see in what light he regards the science he has done so much to develop.

THE PENAL PROLONGATION OF THE SESSION.

It is quite possible that the very reputation of Parliament requires that the session should be prolonged as it is being prolonged. Deep observers of the times and of public affairs may be noting the imperfection and delay with which Parliament does its work, and may have come to the conclusion that some very severe remedy is called for. We are disposed strongly towards the same conclusion. Every class of the community will have a criterion of its own to apply to Parliament, and by which to test its efficiency. We certainly have one. The amendment of the Medical Acts has been more or less before Parliament for fully ten years. The nature of the amendments needed has been palpable. The profession has been remarkably unanimous on this subject. But the work is still undone, simply because the Governments of the day have gone to work with very imperfect information, and without preliminary inquiry. But though we acutely feel the imperfection and delay of Parliamentary work, we cannot deny that the remedy applied is severe and even penal. This would be only a recommendation of the remedy if we could believe that it was likely to be also effective. But to expect members of Parliament to make good laws when they are in a state of exhaustion and irritation, penned up in Westminster, when they are thinking only of getting needed rest, and breathing country or sea air, is to be rather unreasonable. To many conscientious members the prolongation of Parliament may really mean a serious strain upon their health. It is, therefore, devoutly to be hoped that ere another August, means may be devised

which will supersede this severe and penal remedy, for such it assuredly is. We entirely sympathise with those who are jealous for the honour and reputation of Parliament, and who are resolved that it shall be made efficient as an instrument. But for the sake of the earnest men in it of all parties, we point out that there are grave objections to the indefinite or requent prolongation of its proceedings.

THE NEED OF HOLIDAYS.

IN the course of his very able and interesting address, in the Medico-Psychological Section, at Cambridge last week, Dr. Crichton Browne instanced, among the evidences of increased weakness and liability to the neurotic diseases and insanity, the fact that "annual holidays have become a necessity, instead of a luxury." It cannot be denied that, either from habit or necessity, the routine worker—whether "with what he is pleased to call his mind," or that lesser combination of the intellectual faculties by which the routine business of life is transacted—has come to look for a respite from his labours once a year as one of the essentials of existence. In the days when we were young this was not the way in which the annual holiday was regarded. Those who could afford it went out of town; but their object was pleasure, not "relief," still less "recuperation," in any serious sense. Most men worked harder, though generally in a more pleasurable way, during their vacation, than throughout the rest of the year. Now the jaded creature of oppressive and exacting circumstances crawls away to "rest." His plaintive desire is to get anywhere out of the din and turmoil and "worry"—that wondrous word—of the busy world—far, far from "the madding crowd." There is something humiliating in all this. It is a feeble sort of human nature we seem to have inherited. We should like to see the question of causation fully and impartially discussed, in view of the abundantly evident fact that we have as a nation left off drinking sound-brewed ale and well-matured wines, and have taken to imbibing vast quantities of tea and coffee; weak, watery, and acid wines; rivers of mineral waters, real and factitious; and to eating, for food, the made dishes and flimsy compounds so common on the Continent. Were our grandfathers wholly wrong when they associated the courage and stature of the British shopkeeper with the roast beef and ale of old England?

THE MODERN TREATMENT OF STRICTURE.

THE able review of the progress in the treatment of stricture of the urethra during the last thirty years by Sir Henry Thompson was a fitting introduction to the discussion on that subject at the Cambridge meeting of the British Medical Association. To those familiar with the heated disputes of former times, it is striking to see such concurrence of opinion on this subject as was then witnessed. All the speakers agreed in condemning Holt's operation, which might have been less favourably considered years ago had it not been so simple an operation that the merest tyro in our art could perform it; but it was a "blind" proceeding; the surgeon did not know what he was going to do, nor could he be sure afterwards what he had done further than forcing a way through the urethra for a full-sized instrument. Internal urethrotomy is now the operation we are all to accept for intractable strictures. But there is far more to be said on this subject than was, or indeed could be, said at Cambridge. Mr. Teevan spoke of the operation as almost devoid of danger, and challenged any one to produce a case of death from it in a young man. If he will refer to our columns he will there find evidence that should make anyone hesitate to speak lightly of the risk of this procedure. An operation that may be followed by death, abscess in joints, severe hæmorrhage, sloughing, extravasation of urine, permanent chordee, repeated rigors and sup-

pression of urine is surely as serious as many of those usually called "capital," and when we hear that its beneficial results are not, and cannot be, permanent, it is evidently an operation about which enthusiasm is altogether superfluous. We opine that perineal section in one or more of its several forms will yet maintain its position as a valuable and justifiable procedure; it appears to be free from some of the objections inseparable from its rival. We welcome Sir Henry Thompson's valuable remarks on the calibre of the urethra and the curability of stricture by incision. While we fully agree in the belief that strictures are not permanently curable by incision, we think such a result may fairly be hoped for in some cases from permanent and possibly also gradual dilatation. That the treatment of stricture has improved during the last thirty years all must agree, but we doubt if internal urethrotomy is the highest attainable point; it is undoubtedly a very useful and successful operation, but neither in its immediate nor permanent results is it so good as other and milder measures. Something yet remains to be done before surgeons can be satisfied with their power to cope with this common but troublesome disease.

SUNDAY DRINKING.

A VALUABLE return, at the instance of Mr. Onslow, shows the amount of such Sunday drunkenness as comes within the range of conviction by a magistrate, which, of course, is a very different thing from the amount of absolute drunkenness. The number of convictions for being drunk on Sundays in England and Wales, with a joint population of 22,712,266, over a period of three years, from Sept. 29th, 1876, to Sept. 29th, 1879, amounted to 47,401, or 15,800 per annum. Some of our contemporaries find in the figures a rebuke for "the tall moral talk" of reformers. We certainly find in them no material for national pride. The number of convictions varies greatly in different places, and in different kinds of communities. Liverpool and Manchester have an unenviable prominence. In Liverpool alone, with its population of 493,405, there were 4721 convictions, 4381 of these being *bonâ-fide* residents. In Manchester, with a population of 351,189, there were 3282 convictions, 3066 being *bonâ-fide* residents. In the county of Lancaster, with a population of 1,318,632, there were 4227 convictions, considerably less than those of Liverpool alone, with a little more than a third of the population. Sunday drinking is much more in these towns than in London, Birmingham, or Sheffield. In the latter town, with a population of 239,946, there were but 175 convictions. It may well be that the discipline of one town is more severe than that of others, but these discrepancies are very remarkable, and may well command the attention of the several communities to which they refer.

BATHING.

IT is important to recognise that the only virtues of water as used by the bather are two—namely, its value as a cleansing agent, and as a surface stimulant. In this last capacity it simply acts as a medium affecting the temperature of the part to which it is applied, or which is immersed in it. Right views of fact in reference to this matter are important, because there can be no question that some persons overrate the uses of cold water, and run considerable risks in their pursuit of them. Every beneficial action that can be exerted by a bath is secured by simply dipping in the sea, or a very moderate affusion of cold water! Except in cases of high fever, when it is desired to reduce the heat of the body by prolonged contact with cold, a bath of any considerable duration is likely to be injurious. Then, again, it is necessary to recognise the risk of suddenly driving the blood from the surface in upon the organs. The "plunge," or "dip," or "shower," or "douche," is intended to pro-

duce a momentary depression of the temperature of the surface in the hope of occasioning a reaction which shall bring the blood back to the surface with increased vigour, and almost instantly. If this return does *not* take place; if, in a word, redness of the skin is not a very rapid consequence of the immersion, it is impossible that the bath can have been useful, and in nine cases out of ten when the surface is left white or cold it does harm. The measure of value is the redness which ensues promptly after the bath, and this reaction should be produced without the need of much friction, or the bath is not worth taking. The rubbing employed to recover the circulation lost by the bath would probably have done more good without it! Another effect of the bath when it acts properly is to stimulate the nervous system, through the vast series of its terminal fibres which are distributed in the skin. In this way also the action must be very rapid, or it is not efficacious. Unless the vigour of energy is quickly called out, the agent is useless; and if it produces either drowsiness or depression it acts mischievously, and lowers the power it is intended to stimulate and augment. Bathers should bear these facts in mind, and be warned by them not to trifle with an agency which if it is not of value is worse than useless, and can scarcely fail to do harm.

HONOURS AT CAMBRIDGE.

THERE can be little difference of opinion as to the worthiness of those members of the profession upon whom the Honours of Cambridge fell. (We print in another column the speeches of the Public Orator on the occasion.) The foreign selections—if so they can be called—were admirable. Brown-Séquard, Gross, and Donders could not be more gratified with the rare honour of receiving the honorary degree of LL.D. Cambridge, than the profession of Britain will be gratified to know that they have received it. The case is very similar in regard to those members of the profession at home who were so favoured. But we are disposed to agree with some critics who complain that there is a certain narrowness, not to say cliquism, in the principle on which English University honours to the profession have been granted. One university follows the other very much. The majority of those who received the LL.D. the other day at Cambridge had previously received the D.C.L. of Oxford; and of the twelve, no less than six are or have been members of the Medical Council. Such restrictions are apt to give the universities and the public an inadequate view of the number of men in the profession who, on account either of their scientific work or of their general culture, would do honour to the university that honoured them. Can the Universities not act save as one leads the other, or a little less as if membership of the Medical Council constituted of itself a claim to University favours?

HOSPITAL ADMINISTRATION IN INDIA.

IN an article on hospital administration in India in our impression of May 15th, we stated that the explanation of Dr. D. B. Smith, one of the officers inculpated in the charge of maladministration, was "incorporated in the official document" under review; and we conceive that that statement was fully justified, so far as we were concerned, by the terms of the memorandum. We think it simply an act of justice to Dr. Smith to bring to notice that in a letter published in the *Englishman* of July 6th he states that "the most important parts of my letter of explanation have never yet been incorporated in any public document. All I now desire is that it should be published in full, so that the press and the public may be able to say whether or not it is true that, in all respects and at all times, instead of neglecting the interests of Government, I guarded them with zealous care, strict vigilance, and absolute fidelity." We think it is

to be regretted that the Indian Government did not publish his exculpatory letter *in extenso*, when they thought themselves justified in stating that the remarks submitted by him seemed "very fully to establish the ground taken by the Lieutenant-Governor, to the effect that the expenditure had been conducted on a wasteful and lavish scale." It is difficult to understand upon what principle the explanatory letters of Dr. Chevers and Dr. Ewart were appended to the official report, while that of Dr. Smith was withheld; although it, or, as he states, only certain portions of it, were made the subject of not very flattering comment. The course taken by the authorities is the more to be regretted, because Dr. Smith, being still on full pay, is debarred by the rules of the Service from publishing his letter—a restriction which does not apply to the other two officers, who are on the retired list. We do not say that the Lieutenant-Governor was not justified in the conclusion at which he arrived with reference to the extravagant management of the hospital; but we think that when it is found necessary to pass a severe censure on an officer of Dr. Smith's standing, it would only be fair to publish with it such defence as he is able to offer. This is the more necessary when, as in the present case, the justice of the censure is called in question. We trust that the authorities in India will, in the interests of fair play, give as great publicity to Dr. Smith's letter (No. 151, of May 29th, 1879) as they have given to the comments upon it by the Lieutenant-Governor, and the censure involved in his comments.

THE ARMY MEDICAL EXAMINATION.

WE understand that Mr. G. Pollock was unable to conduct the examination in surgery during the past week, and that his duties were relegated to Mr. Haward and Mr. J. Morgan. It would be satisfactory for others besides the candidates to know that these gentlemen were duly appointed by the authorities on the advice of their official advisers. Or was Mr. Pollock left free to appoint his own substitute? And, if so, why were the duties he usually discharged alone given to *two* junior men? Was either of them unable to do it all?

In connexion with this examination a good story is told. One of the candidates, who had made a very special study of typhoid fever in certain expectation that a question would be given on it, was so entirely at a loss when he saw that "instead they asked about enteric fever," that he retired from the examination with many imprecations on his "luck" and the perfidy of examiners!

ICE IN THE COUNTRY.

RAILWAY companies are beginning to awaken to the fact that there are many enterprises open by which their receipts may be augmented. The immense traffic done in country milk, the importation of sea-water to the metropolis, the early delivery of the morning newspapers in country towns, and the improved system, adopted by some companies, of booking small parcels and hampers, are instances to the point. We would mention another enterprise which we believe would not only benefit railway shareholders, but would prove a great boon to persons living in the country at some distance from large towns; and that is the establishment of a traffic in ice at the small stations along the line during the summer months. Ice is now becoming not merely an article of luxury to be occasionally used, but almost a necessity of civilised life; and perhaps nowhere is this necessity more felt than in remote country places where the butchers and fishmongers call only once a week. Used merely for the purpose of preserving meat, fish, milk, &c., in a household of moderate size, a refrigerator with the necessary supply of ice will be found, when well managed, to be a real economy. Moreover, apart from domestic considerations, ice is now employed ex-

tensively as a therapeutic agent. And the advantages of having a supply ready at hand in case of emergencies will be found incalculable. The boon, however, of a cheap and easily accessible supply of ice is denied to the ordinary dwellers in small country towns and villages. This ought not to be the case, and if the railway companies either themselves, or by offering facilities to agents, established a traffic in ice at the small stations on their respective lines, the business would, we believe, soon become as considerable as it is in London and other large towns. The best method for establishing such business would be, we think, to attach an ice-van to the parliamentary train on each line of railway, at first on stated days of the week, till a sufficient traffic was obtained to warrant a daily despatch. A salesman would accompany the van to attend to the distribution of the ice at the various stations, and further, the van might be utilised for the conveyance of fish from the London markets, and thus meet another requirement of remote country places.

CAVENDISH COLLEGE, CAMBRIDGE.

A CONSIDERABLE number of the members of the British Medical Association were present at a lunch given to mark the completion of a new portion of Cavendish College. The chair was taken by Prebendary Brereton, supported by Earl Fortescue, and several interesting speeches were delivered. Professor Humphry observed that this College, with its low charge of £84 per annum, was restoring the University to its original ends—the service of the poor; and it was pointed out that special facilities for the study of medicine existed in Cambridge, which was open to the students of the College, so that a boy entering at sixteen years of age could leave at nineteen, with three years of the residence necessary for the M.B. completed, well grounded in the more elementary parts of his education, with the degree of B.A. and with that of M.A. in prospect.

UNIVERSITY OF DURHAM.

A MEETING of Medical Graduates of this University was held at Caius College, Cambridge, on August 11th, when a "Durham University Medical Graduates' Association" was formed, having for its objects the maintenance of the interests and extension of the usefulness of the Medical Faculty of the University, with the cultivation of social intercourse and good fellowship among its graduates.

An annual meeting will be held in the North and South alternately. The first meeting will be held at Durham in June, 1881, immediately after the Convocation for conferring degrees.

The following gentlemen were appointed officers of the Association:—President: G. H. Philipson, M.A., M.D. Vice-President: Luke Armstrong, M.D. Honorary Northern Secretary: W. P. Mears, M.B. Honorary Southern Secretary: R. H. Milson, M.D. Committee: C. J. Gibb, M.D.; W. C. Arnison, M.D.; W. Travers, M.D.; B. Fenwick, M.B.; S. K. Powell, M.B.; W. T. Tyson, M.B.

BIGELOW'S OPERATION.

SIR HENRY THOMPSON has cordially accepted the main principle contended for by Bigelow, and regards the mischief likely to be done by the residence of fragments of stone in the bladder as greater than the ill effects of a skilful but prolonged use of crushing instruments and evacuating catheters. All the speakers at the debate on this subject at Cambridge coincided in this view; but Mr. Cadge—whose opinion on this point as on all others of surgical practice will be generally accepted as second to none—hesitates to affirm that larger stones can be more safely dealt with by Bigelow's method than by Civiale's. And we are grateful to him for his caution that Thompson's recent cases do not afford evidence on this point.

Evidently a number of stones averaging only two drachms in weight are of no value in helping us to settle the limits of size of the stone for which this operation is advisable. Is the operation better than lithotomy for stones too large for Civiale's lithotripsy, or in cases where that operation is inapplicable, as where the bladder is unable to discharge the fragments? We want evidence on these points, and it is beside the mark to heap up cases of small stones successfully removed at one, or rather, we should say, at two sittings. Sir Henry Thompson's advice to regulate the size and kind of lithotrite to the particular stone is valuable, and especially opportune at a time when some would reduce the operation pretty much to a rule of thumb, and that in favour of colossal weapons.

THE FARR TESTIMONIAL FUND.

AT a recent meeting of the Executive Committee charged with the promotion of the Testimonial Fund now being raised in acknowledgment of the exceptional services rendered by Dr. William Farr, C.B., F.R.S., in the promotion of public health and statistical science, it was announced that the subscriptions already paid or promised amounted to £958 13s. It was decided that the subscription list should remain open for another month or two, and that every effort should be made to secure the substantial success of the Testimonial Fund by bringing the subject under the notice of all who are interested in the recent progress of sanitation in England.

MORE AMATEUR STARVATION.—AN OFFER.

WE are threatened with more fasting. One would have thought that for the present the world had "supped full" of fasting; but one fool begets many imitators, and the experiment of going without food for forty days seems to some people so easy and pleasant, and so sure to bring notoriety, that it is worth trying. We have received a remarkable letter, the writer of which, finding that some medical men in England still doubt the possibility of fasting forty days and nights, says that he is prepared to show them that they are wrong. He states that he fasted thirty days and nights "without the least inconvenience"—truly a bold assertion—and that he is willing at his own expense to come to England to prove it, if desired. Such a proposal is strangely misdirected when addressed to an organ of medical opinion in England.

QUEEN'S COLLEGE, BELFAST.

THE report for the session 1879–80 shows that this College continues to prosper in the number of students attending the various classes, and in the successes achieved by those trained in it at the examinations for admission into the several departments of the public service. A steady increase from year to year has been exhibited in the faculties of arts and medicine, showing that the Queen's College, Belfast, is largely contributing to the intellectual and professional education of the people of Ireland, and thus efficiently fulfilling the important purposes for which it was established. The President in his report refers in flattering terms to Dr. Thomas Andrews, F.R.S., late Vice-President and Professor of Chemistry, observing that it would be impossible to speak in too high terms of the services rendered by him to the College, and to the cause of science throughout the world.

WE have received Gibraltar papers, giving an account of the presentation of colours to the 24th Regiment, by Lord Napier of Magdala. We regret to observe that in naming the officers and men on whom the Victoria Cross was conferred for their gallant conduct at Rorke's Drift, his lordship omitted mention of Surgeon-Major Reynolds, though he included the name of Major Chard, who was not an

officer of the 24th. Had none but officers and men of the 24th been named we should have said nothing on the subject, but the omission of the medical officer, under all the circumstances, has the appearance of being something more than a mere accident; and, if so, was quite unworthy of the gallant hero of Abyssinia.

THE distinction of Companion of the Order of the Indian Empire has been conferred by the Queen on Dr. de Vry, of the Hague, for his long and valuable services in connexion with the introduction of the chinchona trees into India, and the manufacture of Indian quinine.

THE proposition to purchase land at Longcross whereon to build a new infirmary for Cardiff appears to be still in embryo. A committee, however, has been appointed to raise subscriptions with a view to carry out the proposal. The sum required is about £40,000.

DR. JOHN BEDDOE, F.R.S., has been appointed to preside over the Health Section at the approaching meeting of the Association for the promotion of Social Science at Edinburgh.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Hackney.—Dr. Tripe's report on the sanitary condition of the Hackney District for the year 1879 contains much of interest, both generally and with reference to the particular district to which it refers. The year was remarkable for a very low death-rate from most diseases, except inflammatory affections of the lungs; for low temperatures in winter and summer, and an excessive rainfall in most months, especially in summer. Dr. Tripe refers to the intimate relations that exist between a high summer temperature and an excessive mortality from diarrhoea and *vice versa*, especially in infants. He does not express an opinion regarding the precise cause or causes of summer diarrhoea, but he thinks that existing evidence tends to show that the putrefactive changes induced in organic matter by the high temperatures set up the disease. He moreover looks upon the diarrhoea as specific, and unlike ordinary diarrhoea. Microscopic examination of the contents of the traps in water-closets, and of the air in houses where summer diarrhoea was prevalent, showed in many instances the presence of bacteroid forms, and Dr. Tripe gives illustrations which seem to render it probable that the diarrhoea is caused by the carrying of these forms into the body by sewer air. We may cite the following:—"The death-returns for London since the present system of registration has been in force also point to a similar conclusion, as in 1840, when connexions between houses and the public sewers were much less common than now, there were only 452 deaths registered from diarrhoea, and during the next four years the average was only 680; whilst between 1869 and 1878 the smallest annual number was 2479, viz., in 1877, and the highest 3894, in 1871; the mean of the ten years being 3436, against 632 for the five years 1840-4. Although these facts cannot be considered sufficient to show that summer diarrhoea results from sewer-gas containing organisms finding its way into houses, yet they certainly point to the necessity for frequent flushing of water-closets and drains with some disinfectant which retards or prevents putrefactive change, especially when the summer is unusually hot."

The infantile death-rate (that is to say, the death-rate under one year of age) corresponds "with great regularity" to the mean temperature of the air and of the Thames water; and the proportionate number of deaths at all ages from diarrhoea corresponds in different months pretty closely with those of infants. In the 20 years 1860-79 there were 7 years in which the summer temperature was in defect, when the mortality at all ages from diarrhoea per 100,000

inhabitants of London was 200; in 10 summers during which it was in excess by less than 2°, the mortality was 317 per 100,000; and in 3 years when the temperature was more than 2° in excess, the mortality reached 339 per 100,000 inhabitants. "These figures," says Dr. Tripe, "show that great care should be taken in hot weather to prevent diarrhoea, especially amongst young children, by frequent washing with soap and water to ensure cleanliness of the skin, and by wholesome food, good ventilation, especially of bedrooms, protection from the sun, avoidance of excessive exercise, frequent cleansing and disinfection of the drains, and by the removal of all animal and vegetable matter in a state of decomposition from the vicinity of dwelling-houses, especially when the mean air temperature of the week is above 60·5°, and of the Thames water more than 63·5° Fahr."

Dr. Tripe has some observations on the use of disinfectants and the use ("considerable") to which the Sanitary Authority's disinfecting apparatus was put during the year. Looking to the occurrences of small-pox in the district, 35 in number, he states that "the disease, in all instances except one, was confined to one house in a street," a result which he attributes to the active disinfection, the speedy removal of the sick, or their strict isolation, and the revaccination of the inmates in many of the houses. He gives what he believes to be an instance of transference of small-pox contagion by means of a cake and a book, but the instance is worthless from the vagueness with which the fact is stated. The following example of mischief arising from food apparently in a state of putrefactive change deserves quotation at length: "In August last I reported the occurrence of numerous cases of severe diarrhoea, vomiting, and prostration from eating dripping sold by an itinerant vendor. My attention was directed to the cases by the medical attendant of two families who thought they had been poisoned by impure water. I inspected the houses and heard the accounts given by the parents, when I came to the conclusion, as the drainage and water supply were good, that the disease was caused by eating dripping bought at the door. I called, so far as I know, at all the houses where the dripping had been supplied, and found twenty-nine cases living in four streets, two at a rather considerable distance from the others. Nearly all suffered who partook of it, and there were no similar cases amongst the residents of these streets except those just mentioned. The symptoms were great prostration, severe vomiting and purging, cramp, severe pain in the stomach, great subsequent debility, and in some cases fever, lasting for several days. There was only one death—viz., that of an infant who was suckling, but who did not, it was believed, have any dripping. Another infant suffered in the same way, but recovered. The sickness and diarrhoea came on in most cases a few hours (from four to twelve) after eating the dripping, those suffering most severely who partook of the jelly. I carefully examined the dripping chemically and microscopically. It had a peculiar and faint smell, but I did not detect anything except numerous small microscopic organisms resembling monads. The symptoms corresponded very closely to those that occurred some years ago amongst numerous residents of this district who ate some sausages, and of whom one died."

Dr. Tripe enters at some length into a discussion of the vital statistics of his district during the year; but in regard to these we would simply observe that the number of deaths from zymotic diseases was the smallest in proportion to total deaths that he had ever recorded.

A point of considerable interest in the report relates to the provision of hospital accommodation in the metropolis for non-pauper cases and the definition of a pauper. Dr. Tripe is of opinion that "any person being sick with a dangerous infectious disorder, and not having a residence of his or her own, or the means of procuring one, and not having the means of providing proper medical attendance, necessities, and nursing, is a pauper, and should be removed to a hospital belonging to the Metropolitan Asylums Board; that, on the contrary, a person having a house and the money necessary to provide medical attendance, medicines, food, and nursing, is not a pauper—so that, if it were necessary to isolate such a person, he or she should, according to the Act, be removed by the sanitary authority." This definition of a pauper has been acted upon at all times by the Hackney guardians, and Dr. Tripe believes that the Metropolitan Asylums Board's statement that 90 per cent. of the persons treated during the recent epidemics of small-pox in their hospitals were non-paupers is erroneous.

Hastings.—Mr. Ashenden's report for the second quarter of the year shows a birth-rate of 29·98 per 1000 population, and a death-rate of 19·50. Except that 28 deaths were caused by measles, the report presents nothing for remark. Happy is the health-resort that has but uneventful health-reports to present.

THE HEREFORDSHIRE COMBINATION OF SANITARY AUTHORITIES: MEDICAL OFFICER OF HEALTH.

Our readers will remember that a short time ago a threatened break-up of the Hereford Combination of Sanitary Authorities was averted by the interference of the Local Government Board, and that the combined authorities resorted to this interference by passing a resolution reducing the salary of the medical officer from £550 to £400. The resolution, however, in order to give it force, required the assent of the Local Government Board, and we are glad to learn that that Board has refused its assent to so large a reduction, but expressed its approval of a reduction of £50! It does not appear why this change in the salary, which is equivalent to casting a considerable portion of the travelling expenses of the office upon the incumbent, should have been made. Moreover, the joint appointment of a medical officer of health is confirmed for only three years. The term of the appointment, as well as the modification of salary, indicate that the Local Government Board is as unsettled as ever as to the principles upon which the appointments and salaries of medical officers of health should be governed. The Hereford Combination having entered upon a new three-years' term, will have to elect their medical officer of health anew; but as Dr. Vavasour Sandford, who has now held the appointment for several years, will, we understand, notwithstanding the modification of salary, again be a candidate, we assume that the election will be a mere formality, as it is unlikely any member of the profession will, under the circumstances, contest the post.

IMPRISONMENT AND FINES FOR NON-COMPLIANCE WITH THE VACCINATION ACT.

A Parliamentary Return has just been published showing the number of persons who have been imprisoned and fined for non-compliance with the provisions of the Act relating to the vaccination of children. It is not stated over what period the return extends, but we presume that it relates to the whole period since the compulsory powers have been in force. In England the number of persons who have been imprisoned amounts to 87; fined, 3888; and of the imprisoned 14 were imprisoned for one month or above 14 days, and 73 for 14 days or a less period. In Wales no person was imprisoned, but 41 were fined. The return certainly does not convey the impression of much hardship having been caused by the operation of the Act.

ANIMAL VACCINATION.

We learn that the Medical Officer of the Local Government Board, Dr. Buchanan, has left London for the purpose of visiting several of the animal vaccination establishments on the Continent, in furtherance of the arrangements contemplated by that Department of the Government for the introduction of the practice into England.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

The fatality of infantile summer diarrhoea caused a further increase in the rate of urban mortality last week. In twenty of the largest English towns, estimated to contain in the middle of this year seven and a half millions of persons, or nearly one-third of the entire population of England and Wales, 5358 births and 3567 deaths were registered last week. The births were 173, and the deaths 292 above the average weekly numbers during 1879. The deaths showed a further increase of 138 upon recent weekly numbers. The annual death-rate per 1000, which had steadily increased from 18·9 to 23·9 in the six preceding weeks, further rose last week to 24·8. During the past six weeks of the current quarter the death-rate in these twenty towns has averaged 22·0 per 1000, against 25·5 and 17·7 in the corresponding periods of 1878 and 1879. The lowest death-rates in the twenty towns last week were 15·8 in Wolverhampton, 16·6 in Bristol, 17·1 in Portsmouth, and 23·0 in Bradford. The rates in the other towns ranged

upwards to 27·7 in Sunderland, 27·8 in Liverpool, 29·0 in Leeds, 33·3 in Leicester, and 37·6 in Salford. The high death-rates in these last-mentioned towns were mainly due to excessive diarrhoea fatality.

The deaths referred to the seven principal zymotic diseases in the twenty towns, which had steadily increased from 406 to 996 in the nine preceding weeks further rose to 1100 last week. These included 807 from diarrhoea, 112 from scarlet fever, 62 from whooping-cough, 54 from measles, and 44 from different forms of fever. The annual death-rate from these seven diseases averaged 7·7 per 1000 in the twenty towns; while it was but 2·1 and 3·9 in Wolverhampton and Bristol, it ranged upwards to 14·1 and 15·2 in Leicester and Salford. Scarlet fever was proportionally most fatal in Sunderland and Bradford. Two deaths from diphtheria were returned in Plymouth, in Manchester, and in Salford. Small-pox caused 6 more deaths in London, but not one in any of the nineteen large provincial towns. The number of small-pox patients in the Metropolitan Asylum Hospitals, which had declined steadily from 200 to 143 in the three preceding weeks, further fell to 134 on Saturday last; 20 new cases of small-pox were, however, admitted to these hospitals during the week, against 16 and 15 in the two previous weeks. The Highbury Small-pox Hospital contained 11 patients on Saturday last.

The fatal cases of diarrhoea in the twenty towns, which in the eight preceding weeks had steadily increased from 51 to 712, further rose last week to 807. The annual death-rate from diarrhoea averaged 5·6 per 1000 in the twenty towns; it was equal to 5·0 in London, and to 6·3 in the nineteen large provincial towns. The death-rate from diarrhoea among the twenty towns ranged last week from 2·1 in Wolverhampton, to 10·4 in Leicester and 11·2 in Salford; Salford among these towns has shown the largest proportional fatality of diarrhoea during the past four or five weeks.

The deaths referred to diseases of the respiratory organs in London, which had been 200 and 195 in the two preceding weeks, further declined to 152 last week, but exceeded the corrected average weekly number by 7. Of these 152 deaths 87 were attributed to bronchitis and 47 to pneumonia. The annual death-rate from diseases of this class was equal to 2·2 per 1000 in London; it was 3·4 in Liverpool, and 3·9 in Salford.

HEALTH OF SCOTCH TOWNS.

In eight of the largest Scotch towns, having an estimated population of rather more than a million and a quarter persons, the annual death-rate last week averaged 20·1 per 1000, showing a further slight increase upon the low rates, 18·4 and 19·8, in the two preceding weeks; this rate was, however, 4·7 below the average rate in the twenty large English towns. The rates in the eight Scotch towns ranged from 15·9 and 18·1 in Paisley and Aberdeen, to 23·4 and 24·0 in Perth and Leith. The fatal cases of the seven principal zymotic diseases in the eight towns were 122, against 117 and 125 in the two preceding weeks; they included 51 from diarrhoea, 29 from scarlet fever, 17 from fever, 10 from whooping-cough, 8 from diphtheria, 7 from measles, and not one from small-pox. The annual death-rate from these seven diseases averaged 4·9 per 1000 in the eight towns, against 7·8 in the large English towns. The excess of the zymotic death-rate in the English towns was almost entirely due to the greater fatality of infantile diarrhoea. The zymotic death-rate in the Scotch towns ranged upwards from 1·1 and 2·0 in Paisley and Greenock, to 5·6 and 16·0 in Glasgow and Leith; the excess in the zymotic death-rate in Glasgow was due to fever, scarlet fever, and diarrhoea, while it was caused by scarlet fever and diarrhoea in Leith. The fatal cases of diarrhoea in the eight towns, which had been 39, 59, and 61 in the three previous weeks, declined to 51 last week; the annual death-rate from this disease did not average more than 2·1 per 1000, while in the English towns the rate was equal to 5·7. The highest rates from diarrhoea in the Scotch towns occurred in Dundee and Leith. The 29 deaths from scarlet fever (an increase upon recent weekly numbers) included 13 in Glasgow, 12 in Leith, and 4 in Edinburgh. Six of the fatal cases of measles occurred in Glasgow; and diphtheria caused 4 deaths in Glasgow, and 2 in Greenock. The deaths referred to fever, which had been 13 in each of the two previous weeks, rose to 17 last week, of which 11 were recorded in Glasgow, and 2 both in Dundee and Perth. The deaths attributed to acute diseases of the lungs (bronchitis, pleurisy, and pneumonia) were 70 in the eight Scotch towns last week, against

59 and 67 in the two preceding weeks; the annual death-rate from these diseases was equal to 2·8 per 1000, against 1·9 in London. The causes of 98, or 20 per cent., of the 499 deaths registered in the Scotch towns last week were uncertified; in the English towns the proportion of uncertified causes of death scarcely exceeded 2 per cent.

HEALTH OF DUBLIN.

The rate of mortality again showed a marked excess in Dublin last week, and was equal to 35·3 per 1000, against 28·2 and 35·3 in the two preceding weeks. During the past six weeks of the present quarter the death-rate in the city has averaged 31·8 per 1000, against 22·0 in London and 18·1 in Edinburgh. The 213 deaths in Dublin included 59, or no less than 28 per cent., which were referred to the seven principal zymotic diseases, showing a marked further increase upon the 35 and 43 returned in the two preceding weeks; 4 resulted from small-pox, 5 from measles, 15 from scarlet fever, 7 from whooping-cough, 5 from different forms of fever, and no less than 23 from diarrhoea. The annual death-rate from these seven diseases was equal to 9·8 in Dublin last week, against 7·6 in London and 3·4 in Edinburgh. The 4 fatal cases of small-pox showed a further decline from recent weekly numbers, as did the five deaths from measles. The deaths from scarlet fever, whooping-cough, and diarrhoea, however, each showed an increase. The fatal cases of diarrhoea, which had been but 4, 5, and 9 in the three previous weeks, rose to 23 last week, and were equal to an annual rate of 3·8 per 1000; this rate, although showing a marked increase upon the rates in recent weeks, was considerably below the average rate in the twenty large English towns.

VACCINATION AND SMALL-POX: MR. HOPWOOD'S RETURNS.

On the same evening that Lord Hartington announced the intention of the Government not to persevere with their Act to amend the Compulsory Vaccination Act, the President of the Local Government Board was interrogated by Mr. Hopwood (who in recent years has been the principal mouthpiece of anti-vaccinators in the House of Commons), as to a parliamentary return which was called for by him in June, 1879, but which was not printed till 25th February last. It was objected by Mr. Hopwood that the return in question gave more information than was ordered, and asked the President of the Local Government Board on whose authority this information was added; he also asked whether the added information was not misleading, and whether there would be any objection on the part of the Government to give a return of the numbers of deaths from small-pox in England and Wales during the four years 1843-6. Mr. Dodson replied in effect that the information complained of was inserted in a note to the return on the authority of the late Registrar-General because he was of opinion that the return, without this addition, would mislead the public as to the true relations between compulsory vaccination and small-pox mortality. The truth is that in a previous return, asked for by Mr. Hopwood, anti-vaccinators had obtained certain information, so arranged as to lead to an entire misconception of the true bearing of the facts, and to the founding thereon of entirely false conclusions. The late Registrar-General, therefore, when he found himself again in the position of being called upon to furnish a return which was calculated by its arrangement, and by its only partial statement of facts, to further mislead the public, very properly added on his own responsibility other facts which are necessary to the formation of a sound conclusion on the controversial points at issue. In Mr. Hopwood's second return, to which the Registrar-General made the additional note, a comparison of small-pox mortality is made between the seven years 1847-53, and the nine years 1868-77, the latter period including the fatal epidemic of 1871-2. This partial comparison of selected short periods is obviously intended to minimise the apparent beneficial effect of compulsory vaccination. The Registrar-General shows in his note (so objectionable to anti-vaccinators) that taking the whole period, for which the information is available, both before and after vaccination became compulsory, the average annual rate of mortality from small-pox in England and Wales declined from 420 per million between 1838 and 1853, to 216 per million in the 25 years 1854-78. In another part of the same return, dealing with infant mortality, the mortality from eight causes, supposed by anti-vaccinators to be influenced by vaccination, was asked for. It was this portion of the previous return which had been

most mischievously misunderstood, and had led to the false assertion that infant mortality had increased under the influence of vaccination. The Registrar-General has wisely shown in this return, by the addition of two lines to the table, the death-rate from *other* causes, and from *all* causes, thus effectually disposing of the asserted increase of infant mortality. It is true that the mortality from bronchitis and diarrhoea has considerably increased, but who will believe that this is due to vaccination when it is more than balanced by a decline from other causes. With regard to Mr. Hopwood's wish to have a return of the deaths from small-pox in the four years 1843-6, it is to be hoped that the Registrar-General may be instructed to have the causes of deaths in those years abstracted and classified. It seems a matter for great regret that the series of national mortality statistics for the 42 years of civil registration, from 1838 to 1879, should be broken through want of the statistics for those four years.

MORTALITY STATISTICS OF WATERING-PLACES.

At this season of the year the mortality statistics of watering-places have a special interest, affording as they do an indication of the sanitary condition of these health and holiday resorts. The Registrar-General in his Quarterly Return just published supplies his usual table of mortality statistics relating to forty-six of the principal English and Welsh watering-places and summer resorts. It has frequently been a source of complaint on behalf of the local sanitary authorities, that the Registrar-General's statistics do not relate to the precise sanitary districts over which their jurisdiction extends, but to the registration districts or sub-districts in which they happen to be situated. With reference to this objection and the inclusion within the area taken to represent the watering-place of surrounding rural parishes, the Registrar-General remarks:—"This, though doubtless a matter of interest to the sanitary authorities severally interested with the care of a watering-place and of the district outside its limits, is of comparatively little importance to the holiday-making visitor, who by no means confines himself to the immediate boundaries of the place in which he actually sleeps." If, as is frequently asserted, the sanitary reputation of certain watering-places suffers through the inclusion of surrounding rural parishes, it cannot be without use that the public should be in possession of trustworthy statistics for their immediate surroundings as well as for the watering-places themselves. During the second quarter of this year the general sanitary condition of the forty-six health resorts, judged by their mortality statistics, was eminently satisfactory; the annual death-rate from all causes was only 17·0, and the zymotic death-rate was but 1·5 per 1000. The death-rates of Herne Bay, Littlehampton, Lowestoft, and Dover were exceptionally low, being under 12 per 1000; whereas the ratio was considerably above the average in Hastings, Beaumaris, Bangor, Llandudno, Rhyl, Southport, and Blackpool. Of the zymotic death-rate in these watering-places, the Registrar-General gives full details in his table. It appears that during the three months ending June last the zymotic death-rate (which, as we have said, averaged only 1·5 in the forty-six watering-places) was equal to 3·9 in Hastings and St. Leonards, 3·8 in Dartmouth, 4·2 in Rhyl, and 4·3 in Blackpool. This high zymotic death-rate was mainly due to measles in Hastings, and to scarlet and enteric fever in Blackpool. How far these rates would be modified if the statistics related to the several precise urban sanitary districts it is impossible to say. It is more than probable, however, that in most of these cases the Registrar-General's rates somewhat understate the true rate of mortality. In Blackpool, for instance, which includes a considerable area outside the borough of that name, it is reported that the 9 deaths from scarlet fever and the 7 from enteric fever were all recorded within the borough and urban sanitary district. The prosperity of a health resort is so entirely dependent upon its sanitary reputation that the local authorities and the ratepayers cannot afford to ignore the true bearing of such statistics as those just published by the Registrar-General.

HEALTH MATTERS GENERALLY AT HOME AND ABROAD.

THE HEALTH OF THE CUSTOMS' OFFICERS.

Dr. Walter Dickson's report on the health of the out-door officers, watermen, messengers, &c., of her Majesty's Customs, in the Port of London, during the year 1879, is, as

usual, of much interest from the example it affords of the incidence of sickness and mortality among a selected body of men living, for the most part, amidst the general population of London. The number of officers to which the report applies was 933, extra-officers who form a considerable portion of the establishment staff not being included. The mean daily number incapacitated by disease or accident was 37, or 4.0 per cent. of the strength. The ratio of admissions to the sick list was 72.0 per cent. of the mean strength of the force, and the mean duration of each case was twenty days. The deaths were 13 in number, or at the rate of 13.5 per 1000, and the superannuations 2 in number, or at the rate of 2 per 1000. The death-rate did not exceed the annual averages, and the superannuation rate was much below the mean of many years, which is 7 per 1000.

The force is divided into two principal bodies, one stationed at Gravesend, the other within the metropolitan limits of the port. The duties differ in the two sections, and the Gravesend section is formed of younger men, who are chiefly engaged in boarding vessels, and who live on shipboard. There are differences in the incidence of disease in the two sections, but not more than would be anticipated having regard to the difference in ages. As a rule the maladies attacking the Gravesend section are transient in character, while those attacking the metropolitan section are of a more chronic nature.

The year 1879 was remarkable for an almost unprecedented deficiency of temperature, of solar light, and for an excessive rainfall. This exceptional meteorology very markedly influenced the occurrence of disease among the men. Affections of the respiratory organs and tracts preponderated; next in order of frequency came rheumatic gout, and then, as third in place, nervous diseases. With respect to gout and nervous diseases, Dr. Dickson observes, "Gout was remarkably prevalent in the London force, one-fourth of the whole number of admissions on the sick list, or 19 cases, being due to that disease, which, common as it is among Customs' officers, has never before been observed to occur in such large proportion. Most of those affected had a constitutional or inherited tendency to the malady, but is developed in a very remarkable manner in such persons by certain atmospheric conditions, of which humidity and sudden rise of temperature appear to be the chief. On some days with weather of this kind it was not unusual to find two or three fresh cases of well-marked gout. At this season (spring) neuralgia, vertigo, and other nervous disorders were also in excess, but chest affections were in less than the usual proportion. The brief period which might be termed summer was notable for the extreme fewness of cases of disordered stomach and bowels, only six cases of diarrhoea having been placed on the sick list of the London force during the third quarter.

By a wider distribution of the residence of the officers in the suburbs and along the course of the river, as the dock accommodation down stream is extending, it is very obvious that Dr. Dickson's duties are becoming much more onerous; and it does not appear that the Board of Customs has made any provision to facilitate the execution of Dr. Dickson's functions, or in any other way to meet difficulties which must now be experienced in giving medical attention to the river force, by the altered circumstances of its distribution.

FEVER IN IRELAND.—DR. SIGERSON'S FINAL REPORT.

Dr. Sigerson has presented to the Mansion House Relief Committee a final report "On Destitution-Diseases in the West." This report brings out in a very clear light the relation between the prevalence of fevers in the distressed districts and the distress, and again raises the question whether there was not some lack of foresight on the part of the Irish Administration in meeting and dealing with the calamity. Of course Dr. Sigerson writes after the fact, but when we learn from him the extraordinary falling off in the yield of the potato crop year by year since 1876, together with agricultural losses from other sources, and ascertain how sensitively the death-rates appeared to have been affected by these losses, we cannot avoid the conclusion, having regard to previous terrible experiences of Ireland in this matter, that the distress of last winter and the present year, and the numerous evils arising from it, should have been anticipated and provision against them have been made accordingly. The problem, difficult though it may be, is certainly more simple than that of the famine in India, yet it does not seem to have been approached in the comprehensive manner in

which the Indian problem is being attacked. The report forms an important contribution to the history of the still unended distress, and ought to prove of the highest value in indicating the extreme importance of forecasting and warding off future periods of distress. With all due deference to the Principal Secretary for Ireland as to there having been much exaggeration of the distress in some cases, we are still of opinion that even now we have not an adequate knowledge of the present and past condition of things in the distressed districts. There is a world of pathos, and much room for painful reflection, in Dr. Sigerson's observation:—"The exceptional high death-rate (of the distressed districts) demonstrates that many must have quietly succumbed to their sufferings, and silently died out." Dr. Kenny, who was associated with Dr. Sigerson in his work in the west, concurs in the report.

PUBLIC MEDICINE IN FRANCE.

It is interesting to mark the great attention which is now being given to the consideration of the better organisation of public medicine in France, both in Parliament and in the medical press. One of the most important contributions to the subject is a memoir by M. A. J. Martin, recently submitted to the Society of Public Medicine, and which will be found in the pages both of the *Annales d'Hygiène Publique* and the *Revue d'Hygiène*. According to Dr. Martin, while the existing organisation of public medicine in France in view of consultative matters could not well be improved upon, this organisation in respect to administrative matters is singularly ineffective. There is need both in the educational and in the administrative aspects of the subject for arrangements, financial and other, which would give coherency to the existing organisation and admit of the establishment of a complete system of public health administration, consultative and administrative, throughout the country. Evidently very much has to be done in this direction in France, but the impression left on our mind by M. Martin's paper is that in the desire to indicate the requirements of a perfect system he has not given due regard to the practical difficulties that lie in the way. We were scarcely prepared to hear that the defects in the system of public medicine in France are so grave in their practical aspects as now it appears they are—that the system is, in fact, largely a "paper plausibility;" and we fear that there is a danger in the movement for reform now in progress of substituting theoretical conceptions of what is desirable for measures strictly adapted to the wants and capabilities of the nation and of its different communities.

FAMINE IN ASIA MINOR.

Recent news from the famine-stricken districts in Asia Minor give a deplorable account of the state of the populations in the districts between Erzeroum and Bayazid, and in the districts of Van and of Mossul and the intermediate tract of country. The scarcity of food in these localities is extreme, and in many places the people have been trying to support life on wild herbs. The deficiency and high price of grain has, moreover, led to not more than a fourth of the usual amount being sown. The destruction among the flocks in the affected districts, partly from the severity of last winter and partly from the want of forage, has been enormous. It is estimated that half the oxen and three-fourths of the sheep have perished. Deaths from starvation have been very numerous, and the evidences of chronic starvation among the survivors are shockingly apparent. Typhoid, typhus, dysentery, scurvy, cerebro-spinal meningitis, and small-pox are mentioned as the most prevalent diseases in these districts, and fears are entertained of some localities that, unless the Ottoman Government interfere with relief, worse evils from want than have yet been experienced are still in store.

A project for the creation of a Faculty of Medicine in the University of Odessa has been submitted to the Imperial Minister of Finance. The annual cost of the Faculty is estimated at 127,000 roubles, and the construction of buildings at 600,000 roubles, of which the municipality undertake to subscribe one-fourth.

A conference of the medical profession in Catherinoslaw was held on July 22nd to consider measures for arresting the spread of diphtheria and small-pox, both of which diseases were then very prevalent in the government of that name.

The *Indian Medical Gazette* states, on the official authority of the *Calcutta Gazette*, that the "Burdwan fever" may now be considered a matter of history. How terrible the devastation of this disease must have been during its prevalence may be inferred from the fact, given on the authority of Dr. Coates, that in the villages situated along dried-up watercourses in the districts which had been affected by the fever, scarcely one-tenth of the people were left alive. Dr. Coates believes that the fever was caused by the organic filth which the soil-water gained from the soil, rather than by the soaking of the soil *per se*.

The new drainage system adopted by the Slough Sanitary Authority has been completed, and was formally opened a few days ago. The pumping station and tanks are situated near Chalney, a village to the north-west of Eton College. The sewage is conveyed from Slough by a capacious conduit about a mile in length to the pumping station, whence it is forwarded to a farm at Dorney, and utilised by a process of irrigation.

The fort of Vincennes, near Paris, has been temporarily evacuated in consequence of the outbreak of typhoid fever amongst the garrison. In a few days 120 soldiers are said to have been attacked by the disease, though in a mild form.

It would appear that legislation is likely to take place giving the much-needed power to the Calcutta Port Commissioners to regulate the hours during which European sailors in the port may be required to work in the sun.

MEETING OF THE BRITISH MEDICAL ASSOCIATION AT CAMBRIDGE.

THE annual dinner of the Association was held on Thursday, August 12th, in the hall of Trinity College, covers being laid for 350. The speeches to the numerous toasts were long, and it was a late hour before the company dispersed. There was some misunderstanding in connexion with the prohibition of smoking in hall, some of the guests not being aware that to smoke in hall is an almost unheard of offence. On Friday morning Dr. Michael Foster delivered his address in physiology to a large and appreciative audience in the Senate House. A vote of thanks to Dr. Foster was carried with great cordiality. The work of the sections began at 11, and the business of the meeting was concluded at a general meeting at 1:30, when the reports of the Habitual Drunkards, Parliamentary Bills, and Out-patient Reform Committees were received and adopted. At 4 o'clock the President and Mrs. Humphry gave a garden party at the Fellows garden of King's College, and at 9 P.M. the master of St. John's College received the Association and other visitors in the Combination room of the College. The extensive grounds of the College, the Bridge of Sighs, and the river were beautifully illuminated with Chinese lanterns, and there was but one opinion expressed of the brilliant success of this conversation. Saturday was devoted by those who stayed to excursions to various places of interest in the immediate vicinity. Thus ended a meeting which, though not marked by any scientific work of very unusual moment, was thoroughly enjoyed by all present.

Surgery Section.

At the conclusion of the debate of "Lithotripsy at one Sitting," Mr. Lund (Manchester) read the notes of a case of Sarcoma of the Shoulder, for which he performed amputation of the upper limb, scapula, and one-third of the clavicle. The patient recovered, and was exhibited, the result being excellent. Mr. Edmund Owen then read a paper in which he urged that since the introduction of anæsthetics it was wrong to use the hot bath for strangulated hernia, because its good effects could be much more surely obtained from anæsthesia, and the time spent in the bath and the subsequent manipulation were often injurious. The sooner and with the less manipulation a strangulated hernia was reduced the better. Mr. J. Wood maintained that heat was really bad, for it caused the expansion of the

gas in the intestine, and increased the tension in the sac. He, therefore, preferred the use of an ice-bag, and if after it the taxis failed he at once put the patient under the influence of ether, and operated. Mr. Keetley thought heat was useful. Mr. Herbert Page then read a paper on the Immediate Suture of Divided Nerves. After alluding to the experience on the subject already accumulated, he detailed two cases lately in St. Mary's Hospital in which the median nerve was divided in the arm. Immediate suture of the nerve was followed in each case by a very considerable restoration of both sensory and motor function, in one case almost complete. Both the cases were treated antiseptically. At the close of the meeting, Dr. Warren of Boston exhibited a variety of trocars, probes, sounds, bougies, catheters, and evacuating catheters made with a spiral point, which, combining the advantages of the wedge and the inclined plane, were stated to be introduced with greater ease than those generally in use.

On Friday morning the chair was taken by Mr. J. Wood, in the absence of Mr. W. S. Savory. The first business was a debate on the Treatment of Stricture of the Urethra, introduced by Sir H. THOMPSON, who gave a brief and lucid review of the modifications introduced during his own personal experience—the last thirty years. Starting from the time when Syme in Edinburgh was warmly contending for the superiority of external urethrotomy over the employment of caustics, then warmly advocated in Paris, London, and elsewhere, he noted the introduction of soft instruments, which have to a large extent replaced the metal ones, and adverted to the operations of splitting, over-distension, and internal urethrotomy. On looking back over this period, it was satisfactory to be able to see that decided progress had been made. To assist discussion, he formulated the improvements in treatment in five propositions: 1. There is now a general recognition of the principle that a delicate manipulation of the urethra is alone permissible. The rough handling so commonly seen years ago is now universally condemned. 2. The old rigid metallic instruments so often used with danger, if not actual damage, have been superseded wherever possible by elastic, pliable, soft, and taper instruments, which are far safer. 3. There is now a more general recognition of the fact that there are very few strictures indeed which cannot be traversed by an instrument, if only the surgeon gives time, patience, and dexterity. 4. It is now generally accepted that the dilatation of strictures can be carried with safety and advantage to a higher degree than was formerly considered admissible. 5. Internal urethrotomy has been substituted for rupture, caustics and external urethrotomy in nearly all cases requiring an operation. "When a surgeon fails altogether to pass an instrument, perineal section still proves to be a valuable operation. It is curious to note how the various measurements of the urethra given by different surgeons and anatomists have varied; in truth the urethra is not such that it can be exactly expressed, for it has no definite size or calibre when not in use for the passage of urine or a foreign body. It is a very dilatable canal, and the natural dilatability of it varies with the condition of the external surrounding structures. Pearson used bougies of No. 20 English scale, so that the use of large instruments is not a modern invention; but it is probable that surgeons have erred of late in not availing themselves of the great dilatability of the urethra. I must, however, caution you that my experience has amply convinced me that it is easy to damage the canal irreparably by over-distending it. I must also oppose the doctrine now sometimes held, that stricture is curable by complete section of it; I have seen too many cases where the most thorough and complete division of all the stricture tissue has been followed by a relapse to dogmatise on this point; indeed there are very few cases of perineal section which are not followed by recurrence. But the recurrence is very rapid if the stricture is not thoroughly divided. In my hands internal urethrotomy has been as safe and as efficient as Syme's operation. Splitting and over-distension are not so efficient as a well-performed urethrotomy, for a complete division of the stricture tissue is the required object; and I may observe that many of the proposed modes of performing this operation cannot accomplish this. The principles to be borne in mind in undertaking internal urethrotomy are: 1. The necessity of a careful physical examination before the operation, to detect the precise position, size, and nature of the stricture and the condition of the whole urethra. The instruments I always employ for this purpose are metal bulbs on slender stems. 2. The

necessity of completely dividing all the stricture tissue, which is generally most efficiently done by a slender cutting blade introduced through the stricture concealed, and then protruded and drawn outwards. 3. A full-sized catheter should be retained in the bladder for some hours after the operation. 4. Full-sized bougies should then be passed at occasional intervals, to prevent union of the incision by first intention. I, of course, prefer my own instrument, and although very few strictures requiring incision will admit any instrument of the size of No. 5 when they first come under treatment, I have never seen one which could not be brought up to that size by tying in a smaller instrument for a few days. The method of cutting from before back may, however, be safer in untrained hands. The operation has very slight risk attached to it, and I have found that the patients are very comfortable for the first three to four years, but after that they are often compelled to lessen the size of their bougie one or two numbers, but have no symptoms, and then from seven to twelve years after the operation symptoms usually reappear; and I have often recommended a repetition of the operation, in one case I have done it three times. The great desideratum at the present time is a mode of treatment which shall restore the natural dilatability of the urethra; but I believe that no one who has carefully studied the pathology of the affection can hold that any of our present methods will accomplish this end.

Professor MACLEOD.—A careful attention to the kind, extent, and position of a stricture must guide us in our choice of its treatment. A traumatic stricture differs altogether from others, for in it there has been usually a transverse rent in the urethra, which results in a contractile cicatrix; while in a stricture the result of inflammation the mucous membrane is not involved, and there Holt's operation is beneficial, while it only renews the rent in the traumatic form. There is much importance also to be attached to the preparation of the patient for operation—rest for some days, diet, temperance, abstinence from tobacco, regular action of the bowels, healthy urine, and the administration of quinine both before and during surgical treatment have been of use to me, so also opium. It is important also to know precisely the state of the bladder and kidneys before operation, and as an adjunct to gentleness of manipulation I would urge the use of anæsthetics whenever we employ instruments. In my opinion cure can never be obtained. I would divide strictures into—(1) recent limited; (2) old circumscribed; (3) old, extensive, and undilatable; (4) resilient; (5) traumatic. For No. 1 I use Holt's operation, and have never seen any bad results or trouble from it, but I do not think of passing instruments at once after it, and usually wait four days. For No. 2 no treatment is so good as internal urethrotomy by Trélat's instrument, followed up by gradual dilatation. External incision is most valuable for No. 3. If Syme's guide cannot be passed, Wheelhouse's operation is good; the danger of external urethrotomy has been enormously exaggerated. For No. 4 I use both internal and external section. For No. 5, if limited, I cut and then dilate, but if extensive I do a perineal section. Irritability of the canal points to the necessity for constitutional treatment, and if it cannot be cured I should cut the stricture, of whatever nature it be. Multiple strictures are best dealt with one after another. In twenty-five years of hospital practice I have never had occasion to tap the bladder through the rectum, but if hot baths, opium, ice in the rectum, and careful catheterism fail to relieve, I aspirate above the pubes.

Mr. FURNEAUX JORDAN bore testimony to the great value of soft elastic instruments, and added that he had often found that a tiny elastic thread worn in a stricture for a few hours or a day or two occasionally was quite sufficient to keep a stricture in order and the patient comfortable. The same plan was also applicable to rectal and œsophageal stricture. He had relinquished Holt's and Syme's operation for internal incision, for which he used Durham's instrument, which made shallow cuts in four directions, and so must cut the cicatrix. He had treated several obstinate cases by opening the membranous urethra from the rectum, and passing an instrument from behind. He had never had a fistula result.

Mr. REGINALD HARRISON said there were many varieties of stricture, which required different modes of treatment, and the great desideratum was their exact application. He hoped some method of preventing the contractility of scar-tissue might be introduced.

Mr. TEEVAN only differed in a few points of detail from

the conclusions of Sir H. Thompson. When an operation is required certainly internal urethrotomy is the best. If all the deaths due to Holt's operation had been carefully published, that operation would have died a natural death long ago. He had never had a death from internal urethrotomy, and had never heard of one in a young man. No penile stricture ought to be ruptured. No stricture in the bulb should be operated on until milder treatment had been tried and failed, and he would add that no stricture in the bulb should be cut until all narrowings in front had been fully dilated or cut. In his opinion, the struggle had narrowed itself down to rupture *v.* internal urethrotomy. Cases after rupture are traumatic and very intractable, for the rent is not only in the middle line.

Mr. J. WOOD thought rupture a dangerous procedure; he had seen several fatal cases. Internal urethrotomy is the operation of the future; he preferred to do it with an instrument he had invented, by which he can feel exactly the stricture tissue, and cut it only.

Mr. CLEMENT LUCAS was sure that a great majority of cases could be treated by gradual dilatation, and only when this fails should internal urethrotomy be resorted to; the incision necessarily divided more than the stricture. Some cases are curable by gradual dilatation; he lately saw one so treated by Mr. Cock fifteen years ago, who had not an instrument passed for eight years, and yet No. 10 was passed with ease. He referred to the operation commonly known as Cock's perineal section, and described it.

Mr. MACCORMAC remarked that Mr. Simon had performed and described that operation before Mr. Cock did it. He lately performed internal urethrotomy on a "bleeder," who very narrowly escaped death.

Sir H. THOMPSON replied that any operation of merely nicking the urethra was not an internal urethrotomy, which must be made quite through the stricture. There is no danger in a simple longitudinal incision in the urethra; it heals by first intention without any narrowing. He generally made a cut from two to four inches long. He was very glad to hear from so many speakers such unanimity as to the value of internal urethrotomy.

Several papers were then read, and the section adjourned.

Pathology Section.

Continuing his summary of the errors which are liable to arise in the study of the part played by the nervous system in causing derangements of nutrition, Mr. Hutchinson next referred to the fallacies arising from a failure to recognise simple local causes of such derangements. In the case of furring of the tongue on one side, which has been attributed to irritation of the fifth nerve, he had reason to believe that it was always due to the patient not eating on that side of the tongue. Again, we must remember that diseases of the nervous system have a marked effect in causing a derangement of the entire nutritive secretion of the body, that the nutrient fluids are thereby deteriorated, and there is a tendency to atrophy of the tissues, especially such as bones. In paralysed parts another factor tending to degradation of structures comes into play—namely, the enforced rest of the part. With regard to the distribution of nerves, there were also several important points. Especially important was the inquiry whether a part is well supplied as to sensation. Even unsuspected local defects in sensation might yet act on the vaso-motor system, the local distribution of blood, even in inflammation being largely dependent on reflex sensory excitation. In connexion with this it might be observed that neuritis was probably of very frequent occurrence, though difficult to recognise, for it is often seen in the eye without any general affection of health and with no obvious causes, and might disappear without leaving any marked results. Insidious neuritis might thus involve any nerve. Again, it does not follow because a disease is along the tract of a peripheral nerve that it is due to nerve lesion. Such is the complexity of the peripheral nervous system, that it might well be that it was only the peripheral termination organs, such as the Pacinian bodies, which were diseased primarily. So in the case of joints, he thought it probable that they might become anæsthetic in consequence of degeneration in the peripheral nervous system, and the power of sensation being thus lowered, they were more liable to local irritations. Thus partial diminution of the power of sensory nerves supplying a joint, apart from central disease, might cause joint degeneration. Turning now to the general question, Mr. Hutchinson stated the different views as to the trophic

action of nerves, dividing them roughly into the view that all the action was vaso-motor, or that there was in addition a special trophic influence. Before accepting the latter view, all other hypotheses should be exhausted. And certain facts must also be considered as militating against the trophic hypothesis, which might be summed up in these—the great rarity of some of these affections which on the trophic hypothesis should be common; the peculiar characters which they present; the remarkable differences observed in these lesions, which are supposed to be dependent on a common cause, and their great resemblance to others which are not of neurotic origin. Mr. Hutchinson then gave a list of the conditions which are supposed to be dependent on trophic nervous derangement:—Bedsores in cases of paralysis; ulceration of the cornea in injury to the fifth nerve; sympathetic ophthalmitis; herpes zoster; glossy skin in cases of partial section of nerves; arthritis following diseases of the spinal cord; *digitus mortui*; morphea; osteo-malacia; the condition of the skin and bones in leprosy. He then proceeded to inquire in detail whether amongst these there was any one in which no other explanation could be given than that they depended on trophic nerves. The first group, which he called the “anæsthesia group,” comprised bedsores and ulceration of the cornea. As to bedsores, he still believed, in spite of Charcot’s observations, that they were really pressure sores, due to pressure or friction on parts deprived of sensation; and in proof of this he cited the clinical fact that if there is motor paralysis on one side and sensory on the other, the bedsores occur only on the side where there is sensory paralysis. The position of the patient also aided in the production of the pressure. He thought that the fact that continuous pressure very speedily causes local gangrene in a healthy part was not sufficiently recognised by physicians. When once inflammation was started in a part deprived of sensory nerves, the inflammatory process was liable to be peculiar, owing to deranged reflex stimulus. With regard to ulcerated cornea in paralysis of the fifth nerve, he believed it never suffered until a local cause was applied, such as heat, dust, or the like; and when set up, the kind of ulceration was precisely analogous to that occurring in persons in a low state of health. *Reflex or sympathetic ophthalmia* was formerly regarded as a conclusive case of reflex nervous action; especially where, as in some cases, the disease was similar in the two eyes. But he must cite a competitive hypothesis—namely, that instead of being induced through the nervous system by reflex action, the disease might actually travel along the nerves themselves, the nerves merely playing a passive part. In proof of this he mentioned that an interval of three to five weeks is always needed after the injury before the other eye becomes affected, and even if the injured eye is extirpated after an interval of a week, inflammation may yet occur in the second eye. This fact would indicate the slow passage of some pathological change of a nutritional rather than a reflex character. *Neurotic iritis* of spontaneous origin was another illustration of the same kind. *Herpes zoster*, a disease usually regarded as due to nerve lesion, had the peculiarities distinguishing it from other herpes, of certain limitation over sensory nerve terminations, that it is preceded by pain, always leaves scars, tends to cure, and rarely recurs; never, in fact, in the same nerve. His theory was that it is due to neuritis of a sensory nerve, which travels downwards through the trunk of the nerve, and attacks the terminal filaments at its extremities. The next is the *catarrhal group*, including nasal catarrh and rheumatism. Nasal catarrh he believed to be usually reflex from a chill on some part of the chest or respiratory tract, causing an exaggeration of the ordinary function, due to reflex dilatation of vessels. Rheumatism might probably be analogous, the reflex action affecting the joints instead of the nasal mucous membrane. Age and idiosyncrasy were here seen in action in modifying the effects, both catarrh and rheumatism tending to become chronic in the aged. Mr. Hutchinson next referred to a group of cases in which the distribution of nerves leads to the supposition that they are due to nervous influence. Hemiatrophy of the face or scleriosis cutis, the keloid of Addison, seemed to belong necessarily to the fifth nerve, as also morphea, which was usually unilateral; but he was inclined to think that, though located by sensory nerves, they depended on disease of the vaso-motor filaments which travel with the nerve—these being seats of permanent disease—and not on the fifth itself. As an illustration of a similar condition, he showed a skull and lower jaw which was the seat of unilateral hyperostosis and

exostosis, probably due to a similar condition—namely, a vaso-motor derangement distributed by the fifth nerve. Mr. Hutchinson summed up his able address by a classification of the conditions liable to give rise to error, and expressed his general disbelief in the direct trophic influence of the nervous system. A large number of diagrams and specimens were used to illustrate the various points under consideration.

The discussion was commenced by Dr. BROWN SÉQUARD, who expressed his dissent on many points from Mr. Hutchinson. He narrated experiments on dogs which proved conclusively, in his opinion, that bedsores could be produced at will by inflammation in the cord, apart from any external irritation, and with the most extreme care. Moreover, they could be prevented and cured by the alternate application of heat and cold. He believed that the nervous system had five or six different methods of action on nutrition apart from the vaso-motor system. Amongst them the power of attracting blood to the tissues, and producing increased nutritive action, was very important. He cited his recent experiments on collapse to show the nerve influence on the tissues (see THE LANCET, August 14th, p. 268-9).—Dr. BUZZARD reverted to the subject of unilateral furring of the tongue, and mentioned a case where it was associated with neuralgia of the fifth nerve and increased flow of saliva on the same side. He mentioned, also, cases of brittleness of the bones and spontaneous fracture associated with symptoms of *tabes dorsalis*. He cited also the fact that disease of the spinal cord had recently been discovered both in lead palsy and in leprosy, and mentioned a case of recurrent herpes associated with *tabes dorsalis*. With regard to bedsores, he entirely differed from Mr. Hutchinson, and pointed out that they occurred only in a special class of cases.—Dr. CLIFFORD ALLBUTT also mentioned cases opposed to Mr. Hutchinson’s views as to the cause of bedsores, furred tongue, and herpes zoster.—Dr. WILKS suggested that the subject must be discussed as a matter of clinical observation. He thought the relations of some diseases, such as erysipelas, pleurisy, and herpes zoster, to reflex irritation had not been sufficiently considered.—Dr. DICKINSON considered the effects of mental influence on nutrition.—Mr. HUTCHINSON, in reply, maintained the views he had expressed, but allowed that he had stated the facts somewhat dogmatically and with little qualification, desiring to arouse discussion.

Dr. BUZZARD then read a paper on some Cases of Joint Affection in Locomotor Ataxy, associated with Gastric Crises, which he illustrated by admirable photographs. He suggested that co-existence and apparent relation of the gastric symptoms with the joint disease might be explained by the existence of a trophic centre for the osseous and articular system in the vicinity of the vagus roots in the medulla oblongata. This hypothesis would, if confirmed, help to explain the co-existence of cardiac and arthritic affections in acute rheumatism and the occurrence of hyperpyrexia.—No time remaining for the discussion of the paper, Sir James Paget, as President, closed the meeting with the felicitous remark that it was well to end in doubt.

At the meeting of the Section on Thursday, Aug. 12th, the hall was crowded from floor to ceiling with an audience eager to hear the address of the President, Sir JAMES PAGET, on “Elemental Pathology.” This had been postponed until the second day on account of the numerous claims on the attention of the members on the previous day. It proved to be a wise step, for the other Sections were completely emptied, and obliged to suspend work until the conclusion of Sir Jas. Paget’s address.

Commencing with the observation that the complexity both of structure and of surrounding conditions of the human or animal body rendered the study of pathological problems a difficult and complicated one, he suggested that these might be worked out to some extent in plants and minerals. This study, which he would call “Elemental Pathology,” could be carried on at leisure moments. He had found a very large number of papers on diseases and injuries of plants since he had given attention to the subject. First of all, he would direct their attention to the hypertrophies and atrophies of plants. Hypertrophies were important because in plants they were not related to function, but simply to supply of nutritive material; thus the “ringing” of trees causes an hypertrophy analogous to that produced in the human body by the obstructed return of lymph. Again, suppression of one organ led to hypertrophy of another, the adiposity resulting from castration of an animal having its parallel in the artificial hypertrophy of fruits—in both cases, perhaps,

some nutriment being in excess. Atrophies are rare in plants, but degenerations common. Thus senile degenerations are well illustrated by the changes which take place in leaves preceding their fall. The degenerations found in the "sere and yellow leaf" throw light on symmetrical disease; for when a leaf is of symmetrical form, such as palmate, or equal ovate, the decay is commonly symmetrical. In the human body the presence of a circulation and a nervous system were puzzling, and the theories of symmetrical disease attributed symmetry either to a general change in the blood or to the action of nerve terminations disposed in a like manner, but here it was seen that neither blood nor nerve disease was requisite to cause symmetrical decay. Again, the mode of decay and fall of leaves show that decay is not death, for, as Sir James Paget pointed out, dead leaves do not fall, the necessary antecedent changes are vital processes. He then described in some detail the processes which occur in the leaf, stem, and stalk preparatory to the fall of leaves, a process first worked out by Dr. Inman, of Liverpool. These changes, consisting in a gradual change by division of cells and their conversion into cork tissue takes place both in the leaf and the stem, by concurrent actions which are, however, not concatenate, though they proceed in the same measure, time, and place, like two bees working together, thus showing that such changes were not necessarily due to any central controlling activity. When, by the formation of two parallel layers of primordial cells and their division the leaf is now ready to fall, it hangs only by a delicate central thread, which is the so-called fibro-vascular bundle, a special structure made up, not of ordinary parenchymatous cells, though developed from them, but of more highly organised parts, fibres and vessels, to carry sap. This might be compared to a vertebrate column, it has so low a vital power that it cannot degenerate, though we consider it more highly developed. So, too, is it not the case that many of the changes which we call higher developments are from the point of view of vitality degenerations. Bone, for example, is allied to calcareous degeneration, and though it has acquired higher uses, it has also attained lower vital properties. In seeking a parallel in the vegetable kingdom for a rickety child, none seemed to him so suitable as the green roses, devoid of proper colour and odour, which florists had succeeded in producing. Passing next to the repair of injuries in plant structures, he observed that it was much less perfect than in animals; the reparative process very rarely proceeding beyond the mere protection of the injured part, scarcely ever any reproduction of parts being observed. The only exception he knew was one moss, which could partially reproduce a leaf, but not the midrib. When plants were injured by wounds, layers of cork cells are formed around, which may grow over the wound, or a gummy exudation is poured out, but the epithelium never reforms. So wounds of branches never heal, the sole exception being when the wound only reaches the cambium. Continuing this subject, the speaker drew a striking contrast between the stumps of trees and of amputated limbs, remarking on the fact that wounds of trees are a prey to parasites, which do great harm, and suggesting the results of the treatment of such tree-stumps by the methods of Lister and Humphry respectively. Trees showed, too, the "inevitable process of repair" going on in one known case for one hundred and fifty years in a pine tree without complete cure. This law, that an injury which might occur at any age, and have no parallel antecedent in any ancestor, being indeed unique, should inevitably tend to become repaired in a particular way, indicated that there were other laws and properties at work in the body than those accounted for by heredity or evolution. The law was true for crystals as for plants and animals, and seemed to be the general expression of the Divine Will, though not limited by benevolence in particular instances. Two other topics were then in turn discussed, inflammation and specific diseases. Irritants cause inflammation in plants as well as in animals. Specific inflammation was especially well illustrated by galls, which are specific inflammatory hyperplasiae, of which numerous other examples might be found. No less than two thousand kinds of galls were known, all of which are the product of some poison introduced by insects either with the ova or from the mouth in biting, and are all wrought in order to find residence and food for the insects producing them, the disease being in some cases a complex structure adjusted for their sustenance and maintenance. Nor is this all, but

the form of this disease is as characteristic as the insect producing it, so that each can be recognised and attributed to its proper species. Each is a truly specific inflammation, and there are an enormous number of such specific inflammations, their study being thus of the highest interest and importance to the human pathologist. Sir James Paget concluded his eloquent address by urging upon his hearers to study some definite science, apart from their professional studies and work. The bustle and turmoil of daily professional life were unsuited to the proper scientific study of pathology. The astronomer studies astronomy in dark, stormy nights and in the railway train, but his best studies are in the quiet of the observatory and with a calm clear sky. Our life work lies in stormy nights and railway trains; if we desire to study calmly and to profit we must choose some subject which we can carry on apart from our professional work, during our leisure and holidays, which will yet afford lessons of surpassing value. Such a study is that of the diseases of plants.

The address, which occupied nearly an hour in delivery, was characterised by all the ease and clearness of diction, masterly force of language, and felicity of illustration which distinguish the speaker; and the audience showed no sign of any desire to break the spell which bound them in eager attention to the close, or to go back to the work of their own Sections. At its close Professor Humphry moved a vote of thanks to Sir J. Paget for his address, which was seconded by Professor Gross of Philadelphia. An amusing incident occurred during the address; for Professor Humphry, mistaking a pause by the speaker for a cessation, rose to move the vote of thanks, and, turning round to face the audience, did not see that Sir Jas. Paget remained standing and waiting to proceed, until one of the secretaries succeeded in attracting Professor Humphry's attention, when he sat down amidst great applause.

Mr. LISTER then gave an able summary of the investigations of Koch on Septicæmia and Gangrene, of the discovery of the nature of so-called "fowl cholera" by M. Toussaint, and of Pasteur's investigations into its inoculation. He then mentioned the recent experiments with regard to the inoculation of splenic fever or charbon by M. Toussaint in France, and Dr. Greenfield in this country, describing the methods employed. The recent observations by Buchner in reference to the transformation of the hay bacillus into the anthrax bacillus were then mentioned. Mr. Lister showed some specimens from fowl cholera sent by M. Pasteur. — M. TOUSSAINT, who spoke in French, made some observations in reference to the hearty welcome he received, but did not make any statement, Mr. Lister having already described his researches. — Dr. W. ROBERTS referred to the general bearings of the question, and pointed out that bacteria and fungi were beneficial to man in some of their actions, especially the preparation of food, and the causing decomposition. — Dr. LAUCHLEN AITKEN read a brief digest of the experimental results of Klebs and Tommasi Crudeli on the Bacillus Malarie. — Dr. BELL of Bradford gave an account of some cases of Woolsorters' Disease. — Mr. MALCOLM MORRIS described some observations on the Cultivation of Parasitic Organisms in relation to Skin Diseases. — Dr. BRAIDWOOD also mentioned some of his observations in reference to scarlet fever and septicæmia. — Dr. GREENFIELD, who was called upon by the President to make some remarks, observed that the subject as it had been presented was hardly in a state ripe for discussion, and needed much special work before any certain general conclusions could be attained. — Upon the whole the discussion could hardly be pronounced a success, for no propositions were laid down for discussion; and interesting as were some of the facts narrated, their general bearing was not sufficiently clearly stated to attract the attention of those not familiar with the subject; and there was a great lack of obvious connexion between some of the papers and speeches and the matter in hand. The absence of Professor Klebs and Dr. Vandyke Carter, both of whom had been expected to take part in the discussion, and of several others who had sent in their names, contributed to render the discussion much less interesting than might have been expected.

On Friday the Section met—or rather it would appear that the officers of the Section met, for there were scarcely any members present. Papers on Glomerulo-nephritis by Dr. Leech, the Pathology of Psoriasis by Dr. Thin, Congenital Neurotic Papilloma by Dr. Cottle, and Cerebral Embolism by Dr. Dickinson, together with other papers, were read. But it was evident that the interest of the

members of the Association was elsewhere, and the difficulty of forming a quorum led to an early adjournment. On the whole, it would not appear that the annual meeting of the British Medical Association is a favourable field for the prosecution of pathology, or indeed for any serious study. So long as there is eloquence, or prettiness, or great novelty, the attendance is good, but apart from these it immediately languishes. Moreover, it is to be regretted that the various specimens which were illustrative of the communications were not better arranged so that they might be more easy of access and nearer to the room where the papers are read. As it was, a special pilgrimage was required in order to see the specimens to which reference was made in the papers, and the collection was so scattered that it was very difficult to find those of which one was in search. If the Pathological Section is to be continued, this defect should in future be remedied by the collection of the specimens, microscopic and others, either in the room of meeting or closely adjacent to it, and by conspicuous labelling of the specimens shown.

Ophthalmology Section.

On Thursday nearly the whole of the meeting was occupied with a very interesting exposition by Professor Donders of the nature of colour-blindness. The learned professor gave a short *résumé* of our present knowledge of colours, and showed the mode in which he was accustomed to obtain a clear conception of what was really seen by a patient. This consisted in having a circle ruled on a very large sheet of paper, in which were a number of slits. He then prepared a number of slips of paper of different colours, and arranged them like small segments of the spokes of a wheel, radially on the circle, beginning with red and returning to it again through violet. A similar set of slips were given to the patients, and they were told to match them with those placed by the Professor. The method is a most graphic one—the red-colour blind immediately places greenish slips of the colour he conceives red to be immediately below the red ones, and the kind and amount of his colour-blindness can be read off without further trouble, whilst the cards can be kept as a note of the patient. In connexion with this paper others were read, by Mr. Nettleship on "Colour-blindness in Atrophy of the Optic Nerve," and by Mr. Shadford Walker on "Amblyopia and Amaurosis from Tobacco and Alcohol." Dr. Landolt gave a short communication, showing the connexion between malformation of the head and anisometropia. After the meeting broke up, M. Warlomont exhibited a peculiar pair of spring scissors, to which a clamp was fitted in such a manner that when the cut was completed and the scissors removed the clamp remained attached. It seemed that it might be adapted to readjustment operation, and would serve admirably to prevent the tendon from slipping back beyond reach. Dr. Priestley Smith also exhibited a new tenometer, and Dr. Gowers a new form of refraction ophthalmoscope.

The most interesting papers of the last day were those of Mr. Hutchinson on a Recurrent Cyclitis, and an inquiry, in the form of a note, asking for information from those present as to the mode in which they dressed their cases after cataract operations, which elicited the fact that great differences existed, which clearly demand that further inquiries should be made. Two gentlemen closed the eye operated only, all the others closed both. Some applied court plaster only to keep the lids in apposition, but most applied compresses of wool. There appeared to be about an equal number who used them dry with those who used them wet. Some applied leeches early, some only when inflammation had set in. Some did, others did not, employ atropine, and one or two used eserine, especially when the operation was done without iridectomy. A modification of Javal's instrument for the estimation of astigmatism was exhibited. Altogether the meeting of the Ophthalmological Section was most satisfactory. It was ably presided over by Mr. Bowman, and many of the leading ophthalmic surgeons in the country took part in it.

THE following is a copy of the speeches delivered in the Senate House of Cambridge by the Public Orator (Mr. J. E. SANDYS, Fellow and Tutor of St. John's College), on the occasion of the visit of the British Medical Association, August 11th, 1880.

In ipso limine orationis nostrae nihil auspiciatius esse arbitramur quam ut vos, qui consiliorum vestrorum sedem hanc curiam elegistis, totius sanatus nomine omnes salutemus. Qui salutem aliis totiens attulisti, vosmet ipsos omnes salvere iubemus. Athenienses quidem

olim vestro illi Hippocrati auream coronam in theatro publice decreverunt; nos autem, ut nostram erga vos omnes benevolentiam aliquatenus indicemus, et tot viris de humano genere bene meritis, nonnullos, velut exempli gratia, nostra corona qualicunque hodie ornare volumus, qui honos idcirco illis laudi est quod vestra omnium frequentia illustratus, vestro omnium, uti speramus, consensu comprobatur.

Dr. C. E. BROWN-SÉQUARD, F.R.S., *Professor at the Collège de France, Paris*.—Erat nobis in animo Reipublicae Gallicae senatorum illustrem, virum de investigandis humani generis varietatibus optime meritum, nostra laureola hodie decorare. Atqui laurea illa in cypressum mutata est; ille enim, qui ipsum fontem et originem loquendi indicavit, ipse inter omnium dolorem, morte immatura abreptus, conticuit et obmutuit. Quo autem maiore animi aegritudine illum desideramus, eo maiore gaudio eiusdem Reipublicae civem salutamus, qui (ne plura commemorem) ipsam arcem sentiendi in cerebro positam, ipsam carinam illam corporis quae medulla spinalis nuncupatur, fortiter exploravit. Ceterum in tali materia non omnia nobis subtiliter disputanda, non omnia (ut de amicitia Tullius) "ad vivum" rescenda. Vobis igitur praesento Medicinæ Professorem insignem, Edvardum Brown-Séquard.

Dr. F. C. DONDERS, *Professor of Physiology at Utrecht*.—A Rheni Traiecto ad Cami nostri ripas transire dignatus est vir qui pulcherrimo studio dedicatus, disciplinae mathematicae qua nos quoque gloriari sciamus accuratam cum oculorum humanorum exploratione exquisita coniunxit. Laetum profecto est auspicium quod oculis nostris nunc demum contemplari contingit virum societati nostrae Philosophicae honoris causa iamdudum ascriptum, Physiologiae Professorem illustrem, Doctorem Donders.

Dr. S. D. GROSS, of Philadelphia.—Trans fluctus Atlanticos, trans Oceanum non iam ut antea "dissociabilem," patriae nostrae ad portus nuper advectus est vir venerabilis quem inter fratres nostros Transatlanticos scientiae Chirurgicae quasi alterum Nestorem nominare ausim. Ergo libenter quasi fraterno amore hodie salutamus, civitatis bene ominati nominis civem, Chirurgiae Professorem Philadelphensem, Samuelem Gross.

Sir WM. JENNER, Bart., K.C.B., F.R.S.—E fratribus nostris ad nosmet ipsos transimus. Nostris e popularibus unum salutamus, Regiorum medicorum numeromerito ascriptum, qui tum ceteris morbis propulsandis, tum praesertim formidolosae illi febrium cohorti profigandae fortiter incubuit, ausus ipsos mortis illius impetus morari quae pede pulsata aeque "pauperum tabernas regumque turres." Ergo nostro quoque titulo decorem virum titulis iam plurimis aliunde ornatum, Baronetum illustrem, Wilelmum Jenner.

Sir WM. GULL, Bart., F.R.S.—Pulchrum sane est genus illud vitae quod θεωρητικὸν Graeci nominant; pulchrius fortasse quod idem πρακτικὸν appellant; omnium, nisi fallor, pulcherrimum, humano certe generi utilissimum, et θεωρίαν et πρᾶξιν mutua quadam societate inter sese coniunxisse. Cuius rei egregium exemplar in hoc viro hodie iuvat admirari, qui physiologiae scientiam intimam ad artis medicae usum cotidianum feliciter accomodavit. Talium virorum adventu, quotiens aegrotantium lectulis nova lux affulsit! Medicorum talium auxilio, quot et quantos viros ab ipso mortis limine ad vitam rursus vocatos vidimus! Vobis praesento Regiae Societatis Socium, e Regiis medicis unum, Baronetum insignem, Wilelmum Gull.

Sir GEORGE BURROWS, Bart., M.D., F.R.S.—Unum nostris ex alumnis, nostrarum scholarum umbræ hodie paulisper redditum, vultu quam laeto excipimus. Scilicet in hoc ipso senaculo, quinque et quinquaginta abhinc annis, e studiis mathematicis lauream insignem reportavit; deinde Collegii illius vicini socius electus est cuius inter conditores medicum illum Regium, Iohannem Caium, existissime gloriariur; postea, e nostris umbraculis egressus, etiam urbis magnae in luce laudem illustrem adeptus, non modo Regi Medicorum Collegii praeses saepe numero est creatus, sed illius quoque Reginae medicis ascriptus est quam usque ad hunc diem omnes et vivere et valere gaudemus. Vobis praesento Baronetum venerabilem, Georgium Burrows.

WM. BOWMAN, F.R.S.—Sequitur deinceps vir qui adhuc juvenis corporis humani penetralia intima curiositate minuta perscrutatus, illa quae a se ipso optime erant fundata, ab aliis animo magno reliquit extruenda. Ipse interim sese ad illam potius partem explorandam destinaverat, cuius auxilio ad ceteras investigandas felicitas usque erat; ad ipsum videndi sensum, ad ipsos oculos (ut ita dicam) oculos sustulit. Quid autem humanius quam hebescentem oculorum aciem rursus aciem effecisse? Quid, prope dixerim, divinius quam hominibus lumine orbatis lucem illam diei quae Dei donum primum est, totiens reddidisse. Duco ad vos Regiae Societatis Socium, Wilelmum Bowman.

Rev. S. HAUGHTON, M.D., F.R.S., *Fellow of Trinity College, Dublin*.—Venio ad nomen multiplex scientiarum laude illustratum, Professoris scilicet Dubliniensis, viri de studiis Theologicis, Geologicis, Zoologicis, Geographicis, Physicis, Mathematicis, Medicis denique, optime meriti. Ipsa autem "naturae rerum contemplatio," ut ait Celsus, "quamvis non faciat medicum, aptiorem tamen medicinae reddit." Omnia vero illa quae intra provinciae suae fines satis amplius includit, hodie saltem non modo orationis nostrae terminos artiores excedunt, sed temporis quoque angustiis iniquis excluduntur. Praesento vobis virum reverendum, qui fere nullum scientiarum genus intactum, nullum inornatum reliquit, Samuelem Haughton.

JOSEPH LISTER, F.R.S.—Quam multa, quae antiqui temeraria quadam coniectura fortuito asscuti sunt, nunc demum hodiernae scientiae experimentis vera esse constat. Ipse Lucretius olim divinaverat morbos idcirco generari "nimium quia sunt multarum semina rerum, et satis haec tellus nobis caelumque mali fert, unde quaest vis immensi procreare morbi." Atqui usque ad recentem memoriam incerti errabant medicis, ut eiusdem verbis utar, "expertes opis, ignari quid vulnera vellent." Nunc autem, uti nostis ipsi, per Europam totam, chirurgi fere omnes Machaonis nostri praeceptum illud praeclarum sequuntur, scilicet in vulneribus sanandis nihil magis prodesse, quam noxia illa rerum primordia summa cura arcere. Itaque cum tanto viro nos quoque libenter foedus icimus, dextraeque illi intrepidae dextram hospitio iungimus. Duco ad vos Iosephum Lister.

Dr. DENIS C. O'CONNOR, M.D., *Professor of Medicine, Queen's College, Cork*.—Magnum est insularum Britannicarum medicis in consilio delibitantibus summa cum dignitate praefuisse; felix quoque suo optime functum, successoris dignissimo munus reddidisse. Quis autem nobis debet esse coniunctior quam is qui nuperime reipublicae medicae gubernacula illa, uni e professoribus nostris tenenda tradidit? Illi vero e portu iam solventi, nemo magis favere potest quam hic qui ex alto in portum invectus est, ipse in Collegio Professor prope celeberrimum Hiberniae portum posito. O si unquam inter memora portui illi vicina, lapidem illum fabulosum, saxum illud eloquentiae, oratori vestro con-

tigisset oculari; tum profecto tot et tantos viros ea qua par erat eloquentia laudare potuissent. Ceterum, utcumque haec sunt, praesentio vobis Professorem venerabilem, Praesidem optimum, Doctorem O'Connor.

JOHN SIMON, C.B., F.R.S.—Adest deinceps vir de sanitate populi nostri tuenda atque augenda optime meritis. Quod si huius viri laudes, uti meministi, etiam ab exteris beneficibus palam praedicatae sunt, quanto magis ab ipsis Britannis tot beneficiorum auctorem animo gratissimum commemorari necesse est. Ipsum Ciceronem in libris illis quos de legibus composuit, scripsisse recordamur, populi salutem supremam esse legem. Ergo iure optimo legum Doctorem hodie creamus virum de populi salute praeclare meritum, virum litterarum quoque laude insignem, Iohannem Simon.

ANDREW WOOD, M.D., F.R.S.E.—Claudit seriem Andreas Wood, vir ex Athenis illis Caledonicis Academiae nostrae spatii allatus, quem non modo Minervae Medicae sed ipsarum etiam Musarum inter cultores esse iuvat. Meminit fortasse Vergilianum illum lapim cui Apollo "citharam dabat," "scire potestates herbarum usumque medendi" maluisse; sed suo ipsius exemplo probavit "dulce" illud "laborum lenimen" cum arte medendi esse consentaneum. Recordatur certe Horatium illum suum, Apollinem ipsum laudare non modo quod "salutari levet arte fessos corporis artus," sed etiam quia "novem Camoenis acceptus" sit.

Restat ut vos omnes qui sociorum vestrorum laudes tanta benevolentia audivistis, tanto planius exceperitis, Academiae nomine valere iubeamus. Ipsum Medicinae Patrem dixisse meministi, vitam esse brevem, artem longam. Vos igitur, quorum arte vita totiens longior facta est, ipsi diu felices vivite. Vos qui omnium optime nostis, non vivere sed valere esse vitam,—vos, inquam, mox a nobis abituri, rursus forsan redituri, ipsi interim omnes valete.

THE SERVICES.

ARMY MEDICAL DEPARTMENT.—The officers of the department ordered to proceed to India to increase the establishment are as follows:—Surgeons-Major W. Ashton, E. J. Boulton, C. M. Douglas, C. A. Innes, H. M. Macbeth, Thomas Murtagh, and M. L. White; Surgeons A. L. Browne, J. D. Day, C. E. Dwyer, C. R. Egan, Richard Exham, S. J. Flood, W. C. Grant, W. R. Henderson, David Leckie, Robert H. Robinson, O. S. Ward, James Watson, and D. Williams.

ADMIRALTY.—Surgeon James Dunlop, M.D., has been promoted to the rank of staff-surgeon in Her Majesty's Fleet, with seniority of the 13th inst. Deputy Inspector-General John Cotton, M.D., has been appointed to Plymouth Hospital, vice McShane, retired; staff-surgeon J. Strickland to the *Himalaya*.

Correspondence.

"Audi alteram partem."

"REGINA v. INGLE : MEDICO-ETHICAL ASPECTS OF THE CASE."

To the Editor of THE LANCET.

SIR,—Your third "leader" on the nursing case at Guy's calls for a few words of information, which may be supplied without touching upon the question which has to be reserved for the Censors' Board of the College of Physicians. The clinical report and other facts shall, at the appropriate time, be placed in full before the profession. You say: "The first question that arises is whether the step taken in this most deplorable case was determined upon at a formal meeting and after a general consultation of the medical staff, or was the independent act of Dr. Pavy, who, considering the circumstances, felt himself unable to give the usual certificate of death?"

The first step in the case consisted of the patient's statement to me, and thence followed the succession of events that occurred. At my visit, on Monday, July 5th, I had not the slightest idea that anything particular had happened in the ward until I reached the patient's bedside. The complaint was then made to me about the bath administered in the morning. The house physician and several students were standing round the bed. After hearing what the patient had to say, I sent, without a moment's hesitation, for the sister, who was at the time in another part of the ward, and told her what had been mentioned, and said that the complaint must be fully inquired into. I also requested the house-physician to obtain all the particulars he could and lay them before me at my next visit on the Wednesday, in order that I might place the matter in the shape that might be found requisite, before the authorities of the hospital. This was the starting-point of all that followed, but at the

time I had not the most remote idea that the matter would culminate in anything extending beyond the hospital walls.

At my visit on the Wednesday the case had assumed a more serious aspect. Several bruises had been discovered on the patient's body, and the house-physician had, in his weekly report, already mentioned the circumstance to the treasurer. It was afterwards also officially mentioned by me with the result that on the following Saturday an investigation was conducted which led to the dismissal of the nurse. Meanwhile the patient grew worse. On Thursday (July 8th, three days after the bath) I expressed the opinion in the ward and to some of my colleagues that tubercular inflammation of the brain had set in, and in my communication to the treasurer, written on the evening of July 8th, I said: "I feel that the patient has received a shock, from which she will not recover. I found her very ill at my accustomed visit on Wednesday—so ill as to lead me specially to go to the hospital in the evening to see her. I found her worse this afternoon, and I hope I may be mistaken, but fear she is in a state to give little ground for hope of rallying." It was the diagnosis of tubercular inflammation of the brain which gave the foundation for my writing thus. The patient died during the night of the 21st, or 13 days afterwards. The husband, I was informed, had spoken of taking out a summons against the nurse for the ill-treatment of his wife, but this was not done. Dr. Steele, the superintendent, can give the information of how the inquest was brought about. The physician has nothing to do with signing the certificate of death. All that I can state is that I received intelligence of the death from the house-physician about 12 o'clock on Thursday the 22nd, and went to the hospital in the afternoon to attend the post-mortem examination. I was told that Dr. Steele had been in consultation with the coroner during the morning, and that the husband and friends of the deceased had also been with him; and before I left it was intimated to me that the holding of an inquest had been decided upon. This is how the matter stood, but I had, some days previously, said to Dr. Steele in passing through his office that if the patient died I considered justice demanded that an inquest should be held, and I must also say that I expressed this opinion to my colleagues and one or two other members of the profession to whom I spoke about the case; but in no way either directly or indirectly did I communicate with the husband or friends upon the subject. Whatever was said or done by them certainly arose from their independent action.

A great deal more was made of hysteria in connexion with the case at the trial than it was entitled to receive. The nurse in the inquiry before the treasurer had excused herself by saying that she had been given to understand that the patient was suffering from hysteria, and that she thought she was only putting into force the proper treatment. This defence was not less ingenious than it was surprising to me; but, as I had spoken of the indefinite pains complained of at the time of admission as probably hysterical, I felt I ought to make allowance; and, therefore, did not express myself at the trial in the manner I am now at liberty to do. The patient was in the hospital with no decided alteration in her state for very nearly a month before the bath was administered. It was only at first that anything was said about hysteria. I doubt if the term was made use of in relation to the patient's case during the last three weeks of the period named. Certainly at no time was the case really regarded as one of hysteria, nor was any word uttered by me that could give justification for the treatment of hysteria to be applied by the attendants in the ward. The prescription paper suspended at the head of the bed contained, written after the word disease, "Phthisis left side," and nothing about hysteria. The patient was throughout in a weak and delicate state of health. The aspect and general condition afforded testimony which no one, much less an experienced nurse, could possibly mistake. I am quite sure the sister of the ward received from me—I may say in a special manner in this particular case—the impression that gentle and careful management was required. But a few days before the bath I had said, "See if you cannot get this patient up for an hour or two in the evening, she will only grow weaker by remaining in bed," and the last time I saw her before the bath, in consequence of what was mentioned about pain in the left leg, I said to the sister, "I must leave it to you to exercise your judgment as to whether you consider the patient fit to be got up." Had the sister been appealed to by the nurse about putting into practice any treatment for hysteria, I am

perfectly satisfied she would have discountenanced it in the strongest terms. I think I have said enough to show what the excuse upon the ground of applying treatment for hysteria was worth, and it struck me with astonishment when I heard that such a plea had been advanced at the inquiry before the Treasurer.

I am, Sir, your obedient servant,

F. W. PAVY.

Grosvenor-street, August 18th, 1880.

CASES OF WOOLSORTERS' DISEASE.

To the Editor of THE LANCET.

SIR,—As woolsorters' disease is at present attracting the attention of the profession, perhaps the following cases may interest some of your readers:—

CASE 1.—James G—, aged forty-nine years, a sorter of inferior mohair locks at the Black Dyke Mills, Queensbury. I was called in to see the deceased on the morning of the 23rd July. He stated that he had been at work the day previous, but had not felt quite well for some days. He complained of great weakness, cough, and difficulty of breathing. His pulse was almost imperceptible; respiration about 30 per minute, and laboured; temperature in the axilla 102·5° F.; perspiration very abundant. He was quite conscious, and remained so up till death. The chest was resonant in front, but dull on both sides behind. Bronchial râles were everywhere distinct. Heart-sounds normal, but very weak. I ordered him ammonia, brandy, strong broths, and milk, but he died two hours after my visit.

Dr. Spears and I made an examination of the body nine hours after death. The following were the points observed:—A dark purple discoloration of the ears, arms, fingers, and front part of the scrotum; rigor mortis well marked. Brain slightly congested, the ventricles containing more fluid than normal. Pericardium contained about three ounces of clear straw-coloured fluid. Heart healthy, left ventricle firmly contracted, right ventricle filled with dark fluid blood. The structure of both lungs apparently healthy, each pleural cavity containing a large quantity (about two quarts) of clear serum. A number of extravasations of blood beneath the mucous membrane of the trachea and bronchi, most marked at the bifurcation of the trachea. Bronchial glands enlarged, soft, and easily broken down; on section were filled with what appeared to be dark blood. Minute extravasations beneath the mucous membrane of the stomach. Liver, spleen, kidneys, and intestines healthy. The blood everywhere fluid, and of a dark colour. The connective tissue throughout the body of a soft, gelatinous consistence; this was most marked in the connective tissue of the mediastinum.

CASE 2.—Samuel F—, aged thirty-three years, unmarried, and had previously enjoyed good health; was sorting similar material. This case was under the care of Dr. Fawthrop. Deceased began to complain of pain in the chest, cough, and dyspnoea on the 24th July. He was seen by Dr. Fawthrop on the evening of the 26th July. He was then suffering from what appeared to be pneumonia of the right lung. The pulse was 126 per minute, temperature 103° F.; respiration hurried and laboured; great restlessness and sleeplessness. He died on the 28th.

An examination, which was made twenty-nine hours after death, revealed the following appearances:—Rigor mortis well marked; discoloration of the skin similar to that found in the first case. Brain apparently normal, except for a slight extravasation of blood from the choroid plexus of each lateral ventricle. Pericardium contained a good deal of clear serum. Heart normal in structure; the lining membrane of the ventricles, semilunar valves, and commencement of the aorta and pulmonary artery stained a bright cherry-red colour. The right pleural cavity contained four pints of serum. Right lung congested, and a little inflammatory exudation into the lower lobe. Left lung quite normal, except that its pleural cavity had been obliterated by a previous attack of pleurisy. Lymphatic glands pertaining to the right lung very much enlarged, soft, and contained a dirty-brown thick fluid; those on the left side normal. The mucous membrane of the trachea and bronchi of a dark purple colour, with here and there a minute extravasation beneath it. Spleen of normal size; perhaps a little softer

than usual. Stomach congested. Liver, kidneys, and intestines healthy. Blood dark and fluid.

In both cases blood drawn after death, as well as fluids taken from the pericardium, pleural cavity, and spleen, were examined by Drs. Bell and Jackson, myself, and others, and found to contain the bacillus anthracis in large numbers. In both these cases death may fairly be attributed to the occupation of the individual, inferior mohair locks being among the most dangerous class of materials to the wool-sorters, containing, as they do, a large amount of fleeces derived from animals which have died from anthrax. These fleeces are found to contain the bacilli anthracis in large numbers. Being packed in bags they are imported still retaining their vitality unimpaired. When the bags are opened and the fleece sorted, fine hairs containing the bacilli anthracis rise in the air, are inhaled, and supposed to enter the blood by the lungs. Once in, they multiply rapidly, and set up changes which too often end in the death of the infected individual. I have lately met with two or three suspected cases of this disease which ended in recovery. In these cases the bowels acted freely, and although there were great prostration, restlessness, &c., a recovery took place in a few days. In none of these cases were the lungs affected, and, of course, it will always remain a matter of doubt as to whether they were true cases of anthraxæmia or not. Blood taken from the arm showed no bacilli, but this likewise obtains in cases where the patient dies and the bacilli are found after death.

No special treatment has, I believe, as yet been found successful in the bad forms of this disease. In the cases which recovered the treatment adopted was saline purgation; chloral hydrate and bromide of potash, the two latter to combat the restlessness.

I am, Sir, yours, &c.,

SINCLAIR WHITE, M.D., M.Ch.

Bradford, August 2nd, 1880.

CREMATION OR BURIAL?

To the Editor of THE LANCET.

SIR,—After hearing a paper on Cremation last Thursday in the Section of Public Health, at the Cambridge Meeting, many of the members present signed the following address to the Home Secretary:—

“We, the undersigned, Members of the British Medical Association assembled at Cambridge, disapprove of the present custom of burying the dead, and desire to substitute some mode which shall rapidly resolve the body into its component elements by a process which cannot offend the living and may render the remains absolutely innocuous. Until some better mode is devised, we desire to promote that usually known as cremation. As the process can now be carried out without anything approaching to nuisance—and as it is not illegal—we trust the Government will not oppose this practice, when convinced that proper regulations are observed, and that ample guarantees of death having occurred from natural causes are obtained than are now required for burial.”

I have been informed that many more members would have signed this address if they had heard of it or seen it, and it is probable that members who were not at Cambridge, or others not members of the Association, might wish to sign it before it is presented. I shall therefore be obliged if you will allow me to make known through your columns that I shall be glad to receive by note or post-card the name of any gentleman who may desire to append his signature to the memorial.

I have the honour to be, yours &c.,

T. SPENCER WELLS.

Upper Grosvenor-street, W., August 17th, 1880.

INDIAN MEDICAL SERVICE PENSIONS.

To the Editor of THE LANCET.

SIR,—I am a surgeon-major in the Indian army of over twenty-two years' service, and should—as I fear will be the case—my health prevent my returning to India, I shall have to retire on a pension of £220, or as much of that as will remain after deduction of subscription to military and orphan funds and English income-tax.

Had every day of my service been spent in India I should

now be entitled to a pension of £292, but having been thrice obliged to take sick leave, the greater part of which is deducted from my service for pension, I am only entitled to the lower rate. I have had no leave in India, and none out of India except sick leave.

A medical officer of the British service is, on the completion of twenty years' service, the greater part of which has probably been in England or in temperate climates, entitled to a pension of £365; and, in his case, all leave is counted as service for pension.

Surely the man who has had to bear the burden and heat of the day in the scorching plains of India is entitled to *at least* an equally good retiring allowance when his health breaks down under the strain.

I trust you will use in behalf of the Indian Service the same able advocacy of our claims urged in your columns on behalf of the sister service, which tended so much to gain for its members the equitable pension rules which they now enjoy.

Yours truly,
SURGEON-MAJOR,
Senior Grade I.M.S.

MEDICAL NOTES IN PARLIAMENT.

In the House of Commons, on Thursday, the 12th inst. a copy was presented of an Order in Council, approving of additional regulations made by the Council of the Pharmaceutical Society of Ireland.

On Friday, a tabulated return was ordered, upon the motion of Mr. Hopwood, for the year 1847, and for each year from 1855 to 1878 inclusive, of the proportion per cent. of deaths from small-pox in England and Wales amongst infants of various ages up to ten years, and of the proportion of deaths among infants under one year, per million of births from each of the following causes: syphilis, scrofula, tabes mesenterica, skin disease, erysipelas, pyæmia and phlegmon, bronchitis, diarrhoea, atrophy and debility.—Lord F. Cavendish stated to Mr. Corbet that there had been no reduction in the grants to hospitals and infirmaries in Ireland. An apparent reduction in 1879 was due to an alteration in the period for which the account was made up.—Captain Aymer, on behalf of Mr. Grantham, asked the series of questions with regard to the compulsory retirement of Captain Chatterton, on a medical report, in January, 1869, which questions were printed in last week's LANCET. Lord Hartington, in reply, said he had no objection, for the satisfaction of the Honourable Member, to ask the Indian Government for a report on the case, but he must repeat that the case had been under the consideration of successive viceroys and secretaries of State, and he could not hold out any hope that the decision would be reversed. At the evening sitting, Mr. O'Connor Power called attention to the condition of the fever districts in the west of Ireland, with special reference to the bad state of the cabins. The hon. gentleman read copious extracts from the reports of the medical inspectors sent down by the Local Government Board, showing the squalid and unhealthy nature of the cabins, many of which consisted of one room, in which, besides the occupier's family, cows and pigs were kept. He also pointed out the references in the reports to the necessity for supplying the distressed population with a change of nutritious food. He admitted that, owing to the action of the Irish authorities the actual amount of disease had been much diminished, but urged that the insanitary condition of the dwellings required the serious and immediate attention of the Government, and that a competent medical staff should be organised and distributed over the districts affected by fever; and he concluded by moving a resolution to that effect. Mr. Sexton, in supporting the resolution, said the guardians in the west of Ireland were not fit to be trusted with the administration of the Poor Law. The most urgent want of the people was a change of food from Indian meal. He suggested that some of the veterinary surgeons who were kept by the unions should be got rid of, and qualified medical officers put in their place. After speeches from several other Irish members, Mr. Forster said the calamity and distress of this year would have one good result—in throwing a strong light upon the condition of the people in certain parts of Ireland. Probably, the county Mayo was about the worst, but parts of Galway were almost as bad. Admitting that the people were predisposed

to fever by bad sanitation and a want of sufficiently nourishing food, Mr. Forster said he believed they had now got over the stringent emergency of the crisis. Many of the suggestions of the mover of the resolution had been carried out, in supplying a change of food, an efficient medical staff, and a number of nurses, and highly encouraging results were now being reported. He had no objection to the resolution being adopted in a modified form, to the effect that the condition of the agricultural population of Mayo, Sligo, and Galway demanded the serious and immediate attention of the Government. Some further discussion ensued, in the course of which Dr. Lyons pointed out that a reform of the dwellings of the poor could only be brought about gradually. He wished to say a word with regard to the general medical service. He was sure Mr. O'Connor would not wish to throw any doubt upon the assiduity, ability, and zeal of the medical gentlemen who had charge of the sick poor in the fever districts. The medical inspectors had stated in the most cordial terms their approval of the manner in which the local practitioners in charge of dispensary districts had carried out their duties, remarking particularly upon the careful management of those gentlemen, and the readiness with which they exposed themselves, regardless of any risk. He could not believe that persons had had to go forty miles for dispensary relief, as had been stated. That must be an exaggeration; but it was a subject that required attention. He advocated the establishment of *depôt* hospitals in the villages during these fever outbreaks wherein the sick could be more successfully treated than in their wretched homes. Mr. O'Connor Power having accepted the suggestion of the Chief Secretary, the resolution, as amended, was agreed to.

On Monday, on the motion of Mr. Meldon, a return was ordered of the names of all medical officers of workhouses and dispensaries in Ireland who, since the passing of the Medical Officers Superannuation Act, 32 and 33 Vic. c. 50, have resigned their offices and applied to their boards of guardians for superannuation allowances under that Act, with the causes for such resignation; the ages and length of service as Poor Law Medical Officers of each person at date of resignation; the result of such application to the guardians; and the reason, if any, given by the said guardians for refusing the application.—Some discussion took place in Committee of Supply on the vote for the Broadmoor Lunatic Asylum. Mr. A. O'Connor complained that the salaries of the Broadmoor officers were much higher than those paid in the Dundrum Asylum, whilst the wages of the attendants were nearly double. Mr. Peel replied that year by year these estimates were being reduced. He did not think the salaries were excessive. A commission was now investigating the whole subject of Broadmoor. In answer to Mr. Briggs, the honourable gentleman stated that when the criminal lunatics were being transferred from Bethlehem to Broadmoor, one of them had become so much attached to the former place that he begged to be allowed to remain, and his request was granted. Mr. O'Connor, returning to the charge, contended that the attendants at Dundrum had double the work at half the pay of the Broadmoor attendants. They looked after seven patients apiece, whilst the Broadmoor attendants only looked after four apiece. The whole of the vote was extravagantly drawn up. For instance, books and newspapers cost £75 a year.—The Solicitor-General of Ireland mentioned that he had recently gone over the Dundrum Asylum and found it excellently managed.—Mr. Biggar moved to reduce the Broadmoor vote by £400, but the amendment was negatived, and the vote was agreed to.—A copy of revised rules for prisons in Scotland, under sanction of the Home Secretary, was presented.

On Tuesday petitions were received from Surgeon-Major Philip Warren Sutherland and Surgeon-Major Samuel Jardyne Wyndewe, for inquiry into their respective cases. Mr. McLaren presented the former petition, and Mr. Dick Peddie the latter, and both were ordered to lie on the table.—Petitions against the Vaccination Acts Amendment Bill continue to come in, notwithstanding the abandonment of the measure, and one was received to-day from the Hampstead Union.—Mr. W. Corbet gave notice that early next session he will "call attention to violations, not only in letter, but more in spirit, of the Charter of His Majesty King George the Second for erecting and endowing Saint Patrick's Hospital for Lunatics, Dublin, founded by the will of Dean Swift, and commonly called Swift's Hospital, and to all the circumstances connected with that institution"; and move a resolution,

Obituary.

WILLIAM WHITE WILLIAMS, M.D., F.R.C.P.

WE have to record the death of Dr. W. W. Williams, which happened on the 6th inst., at his house in Cheltenham, where, on the 2nd inst., he was suddenly seized with an attack of hemiplegia, from the effects of which he never rallied. He had for some years been in failing health, but not in a condition to cause any immediate anxiety to his family. Dr. Williams was born in April, 1815, and was thus in his sixty-fifth year. He was educated at the London Hospital, and he engaged for a few years in general practice in Oxfordshire, and subsequently at Hayes in Middlesex. Here he was attracted by the teaching of Dr. Conolly at Hanwell to the special study of mental disease, and in 1845 was appointed medical superintendent of the Gloucester County Asylum—his native county. He held this office till 1863, when he retired in ill-health, receiving from the Quarter Sessions a liberal pension, and the appointment of honorary consulting physician to the asylum. During his tenure of office at Gloucester the charity foundation was separated from the county funds, and the private patients transferred to the new Lunatic Hospital at Barnwood, which owed its origin and much of its early success to Dr. Williams's foresight and judgment, and of the Governing Committee of which he continued to the last a member.

Dr. Williams was also for many years honorary secretary of the Medico-Psychological Association. He shared with Mr. Gaskell and Mr. Wilks—both subsequently Commissioners in Lunacy—and with Dr. Bucknill, F.R.S., the early labours which built up, on Lord Shaftesbury's Act of 1845, our present English public asylum system, on the foundation-stone of the non-restraint system, which he had learnt from Dr. Conolly's teaching at Hanwell.

Subsequent to his retirement from office in 1863 Dr. Williams lived in Cheltenham, and to the last took the warmest interest in the progress of medical science. There were few new books he did not read, and the latest writings on psychological medicine found in him a diligent student. A man of retiring disposition, and with but a modest estimate of his own powers, his great gifts of organisation and industry were hardly known beyond the sphere of his daily work. Of blameless life, of warm domestic sympathies, and of unvarying hospitality, his family and his old trusted friends—like the writer of these few memorial lines—alone knew his full worth, or are able to measure their own great loss, and which, from the suddenness of the blow, they hardly yet know as they will, when, in the dull years to come, they begin to miss his wise and gentle counsel, and to long once more for his genial welcome.

Medical News.

UNIVERSITY OF LONDON.—The following candidates have passed the recent First M.B. Examination for Honours in the subjects indicated:—

ANATOMY.

FIRST CLASS.

Cooper, Geo. Fredk. (Gold Medal), St. Thomas's Hospital.

THIRD CLASS.

Evans, Charles Silvester, St. Thomas's Hospital.
Moline, Paul Frank, University College.
Martin, Sidney Harris Cox, B.Sc., University College.
Horrocks, William Heaton, Owens College.
Norvill, Frederic Harvey, King's College.

PHYSIOLOGY AND HISTOLOGY.

FIRST CLASS.

Price, John Alfred Parry (Exhibition and Gold Medal), Guy's Hospital.
Tunzelmann, E. W. von (Gold Medal), University College.
Halliburton, Wm. Dobinson, B.Sc., University College.

SECOND CLASS.

Horrocks, William Heaton, Owens College.
Equal merit. { Booth, Edward Hargrave, Guy's Hospital.
Martin, Sidney Harris Cox, B.Sc., University College.

THIRD CLASS.

Collier, Joseph, Owens College.
Evans, Charles Silvester, St. Thomas's Hospital.

CHEMISTRY.

FIRST CLASS.

Price, John Alfred Parry (Exhibition and Gold Medal), Guy's Hospital.
*Overend, Walker, B.Sc., St. Bartholomew's Hospital.
(* Obtained the number of marks qualifying for a Medal.)

SECOND CLASS.

Stephens, Lockhart Edward Walker, Guy's Hospital.

THIRD CLASS.

Spicer, Robert Henry Scanes, B.Sc., St. Mary's and Guy's Hospitals.

MATERIA MEDICA AND PHARMACEUTICAL CHEMISTRY.

FIRST CLASS.

Halliburton, Wm. D., B.Sc. (Exhibition and Gold Medal), University College.

SECOND CLASS.

Brooks, Walter Tyrrell, King's College.
Overend, Walker, B.Sc., St. Bartholomew's Hospital.
Wilkinson, Wm. Camac, B.A. Sydney, University College.

THIRD CLASS.

Equal merit. { Beverley, John Metcalfe, Owens College.
Price, John Alfred Parry, Guy's Hospital.
Faulkner, Joseph, St. Bartholomew's Hospital.
Adams, William Coode, University College.
Berry, James, St. Bartholomew's Hospital.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Aug. 12th:—

Creswell, John Charles, Bromsgrove.
Newcombe, Frank, Derby.
Fotherby, Henry Arthur, Finsbury-square.
Oswold, Robert James William, Kennington-road.
Palmer, Harold Lewis, Haverfordwest.
White, Edwin Francis, Putney.

The following gentlemen also on the same day passed their Primary Professional Examination:—

Alexander Lane, Guy's Hospital; Ernest Llewellyn, London Hospital.

UNIVERSITY OF GLASGOW.—The following are lists of candidates on whom the degrees of M.D., B.M. & C.M., and B.M. were conferred by the University on July 29th:—

DOCTORS OF MEDICINE.

*Bryce, James, M.B., Scotland.	Hunt, Thomas, M.B., Scotland.
Denniston, Jas., M.B., Scotland.	Hutchison, Jas., M.B., Scotland.
Dun, Wm. G., M.B., Scotland.	Jones, Jas. Arthur, M.B., Wales.
Elder, George, M.B., Ireland.	Young, Thomas, M.B., Scotland.
Gemmell, Samson, M.B., Scotland.	

* Commended for Thesis.

BACHELORS OF MEDICINE AND MASTERS IN SURGERY.

Adam, Alexander, Australia.	Mackay, Hugh, Scotland.
Anderson, Matt. S., M.A., Scotld.	Macindoe, Alexander, Scotland.
Blyth, David, Scotland.	Macintosh, Malcolm, Scotland.
Bond, John, Scotland.	M'Crorie, Archibald, Scotland.
Boyd, James D., Australia.	M'Culloch, Allen, Scotland.
Brown, John T., Scotland.	M'Dougall, Hugh, Scotland.
Campbell, Walter Scott, Scotld.	M'Gregor-Robertson, J., M.A., Scot.
Campbell, William A., Scotland.	M'Kenzie, John, Scotland.
Davidson, Thomas, Scotland.	M'Lennan, Quintin, Scotland.
Dinsmore, Geo. H. J., England.	M'Leod, Donald, Scotland.
Fraser, William, Scotland.	M'Vean, John D., Scotland.
Gemmell, Thos. P., Scotland.	Martin, Alexander, Scotland.
Gilbert, Robert, Scotland.	Miller, Robert, Scotland.
Gilchrist, Robert M., Scotland.	Morison, Donald, Scotland.
Grant, David, Scotland.	Morton, Alex., M.A., Scotland.
Gregson, Thos. W., England.	Muir, James F., Scotland.
Gupta, Pyari Mohan, India.	Ochiltree, E. G., Australia.
Hogarth, And. A., M.A., Scotld.	Parmer, William F., India.
Inglis, David W., M.A., Scotland.	Picken, James, Scotland.
Johnston, Alex., Scotland.	Reid, John, Scotland.
Jones, Wm. Rees, Wales.	Ritchie, John, Scotland.
Kaye, James, Scotland.	Scott, George, England.
Kerr, J. G. Douglas, Australia.	Speirs, John L., Scotland.
Kilpatrick, Alex., Scotland.	Steven, John Lindsay, Scotland.
Kirkland, Robert, Scotland.	Stevenson, John, Scotland.
Kyle, David H., Australia.	Stewart, Alexander, Scotland.
Laing, Wm. A. G., England.	Stewart, Thomas, Scotland.
Ledingham, Alex. N., Scotland.	Tannahill, Thomas F., Scotland.
Liddle, Wm. T., Scotland.	Taylor, Robt. G., C. of Good Hope.
Love, James K., Scotland.	Topping, John P., Scotland.
Macaulay, John T., Scotland.	Wilson, James A., Scotland.
Mackay, Alex. D., Scotland.	Walker, John M., Scotland.

BACHELORS OF MEDICINE.

Babbie, William, Scotland.	Palmer, Benj. A., Ireland.
Brown, Wm. H. J., Scotland.	Pollock, Chas. Fred., Scotland.
Cluckie, Niven Gordon, Scotland.	Rankin, Guthrie, Scotland.
Macintyre, Alexander, Scotland.	Turnbull, Ridley, England.

The following gentlemen were named as entitled to Honours, to High Commendation, and to Commendation, on account of distinguished merit at the various examinations for the degrees of M.B. and C.M.:—

HONOURS.

Hogarth, Andrew A., M.A.	Robertson, Joseph M'Gregor, M.A.
Steven, John Lindsay.	

HIGH COMMENDATION.

Inglis, David W., M.A.

Pollock, Charles Fred.

COMMENDATION.

Anderson, Matthew S., M.A.

Blyth, David.

Fraser, William.

Gilbert, Robert.

Grant, David.

Love, James K.

McDougall, Hugh.

Mackintosh, Malcolm.

Mackay, Hugh.

Martin, Alexander.

Morton, Alexander, M.A.

Palmer, Benjamin A.

Rankin, Guthrie.

THE LIBRARY of the Royal Medical and Chirurgical Society was closed on Monday, August 16th, and will be reopened on Thursday, September 16th.

THE salary of Mr. T. L. Gentles, L.F.P.S. Glas., medical officer for the southern district of the Derby Union, has been increased from £80 to £100 a year.

SIX CHILDREN and a servant, belonging to a household in Barnsley, were recently attacked to a serious extent with symptoms of irritant poisoning after partaking of corned beef which had been enclosed in a 2-lb. tin in the ordinary manner.

A ROYAL WARRANT has been promulgated in reference to the promotion of army veterinary surgeons for distinguished service. It provides that "in a case of distinguished service a veterinary surgeon, if qualified, may be promoted to the rank of first-class veterinary surgeon without reference to seniority."

THE FRENCH HOSPITAL.—The French Ambassador, M. Challemeil-Lacour, accompanied by the Comte de Florian, of the French Legation, paid a visit on the 14th inst. to the French Hospital and Dispensary, Lisle-street, Leicester-square.

WEST OF ENGLAND SANATORIUM.—At the annual meeting of the friends of this institution, held at Frome on the 11th inst., the report read showed that 719 patients had received the benefits of the charity, as compared with 638 in the previous year. The receipts for the past twelvemonth were £2037 18s. 8d., and the expenditure (with an investment of £50) £2122 17s. 4d.

REQUESTS TO MEDICAL CHARITIES.—Mr. Johnston, W.S., bequeathed £100 to the Royal Infirmary, £25 to the General Dispensary, £25 to the Hospital for the relief of persons suffering under infectious disease, all of Aberdeen; and £50 to the Edinburgh Royal Infirmary. By the will of Mr. Henry Crawter the National Hospital for the Paralysed and Epileptic becomes entitled to £200. The late Mr. Hugh Wardlaw of Belfast has bequeathed £100 per annum to the Belfast Royal Hospital, £50 per annum to the Belfast Charitable Society, and £50 per annum to the Ulster Institution for promoting the Education of the Deaf, Dumb, and Blind.

LONGEVITY IN ENGLAND.—The mortality returns for England in the year 1878, which have recently been completed, record the deaths of 230 men and 510 women registered as ninety-five years old and upwards when they died. Twenty-four of the men and sixty-four of the women had reached a hundred and upwards, viz., twelve males and twenty-seven females, 100 years; five males and thirteen females, 101; two males and eight females, 102; three males and seven females, 103; one male and four females, 104; 1 male and 4 females, 105; and one female who died in the Luton district, 106. Eight of these centenarians, one male and seven females, died in London districts.

A NEW CONVALESCENT HOSPITAL FOR PLYMOUTH AND DEVONPORT.—Up to the present time there had not been any provision for convalescent patients in the neighbourhood of Plymouth. To meet this urgent want a house has been purchased at Plympton, which is situated about five miles from Plymouth, on the skirts of Dartmoor. It is well placed upon the side of a hill in a healthy, airy situation, and has a small garden attached, where patients may sit and inhale the pure air from the moor, and yet be sheltered from the east wind. The house has been purchased, enlarged, fitted, and furnished at the sole cost of Miss Middleton, of Plymouth, a lady well-known in that town as a benefactor of the poor. She has placed the establishment in the hands of trustees, and two sisters of charity, who have had considerable experience in the convalescent house at Walton, near Cliefden, are now in charge. There is accommodation for ten patients of the female sex, and the medical men of Plympton,

Drs. Aldridge, Ellery, Miles, and Stamp have undertaken the medical charge. It is hoped that the House of Rest, or convalescent hospital, may prove of service to a numerous class of young women who are engaged in business, and who, from overwork or other causes, may require rest and change of air more than medicine for their restoration. Surgical cases will also be admitted, and it would therefore be a great boon to the general hospitals in Plymouth and Devonport if each had a bed in the House of Rest at their disposal. As the Home will be kept open all the year round, it will be available for cases of threatening phthisis which might be sent from the northern towns, the climate of Plympton being very similar to that of Torquay. As there is no endowment, the work will have to depend for support upon the subscriptions and donations of the charitable, and such assistance is being earnestly solicited by the committee. Subscribers of one guinea will be furnished with a letter, which will enable them to send a patient for a period of three weeks, the patient paying 3s. per week. Patients will also be admitted on payment of 12s. per week on the recommendation of a medical man.

Medical Appointments.

Intimations for this column must be sent DIRECT to the Office of THE LANCET before 9 o'clock on Thursday Morning, at the latest.

BROWN, A. S., M.R.C.S.E., L.S.A., has been appointed House-Surgeon to the Warneford Hospital, Leamington.
 CONSTABLE, J., M.D., C.M., Leuchars, has been appointed Medical Officer and Public Vaccinator for Dairsie, vice J. W. R. Mackie, M.D., deceased.
 DONKIN, W. F., M.A., has been appointed Public Analyst for the County of Wilts. Remuneration by fees.
 ELLIOTT, H., M.R.C.S.E., L.S.A., has been appointed House-Physician to the North Staffordshire Infirmary, Hartshill, Stoke-upon-Trent, vice Shaw, resigned.
 FINEGAN, A. D. O'C., L.K.Q.C.P.I., R.C.S.I. L.M., has been appointed Assistant Medical Officer to the St. George's-in-the-East Infirmary and Workhouse, vice W. J. Sprott, resigned.
 FORSYTH, R., M.D., C.M., has been appointed Medical officer of Health for Drighlington, Yorkshire.
 FRASER, G. B., M.R.C.S.E., L.S.A., has been appointed Honorary Medical Officer to the West of England Sanatorium.
 HACON, W. E., L.R.C.P.L., M.R.C.S.E., has been appointed Resident Medical Superintendent of the Christchurch Lunatic Asylum, Canterbury, New Zealand.
 HALL, Mr. T. L., has been appointed House-Surgeon to the Bridgnorth Infirmary and Dispensary, vice Gray, resigned.
 HAYES, T. E. D., L.K.Q.C.P.I., M.R.C.S.E., L.S.A., has been appointed Medical Officer to the Hawkhurst District of the Cranbrook Union.
 JACOB, E. H., M.A., M.D., has been appointed Honorary Physician to the Leeds Fever Hospital.
 MARSH, C. J., M.R.C.S.E., has been appointed Medical Officer for the Second District of the Yeovil Union, vice Garland, resigned.
 MELLER, C. M., M.D., M.R.C.S.E., L.S.A., has been appointed Medical Officer to the Carisbrooke District of the Isle of Wight Union.
 MILNE, T. M., M.D., has been appointed Medical Officer of Health for the Borough of Accrington, vice Ewart, resigned.
 ORFEUR, C. H., M.R.C.S.E., L.S.A., has been appointed Medical Officer to the Workhouse of the Bedminster Union.
 PRICHARD, J. E., B.A., M.B., M.R.C.S.E., L.S.A., has been appointed Resident Medical Officer to the Swansea Hospital, vice Phillips, resigned.
 ROXBURGH, R., M.B., has been appointed Honorary Consulting Physician to the West of England Sanatorium, vice J. J. E. Willmott, M.B., resigned.
 STONHAM, Mr. C., has been appointed Obstetric Assistant to University College Hospital.
 TICEHURST, C. S., M.R.C.P.E., &c., has been appointed Surgeon to the Petersfield Cottage Hospital, vice T. Moore, resigned.
 VLELAND, C. J., M.R.C.S.E., L.S.A., has been appointed House-Surgeon and Secretary to the General Infirmary, Hertford, vice G. H. Cressey, resigned.
 WRIGHT, A. H., M.D., has been appointed Associate Lecturer on Physiology in the Toronto School of Medicine.

Births, Marriages, and Deaths.

BIRTHS.

AIKMAN.—On the 30th ult., at New-street, Guernsey, the wife of John Aikman, M.D., of a daughter.
 BOWES.—On the 12th inst., at Berry Wood, Northamptonshire, the wife of J. Ireland Bowes, M.R.C.S.E., of a son.
 DAVIDSON.—On the 17th inst., at Priory-row, Coventry, the wife of Charles Davidson, M.D., of a son.
 GOODHART.—On the 12th inst., at Hervey-road, Blackheath, the wife of James F. Goodhart, M.D., of Weymouth-street, Portland-place, W., of a son.
 POWELL.—On the 14th inst., at Bromyard, the wife of Wm. Powell, M.R.C.S.E., of a son.
 STEVENS.—On the 16th, at High-street, Stoke Newington, N., the wife of A. Felix Stevens, M.D., of a daughter.

MARRIAGES.

HENTSCH—HORA.—On the 1st inst., at St. Giles's, Camberwell, John Page Hentsch, M.R.C.S., of The Terrace, Camberwell, to Edith, eldest daughter of Winfield Hora, Esq., of Camberwell.

MAYBURY—CURTIS.—On the 18th inst., at the Parish Church, Porchester, by the Rev. S. Lidbetter, Vicar of St. Mark's, Portsea, assisted by the Vicar, the Rev. T. Knight, Aurelius Victor Maybury, M.D., fourth son of William Augustus Maybury, Esq., Surgeon, Cedar Lodge, Frimley, Surrey, to Mary Elizabeth, eldest daughter of George Curtis, Esq., J.P., of Porchester.

MESSER—BELCHES.—On the 11th inst., at St. James's Church, Plymouth, Adam Brunt Messer, M.D., Fleet Surgeon, Royal Navy, to Elizabeth Mary, youngest daughter of Peter Belches, Esq., Commander R.N.

MYERS—BARTLETT.—On the 18th inst., at St. Paul's, Camden-square, N.W., by the Rev. Thomas Moore, Henry Reynolds Myers, Surgeon, to Laura Isabelle Bartlett, fourth daughter of Mrs. Thos. Boulton, of Gweedore House, Lee, Kent, and widow of the late Stephen Bartlett, Esq., of Belsize, Hampstead, N.W. No cards.

ROGERS—MABYN.—On the 7th inst., at St. Mark's, Myddelton-square, E.C., J. F. Rogers, L.R.C.P., M.R.C.S., to Eliza Coulson, daughter of the late George Maby, Esq., Bath.

ROUTH—ROUTH.—On the 14th inst., at the Parish Church, St. Mary-lebone, Amand Jules McConnel, M.R.C.S., L.R.C.P.L., eldest son of Dr. Routh, of Montagu-square, London, to Blanche Rothwell, daughter of the late Richard Routh, Esq., of Constantinople.

DEATHS.

DAVIS.—On the 16th inst., at Conie Brae, West Malvern, Henry Davis, M.D., F.R.C.S., formerly of Putney, aged 70.

HERBERT.—On the 11th, at Markyate-street, near Dunstable, Jonas Travers Herbert, L.R.C.P.Ed., L.R.C.S.Glas., aged 39.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

BOOKS ETC. RECEIVED.

BERMINGHAM & Co., New York.

Fracture of the Patella. By Dr. F. H. Hamilton. pp. 106.

BLACK, A. & C.

Picturesque Tourist of Scotland. Twenty-second Edition. pp. 664. Illustrated.

KEGAN PAUL & Co., London.

Animal Magnetism: Physiological Observations. By Rudolf Heidenhain, M.D. Translated from the Fourth German Edition by L. C. Wooldridge, B.Sc. Lond. With a Preface by G. J. Romanes, M.A., F.R.S. pp. 108.

LONGMANS, GREEN, & Co., London.

Lectures on the Science and Art of Education. With other Lectures and Essays. By the late Joseph Payne. Edited by his son, Dr. J. F. Payne. pp. 386.

The Englishman's Illustrated Guide-book to the United States and Canada.

Transactions of the National Association for the Promotion of Social Science; Manchester Meeting, 1879. pp. 320.

Leçons Cliniques sur l'Uréthrotomie Interne. Par le Dr. E. Delefosse. (Baillière et Fils.)—The Veterinary Journal, August.—Good Words, August.—Sunday Magazine, August. (Isbister & Co.)—Fraser's Magazine, August. (Longmans.)—Seventy-seventh Annual Report of the Society for the Suppression of Vice.—Azione della Chinina sulla Sensibilità e suo Potere Tossico.—Sunstroke as seen in India. By Surgeon-Major W. Curran.—Die Pneumatische Behandlung der Respirations- und Circulations-krankheiten im Anschluss an die Pneumatometrie und Spirometrie. Von Dr. L. Waldenburg. (Verlag von A. Hirschwald.)—On Dry Ash and Earth-Closets. By Leonard Armstrong.—Origin and Mode of Development of the Morphological Elements of Mammalian Blood. By Dr. R. Norris.—Fashion in Deformity. By Prof. Flower.—Archiv für Augenheilkunde. Band IX.—The Contemporary Review, August. (Strahan & Co.)—La Peste en Turquie: Les Trois dernières Epidémies de Peste du Caucase. Par Dr. J. D. Tholozan. (Masson, Paris.)—Report of the Inspector of Lunatic Asylums on the Hospitals for the Insane for 1879. (Victoria.)—The Great Eastern Railway Company's Tourist Guide to the Continent.—A Few Remarks on the Necessity for further Suppression of Infectious Disorders. By D. Murdoch, M.R.C.S. (Stanford.)—The Medical Embassy to England.—Journal of Science, August.—Preservation of Health in India. By Sir Joseph Fayrer, K.C.S.I., M.D. (Kerby & Edean.)—Sick Nursing at Home. By S. F. A. Caulfield. (Bazaar Office.)—Conveyance of the Contagium of Anthrax to Hair-factory Workers. By Dr. J. B. Russell.—Report of Cases under Treatment in the Seamen's Hospital.—Transactions of the American Dermatological Association.—First Annual Report of the State Board of Health, Lunacy, and Charity of Massachusetts.—Dublin Journal of Medical Science, August.—Treatment and Cure of Gout, Gravel, and Rheumatism. By Dr. Quarante.—Di un Nuovo Criterio per determinare con rigore scientifico il valore relativo dei diversi Antisettici. Del Professor V. Chirone.—Proceedings of the Medical Society of the County of Kings.—Monthly Review of Dental Surgery.—Address to the Graduates in Medicine at Glasgow University. By Dr. John Cleland. (Maclehose.)—New York Medical Journal, August. (Appleton.)—On some Important Advantages to be secured by Oblique Section of the Skin in Surgical Operations. By Dr. J. H. Packard.—Journal of Science, August.—Journal de Médecine, de Chirurgie, et de Pharmacologie.—British Journal of Dental Science, August. (Churchill.)—Lunacy Reform: The Right of the Insane to Liberty. By Dr. Seguin.—Contributions to the Clinical History of the Multiple Neuroma. By Dr. Prudden.—I Clisteri Nutritivi e l'Alimentazione per il Retto. Del Dr. Michellacci.

METEOROLOGICAL READINGS.

(Taken daily at 8 a.m. by Steward's Instruments.)

THE LANCET OFFICE, August 19th, 1880.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radiation in Vacuo	Max. Temp. in Shade	Min. Temp.	Rain fall.	Remarks at 8.30 A.M.
Aug. 13	30.10	N.	63	60	109	73	59	..	Overcast
" 14	30.12	N.E.	63	60	105	74	59	..	Overcast
" 15	30.19	N.N.E.	63	60	92	69	62	..	Overcast
" 16	30.08	E.	60	58	80	68	57	..	Overcast
" 17	30.09	N.E.	64	60	104	76	58	..	Overcast
" 18	30.14	E.	62	58	85	70	58	..	Overcast
" 19	30.06	E.	61	59	99	71	57	..	Overcast

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Local papers containing reports or news-paragraphs should be marked.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

Lectures, original articles, and reports should be written on one side only of the paper.

We cannot prescribe, or recommend practitioners.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET to be addressed "To the Publisher."

THE BOARDING-OUT SYSTEM.

THE benefits attending the boarding-out of pauper children are distinctly affirmed and set forth in a report recently issued by a committee appointed by the Leeds Board of Guardians to inquire into the system as carried out in that union. They state that the success of the scheme has fully answered their expectations, and they confidently point to the children in the homes in which they have been placed for confirmation of the favourable opinion expressed in the report. Before being sent out, the children undergo a careful medical examination, and no child is allowed to be received until a certificate of fitness has been signed. Great care is taken to select healthy homes with persons of good character and habits, and the committee believe their efforts to secure these essentials have been so far successful. The average cost per head of 86 children thus boarded out, including maintenance, school and medical fees, and clothing, is estimated at 5s. 3d. per week.

Dr. J. Brown Sim will find the articles referred to in THE LANCET of May 18th and 25th, 1878.

Ambulance.—We were not aware of the existence of the Society named.

"RUNNING" IMPULSE IN EPILEPSY.

To the Editor of THE LANCET.

SIR,—Last year, when acting in association with Dr. Thomson, of Peterborough, I met with what was to me an unusual case of epilepsy. I should be glad to know if any of your readers have seen the seizure take a similar form.

A. W.—, aged twenty, labourer, employed in a brick-field near the town, while engaged in his ordinary occupation, suddenly became unconscious, and appeared to be seized with an irresistible impulse to run; the load he was carrying dropped from his shoulder, and after running about two hundred yards he fell into a pit half full of water, which happened to be in his way, and had it not been for the timely help of a fellow-workman the case would have ended in drowning. As it was, the man had the appearance of prolonged immersion, and required some care to "bring him round." I was informed that the patient had been subject to these attacks at intervals for some years, and that only six weeks previously he ran a distance of seven miles, when he was stopped on the road, and conveyed back to Peterborough. After resting an hour or two to overcome the fatigue of the attacks, work was usually resumed, provided no accident occurred.

The act of running can scarcely be looked upon as a form of aurage because there was no subsequent spasm, either tonic or clonic.

I am, Sir, yours truly,
J. D. MILLER, M.B. Edin.

Brampton, Cumberland, Aug. 7th, 1880.

NEW SYDENHAM SOCIETY.

THE Report of this Society presented to the twenty-second annual meeting, after enumerating the works issued in 1879, announces the probable series for the current year as follows:—1. A third fasciculus of the Society's Lexicon (already out). 2. The fifth and concluding volume of Hebra's Treatise on Skin Diseases, with index to the whole (already out). 3. Koch's Researches on the Etiology of Diseases consequent on Wound Infection. 4. A third fasciculus of the Society's Atlas of Pathology, comprising Diseases of the Liver. 5. A fourth fasciculus of the Lexicon. The Council has adopted for reprinting, the classical Treatise of Dr. Stokes on Diseases of the Chest. This work, which has been always held in very high estimation by all authorities, has been for some time out of print. It will be edited for the Society, with short annotations &c., by Dr. Hudson, of Dublin. It has also been decided to edit for the Society a selection from the works of Duchenne, and Dr. Vivian Poore has, at the Council's request, undertaken the preparation of the work. The translation of Professor Charcot's Lectures on the Diseases of Old Age, and on certain Chronic Maladies, has been decided on. The work has been placed in the hands of Mr. William S. Tuke. The preparation of the Society's Lexicon is, in the hands of its editors, Mr. Power and Dr. Sedgwick, progressing satisfactorily and as rapidly as the difficulties of the task permit. Three fasciculi have been issued, and another is just ready. It is to be distinctly understood that the fasciculi of this work are always issued as soon as ready. The Council is prepared to devote to it any portion of the year's income that may be requisite, and nothing but the onerous nature of the editors' task will be allowed to delay its publication. The balance in hand at the close of the year was £1367 1s. 9½d.

M.R.C.S. Eng.—The facts are very important, and should be communicated to any Corporation which may give its diploma to the person in question; but we cannot publish them.

X. Y. Z.—We have had a long correspondence on the subject recently.

THE UPPER ENGADINE, ST. MORITZ.

To the Editor of THE LANCET.

SIR,—Fashion has been charged as the ruling element in making the Upper Engadine a place of such well-known resort to invalids. If so, fashion for once is largely in the right. I have just returned from a sojourn there of eighteen days, ending July 17th, and can verify the accredited health-giving character to this place. During our stay we had rain for a portion of three days, several violent thunderstorms, particularly at night. The days were warm, the evenings and nights cold, necessitating extra covering—in fact, a hot-water bottle to the feet of a visitant is occasionally not an unacceptable adjunct to preparation for sleep. This is not peculiar to St. Moritz, but applies generally to all Alpine regions. Taking into account the altitude of St. Moritz, 5500 feet above sea-level, its temperature is as high as many places from 1000 to 2000 feet lower. The absolute dryness of the air; the diminished barometrical pressure, which is pretty even during summer and winter; the highly electrical condition of the atmosphere; the continuous air-currents which sweep through the valley, together with a universally increasing appetite and a corresponding digestion, form healthmates of no ordinary kind. In winter air-currents are less—in fact, there is hardly any wind, and the only disturbers of the place are thunderstorms. Consumption in the Engadine is unknown.

The waters, containing iron and soda salts, and also being freely charged with carbonic acid, are of an agreeable kind, and, like all waters with such surroundings, play good secondary parts as restorers of health. The enjoined rules for drinking the water and taking the baths are of the greatest moment to many who never observe rules; and, if residents at the "kurhaus," sleep is out of the question after 7 A.M., when a well-arranged band begins its programme. The cases best suited for the Engadine are those of anemia and convalescence. Rheumatic cases (I speak in this personally) may return as they went; if with a short probation. I should not under any circumstances suggest or sanction an invalid going to the Engadine for a period less than a residence of one or two months. The necessary five days' journey each way cannot otherwise be compensated for.

The Engadine has been charged with harpies, starvation, and barrenness. Harpies will hang on wealth, and that which belongs to the English spoils the pristine beauty of every place it touches. Starvation must be unknown where numberless hotels vie with each other in the moderateness of their charges and the profuseness of the table. Surely from 10 to 15 francs per day inclusive, when the whole season is only from July 15th to September 15th, cannot be considered high charging.

In regard to the selection of locality, I chose the village itself, which stands about 150 feet higher than the valley, and an easy walk to the baths.

Expenditure belongs purely to the requirements of the individual. He who finds barrenness in such grand and varied mountain ranges, clad by the mountain rose and numberless floral gems, as also by the fine clumps of the Alpine fir, must have been tutored in some unknown arcadia, where one would fear the breath of life could not be breathed as in the Upper Engadine.

Yours truly,

Argyll-street, Regent-street, August, 1880. JOHN McOSCAR, M.D.

A GIGANTIC REPTILE.

AMONG the recent additions to the Geological Department of the Museum of Natural History, Central Park, New York, are some bones of reptiles obtained from the ancient cretaceous seas of Kansas and Colorado. As an illustration, we may mention that the thigh-bone of a species of *Atlantosaurus* now exhibited is upwards of six feet in length; while to show the contrast, resting close to it, is the corresponding bone, six inches long, of the largest species of crocodile of the present time. Scientists have considered that reptiles of this class reached two hundred feet in length; but since the discovery of the *Atlantosaurus* another huge form has, according to the *Scientific American*, been found, the thigh of which measures over twelve feet in length.

M.R.C.S.—The subject is one which cannot be pursued with practical advantage further than it has been carried in works on the Skin.

Mr. J. Astle.—We have no knowledge of the medicine named.

DERMOID TUMOURS OF THE CORNEA.

To the Editor of THE LANCET.

SIR,—In answer to "Coursers's" letter, I may refer him to the fifteenth volume of the Pathological Society's Transactions, in which he will find a drawing illustrative of the eyeball of an ox, on the anterior part of which hair may be seen growing from it. The specimen is to be seen in the museum of St. Bartholomew's Hospital. It is thus described in the catalogue: "A tumour, which appeared to be composed of fat and condensed cellular tissue covered by skin, grew from the outer half of the cornea and sclerótica. The conjunctiva appeared to be lost in the integument which enveloped the tumour. Long hairs, with true bulbs, grew from the skin on the surface of the tumour." Cases of a similar nature in the human subject are to be found in the Ophthalmic Hospital Reports for 1860-61, and in the works of Mr. Wardrop and Von Ammon. I may also refer to the *Journal of Anatomy and Physiology* for October, 1879, for an interesting case of development of hair on the eyeball of a dog, recorded by Mr. G. E. Dobson.

I remain, Sir, yours obediently,

Norwich, Aug. 1880.

CHARLES WILLIAMS, F.R.C.S.

To the Editor of THE LANCET.

SIR,—Your correspondent, inquiring in THE LANCET of the 7th inst. respecting the above subject, will find a similar case, with the treatment adopted, in the *Veterinary Journal*, vol. iv., p. 245. There are three other cases of corneal dermatoma recorded in the same volume.

Yours truly,

Dartford, Aug. 17th, 1880.

W. A. EDGAR, M.R.C.V.S.

* * WE may direct attention also to an article in the July number of the *Philadelphia Medical Times*, in which is published a paper by Dr. J. B. Roberts on the above subject. Specimens of the abnormality, removed from a young bullock, were shown at the Philadelphia County Medical Society. Each cornea was partially covered by a circular, somewhat elevated growth, closely studded with reddish hairs about three-eighths of an inch long, such as are seen on the skin of oxen. In one eye the tumour involved the sclerotic region, and then invaded the cornea to about one-third, while in the other organ the growth appeared to be limited almost exclusively to the corneal tissue. The tumours were nearly the size of a ten-cent piece, and in one the continuity of the conjunctiva and the sclerotic with the surface of the growth was readily apparent.—ED. L.

Pericula.—We fear our correspondent, in the present state of the law, would not be able to recover charges for attendance during the period in which his name was erased from the Register owing to change of address.

Mr. F. B. Lee.—Anatomy: Ellis's Demonstrations; Gray or Quain. Physiology: Kirkes or Foster.

C. S.—Bischof's spongy iron filter, 505, Oxford-street.

A. K. C.—We are not aware of the facts.

THE NAVAL MEDICAL SERVICE.

To the Editor of THE LANCET.

SIR,—IN THE LANCET of August 7th, the letter of "Roderick Random" draws attention to the Admiralty again passing over their own medical officers. The writer seems not to be aware that their lordships reduced the salary one-third, from £150, as heretofore, to £100 at present, at least so far as is publicly known. The private communications about this £50 a year must have been interesting, as no information or announcement about it was made to others. This is probably the great reason (and their lordships have always a surfeit of reasons for refusing or giving); but the political and diplomatic may have influence to counteract or propitiate Dr. Nevins and his party. It is surprising that civil practitioners in any practice can accept such appointments, not alone for the peculiar duties, but the time that is consumed if the regulation time is kept, and there is not otherwise undue hurry. This and the other appointments held by civilians under the Admiralty may suggest to the youthful medico thinking of entering the Royal Navy the prudence of remaining a civilian.

August 11th, 1880.

Yours &c.,

Z.

POPULAR SANITARY LITERATURE.

THE House and Home, a publication which conveys in a popular style much useful information on matters connected with the health and comfort of households, has now, we are informed, become the recognised organ of the Working Men's Club movement. The number for August 14th contains a good portrait of Professor Huxley.

Dr. Irving is referred to page 199 of *THE LANCET* of July 31st for the answer to his previous letter. He is thanked for the extract from the *Englishman*, which, however, we had previously received from India.

Students.—1. Lionel Beale's.—2. Baker's, 244, High Holborn.

Puzzled.—We should recommend our correspondent simply to live down the false report.

Mr. W. J. Kilner.—The paper is marked for insertion.

SUPRA-PUBIC PUNCTURE OF THE BLADDER.

To the Editor of *THE LANCET*.

SIR,—With reference to Mr. Marsh's letter on the above subject in your issue of May 8th, I have much pleasure in forwarding you a few notes of a case in which I performed the operation on a native.

On Nov. 20th, 1875, when in charge of the Civil Hospital, Malligam, I was called up to see a bunya (or native merchant), who was suffering from retention of urine. The man had been very much catheterised previous to my seeing him by the native doctor. The patient was apparently about twenty-seven years old, and presented all the symptoms of retention, the bladder reaching nearly to the umbilicus. I attempted to pass a catheter, beginning with a No. 8, but failed. There being no curved trocar and cannula by which the bladder could be punctured per rectum, I punctured the bladder with a small trocar and cannula above the pubes, and drew off a very large quantity of urine, to the great relief of the man. The cannula was tied in, and a plug put into the hole to prevent the urine dribbling. I ordered him a chloral draught.

Nov. 21st.—I found the patient very well; no pain in the abdomen, but a great deal of pain complained of in the urethra; bowels opened; urine passed freely through cannula.

22nd.—The patient worse this morning; no urine passed through cannula; the abdomen was very tympanitic. A No. 8 gum-elastic catheter was passed easily into the bladder, having first of all injected some oil in the urethra. No urine appeared. Warm water was injected into the bladder, and it returned on gentle pressure over the bladder. The catheter was tied in, and the cannula over pubes removed. Turpentine stupes and cupping over the loins ordered, and aromatic spirits of ammonia three times a day. On my evening visit I found the man had a fit of ague; has passed urine several times through the catheter; tongue clean; pulse good; bowels opened. Ordered five grains of quinine every four hours.

23rd.—The patient free from fever. The catheter (which brought away a great deal of discharge) was removed, and a silver No. 8 passed; this was replaced during the day by a gum-elastic No. 8. Feels very comfortable.

24th.—Patient feels very well this morning. Removed the catheter, which was not replaced. I was called in during the evening to pass an instrument, as he could pass no urine voluntarily. I passed a No. 8 silver, and tied it in for the night.

25th.—The patient had a bad night; feels weak; bowels opened three times. I drew off about two pints of urine, removed the catheter, and did not pass another.

26th.—Patient much better; passed his urine voluntarily last night for the first time; discharge from urethra, but no pain.

27th.—Discharge slight from urethra; otherwise feels quite well; urine passes freely.

28th.—The patient left the hospital with a slight discharge from the urethra, which in a few days left him.

The man confessed to having had two or three attacks of gonorrhoea, but never any retention of urine, which I think was due to spasm of the urethra. With the exception of the symptoms of suppression of urine, which I do not think were due to the supra-pubic operation, he had hardly any bad symptom.

I should have no hesitation in performing the supra-pubic operation, in preference to the one by the rectum, if I had another case, and, as Mr. Marsh says, no preliminary incision need be required. The instrument used was the ordinary small-sized hydrocele trocar and cannula.

Your obedient servant,

JAMES S. WILKINS, M.R.C.S. Eng., &c.,
Garrison Surgeon, Fort Asirgarh, C.P.

June, 1880.

CONSULTANTS VERSUS GENERAL PRACTITIONERS.

To the Editor of *THE LANCET*.

SIR,—I sent a patient suffering with severe inflammation of the eye-ball, and whose sight was seriously imperilled thereby, to a London ophthalmic surgeon the other day for his advice. He at once told my patient that "if she had been another day under my treatment she would certainly have lost the sight of her eye." The friends of the patient thereupon wrote to me, declining to pay my charge for attendance on the case, on the ground that it had been wrongly treated. As I have never had any similar experience before, I should be glad to know if it is usual for consultants to freely express their opinions of the line of treatment previously employed to the patient or the patient's friends; and, further, whether such expression of opinion is in any case, or under any circumstances, justifiable.—Your obedient servant,

August, 1880.

A COUNTRY PRACTITIONER.

Students, (Dublin).—Mysophobia is a form of mental derangement characterised by a morbid fear of defilement or contamination. Ten cases of this affection are described by Dr. William A. Hammond in No. 1, Vol. I., of "Neurological Contributions" (New York: Putnam's Sons). The very interesting and important paper therein reprinted was read before the New York Neurological Society, April 7th, 1879.

Mr. J. H. Schorer, (Berlin).—We cannot exchange.

HOW ANTI-VACCINATION STATISTICS ARE MADE.

To the Editor of *THE LANCET*.

SIR,—I send you an extract from the *Northern Echo*, to which I wish to call your attention, and should like to have your opinion.

"ALLEGED DEATH FROM VACCINATION AT WEST HARTLEPOOL.—A coroner's inquest touching the death of an infant was held on Saturday afternoon at the Burn Hotel, Stranton. According to the mother's statement, Mr. M'Bride, Dr. Moore's assistant, attended her in her confinement, and the child was vaccinated when two months old by Dr. Moore, jun. That was upwards of twelve months ago, and the child had never been well since. Soon after undergoing vaccination the child broke out in spots all over its head and face, and it continued to get worse until it died on Friday. The child was full-grown when born, and perfectly healthy. Dr. Swanwick, who examined the body on Saturday morning, gave it as his opinion that death was due to syphilis from inoculation, as from the parents and other members of the family there was no reason to suppose it was hereditary. As that could not have been avoided, death must be set down to natural causes. He stated, in reply to a question, that he once attributed a death to vaccination; but he was undeceived when a member of the same family died before being vaccinated, the symptoms being similar. Vaccination, again, might bring out the seeds of disease previously dormant. The jury found a verdict in accordance with the medical opinion expressed by Dr. Swanwick."

1st. As to the conduct of the coroner in calling in a medical man to give evidence upon mere external examination, who had never seen the child alive, and knew nothing of the family history of the case, and in returning a verdict on such evidence. Also, why the medical man who attended the child was not called as a witness, and why the medical man who acted as deputy in place of the public vaccinator, and against whom the charge was made, was not called.

2nd. As to the evidence of the medical man examined. Is a medical man justified from external examination of a child dead some time to say whether syphilis was acquired or hereditary?

All this, taken in connexion with the said medical man's opinion in a former case of supposed syphilitic poisoning, which he had to retract, along with the present disturbed state of public opinion on compulsory vaccination.

I had nothing to do with the case, never saw the child, but know all the parties concerned.

I enclose my card, and am, Sir,
West Hartlepool, August 2nd, 1880.

Yours truly,
FAIR PLAY.

* * It is clear that no such opinion could be of any value apart from a careful inquiry into the history and a post-mortem examination, and that the evidence of the medical man who performed the vaccination should have been sought. The evidence that the vaccination had anything to do in producing the syphilis, if syphilis existed, is absolutely wanting. It is much to be regretted that medical men should lend themselves to the purposes of anti-vaccination agitators.—ED. L.

A HINT FOR VISITORS TO BRUSSELS.

To the Editor of *THE LANCET*.

SIR,—In reply to several communications which I have received from professional brethren, who propose visiting Brussels this summer on the occasion of the anniversary fêtes, will you kindly permit me to say through your columns that the latter end of this month and September is the best time for seeing the Ardennes, of which Spa is the chief town. Spa is distant from Brussels about four hours by rail, and frequent trains run daily. Comfortable board and lodging may be obtained for about fifty francs a week. To any members of the profession desirous of making acquaintance, under unusually favourable circumstances this year, with the historic district of the Ardennes and its important chalybeate springs, I shall be very glad to afford any information or assistance in my power.

Yours &c.,

LITTON FORBES, M.D.,
Resident Physician.

Spa, August, 1880.

THE MEDICAL ASPECT OF FREEDOM OF CONTRACT.

To the Editor of *THE LANCET*.

SIR,—Can any of your readers inform me, through your columns, of a case where a Judge has given judgment, or the law on the subject, where an assistant, having been bound by agreement not to practise within a certain distance of his principal, does so practise contrary to that agreement?

Sir Wm. Harcourt says in a speech on Freedom of Contract (*The Times*, June 11th, 1880): "Under common law many contracts were null and void, as, for example, contracts in restraint of industry and trade, which prevented a party obtaining a livelihood in any particular vocation or profession, were absolutely null and void, as being contrary to public policy." Does that apply to a contract between a medical man and his assistant?

Yours &c.,

ASSISTANT.

August, 1880.

TREATMENT OF BURNS.

DR. SHRADY, of New York, has recently treated burns by applying a paste composed of three ounces of gum acacia, one ounce of gum tragacanth, one pint of carbollised water (one to sixty), and two ounces of molasses. It is applied with a brush, renewed at intervals, and is stated to be a successful method. Four applications are usually sufficient, the granulating surfaces being treated with simple cerate or the oxide-of-zinc ointment, as indicated.

C. M. C. has forgotten to enclose his card. Moreover, the question he propounds is not a medical one.

Mr. W. H. Middleton.—The same sum should be paid for the wives as for members.

ERRATA.—In our report of the meeting of the British Medical Association last week, the honorary degree granted to several medical men was by a printer's error stated to be "LL.B.," it should, of course, have been "LL.D." It was "Mr. F. Jordan," and not "Gordon," who took part in the debate on Bigelow's operation. In Mr. Erichsen's speech on the treatment of wounds, in the 2nd line, "Lister" is printed for "Liston"; and in line 10, "antiseptics" should read "anesthetics." In several places Mr. Cheyne's name was wrongly printed "Chiene."—In the list, published in our last issue, of the medical officers serving in Afghanistan, in the first division of the Northern field force, the name of the surgeon in charge of the 68 R.A. should have been printed E. H. Fenn (formerly house-surgeon at the Middlesex Hospital), and not "Févre."—The name of the coroner for the Eastern Division of Middlesex was printed wrongly in our annotation on page 226. It should have been Humphreys, not "Humphrey."

COMMUNICATIONS, LETTERS, &c., have been received from—Mr. C. Lucas, London; Mr. J. Hutchinson, London; Mr. L. Tait, Birmingham; Dr. Sturges, Lafford; Mr. Mardon, Littlehampton; Mr. Lee, Heckmondwike; Mr. Rearden; Mr. J. Taylor, Cleland, N.Z.; Mr. Edgar, Dartford; Dr. Walker, Crick; Mr. Evans; Dr. L. Forbes; Mr. Maples, London; Dr. F. W. Smith, Leamington; Dr. Budd, jun., Clifton; Dr. MacLagan, London; Mr. Broom, Wolverhampton; Mr. Sandys, Cambridge; Captain Hobson, London; Mr. J. T. Jones, Barnstable; Dr. Milson, London; Mr. Wolfenden; Dr. Fenn; Mr. M. Rosenblad, Kalmar; Dr. Ranking, Dublin; Mr. Meredith, London; Dr. Gairdner, London; Dr. Sim; Mr. Middleton, Williton; Mr. Garnell; Dr. Wallace, Greenock; Dr. Coombe, Twyford; Mr. Groves, Brixton; Mr. Callant, Bridgnorth; Mr. Maycock, Leamington; Mr. Kemp, London; Dr. D. Page, Netherfield; Dr. O'Neill, Lincoln; Dr. Thin; Mr. Nordenfelt; Messrs. Paul and Burrows; Dr. Ch. Richet, Paris; Mr. G. Meadows, Hastings; Mr. Kilner; Mr. Schorer; Commander Cheyne; Dr. Nelson, St. Louis; Mr. Brinckman; Dr. Sigerson; Surgeon-General Gordon, London; Dr. J. Anderson, London; Dr. Rickards, Birmingham; Dr. F. H. Alderson; Mr. Robertson, Liverpool; Mr. Adwatt, Blackburn; Dr. Owen, Liverpool; Dr. Firth, Norwich; Mr. Eberle, Easingwold; Mr. Horsfall, Glasgow; Dr. Thomas; Mr. Brough, Hampstead; Messrs. Chapman and Co., London; Mr. Burbidge, Coventry; Mr. Brown, Hartlepool; Mr. Oldfield, Ashill; Messrs. Whitehead and Sons, Huddersfield; Mr. Fugh, Taunton; Mr. Cole, Hollywell; Mr. Lilley, Bridgewater; Mr. Biswas, Calcutta; Mr. Hardman, Blackpool; Studens; W.; Nectus; A Country Practitioner; Ambulance; Septic; Scrutator; M.R.C.S.; X. Y. Z.; X. A. K. C.; X.; A Medical Student of Dublin University; Enquirer; W. P. K., St. Leonards; C. D., Aylesbury; M.R.C.S., L.R.C.P.; H.; &c. &c.

LETTERS, each with enclosure, are also acknowledged from—Mr. Oliver, Hawkhurst; Mr. Taberner, Wigan; Messrs. MacLachlan and Co., Edinburgh; Mr. McKennel, Dumfries; Mr. Millerchip, Coventry; Mr. Spear, South Shields; Mr. Whitfield, Oxford; Mr. Townsend, Exeter; Mr. Hodgkinson, London; Mr. Ashburner, Ulverston; Mr. Walker, Heckmondwike; Mr. Appleyard, Maidstone; Mr. Morgan, Lichfield; Mr. Brown, York; Dr. Rugg, Brighton; Dr. Norton, Maidstone; Mr. Bowes, Berrywood; Messrs. Halles and Co., Halifax; Mr. Hutchinson, Snainton; Rev. F. J. Kiddle, Buckingham; Mr. Wray,

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Medical News and Abstract (Philadelphia), Calcutta Medical News, Philadelphia Medical Times, Morningside Mirror, Indian Herald, House and Home, Science, Deutsches Familienblatt, Chemists' Journal, Nottingham Journal, Carlisle Patriot, Temperance Record, Liverpool Daily Post, Western Morning News, Newcastle Daily Chronicle, Bristol Mercury, Welshman, Bradford Observer, &c., have been received.

Medical Diary for the ensuing Week.

Monday, Aug. 23.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

ST. MARK'S HOSPITAL.—Operations, 2 P.M.; on Tuesday, 9 A.M.

Tuesday, Aug. 24.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 3 P.M.

Wednesday, Aug. 25.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.

ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.

ST. MARY'S HOSPITAL.—Operations, 1½ P.M.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at 1 P.M.

LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.

GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.

Thursday, Aug. 26.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.

CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M.

Friday, Aug. 27.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, Aug. 28.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

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Tables of Contents, with the Index of Advertisements, for each Number can be had on application to the Publisher.

Agent for the Advertising Department in France—J. ASTIER, 67, Rue Caumartin, Paris.

Lectures

ON THE

PHYSICAL EXAMINATION OF THE MOUTH AND THROAT.

Delivered to the Junior Class of Clinical Medicine, University College,

By G. V. POORE, M.D., F.R.C.P.,

PROFESSOR OF MEDICAL JURISPRUDENCE, UNIVERSITY COLLEGE; LATE ASSISTANT PROFESSOR OF CLINICAL MEDICINE; ASSISTANT PHYSICIAN, AND PHYSICIAN IN CHARGE OF THE THROAT DEPARTMENT OF THE HOSPITAL, ETC.

LECTURE V.

LARYNGEAL PARALYSES: ALTERATIONS IN PHONATION AND ARTICULATION.

GENTLEMEN,—The larynx is the seat of many forms of paralysis, and we often see an impairment in the movements of the vocal cords owing to failure of one or more of the muscles which move them.

It may be well to recall your minds for a few moments to the muscles of the larynx. One may begin by saying that the mucous membrane of the larynx, except at the margins of the true vocal cords, everywhere immediately covers muscular fibres, which fibres have been grouped and named by anatomists. The best marked of these groups are—

1. The posterior crico-arytenoid muscles, which arise from the impressions on the posterior surface of the cricoid cartilages, and are inserted into the outer angle of the base of the arytenoid cartilages. These muscles rotate the arytenoid cartilages *outwards*, and thus cause the *processus vocales* to diverge. They cause the vocal cords to separate widely, or, in other words, they *abduct* them. These are the only muscles which separate the cords.

2. The crico-thyroid, a triangular muscle passing obliquely upwards and outwards from the front of the cricoid cartilage to the lower border of the thyroid cartilage, causes the thyroid to move downwards and forwards over the cricoid, and thus produces tension of the vocal cords.

3. The arytenoid muscle passes from one arytenoid cartilage to another, and causes them to approximate, and hence helps to close the glottis.

4. The lateral crico-arytenoids pass from the upper margin of the cricoid to the outer angle of the arytenoids, and cause the arytenoid cartilages to rotate inwards. These muscles are *adductors*, antagonists of the posterior crico-arytenoids, and help to close the glottis.

5. The thyro-arytenoid muscles run parallel to the vocal cords from the thyroid to the arytenoid cartilages, and tend to relax the vocal cords.

6. The muscular fibres covered by the aryteno-epiglottic folds of mucous membrane help to close the glottis and depress the epiglottis, and the thyro-epiglottic muscle also tends to depress the epiglottis.

These muscles are all supplied by branches of the vagus, the crico-thyroid by the superior laryngeal, and all the others by the recurrent laryngeal. Now, since the great cause of paralysis is a lesion involving the origin or trunk of a nerve supplying a muscle, it is necessary in considering the paralyzes of the larynx to bear in mind the origin and course of the vagus and its laryngeal branches.

The vagi having their deep origins in a grey nucleus at the lower part of the floor of the fourth ventricle, start from the lateral tract of the medulla, and, being joined by fibres from the glosso-pharyngeal and spinal accessory, pass through the jugular foramen, and down the neck within the sheath of the carotid vessels lying between the internal jugular vein and the internal and common carotid arteries as far as the root of the neck. The right nerve crosses the subclavian artery between it and the subclavian vein, while the left, lying between the left carotid and subclavian arteries and behind the left innominate vein, crosses in front of the arch of the aorta. The right recurrent laryngeal nerve arises in front of the subclavian artery, winds from before back around the subclavian, and ascends obliquely to

the side of the trachea behind the common carotid and inferior thyroid arteries. The left recurrent laryngeal nerve arises in front of the arch of the aorta, and winds from before back around the aorta, close to the junction of the transverse and descending portions of the arch, and just beyond the junction with it of the obliterated ductus arteriosus, and then ascends to the side of the trachea. Both nerves ascend in the groove between the trachea and oesophagus, and enter the larynx behind the articulation of the inferior cornu of the thyroid cartilage with the cricoid. It is a matter of great clinical importance to bear in mind how the course of the vagi in the neighbourhood of the origin of the recurrent laryngeal nerve differs on the two sides. The left recurrent has its origin, so to say, much deeper in the thoracic cavity than the right, and encircles the aorta just beyond the main branches of the arch. This part of the aorta lying deeply is not, as it were, very accessible to direct clinical observation; but by the fact that disease of this part often causes injury to the left recurrent laryngeal nerve we are often enabled from the impaired functions of this nerve to infer disease in the neighbourhood of the junction of the transverse and descending parts of the arch of the aorta. Once more reminding you that disease, injury, or pressure upon the recurrent branches of the vagus, or of the trunk of the nerve superior to their origins will cause paralysis of the laryngeal muscles, we will consider the appearances produced by these paralyzes.

In a normal larynx the vocal cords are of a pearly whiteness, and appear of an equal width on either side (about one-eighth of an inch). The chink between them runs directly in the middle line. During deep inspiration the cords separate widely, the tips of the arytenoid cartilages recede from each other, and the aperture of the glottis assumes a somewhat lozenge-shape, like an ace of diamonds truncated at its lower end.

During phonation (as when we ask the patient to say "Ah") the cords approach each other, and almost meet in the middle line, and the tips of the arytenoid cartilages approach each other so as to be almost in contact. If we ask a patient alternately to take a deep breath and say "Ah," we see how vigorous the movement of the vocal cords is in health. If the patient can sing, and we ask him to ascend the scale, we see, as the note gets higher, the chink between the cords get narrower, but in a degree which is scarcely perceptible. During the utterance of very high falsetto notes the *processus vocales* of the cords are seen to touch each other, and the chink between the anterior part of the cords gets wider.

I will here remind you that failure of movement of the cords may be produced by causes other than nerve injury, such as—(1) Mere muscular weakness, as in anæmic conditions and emotional causes; (2) functional nerve troubles, as in hysteria and some forms of stammering; (3) direct injury to the muscles by inflammation above or beneath them, and consequent impairment of their nutrition; (4) disease of the crico-arytenoid articulations; (5) mechanical impediments to free movements, such as swelling of the mucous membrane, or the presence of polypi or warts, or, as I have actually seen, one cord may be glued in one position by the tenacious *mucopus* covering the mucous membrane.

The cords on either side may be unequally exposed. This may be due to a swelling of one false cord preventing a full view of the true cord beneath; or it may be caused by a loss of the power to adduct the cord which is least exposed, or to abduct the cord which is most exposed. When the cords are unequally exposed, and the glottic chink runs obliquely instead of directly in the middle line, we may be sure there is failure of movement on one side or the other. On asking the patient to say "Ah," we may notice that there is a *failure more or less complete to approximate the cords*. They may remain motionless, with the glottic aperture open nearly to the full, or the cords may make an attempt to approach in a tremulous, hesitating manner. This is due to muscular weakness in the adductor muscles, and is almost always brought about by anæmia. It is very common in hysterical women, but also occurs in males. The most marked case I have seen was in a boy after one of the acute specifics, whose larynx showed an extreme degree of anæmia. Cure the anæmia and the trouble gets well.

One vocal cord may be seen to move vigorously while the other remains stationary. This is the most common and the most important of the laryngeal palsies, because it indicates, in the majority of cases, disease or injury of the recurrent laryngeal nerve on the side of the immovable cord. It often happens that phonation is normal in these cases, because the

healthy cord when adducted overpasses the middle line, and comes into nearly perfect contact with its fellow. This palsy is far commoner on the left side than the right, and is then generally due to an aneurism of the transverse part of the arch of the aorta. So often is this the case that it should be a rule of practice, whenever the palsy is seen, to make diligent search for aortic aneurism. In every case of obscure chest symptoms, with deep-seated, shooting pains, &c., the larynx should always be examined, to ascertain if there be any failure of action of one cord. This should be a matter of routine never to be departed from, for the inaction of the cord may precede every other symptom, and may occur without there being either hoarseness or cough to direct attention to the larynx. If I were asked to name the chief service which the laryngoscope had rendered to medicine, I should unhesitatingly reply that it was the facility it had given us for the diagnosis of the early stages of aortic aneurism. I need not say that pressure upon the vagus in its recurrent branch by tumours of any kind or by disease of the nerve will cause the paralysis. Aneurism, however, remains the cause *par excellence*.

We occasionally see a *paralysis of the abductors* of the vocal cords due to a failure of contraction in the crico-arytenoidei postici muscles. With the laryngoscope we see that when the patient takes a deep breath (or rather attempts to do so, for very full inspirations are not possible in this condition) the vocal cords do not separate as they do in health, although when he expires forcibly the glottic clink may be somewhat widened by the forcible separation of the cords by the outgoing blast. During attempts at phonation the approximation of the cords is perfect, and the voice is normal. If this form of paralysis persists, the adductors not being antagonised, the cords gradually approach each other, so that the patient's life is endangered owing to the difficulty in drawing air through the closed glottis. It is caused by a failure of one group of muscles, and is more often due to local trouble, such as necrosis of the cricoid cartilage, and consequent involvement of the neighbouring muscles in the inflammatory process, than to nerve lesions. It sometimes appears to be "functional," and has also been seen complicating chronic nervous diseases, such as locomotor ataxia.

Besides these common and well-established forms of laryngeal paralysis, there are others which are less common. A *paralysis of the crico-thyroid muscle*, the tensor of the cords, has been described; and it is alleged that the border of the cords appears wavy and slack. I have seen a wavy condition of the cords, but have regarded it as being caused by chronic catarrh and impairment of the elasticity of the cord. The crico-thyroid being supplied by the superior laryngeal nerve, the sensory nerve of the larynx, one would look for evidence of impairment of sensation in these cases.

A *paralysis of the arytenoideus* and a consequent failure of the arytenoid cartilages to approximate during phonation have been described.

Before leaving the subject of laryngeal paralyses, I will enumerate some of the chief causes of the *nerve lesions* to which they are due. These are—

1. Central lesions, such as: (a) Bulbar paralysis, (b) locomotor ataxia, (c) Cruveilhier's atrophy (?). It is not often that the laryngeal symptoms are very marked in these conditions, and the laryngoscope is generally required to make out the want of activity in the laryngeal muscles.
2. In some rare cases of lead palsy there have been laryngeal paralyses.
3. In "diphtherial" paralysis.
4. Pressure on the trunk of the vagus in the neck by tumours of any kind.
5. Pressure upon or stretching of the recurrent laryngeal nerves by (a) aneurisms; (b) mediastinal tumours; (c) pleuritic thickenings about the apices of the lungs; (d) growths involving the œsophagus and implicating the recurrent laryngeal; (e) any tumours of the neck.

With regard to spasms of the larynx, these are more a matter of inference than direct observation; and I shall reserve the discussion of them till a later period.

We have now finished the *inspection* of the mouth and larynx, and we may proceed to consider the *auscultation* of these parts. In auscultation the stethoscope is of little or no use, and the facts to which I wish to draw your attention are the various sounds emitted by the vocal apparatus as they strike our unaided ear.

First, as to derangements of speech. In speech there are two factors—viz., *phonation* and *articulation*: the production of the sound and the moulding of the sound into words. Either or both of these functions may be deranged.

Phonation is the work of the larynx. It is caused by the

vibration of the vocal "reeds" (misnamed "cords") set in motion by a blast of air driven past them, just as the "reed" or lamella of a concertina is set vibrating by the bellows. Now for the production of a normal tone with the larynx it is necessary: (1) that the cords should be of their normal texture and thickness so as to vibrate easily; (2) that they should be brought almost into complete contact with each other so that the merest chink only exists between them; (3) that the normal tension of the cords should be maintained; (4) that the blast of air driven between them should be sufficient to cause a full vibration. Now if any of these four factors of phonation be at fault, we get a deficiency or an alteration of the normal tone of the voice, and the patient is either *aphonic* or *hoarse*.

In *aphonia* the voice may be reduced to a scarcely audible whisper, and it is caused either by a failure of the vocal cords to approximate, as in hysterical or anæmic aphonia, or by a failure of the proper blast of air, as in conditions of great exhaustion. In hysterical aphonia you will observe that the patient makes no great effort to emit a sound. The lips move, but no sound issues from them. The absence of effort on the part of a patient otherwise in tolerable health is almost sufficient for the diagnosis of the cause of aphonia. Aphonia may be produced by emotional causes, and the phrase "struck dumb with emotion" is common enough in newspapers and works of fiction. Aphonia—i.e., absence of phonation without alteration of quality—is a rare condition. *Hoarseness*, on the other hand, is met with every day, and is the commonest of all symptoms of laryngeal disease. It may arise from very different conditions; whenever it is present the laryngoscope should be used as a matter of routine, and it may be said that the chief use of the laryngoscope is to determine the cause of hoarseness. Hoarseness is of two kinds. It may be complete, as when the voice is reduced to one prolonged stridulous whisper; or the voice may be mainly hoarse, but bursts into tone as it were for short, transient moments. This latter variety I have called *mixed hoarseness*. When present it always indicates that the cause of the hoarseness is such as can be overcome by effort, or is movable.

Alteration in the texture of the cords is a common cause of hoarseness. Mere hyperæmia, or the slight thickening caused by catarrh, or the greater amount of thickening produced by chronic inflammation or syphilitic infiltration prevents the proper vibration of the cords and produces hoarseness. The accumulation of tenacious mucoid secretion upon the cords and between them prevents this vibration and interferes with the blast of air, produces hoarseness, and adds to the voice other vibrations, which are not vocal. In laryngeal catarrh due to any cause this condition exists, and the hoarseness is often "mixed" as I have called it, because when the mucus is removed either by a cough or a laryngeal brush, the voice becomes normal until the secretion reaccumulates. Brushing out the larynx with various astringent solutions has been commonly practised in chronic laryngitis, whether of a simple, tuberculous, or syphilitic nature. You have often seen patients come into the throat department absolutely hoarse; you have seen me take a brush dipped in an astringent solution, and pass it down to the vocal cords, the brush returns with a lump of mucus adhering to it, and the patient probably has a violent fit of coughing and expectorates another lump. By this means an obstruction to the proper vibration of the cords is removed, and the patient, whose voice becomes normal, or almost normal, conceives a great veneration for laryngeal mirrors and curved brushes, and looks in wonderment at the lump of mucus which has been removed. Of course, in chronic cases the hoarseness returns in a few hours, and possibly the passage of the brush may have rather intensified the causes of the catarrh. There is no doubt that the laryngeal brush has been much over-used, and I would here warn you that the over-use of an instrument is liable, especially in private practice, to bring the operator and his art into disrepute.

The cords may fail to approximate from various causes, the chief of which is muscular weakness and paralysis. When the cords fail to meet the patient tries to produce a sound by increasing the force of the blast of air from his lungs, and the result is hoarseness. We lately had a boy in the out-patient room who had been suffering from hoarseness, and whose condition, diagnosed elsewhere as laryngitis, had been treated by the application of counter-irritants and the administration of so-called "antiphlogistics." The laryngoscope showed great anæmia of the larynx, and proved that the cause of his hoarseness was a failure in the

power of the adductors. Fresh air, good food, and iron soon removed his trouble.

When one cord alone is paralysed there is generally hoarseness at first, and there is always occasional hoarseness. It is remarkable to find how hoarseness disappears in these cases after a time. The reason, however, is plain. It is, that the healthy cord, which at first fails to come into apposition with its fellow cord, does so easily later on, because in adduction it over-passes the middle line of the larynx and touches its paralysed fellow. It may be also that the tension of the paralysed cord gradually improves, owing to the fact that the crico-thyroid muscle (supplied by the superior laryngeal nerve) is unopposed by its antagonist (supplied by the paralysed recurrent laryngeal nerve).

The proper approximation of the vocal cords may be prevented by growths, whether simple or malignant, arising from them or projecting between them. This is a condition at once made clear by employing the laryngoscope. One often sees an hypertrophied, and, perhaps, ulcerated fold of mucous membrane in the inter-arytenoid space projecting between the cords and preventing their free movement. Swelling of the false cords may be so great as to prevent the approximation of the cords.

The normal tension of the cords may not be maintained, or the tension of one cord may not be maintained, and thus we get hoarseness more or less complete. I have seen one instance, and only one, in a case which I saw in consultation with Mr. Tweed, in which the cord presented a wavy edge instead of a straight one during phonation, and the voice had a certain husky, tremulous, bleating quality, which was very characteristic. Whether this want of tension in one cord was produced by want of power in the crico-thyroid or by chronic catarrh I could not determine.

If the voice be very much used, and especially if it be very much used in foul atmospheres, such as are usually found in ill-ventilated theatres, churches, concert-rooms, and drawing-rooms, the muscles which move the cords, and especially the tensors, become tired and the musical quality of the voice gives place to hoarseness or huskiness. This is first observable during the emission of high notes, because the proper high degree of tension of the cords is not maintained. This form of singer's hoarseness is brought about by fatigue of the vocalising muscles, and it is important to remember that this fatigue is most easily produced in over-heated, foul, enervating atmospheres, and it is not surprising that fine tenor singers shrink from committing vocal suicide in the wretched rooms in which they are often expected to sing.

Failure of the proper blast of air may be caused by obstruction below the cords, as by tumours pressing on the trachea, or cicatricial contraction of the larynx or trachea. In cases of wound of the trachea, in which nearly all the expired air escapes by the wound, the consequent aphonia may be almost absolute. In conditions of great weakness the blast may be deficient in force, and in cases of extreme emphysema there is always an impairment of the quality of the voice.

Phonation may be fairly good, but the patient may be nearly or quite incapable of altering the pitch of his voice. This shows want of muscular power. It is present in cases of labio-glosso-laryngeal paralysis, where both the cords are paralysed. It was present also to a marked extent in a patient whose case was recorded by Dr. Yeo and Mr. Lister. This patient's vocal cords were completely removed by the operation of thyrotomy, but notwithstanding this fact, he managed, after his recovery, to speak fairly well in a low-pitched monotone. By the kindness of Dr. Yeo I examined the patient's larynx, and it was most interesting to observe how phonation was produced by an approximation of the aryteno-epiglottic folds. It is generally taught that the vocal cords are essential for phonation, but this case proved how completely their functions might be assumed by other parts.

I have shown sufficiently how the symptom "hoarseness" may depend upon many different pathological conditions, and I will now pass on to consider alterations in the second factor of vocalisation—viz., "articulation."

Articulation is brought about by muscular movements of the jaws, lips, cheeks, tongue, and soft palate. At the onset of this subject one may remark that articulation may be performed in many ways, and after removal of parts which we might consider essential the patient will accommodate himself to circumstances in a remarkable way. Thus it is well established that people can talk almost perfectly without a tongue. In the same way unilateral paralysis of

the muscles of articulation has wonderfully little effect after the lapse of a short time, and the loss of the teeth is soon compensated for. On the whole, defects of articulation are not of such clinical importance as to warrant one in spending much time upon the subject, and I will merely indicate some of the more important points, and refer those who want more information to Dr. Bristowe's excellent lectures on the subject, delivered last year at the College of Physicians.

The vowel sounds (pronounced in the French manner) *a, é, i, o, u*, depend upon the relative size of the oral opening and the oral canal. Thus "a" requires the mouth wide open, while "u" necessitates an extreme contraction of the orbicularis oris. The sound "aw," as in "hawk," necessitates a contraction of the pharynx.

Certain consonants demand a large amount of lip contraction—such as "p" and "b." Others demand vigorous movements of the tongue—such as the vibratile "r," in which the tip of the tongue is set vibrating; "t" and "d," in which the tip of the tongue is brought forcibly against the teeth, and also "ss" and "th," in which the tip is protruded between the teeth. Lastly, the hard "g" and "k" demand a considerable amount of pharyngeal contraction.

A knowledge of these facts enables us to employ test words for the detection and localisation of the seat of defect in articulating power. Thus the words "Pooh! pooh!"—or, better still, "Booby"—will serve to test the lip power, as they involve the utterance of a labial consonant and the labial vowel sound. Such a word as "thrill" will especially test the tongue power, and "hawk," or "gawk," will test the power of pharyngeal contractions.

In no condition is the power of articulation so completely lost as in bulbar paralysis or labio-glosso-laryngeal paralysis. Here lips, tongue, palate, and larynx are all affected, and the patient is reduced to the utterance of monotonous inarticulate sounds. Unilateral paralyses or atrophies interfere singularly little with articulation. A sore place upon the tongue effectually stops the utterance of such words as "thrill," "tittle, tattle," &c.; but we have lately had a girl attending the out-patient room who could say all these words perfectly, in spite of very marked atrophy of the right side of the tongue. The loss of the front incisor teeth while the lateral remain puts an end to the proper utterance of "F's" and "V's," although the patient soon learns, unconsciously, to compensate for this as for every other defect. When all the teeth are lost the rim of the gums takes their place, and articulation becomes perfect again.

The presence or absence of nasal resonance is a point worthy of attention, and one capable of affording a considerable amount of valuable information. The nasal cavity, as you are aware, is shut off from the oral cavity by the pressure of the soft palate against the pharynx during the utterance of all sounds, except those of "m," "n," and "ng."

The labial sound "b," as in "bab," the dental sound "d," as in "dad," and the palatal sound "g" (hard), as in "gag," which are all normally produced with the nasal cavity shut off, become altered to the naso-labial sound "mam," the naso-dental sound "nan," and the naso-palatal sound "ngang," when the nasal is not shut off from the oral cavity. Salter gives the following as a sample of this kind of utterance, the words "Both brothers drove in a gig" becoming "Moth mrothers nrove in a nging." Now, whenever we hear this kind of utterance, we may be sure that there is a difficulty in shutting off the nasal cavity, and we shall expect to find: (1) a cleft palate, (2) a perforation of the hard or soft palate, (3) a paralysis of the soft palate, or (4) a mechanical obstacle to the movement of the soft palate.

It is common to find the reverse of what we have been describing, and to hear sounds which should be nasal uttered without their nasal quality. In this case "m" becomes "b," "n" becomes "d," and "ng" becomes (hard) "g," and (again to borrow a sample from Salter) the sentence, "The afternoon was fine, though the morning was rainy," becomes "The after-dood was fide, though the bordig was raidy." This is the well-known pronunciation of the sufferer from a common cold, owing to the swelling of the nasal mucous membrane and the impossibility of driving air through the nasal cavity. Whenever we hear this pronunciation we may be sure that the nose is shut off from the mouth by: (1) a common cold; (2) by the adhesion of the soft palate to the pharynx; (3) by the presence of nasal polypi or other tumours; (4) by post-pharyngeal abscess. The lesson to be learnt from these facts is that whenever we have excess or deficiency of nasal resonance we should at once search for the cause.

Lectures

ON

THE RELATIONS OF SARCOMA TO CARCINOMA.

Delivered at the Royal College of Surgeons in June, 1880,

By HENRY TRENTHAM BUTLIN, F.R.C.S.,

ERASMUS WILSON PROFESSOR OF PATHOLOGY TO THE COLLEGE,
ASSISTANT-SURGEON TO ST. BARTHOLOMEW'S HOSPITAL, &c.

LECTURE I.—PART II.

TUMOURS OF THE TESTIS.

If in many points the foregoing cases differ widely from one another, there are yet some points common to all. And if a larger number of cases of sarcoma and carcinoma be compared, I think it will be found that the characters which they possess in common are more numerous than those by which they are distinguished. For example, the conditions of occupation and social position, of marriage, of previous health and family history, appear to exercise no greater influence on the production of one than of the other disease. The histories of both diseases are the same with regard to cause, rapidity of growth, pain, and previous inflammation. In shape, contour, and consistence their characters are very similar, except that sarcoma is sometimes very hard. Nor is the relation of the tumour to the scrotum or the condition of the cord helpful in diagnosis. Even after removal it is often impossible to distinguish between sarcoma and carcinoma unless the microscope be employed, for the position of the growth may be the same in either case. Each may contain cysts, each may exhibit an encephaloid appearance; and, although the presence of cartilage proves, as I believe, that the tumour is a sarcoma, the absence of cartilage does not prove it to be a carcinoma. Regarding the characters in which they differ, again I think it will be found that the cases of sarcoma differ more markedly from one another than do the cases of sarcoma from those of carcinoma. Unfortunately, I have not an equal number of cases of each disease to compare together; and, still more unfortunately, a large proportion of the few cases of carcinoma here collected is incomplete. Of these sixteen cases, although eight are known to have died, complete autopsies were performed only in three, and a partial section in one. Again, the total duration of disease in some of the eight patients who died is uncertain, for two died from the effects of the operation of castration, and the duration of another case up to the time of operation is unknown. Yet it is possible to ascertain some important points, which I now may shortly indicate. There is only one under twenty years of age—a child of two years, whose testis was removed after it had been enlarged three months. Sections of the tumour presented so marked an alveolar structure that I believed it to be a carcinoma. Nearly two years later the patient died, as it appeared, from caries of the spine, of which many of the signs were present. But there was no abscess; and no post-mortem examination was permitted. The case is described by Mr. Marsh, and its minute characters are figured in the Transactions of the Pathological Society.¹ Although after twenty years no age was free from its occurrence, carcinoma of the testis was most frequent between the ages of thirty and forty or thirty and forty-five. It never affected more than one testis. The tumour was unmixt with other tissues. Affection of the glands was found in every case in which the abdomen was opened, and was strongly suspected in another patient, whose case I have already more fully mentioned. In two of the three complete autopsies the lungs and liver were the seat of secondary growths; in the remaining case these organs were exempt, while the suprarenal capsule was diseased.

The cases of sarcoma are twenty-eight in number. Most of them are round-celled, only three such as can be classed with neither of the first two groups. Of these twenty-eight

cases seventeen died, and on these seventeen subjects eleven post-mortems were performed, while in one case the abdomen only was examined. The disease was most frequent at two periods of life: the first period extending from birth to ten years old; the second corresponding with the period during which we have just found that men are most liable to carcinoma. I do not pretend to explain why both classes of tumour occurred so frequently during the third decade of life, a time during which inflammations of the substance of the testis are perhaps less frequent. But I imagine before the age of ten two causes concur to render carcinoma rare: first, the little liability to cancerous degeneration of epithelium of any part at so early an age; second, the inactive condition of the epithelium of the testis before the age of puberty. Both testes were occasionally affected by sarcoma. Many of the tumours were mixed with cartilage or other tissues. The glands were not diseased in every case in which examination was made, but were enlarged and sarcomatous in nine of the twelve cases in which the abdomen was opened, and the supposition of their enlargement was so strong in two other cases as to amount almost to certainty. Secondary growths occurred in the lungs in more than half the cases; in the liver only in a single case. The bones or skin, or both, were affected in five instances.

If now, instead of thus comparing all the cases of sarcoma with those of carcinoma, we compare separately the round-celled and the spindle-celled tumours with the carcinomas the results are more striking. The round-celled tumours occurred in persons of any age between eight months and sixty-four years, but most often before the age of ten or between fifty and sixty years. Both testes were not infrequently affected. None of the tumours contained cartilage or any organised tissue other than fibrous. Glandular affection was absent in two of the six cases in which autopsies were performed, and the lungs were the seat of secondary growths only in a single instance, yet in five cases there was wide-spread generalisation in the bones and skin or subcutaneous tissue. And with the skin the liver was in one patient affected. Several of these round-celled tumours, especially in those cases in which both testes were affected and generalisation was extensive, were examples of what has been called lympho-sarcoma or lymphadenoma of the testes, chiefly on account of the delicate reticulum, which can be discerned amid the cells.

The subjects of the spindle-celled sarcomas were from ten months to forty-five years old, but the disease was far most frequent in persons under ten and from thirty-five to forty-five. In no case were both testes affected. Cartilage was present in greater or less quantity in more than half the cases. The total duration of disease was rather longer in patients with spindle- than in those with round-celled sarcoma. Several of the former lived three years, most of the latter only two. Affection of the glands occurred in every case in which the body was examined after death, and in two cases in which no examination could be made, a like affection was indicated by the presence of a large tumour in the pelvis and abdomen. The lungs contained secondary growths in every case but one, and in that case a large tumour occupied the situation of the kidney. In no instance was there extensive generalisation similar to that occurring in the fatal cases of round-celled tumours.

A careful summing-up of the chief differences existing between carcinoma and sarcoma of the testis and between the varieties of sarcoma shows that, apart from those of structure and of age of occurrence, they are for the most part differences in the manner of their generalisation. Whether these differences of generalisation are due merely to modifications of structure or to some other cause I cannot now determine, if indeed I am ever able to do so. But I think I can offer an explanation of one seeming anomaly—namely, of the departure in certain cases from the general rule that the lymphatic glands are affected in both diseases. The very fact of secondary enlargement of the glands in sarcoma of the testis is contrary to the general law laid down in many text-books teaching that sarcoma does not produce affection of the lymphatic glands. But if this law be true of sarcoma generally—a point to which attention will be particularly directed in the study of tumours of other tissues and organs—it is so thoroughly reversed in the present instance that we are even obliged to seek some explanation of those cases in which affection of the glands was absent. They are three in number,² two round-celled, one mixed, and they present one

¹ Vol. xxvi., p. 138.

² Nos. 5, 13, 23.

feature in common in which they differ from all the other fatal cases—their extremely short duration. The whole course of the disease in two of them was hardly longer than two months, and of the third was only five months. Castration was not performed on either of the two patients whose disease pursued the most rapid course, therefore the exception to the rule cannot be traced to operation. The only other case in which the total duration was less than a year was that of a child four years of age, who died about seven months after the first appearance of the primary tumour, and in whom the lumbar glands were sarcomatous and much

enlarged. But the duration of this case, short as it is, is half as long again as the duration of the longest of the other three, and three times as long as that of either of the two shortest. The inference is inevitable that these three patients died ere sufficient time had elapsed for affection of the glands to be developed, and that had they lived a few months longer each of them would have been the subject of glandular affection. I have already spoken of the slow progress of glandular disease, in reference to the boy under Mr. Lant Smith's care, and the same case may serve to illustrate its sometimes tardy onset.

CARCINOMA TESTIS.

No. of case.	Age.	Cause.	Duration before operation.	One or both testes	Affection of scrotum.	Condition of cord.	Part of testis affected	Tumour simple or mixed.	Total duration.	Recur-rence in stump.	Affec-tion of glands.	Lungs.	Other parts of body.
1	50	Blow in perinm.	15 mths.	1	Adherent	Thicknd.	All	Simple	—	—	—	—	—
2	30	0	24 "	1	Adherent	Thicknd.	Body	"	24 mos.	—	(?) Yes	—	No post-mortem exam.*
3	40	—	36 "	1	Adherent	0	All	"	42 "	Yes	—	—	No post-mortem exam.
4	24	Kick	16 "	1	0	—	All	"	—	—	—	—	—
5	34	(?) Blow	14 "	1	0	0	Body	"	—	—	—	—	—
6	39	0	6 "	1	0	Thicknd.	All	"	7 mos.	—	—	—	No post-mortem exam.*
7	36	—	6 "	1	—	Thicknd.	All	"	—	—	—	—	—
8	38	—	(?)	1	—	—	—	"	(?)	Yes	Yes	Yes	Liver, right breast
9	55	—	48 "	1	0	Thicknd.	All	"	—	—	—	—	—
10	2	—	3 "	1	0	—	All	"	24 mos.	0	—	—	No post-mortem exam.
11	21	0	No opern.	1	—	Thicknd.	All	"	?18 "	—	Yes	Yes	Liver
12	54	(?) Friction	11 mths.	1	—	0	Body	"	—	—	—	—	—
13	45	—	15 "	1	Ulcerated	—	Body	"	24 mos.	0	Yes	0	Supra-renal capsule
14	38	0	36 "	1	Adherent	Thicknd.	Body	"	36 "	0	Yes	—	Partial post-mortem ex.
15	72	—	18 "	1	—	—	All	"	—	—	—	—	—
16	42	Squeezs	24 "	1	0	0	All	Simple	—	—	—	—	—

* Deaths from causes connected with operation.

SARCOMA TESTIS.

No. of case.	Age.	Cause.	Duration before operation.	One or both testes	Affec-tion of scrotum.	Condition of cord.	Part of testis affected	Tumour, simple or mixed.	Total duration.	Recur-rence in stump.	Affec-tion of glands.	Lungs.	Other parts of body.
Round-celled.	1	35	0	7 mths.	1	0	(?) Body	Simple	13 mos.	0	—	—	No post-mortem exam.
	2	19	0	5 "	1	0	All	"	—	—	—	—	—
	3	10	0	No opern.	2	0	All	"	24 mos.	—	Yes	0	Subcut. tissue, bones
	4	51	Friction	36 mths.	1	0	All	"	—	0	—	—	—
	5	50	—	1 "	1	—	Epidid.	"	5 mos.	0	0	Yes	Liver, skin
	6	61	0	60 "	1	0	All	"	—	—	—	—	—
	7	64	(?) Strain	2 "	1	0	Body	"	—	—	—	—	—
	8	57	—	12 "	2	0	Thicknd.	All	21 mos.	Yes	Yes	0	Bones, subcut. tissue
	9	57	—	12 "	2	0	Thicknd.	All	42 "	—	—	—	No post-mortem exam.
	10	3	—	13 "	1	0	(?) Body	"	24 "	0	Yes	0	0
	11	5	Bruise	3 "	1	0	All	"	12 "	0	Yes	—	Partial post-mortem ex.
	12	34	0	2 "	2	0	All	"	—	0	(?)	—	Bones
	13	8 mos.	—	No opern.	2	0	Body	"	2 mos.	—	0	0	{ Bones, heart, subcut. tissue, penis
Spindle-celled.	14	10 mos.	—	4 mths.	1	Ulcerated	All	—	—	—	—	—	—
	15	25	—	(?)	1	—	All	Cartilage	—	—	—	—	—
	16	34	0	3 mths.	1	0	All	Cartilage	—	—	—	—	—
	17	6	—	3 1/2 "	1	0	All	Simple	33 mos.	0	(?) Yes	—	No post-mortem exam.
	18	26	0	14 "	1	0	Thicknd.	All	24 "	Yes	Yes	0	Kidney
	19	40	Bruise	8 "	1	—	0	All	36 "	0	Yes	Yes	—
	20	45	(?) Blow	3 1/2 "	1	0	Body	Cartilage	—	—	—	—	—
	21	40	—	—	1	—	0	Body	Simple	(?)	0	Yes	—
	22	45	0	72 mths.	1	0	Body	Simple	—	—	Yes	—	—
	23	37	Bruise	24 "	1	0	Thicknd.	Body	30 mos.	Yes	—	—	—
Mxd tum.	24	10	0	5 "	1	0	0	All	Simple	36 "	0	(?) Yes	No post-mortem exam.
	25	4	0	1 "	1	0	0	All	Cartilage	7 "	0	Yes	Spleen
	26	40	0	72 "	1	0	—	All	Simple	72 "	—	—	No post-mortem exam.*
	27	40	Blow	48 "	1	—	—	All { Cart. and muc. tiss.	—	—	—	—	—
	28	40	0	No opern.	1	0	Thicknd.	All	2 1/2 mos.	0	0	Yes	Interior of heart

* Death from causes connected with operation.

In connexion with the frequent combination of cartilage with spindle-celled tumours, let me try and rescue a group of tumours, which I believe to be quite innocent, from an opprobrium which most unjustly rests upon them. I mean the cartilaginous tumours of the testis. A pure cartilaginous tumour growing from bone, or indeed from such soft parts as the parotid is generally regarded, and with justice, as a quite innocent tumour. But some cartilaginous tumours, of the testis especially, have pursued a course so unexpected and so decidedly malignant that at the present time we look with suspicion upon all cartilaginous tumours of the testis, and feel that we best consult the interests of our art and our individual credit by refusing any but the most qualified opinion regarding the future of the subjects of such tumours. One of the best and most complete

cases of malignant enchondroma of the testis is that related by Sir James Paget in the Medico-Chirurgical Transactions for 1855. Studied alone it appears incontrovertible that this case was one of pure cartilaginous tumour running a rapidly malignant course, and at the period of its publication I can scarce perceive how any other explanation of it could be given. But studied as one of a group the members of which form a series of gradations between the hard and soft tumours its pathology becomes more evident. I will not recount the case in full, but may recall its salient features that the proof of my argument may be rendered more complete. The patient was thirty-seven years of age. In January, 1855, his testis was removed on account of an enlargement which had been noticed about two years. At the time of the operation thickening of the spermatic cord was

found to extend nearly to the internal ring. The tumour consisted of two main masses one above the other, and of small growths lying in the inguinal canal. The main masses were composed of nodules, tortuous, cylindrical, and knotted pieces of cartilage, embedded in a tough filamentous white connective tissue, and in the upper swellings were many thin-walled cysts, containing clear pellucid fluid. New growth could easily be distinguished in the lymphatics of the cord. Examined with the microscope the cartilage proved to be hyaline, the opaque white and softer structures showed generally a filamentous and nucleated substance and two chief structures were found in all. The axes of the connecting threads and the central substance of the growths which they supported were composed of densely nucleated substance; their exterior of a filamentous substance composed of fusiform and thin caudate corpuscles laid parallel with one another. On the 1st of May, 1855, the patient died. Lymphatics filled with new growth were traced along the course of the spermatic vessels to a large gland containing a cystic cavity lying beside the inferior vena cava. From this gland the lymphatics passed up close beside the vein, and at one point the vein was penetrated by an outgrowth proceeding from the lymphatic vessels. Both lungs were full of large cartilaginous tumours, growths of which were discovered on the inner coat of many branches of the pulmonary artery.

M. Dauvé relates a somewhat similar case in his monograph on enchondroma of the testicle.³ A man, twenty-six years old, noticed a small hard tumour at the lower part of the right testis in June, 1859. This tumour, or the testis, slowly increased in size, until in March, 1861, it measured eight by eleven centimetres, was enormously heavy, exceedingly hard, and uniformly ovoid. Castration was performed, when the testis was found to be transformed into a large tumour composed of cartilage. As in the last case so in this, the cartilage presented numerous nodules and tubes or cylinders of pearly aspect, resembling in their form and disposition the tubules of the testis. In the lower part of the tumour there was less cartilage, more fibrous tissue; and this also was the case in the epididymis, enlarged like the body of the testis. Here and there in the cord were masses of grey soft tissue made up of fibrous elements. A few days after the operation a fungous growth appeared from the stump of the cord. Later the left lower extremity began to swell, and on June 18th, about three months after the operation, the patient died. On examination after death the pelvic and lumbar glands were enlarged, soft, and grey in colour. A large suppurating tumour existed in connexion with the left kidney, but the other viscera of the abdomen, and those of the thorax, were healthy. These secondary tumours of the abdomen contained no cartilage which could be detected with the unaided sight, but with the microscope small portions were discovered. Further than this no account of the minute structure of these tumours is recorded, for the autopsy was delayed during the hottest days of a brilliant summer, and decomposition was already far advanced.

With these two cases a third may be included to complete the series. A groom, thirty-five years of age, was castrated by Mr. De Morgan for the removal of a tumour of the right testis.⁴ The growth dated from a squeeze the testis had sustained against the pommel of his saddle eight months previously. Great swelling and ecchymosis followed the injury, which subsided in two months, but left the testicle enlarged and hard. At the period at which it was removed it formed an elastic, nearly globular swelling, $5\frac{1}{2}$ inches in its long diameter. It contained numerous cysts, varying in size from a small pea to a walnut, most of which contained liquid, but some were occupied by solid growths. They were lined with epithelium, and their walls were composed mainly of connective tissue, but in the connective tissue were scattered small deposits of cartilage. The cord was not thickened; and although the tumour was of rapid growth, and the mingling of tissues was of doubtful import, it was hoped the disease was not malignant. For a year the patient remained quite well, but from that time his health began to fail, and more than two years after the operation he died. The cord was still healthy, but a large cystic mass occupied the right iliac fossa and lower part of the abdomen. Both lungs contained scattered cystic tumours, with nodules of cartilage in their substance; and the pleuræ were studded with firm pink-white masses of small size. Singularly enough, the secondary growths both of the pelvis and of the lungs con-

tained more cartilage than the primary tumour; but their soft parts consisted almost entirely of spindle cells.

The first and second of these cases are such as would generally be termed enchondroma of the testis; but if the third case had not been so described in the Transactions of the Pathological Society, it certainly would not have occurred to me to consider it a cartilaginous tumour. Since, however, it has been thus described, I am content so far to admit its claim as to group it, for the purpose of illustration, with the two more characteristic tumours; for I believe all these tumours are essentially of a like nature, and should be referred to the same class or group.

When a tumour—a carcinoma for example—becomes changed at various points into a fatty or cheesy substance, we regard this substance, and probably with justice, as the result of fatty or caseous degeneration of the tissues of the tumour. And even when it occurs so largely as to affect the moiety or more of the substance of the tumour, we should hardly think of describing such a tumour as a fatty or caseous growth. It still remains, as it always was, a carcinoma, some of the features or even capabilities of which may be affected by the degeneration of its substance, but whose tendencies will still be those of carcinoma. So, when a tumour—a sarcoma for example—presents here and there tiny nodules or plates of cartilage, we regard these tiny masses, and I believe with justice, as the result of organisation of the tissues which form the tumour; for cartilage and sarcoma tissue belong both to the connective tissue series. The material from which one of them is formed may equally be transformed into the other. I do not pretend to explain the law in accordance with which—in a tumour of the testis for example—one portion of this material is transformed into spindle-cells, another into cartilage, and perhaps a third portion into fibrous tissue. Nor do I know why the conjunction of cartilage with sarcoma is so frequent in spindle tumours of the testis; so rare as to be almost unknown in round-celled tumours; unless perhaps the impulse to organisation, which in the former results, for the most part, in the production of spindle-cells, and is there arrested, is sufficient at certain points to produce a more perfect tissue, and is even so powerful in some sarcomas as to transform nearly the whole mass into cartilage or fibrous tissue.

But this transformation of its substance does not produce a proportionate effect upon the nature of the tumour; it remains what it always was—a sarcoma—the features of which may be concealed, but whose tendencies will still be those of sarcoma. If the description of the three tumours mentioned above be referred to, it will be seen that neither of them is composed solely of cartilage. Each had a softer part or parts, consisting in the first case of what may fairly be described as round and spindle-cells, in the second of "fibrous elements," in the third of what is, somewhat loosely, called "connective tissue." It was this soft cell-tissue which in the first case extended up within the lymphatics into the pelvis. And in the second and third cases this soft tissue formed nearly the whole of the secondary tumour, so much so in one of them that the presence of cartilage could only be detected with the microscope. This latter circumstance is the more noteworthy because the primary tumour was almost precisely similar in the amount and disposition of its cartilage to the primary tumour described by Sir James Paget. This absence of organisation, as I should regard it, of some parts of the primary and of the secondary tumours, is often spoken of as if it were a sarcomatous degeneration of a tumour more highly organised. But there are several reasons opposed to this theory, among which I may mention, as perhaps the strongest, that the most recent tumours and most recent portions of the tumours are the least organised, or are not organised at all, and that there is no evidence of the previous existence of cartilage in the parts which are said to have thus degenerated. If the words "sarcomatous degeneration" are intended to convey that the secondary tumours are in their structure more decidedly embryonic than the primary growth, the only objection which can be raised against the expression is that it is not applied correctly.

No argument, however, will be so convincing as a comparison of these three cases first with one of pure cartilaginous tumour of the testis, next with those of the group of spindle-tumours, among which I have taken the liberty to include them, as Nos. 18, 19, and 23. This is an example of pure cartilaginous tumour.⁵ It had been growing four

³ Mém. de la Société de Chirurgie, tom. vi., p. 291.

⁴ Pathological Transactions, vol. xviii., p. 182; vol. xx., p. 331.

⁵ St. Bartholomew's Museum, Series 23-34.

years in the scrotum of a young man, twenty-two years old. Castration was performed early in 1875, and less than a year ago I saw the patient alive and in perfect health. The tumour is of small size, is composed of hyaline cartilage, which in its aspect and disposition resembles that of the malignant tumours, but there is no softer tissue present save a thin layer of fibrous tissue around and between the portions of cartilage.

On the other hand, it will be seen that the age of these patients is that at which sarcoma is common; that they do not differ from the other cases of the group in their relation to the scrotum, their position in the testis, their total duration, or their affection of the lymphatic glands.

The only characters of difference are the thickening of the cord in two of them, and consequent affection of the stump, and the affection of the kidney rather than the lungs in one—the former character an expression of greater rather than of less malignancy of the primary tumours; the latter distinguishing the case in which it occurred as much from the cartilaginous as from any of the other cases.

On the question of operation in cases of sarcoma and carcinoma I can say but little. For, while the few cases in which no operation was performed were all fatal, their fatality was a necessary condition to their enrolment in these tables; on the other hand, the large majority of deaths were of persons who had been castrated. But as the operation is not very dangerous to life, and as either disease is probably certainly fatal unless interfered with, the balance of opinion must be decidedly in favour of castration, especially as the good health of a few fortunate persons is recorded long after operation.

A PLEA FOR THE CLASSIFICATION AND DETAILED STUDY OF MENTAL AND SENSORY CAUSES, OR FORMS, OF SLEEPLESSNESS.

By JOSEPH MORTIMER GRANVILLE, M.D.

SLEEPLESSNESS—other than that occurring as a symptom, or in the course, of physical disease—is one of the commonest troubles the medical practitioner is called upon to treat; and it is not the least embarrassing. It is protean in its forms, and so complex and obscure are its “indications,” that the treatment it receives is practically a recourse to the expedient of stupefying the brain by opiates, chloral, or bromide of potassium, annulling the consciousness and mimicking natural sleep by an artificially-induced state, which may in some cases end in sleep, but is not itself sleep in any physiological sense, being a drug-created stupor. Thus is the difficult task of precise diagnosis avoided; while we compound for the discharge of the duty of special and direct treatment by overpowering the energies of self-consciousness. One of the first steps towards establishing a more satisfactory condition of matters, and introducing a better system of treatment, must be a deeper insight into the causes or forms of sleeplessness. I desire to bring under the notice of the profession a proposal for the classification of these causes or forms in, what seems to be, a natural order.

It may now, I think, be fairly assumed that neither Fleming, Crippie, Durham, Hammond, Sommer (arguing from the results of experiments made by Pettenkofer and Voit), nor any other of the many investigators who have tried to solve the enigma of sleep on physiological principles, has entirely succeeded. Each of these inquirers has contributed something to the sum of knowledge we possess about sleep; but, after all, the conclusion at which Vulpian arrived, simultaneously with other observers in this country, is probably the true one—namely, that the modifications of blood supply and pressure, which have in turn been supposed to be the causes of sleep or wakefulness respectively, are their concomitants or consequences. In short, the changes shown to take place in the rate of the circulation, and the size of the vessels of the brain, during sleep are the results, *not the causes*, of that state. Even in relation to the so-called “sleep” pro-

duced—or induced—by drugs, it seems probable that Vulpian is right when he sums up the inferences to be drawn from his own elaborate and careful experiments as follows:—“Le sommeil chloralique n'est donc pas dû, plus que celui qui est provoqué par l'éther, le chloroforme ou l'opium, à une anémie ainsi produite dans le cerveau. Nous pouvons donc dire que l'action hypnotique des diverses substances, que nous avons étudiées, sous ce rapport, s'exerce sans que les effets qu'elle produit puissent être rattachés à des modifications vasculaires des centres nerveux. Ces substances n'agissent pas, en effet, sur ces centres, par l'intermédiaire des vaso-moteurs, comme on l'a admis sans la moindre preuve directe; c'est sur les éléments anatomiques mêmes des centres nerveux que porte leur influence. Ce sont ces éléments qui sont directement modifiés, probablement parce que les agents en question y pénètrent et y produisent une altération histo-chimique.” In any case we are, I think, driven back from our speculations in physiology, upon the study of the mental and sensory phenomena in the search for a deeper and more accurate knowledge of sleep as a rhythmical function of life. Until new light is thrown on the subject of the actual and intimate causes of sleep we may most usefully direct our attention to the subjective experiences and objective characteristics of the act or state of sleeping; and it will help our inquiry, as well as facilitate the practical task of discovering remedies for aberrations of sleep, to classify the proximate causes, or forms, of sleeplessness.

There are two primary groups of manifestations. 1. The psychical, or mental, including such “sensations” as may arise from the mind making intentional or conscious use of the sense-organs. 2. The automatic, or sensory, comprising those intellectual acts or processes which are performed by habit, repetition, or what is called instinct, together with all the sensations which are involuntary and uncontrolled—or uncontrollable—by the will. To one or the other of these groups every cause or form of sleeplessness, not essentially morbid, may be referred. The annexed Table, a simple arrangement of bare clinical notes, will make my meaning evident. I am compelled by want of space to give only one of the tables comprehended in my scheme, and in the reproduction of that I have been obliged to omit all but a meagre sentence under each heading to mark its purport. The reader will, however,—if he approve the principle—have no difficulty in recalling the results of his own experience as to the symptoms and methods of treatment here indicated in rough outline. It is simply on the adoption of a precise method of classification I am anxious to insist.

Group I., as indicated in the Table, includes the causes or forms falling within the domain of the higher Consciousness, and probably located in the supreme cerebral centres, psychical in their character, and to some extent, at least at the outset, under the control of the will. They may be recognised as standing in close relation to some one of nine faculties or departments of consciousness—viz., thought, sensation (inclusive of the senses generally acting in concert), sight, taste, smell, hearing, touch, conscious muscular movement, and visceral-consciousness (that is, consciousness of what is going on in the viscera, or “feelings” and impulses taking their rise in or from the viscera). In respect to each of these forms of mental consciousness there are two varieties of Condition and two of State, *condition* being transitory, *state* more permanent. The consciousness may be accidentally thrown into a particular “Condition”; or it may, by persistence of an exciting cause or weakness, acquire a particular “State.” Thus there may be the Condition of “not being sleepy, or unable to sleep,” or that of “being too much engrossed to sleep”; and there are the States of “irritability” and “inability.” Under the heading “Not being sleepy, or unable to sleep,” in relation to *Thought* there may be simple wakefulness, with a disposition to think on any subject that suggests itself indifferently; or, in the absence of any special topic of formal consideration, imagination may disport itself wildly. In relation to *sensation* as a whole, there may be a condition of watchfulness or mental expectancy generally, the mind being, so to say, on the alert, keeping the senses awake; or in relation to the senses severally there may be troubles—e.g., *sight*, mental watching, with intolerance of the dark, and expectancy or fear; *hearing*, mental listening, awe-stricken or hopeful, with impatience of silence and wakeful imaginings of sound; or, disturbance in connexion with sensations of *taste*, of *smell*, of *touch*; longings or impulses for *muscular movement*, with a chafing sense of the restraint imposed by

OUTLINE OF A SCHEMA FOR THE CLASSIFICATION OF MENTAL AND SENSORY CAUSES, OR FORMS, OF SLEEPLESSNESS.

"Le sommeil général est l'ensemble des somnolences particulières."—BICHAT.

GROUP I. RELATING TO THE CONSCIOUSNESS: THE DISTURBANCE LOCATED IN, OR REFLECTED UPON, THE SUPREME CEREBRAL CENTRES.

Sleeplessness apparently due to the Conditions expressed by—				"Irritability."		"Inability."	
"Not being sleepy, or unable to sleep."		"Being too much engrossed to sleep."		Symptoms.	Treatment.	Symptoms.	Treatment.
Faculties causing or concerned in the Sleeplessness.							
Thought and imagination.	Symptoms. Thought active; imagination active when external objects are excluded. The senses kept on the alert by the will; watchfulness, mental expectancy of general sense impressions. ¹	Treatment. Interdict dozing by day. Discharge the energy of the cerebral centres by special work, such as reading aloud before going to bed. Change of the surroundings. Give the mind a sense of security by any simple arrangement. A warm bath before sleep.	Symptoms. Thought or fancy weary, but unable to get rid of some special subject which has taken hold of the mind. ³ Expectancy or imagination of a special set of sensory impressions haunts the mind.	Treatment. Encourage thought on the disturbing topic by day, and thus let the mind discharge itself before going to sleep. The special sensation engaged must be dealt with in detail, as below. Discharge the motor energy before sleep.	Symptoms. An irritable state set up by disorderly or painful thought. When no longer restrained by the surroundings excitement occurs. Mentally induced hyperaesthesia. When the attention is diverted, this form of irritability generally ceases.	Symptoms. A sort of mental "inability" to control thought. Ideal spectacles haunt the imagination.	Treatment. The performance of a task which can be achieved almost automatically — e.g., reciting verses from a dramatic poem. Sponging with very hot water (not a bath) immediately before going to bed.
Sight (mental or voluntary).	Symptoms. Watching, with intolerance of the dark. Real objects being invisible, images of thought are too vivid.	Treatment. Apply a bandage over the eyes before the light is extinguished. The will thus inhibits both mental and physical sight.	Symptoms. Thought so engaged with particular pictures of memory or fancy that it cannot put them away.	Treatment. Careful and slow inspection of a series of highly coloured pictures or portraits will displace the disturbing pictures of thought.	Symptoms. Irritability of mental sight, which renders the sufferer liable to spectra of fancy with intolerance of light.	Symptoms. Inability to see men- tally may be occasioned by inability to see physically, or it may be the effect of a mental weakness.	Treatment. Sleep in well-lighted room surrounded with near objects. Reading or thinking of subjects easily pictured by thought.
Hearing (mental or intentional).	Symptoms. Listening, with intolerance of special noises or sounds, and impatience of complete silence.	Treatment. Stop the ears with cotton-wool before trying to sleep. This inhibits the act of hearing, and gives rest.	Symptoms. Expectancy or imagination of special sounds, which has disturbed or agitated.	Treatment. The introduction of sounds which will help to divert the attention, as music or the ticking of a clock.	Symptoms. Irritability of mental or physical hearing, with acutely sensitive intolerance of sounds.	Symptoms. Inability to hear, real or imaginary, may be a cause of sleeplessness.	Treatment. Avoid sleeping on a partially deaf ear. Watch under pillow will often relieve, or the loud ticking of a clock.
Touch (in its direct relation to mental impressions).	Symptoms. Irritation caused by weight or texture of bedclothes. One form is the sense of "falling," when going to sleep on the back. ²	Treatment. Warm bath followed by cold douche or spray, and lying for some little time flat on the back on a couch before getting into bed.	Symptoms. Special expectancy in relation to touch. Common in children, and the aged in whom mental dispositions of childhood revive.	Treatment. To break up organised expectations or "feelings," change the surroundings; or yield for a time to the demands of consciousness.	Symptoms. Irritability, with hyperaesthesia of the skin, common in certain forms of mental disease, or established by habit.	Symptoms. Anæsthesia of the surface mentally induced, often hysterical, occurring at night, because the mind is thrown in on itself.	Treatment. The use of a bath and rubbing with towels of rough texture.
Taste (mental or voluntary).	Symptoms. Seldom general, but sometimes occurring, and then leading to an undiminished craving for food.	Treatment. The use of a flavoured lozenge will relieve and prevent the craving for food.	Symptoms. Special tastes may be heightened at night, or a taste ordinarily present be only then recognised.	Treatment. The use of a lozenge giving the flavour desired, or covering that which is distasteful.	Symptoms. Irritability of this sense. Often caused by rough or decayed teeth or ulcers on palate.	Symptoms. Inability to taste may occur in persons who have smoked excessively, or in the aged.	Treatment. The use of a strong lozenge (e.g., capsicum or camphor). Special treatment for local affection.
Smell (mental or voluntary).	Symptoms. An acute sense of smell often causes sleeplessness. It may be real or imaginary.	Treatment. Holding nose over steam before going to bed; as a palliative use scent or snuff.	Symptoms. A highly sensitive condition in respect to a particular odour, real or imaginary.	Treatment. Use scent gratifying the desire, or covering the unpleasant odour, real or imaginary.	Symptoms. Irritability of the sense of smell, continuous or recurring, may be specific.	Symptoms. Inability to smell, real or imaginary, is an occasional cause of sleeplessness.	Treatment. Local applications of a strong, stimulating character — snuff or douche.
Muscular-consciousness.	Symptoms. Fidgeting or twitching. When it occurs in muscles of hip-joint or elbow, causes dream of jumping or falling.	Treatment. Care should be taken to avoid supporting the body on a particular joint or limb. Warm bath relaxes muscles; cold braces.	Symptoms. The will set on grasping a particular object or maintaining a particular position; sleep impossible unless impulse be satisfied.	Treatment. Intentional abandonment of the idea inhibits the muscular action. Posture requiring some other action will counteract it.	Symptoms. A highly excitable state of the muscular system, choreic or hysterical, may arise from want of muscular work by day.	Symptoms. That accompanying paralysis, sometimes due to the weight of clothing. Mental night-mare.	Treatment. Remove all bonds and burdens, and place body and limbs in a half-flexed and free position before sleeping.
Visceral-consciousness.	Symptoms. The attention may be morbidly directed to any one of the viscera or their functions.	Treatment. Satisfaction of normal needs and impressions before lying down. Avoid late meals.	Symptoms. Special sensations in the viscera, or feelings engendered by them, may prevent sleep.	Treatment. The cause of these feelings should be investigated and treated directly. Divert attention.	Symptoms. Irritability of the visceral-consciousness common in hyper-sensitive and hysterical persons.	Symptoms. A feeling of inability to discharge special functions may cause sleeplessness.	Treatment. Special treatment for the cause. In cases of hysterical or morbidly disturbed states, a late meal relieves.

¹ "Systatica, irritation or inertness of the mind extending to the muscles or external senses; or of the muscles or external senses extending to the mind."—MASON GOOD.

² "Agrypnia Chronica: Habitual wakefulness; mind tranquil; attention alive to surrounding objects; mostly common to advanced age; found also occasionally in excessive fatigue, &c."—MASON GOOD.
³ A form of anæsthesia which impresses the mind with a feeling that the body has lost its support; caused, I believe, by partial stagnation of blood in the posterior columns of the spinal cord.

quiescence; or there may be mental impressions arising, or imagined, in connexion with some one or more of the visceral organs, which I propose to class as forms of *visceral-consciousness*. Again, the heading "Being too much engrossed to sleep" will include *thought*, busy or exhausted with a special task or subject of which it cannot rid itself: the *sensations* generally engrossed with a supposed duty of watchfulness, or severally engaged with and unable to leave a particular subject of mental *sight, hearing, taste, smell, or touch*; the *motor* faculty too busy with a special act to sleep, or the *visceral-consciousness* dwelling wakefully on a particular organic function. In like manner under the general heading "State," there may be continuous or recurring "Irritability" of any one or more of the several faculties, of the class which obtains when—by imagining—a "nervous" person so works on his mental sense of sight or hearing, that every wave of light or sound disturbs him; or, again, there may be conscious "Inability," with a distressing sense of powerlessness to perform some function, as when the knowledge that *hearing* is difficult so distracts or distresses the mind that sleep is impossible, the Consciousness worrying itself with the analysis of every imperfectly recognised sound, and thus creating a special cause or form of mental sleeplessness.

Group II.—which I have been unable to tabulate, but in outline resembles that presented—includes the common forms of sleeplessness related to the Sub-consciousness, being organised *habits*, probably located in the centres or combinations formed by the repetition of mental processes, and only partially under the control of the will, having passed into the class of "automatic" activities over which the lower or sub-consciousness holds sway, although—to revive a good old term—they may be *consensual*. The classification of this group is identical in its outlines with that indicated for Group I. Under the headings "Not being sleepy, or unable to sleep," and "Too much engrossed to sleep," we have the automatic faculty of *thought* exercising by the force of habit individualised methods, and carrying out special processes, of reasoning on every topic or subject that occurs to the mind. A clerk will reckon and calculate, a lawyer argue, a divine preach, a writer compose, in obedience to the law of habit, sleep being impossible. It is this form of disturbance which makes persons say they are "too tired to sleep," the truth being that the controlling faculty of Will is too weary to inhibit the automatic faculty, and they cannot go to sleep in a natural way, and are therefore sleepless. The *senses*, generally, may be actively watchful and wakeful, also in obedience to the law of habit, as often happens after a lengthened period of watching by a sick bed and the formation of a strong habit of keeping on the alert; or any one of the senses may be individually wakeful from custom. The sensory and muscular systems may be sleepless. Cases illustrative of this class of disturbances are of frequent occurrence; e.g., after a long voyage nervous or sensitive persons cannot sleep without the noise of the wind and waves, and that habitual balancing of the body which is induced by sleeping in a berth, or even in a swinging cot or hammock. Habits of function in relation to the *viscera* are also very common, and may be the causes of sleeplessness. Thus the bladder or intestine may contract a habit of discharging its contents at particular periods; and, partly from habit, and in part from the vascular and nerve changes incident to "going to sleep" or "awakening," there may be experiences in connexion with the organs of special function which disturb, and greatly distress if they are not explained. A not uncommon trouble of this class which occasions much distress and anxiety, when its nature and cause are unrecognised, is priapism occurring in the early morning. This is, I believe, generally the result of irritation of the cord in the process of its awaking; although sometimes it may be the effect of reflex action excited by urine in the bladder. Under all these forms of Condition the faculty which is in the habit of working at night cannot sleep, and being unable to perform its accustomed labour disturbs the whole body, by fruitless and fidgety endeavours. States of "Irritability" and "Inability" affecting the automatic sub-consciousness are likewise common causes of sleeplessness, as when a habit of sleeping in the dark renders the dullest light a cause of sleeplessness, although there is no trace of intolerance of light by day.

The key-note of the classification proposed may be found in Bichat's aphorism, which I have set at the head of the table, "Le sommeil général est l'ensemble des sommeils particuliers." The several sleeps composing general sleep do not commonly occur simultaneously or last during equal periods.

The order of their occurrence in "falling asleep" seems to be—1, muscular-consciousness; 2, sight; 3, hearing; 4, smell; 5, taste; 6, thought; 7, touch. This is a broad statement, and will be found only approximately accurate; the succession varying with the individual organism and habit. The order of awakening is, again speaking generally, inverse. The rest enjoyed by each system contributes its share to the grand result, and the relative proportions of the several sleeps compounded determine the character of the phenomenon as a whole. It follows that the converse is true with regard to the nature and causes of sleeplessness. The general character of the "sleeplessness" from which a patient suffers, and the plan of treatment most likely to be successful in his cure, can best be ascertained by recognising the particular *cause* or *form* of the wakefulness; and this may be most readily made out by noting the prominent symptoms, and determining the class and group of the natural classification to which they belong. If any one should contend that the phenomena I have noted and classified are not causes but simply symptoms of sleeplessness, he may regard them as *forms* of the trouble, and it will still be open to him to accept, at least in principle, the grouping suggested.

The differential diagnosis of the two groups of causes or forms of this trouble is of the highest importance, because the principles and methods of treatment are not identical for the corresponding conditions and states, or even for what appear to be precisely similar symptoms or indications. Thus, for example, the characteristic feature of the phenomena in Group I. is the element of Self-consciousness which declares itself, or may be detected, as a conspicuous part of each experience. The Will has a limited, but *only* a limited power, over the functional or organised habits of the sense organs, the muscular and visceral systems, and, even, over those tracts or departments of the brain which are concerned in sub-conscious cerebration. It can sometimes inhibit particular actions or interrupt the discharge of special energies—or energy striving to act in specific directions—which habit has liberated. It can, so to say, block the line of least resistance. The Will is not, however, directly or actively concerned in the causes or forms of sleeplessness classed in Group II., unless it interposes, because every process of thought or action which has become organised by repetition and become a *habit*, has passed out of the domain of the supreme faculty of the Consciousness into the series of automatic activities controlled by the Sub-consciousness. Whereas the will *is* directly and actively concerned in the causes or forms of sleeplessness included in Group I. It follows that while the treatment for the disturbances in Group II. must be indirect, and so aimed as to operate through the senses chiefly, that adopted for the relief of the troubles classed in Group I. must, in some way, act immediately, or, at least, very directly, upon the Will and Consciousness. Mental diversion will relieve the symptoms of the *first* group, whereas it is not unlikely to intensify the wakefulness arising from troubles of the *second* group, although at a glance these may seem identical in form with the others. The intensifying of automatic actions when the self-conscious attention is diverted is well understood. The restraint of the Will being withdrawn, "impulse" or "instinct" has unqualified control of the organised brain and nerve-centres. Another matter not so commonly recognised is the fact that if the Will be pressed or permitted to interfere for the amendment of a troublesome *habit*, it generally increases the trouble by irritating the nerve-centre or combination which has been formed, by repetition, for the performance of the particular act or process it is desired to control. The centre not having been constructionally disciplined for control by the Will resents the authority that faculty now tries to exercise over it. If an expert and practised pianoforte player were to try to make the fingering of each chord a voluntary act, he would be unable to play, and throw himself into a fever of excitement. This is what happens when the essential difference between the two classes of phenomena classed in Groups I. and II. is not perceived, and the voluntary method which is likely to be useful in the one case is misapplied in the other. The discrimination is not always easy, but it is indispensable that it should be made. The history of the case and the known effects of Attention in relation to the seeming cause of the wakefulness will generally enable the practitioner to determine the group to which a particular phenomenon or symptom belongs; but he must make the discrimination for himself, because nothing is more unwise or

conducive to failure in these cases than to ask leading questions. The examination should be so conducted as to avoid giving the patient the slightest clue to the nature of the investigation pursued. Even when the cause of sleeplessness has been recognised, it is, except in rare instances, undesirable that the patient should be informed of the precise nature of the disturbance. If the cause belong wholly to the second group, and is a matter of habit, it is almost always essential that he should be kept in ignorance of the trouble from which he suffers, while it is treated through the surroundings or indirectly.

I am not asking medical men to over-estimate, still less am I wishing them to treat, symptoms, but to search for the causes of disease by tracing back to their several sources the divers forms of an affection which may spring from any one of a large number of disturbances. There is no means of getting at a disease, and acquiring an intimate and precise knowledge of its nature, except by studying the formulæ of its manifestations; and there is no safe way of selecting a method of treatment except by observing carefully the indications for treatment which are supplied by these same formulæ. I know well that the bane of modern science is the exaltation of the analytical over the synthetical method of research; but here we are face to face with a symptom too often regarded as a disease. We do not know what it is. It has never been, so to say, picked to pieces, and we have hitherto treated it *en bloc*. Not being able to ascertain what it is keeps a particular patient awake, we exhibit a so-called "soporific," which will stupefy or intoxicate him until he falls into a state of unconsciousness, and, in the end, perhaps, sleeps! The practice is not, possibly, less scientific, but it is certainly not one whit more so, than to treat pains in the epigastrium with pepsin, without taking the trouble to inquire whether there is any organic disease, whether the food taken is digestible, whether it is properly masticated, or whether the patient is suffering from excess, or, it may be, starvation. We cannot proceed a single step on the way to treat Sleeplessness intelligently until its form, in each particular case submitted to us, is definitively ascertained, and the cause of wakefulness clearly made out; therefore, I plead for the recognition and classification of those ideational and sensory forms, or proximate causes, of sleeplessness which are too commonly overlooked.

London.

PAROXYSMAL OR INTERMITTENT HÆMATURIA IN A YOUNG CHILD FOLLOWING SUPPOSED INJURY.

By W. H. DAY, M.D.,

PHYSICIAN TO THE SAMARITAN HOSPITAL FOR WOMEN AND CHILDREN.

J. L—, aged three years, a healthy and well-developed child, was admitted into the Samaritan Hospital under my care on Nov. 14th, 1879, having passed blood in her urine twenty-four hours previously, *unaccompanied by pain*. The urine then became quite clear up to the time of her admission. Blood had been noticed in the urine for a month past, but this last attack alarmed her parents.

History.—The mother stated that a year ago the child fell downstairs, and for the first time in her life she passed blood in her urine for three times succeeding this accident. The bleeding did not recur till July, 1879, when it lasted only for one day; then five weeks elapsed, and it recurred once more for one day only. There was no further return till shortly before admission. The father and mother were both healthy, and had always resided in London. There was no history of measles, scarlet fever, or constitutional syphilis. The heart, liver, spleen, and lungs were healthy; the temperature was normal and the bowels regular. The child complained of pain when pressure was made over the loins, but no decided indication of suffering was shown when pressure was made on either lumbar region.

On the day following admission the urine was of acid reaction, sp. gr. 1022; it had the appearance of muddy water and threw down a thick deposit, which was rendered

clearer by moderate heat; it remained slightly clouded on boiling, and did not become clear by nitric acid. The colour was due to the admixture of uric acid crystals with blood, showing that there was hæmorrhage from the kidneys, but there was no free clot. On a microscopical examination the deposit was found to consist almost entirely of uric acid crystals, with a few epithelial casts and red corpuscles.

The child was put on a milk diet, and kept in bed. A mixture of bichloride of mercury, with the tincture of the perchloride of iron, was ordered three times a day.

Nov. 19th.—There was a deposit of rather dark, coagulated blood at the bottom of the test tube. Seven ounces of urine were passed in the twenty-four hours.

20th.—Urine smoky and albuminous. Six ounces passed during the night and day. A mixture of tincture of perchloride of iron, with diluted hydrochloric acid, was ordered.

22nd.—Urine smoky, sp. gr. 1022, acid, throwing down a turbid deposit, the lower part of which was reddish; bowels regular. She occasionally cried at night from pain across her loins, which prevented her from sleeping, the pain generally lasting about half an hour.

24th.—A good deal of bronchial catarrh. Iron mixture discontinued, and squill and ipecacuanha ordered for the cough.

27th.—Cough better. Since the iron mixture was given up more blood was passed in the urine, some specimens being like port-wine and water. The average quantity of urine passed during the past three days was $11\frac{1}{2}$ oz., $7\frac{1}{2}$ oz., and $9\frac{1}{2}$ oz.

Dec. 9th.—On an average since last report the child passed daily from 10 oz. to 14 oz. of urine, having a sp. gr. of 1024, some specimens being clear, and others containing blood of a dark port-wine colour, settling at the bottom of the vessel in a coagulated mass. In one of the specimens there were numerous hyaline casts, and an abundance of free renal epithelium with uric acid crystals. Constitutionally the child appeared well, the tongue was clean, she never vomited, and the bowels acted twice a day. There was no puffiness of the face nor anasarca. Two teaspoonfuls of a mixture, containing gallic acid and sulphuric acid, were ordered to be taken three times a day.

15th.—The urine has continued perfectly clear since the 9th without any deposit of blood. Sometimes the morning urine was perfectly clear, that passed in the evening throwing down a copious whitish deposit, which became clear on boiling (lithates).

Jan. 8th, 1880.—No return of blood in the urine, on an average the patient passed 15 oz. of urine during the twenty-four hours. General health good.

14th.—Urine very clear, acid, unchanged by boiling; no blood or albumen. To omit all medicine.

Feb. 3rd.—The urine remained perfectly healthy since last report, although she had been up and about the ward. She left the hospital on this day.

13th.—Readmitted, passing bright-coloured blood with her urine.

April 1st.—There was no return of blood except fourteen days previously, when a small quantity again appeared in the urine, and since then it had varied considerably, some specimens containing blood and some none. For the last ten days the urine remained clear. The child was pallid, but there was no sign of anasarca, no headache or disinclination for food. Heart-sounds normal. The gallic acid mixture was resumed. Milk diet.

25th.—The urine was perfectly clear; sp. gr. 1028; acid reaction; in every respect normal. The child left the hospital with directions to continue the gallic acid mixture, and to return again if blood made its appearance in the urine.

Three weeks after leaving the hospital she had only passed blood in the urine once, and then she had catarrh and cough.

Remarks.—This case is very interesting from several points of view. Looking at the history, the absence of the exanthemata, and the general good health of the parents and the child, it does appear that the injury was the starting-point of the hæmorrhage, which came on for the first time the day following the accident, and that once originated, absolute rest and a milk diet were necessary to arrest it. Only falls are such common accidents among children that the injury in this case might be a pure coincidence. With regard to medicine, the remedy that did most good—in fact, which alone never failed to control the hæmorrhage—was gallic acid. At no time was there any rigor or elevation of temperature, nor any diminution in weight. The

chief noticeable change was an increase of pallor in the patient, which was no doubt in a great measure due to confinement to bed and the suspension of all animal food.

Dr. Greenhow has recorded some very interesting cases of "intermittent hæmaturia." In one of his cases, a boy eight years and a half old was first seized with hæmaturia when two years of age. The attacks were preceded by shivering and thirst, and whenever the boy got chilled the urine became of a dark colour, sometimes as though blood were mixed with it, at other times like black beer with a froth upon it. "During the attacks the boy generally had stiffness and weakness of the legs, so that he could scarcely walk, and his feet sometimes became of a purple colour, and swelled so much that he could not put on his shoes; his ears also frequently became cold, purple, and painful to the touch. More rarely his hands swelled and became purple during the attacks. The first urine passed after the shiverings had always been dark-coloured, the second less so than the first, and at the third or fourth micturition the urine generally resumed its normal appearance."¹ This case differs from some of those recorded by Dr. Greenhow and others in the absence of a malarious history, rigors, sweating, and febrile symptoms. The child, with the exception of being rather pale, was perfectly healthy-looking, and there was an absence of sallowness which has been often observed in some of these cases, particularly when the hæmaturia has been associated with the oxalic acid diathesis. Dr. Greenhow regards the affection as a form of dyscrasia—a disease of the blood rather than of the kidneys. I should say that Dr. Greenhow's explanation given above was suitable to my case, whilst I do not altogether ignore the possibility of some injury being received when the child fell downstairs, thus exciting a degree of renal congestion which was the starting-point of the evil. The presence of free blood certainly points to intermittent renal disease as well as pure hæmaturia; still, in all other cases of paroxysmal hæmaturia the theory that no kidney affection exists has yet to be proved; for we must never forget, as Dr. Legg has reminded us, that no record exists of any examination after death of a patient who during life was subject to paroxysmal hæmaturia.

Dr. Godson² relates a case of paroxysmal hæmaturia in a little girl, two and a half years of age. Each attack was preceded by rigors. As in my own case, uric-acid crystals were found in abundance in the urine, and likewise gallic acid was administered with equally good results in both cases. According to Dr. Wickham Legg's exhaustive record of the literature of this disease,³ uric-acid crystals have previous to Dr. Godson's case been observed in two cases only. The presence of free blood and the absence of initial rigors distinguish my case from most others. It may be considered as paroxysmal hæmaturia in the literal sense of the latter term; whilst the more frequent form, where rigors are observed and no red corpuscles can be found in the blood, is strictly hæmaturia.

Manchester-square, W.

INSANITY: ITS TREATMENT AND PREVENTION.

The Presidential Address for 1880 of the Border Branch of the British Medical Association,

By J. A. CAMPBELL, M.D., F.R.S. EDIN.,
MEDICAL SUPERINTENDENT, GARLAND'S ASYLUM, CARLISLE.

It is difficult for one busied in the treatment of insanity himself to speak generally of the treatment in the country at large in an unprejudiced manner. I shall just tell you what I have noticed during the fifteen years I have studied and treated insanity, and afterwards touch shortly on the present treatment. I have noticed the following:—An increasing tendency to examine into the physical condition of the insane. To look for, and in the majority of cases to find, bodily causes for mental manifestations, and to keep careful and systematic records of cases, and in doing this to make use of instruments of precision available in medical practice, and a persistence in this in spite of the difficulty caused by the

patient's state. An intelligent and accurate inquiry into the use of various therapeutical remedies, and this by not a few but many observers. A markedly greater interest in pathological research, and even without discussing the advantage of making post-mortem examinations in each case from scientific or educational points of view. The greater security given to the life of patients, and the safeguard from injury resulting from such a procedure, must commend it even to the non-professional mind. In 1878 out of 4715 deaths which took place in English asylums, 2349 autopsies were made. A greater tendency to give individual liberty to convalescents or patients who seem harmless, and at all to be trusted. A clearer idea as to the necessity of continued treatment and care in an asylum, and a consequent shorter residence after recovery in certain cases. A fuller realisation of the value of employment as an aid to recovery. An increase in outdoor exercise, especially for female patients. In most well-conducted asylums nowadays few if any patients whose bodily health permits of it are restricted to the house, or what used to be called "airing yards"; and where these were walled in and devoid of all vegetation, where the patients saw nothing but the sky and the side of the asylum, this must have been a great advance, as some superintendents point out *in extenso* in their reports. To many of us it appears wonderful that such places should have been invented at all. A freedom from the sort of asylum horror which at one time existed at the terms "seclusion" and "restraint"; a conviction that the use of either when really requisite will not bring back their universal use; and a recognition that in certain forms of excitement, such as epileptic, and also delirious excitement in general paralysis, seclusion is not only permissible, but the safest and best treatment for the patient. A growing knowledge that hitherto the staff of attendants has been proportionately small for the work both of day and night nursing, and that, no matter how much may be written on the getting and keeping good attendants, yet, like most things, it resolves itself into a money matter. Facilities for all medical men becoming acquainted with insanity and its treatment, which at one time did not exist. Theoretical and practical teaching of insanity is now the rule in all medical schools, and the contiguous asylums are available for teaching purposes. For those who wish a further acquaintance with the subject there are numerous clinical clerkships easily obtainable, affording asylum residence and practical instruction. The present and future medical student will be almost culpable if he does not make himself fully conversant with at least certain portions of this subject.

Now as regards the treatment of the present day. In most if not in all asylums everything is done with the view of promoting the recovery of recoverable patients, and affording comfort, care, and safe keeping to those in whom recovery cannot be expected, and great amelioration in state is often brought about to the latter in health, habits, and mental condition by treatment and assiduous attention. It is quite recognised that cleanliness, order, discipline, personal tidiness, neatness and elegance of surroundings are all to be desiderated, and are important elements in the general treatment; but it has also to be kept in mind that with working patients engaged in farm and other manual labour, a spick-and-span appearance of person and attire, and a state of extreme polish and order as regards the wards, though it may gain ephemeral praise for the superintendent, can only be estimated at its proper value when considered along with the other working of the asylum as a whole. Dutch houses, though clean to a degree, are said to be wanting in comfort, when it is necessary to go in at the back door for fear of soiling the front door-steps. Unless the material comforts are considered, magnificent ball-rooms only very occasionally used, corridors with flowers seldom traversed by the patients, and grounds tastefully laid out and seldom frequented, do little to aid recovery or promote happiness in those whose life has to be passed in an asylum. County asylums are built and furnished for the care, comfort, and ordinary life of, principally, the working classes, not to excite the amazement and wonder of casual visitors.

Now as regards direct medical treatment. Few medical men believe that insanity—a disease which comes on slowly, which in the majority of cases has been produced by a breach of many of the most ordinary laws of health, and which in the vast majority of cases is found with the impaired bodily health to be expected from such a course of life—will ever be cut short by a dose of medicine, or cured instantaneously by any means. All are united in believing that

¹ Clinical Transactions, 1868, p. 44.

² Notes of a Case of Paroxysmal Hæmaturia. St. Barthol. Hospital Reports, vol. xiii., p. 165.

³ On Paroxysmal Hæmaturia. Ibid., vol. x., p. 71.

patients should be placed in healthy localities with pleasant surroundings; that recovery of bodily health is the first step; that employment, recreations of various kinds, and even routine devotions are all means to the end. So far as I have read in asylum reports, asylums in this country have been very exempt from zymotic diseases, but several have suffered severely from diseases consequent on imperfect drainage. For the last few years this subject has received general attention, and I should think that enteric fever and erysipelas will soon be spoken of as diseases which used to occur in asylums.

I last year laid before you a *résumé* of my practice during the five years ending 1878, in dealing with the excitement met with in mania, puerperal mania, general paralysis, and epileptic insanity. I pointed out the variability of the duration of the attacks of excitement, even in repeated attacks in the same individual, and the necessarily extreme difficulty of accurate estimation of therapeutic treatment. I discussed the question of the value of sedative treatment by day and of hypnotics given at night to prevent undue waste in recent curable cases, and also in chronic patients, and the action of protracted out-door exercise, and its influence as a calnative by expending in muscular exertion the nervous energy which would otherwise eliminate itself in noise or violence. I also touched on other agents useful in treatment. I found that sedative treatment during the day was at times necessary to render patients manageable, but when used for any length of time the patient remained somewhat longer in a stupid or mentally clouded state after the excitement passed off.

In acutely excited cases, where sleep could not otherwise be produced, it should be caused artificially, but this treatment should not be long continued. In my experience chloral in twenty or thirty-grain doses given in sherry was the most certain sleep-producer and harmless, all that was wanted being to set the patient to sleep, not to cause continued drugged sleep. I gave corroborative evidence, based on six years' experience, as to continued treatment with bromide of potassium in reducing the number of fits and allaying irritability, the most disagreeable and difficult feature in epileptic insanity.

I also expressed myself very strongly as to the value of prolonged out-door exercise, that by it the necessity for sedative treatment is much diminished, and insomnia seldom present. I have since then conducted my practice in accordance with these views, and have had most satisfactory results.

So many careful and accurately recorded papers have appeared in the medical journals dealing not only with the sedative qualities of different medicines, but also their effect on the system as regards nutrition, &c., that I do not touch on the subject. I think, however, that the concurrence of opinion of careful observers in asylum practice questions a direct curative action from sedative treatment, while quite admitting its use to enable an acute attack to be safely and more easily tidied over.

In general paralysis no means of treatment hitherto adopted has much retarded, far less cut short, the course of the disease.

Delusions of a fixed character in persons otherwise possessed of mental capacity and in the enjoyment of good bodily health, have as yet proved an unsolved problem, and even after death we are left in the dark concerning their cause for the most part. Though each year, owing to increased care in treatment during attacks of excitement, fewer cases lapse into dementia, yet it is sad to think what a mass of human beings, well grown men and women who outwardly appear well, who, I have no doubt, have still their faculties though in a clouded and dormant state, wanting a something to bring them into action and subordinate them to an acting will, still remain monuments of our inability to prevent such a state, or to galvanise their mental powers into action. I believe we shall yet find a means of stimulating some of them into mental activity. Two forms of treatment emanating from the other side of the Channel call for notice. Dr. Ponza proposed a treatment by coloured light, light admitted through stained glass windows, the walls of the room tinted to match the coloured light. He found that keeping patients in red rooms was good for melancholia, blue rooms for excitement. He reported cases, strongly insisted on the value of the treatment, even in apparently hopeless cases of insanity. In one asylum that I know in England the treatment was tried without result. In France lately much has been written of the

efficacy of metallic application externally in cases of nervous disease of a hysteric type—hystero-epilepsy. Numerous medical men have witnessed these applications and their good results. I confess myself sceptical of such forms of treatment; they savour to my mind of the records of Arabian physicians and sages. In this country all agree that though nervous affections of a hysteric character may originate from one locality or one set of organs, yet the treatment, founded on common sense and experience, should be general, to improve the bodily health, to use all moral means to make the patient live more outside herself, and get rid of perverted sensations, thoughts, and actions, and as far as possible to distract attention from the sources of such. Before I leave this portion of my subject I may briefly allude to two topics which are at present under consideration, and which may in future influence the treatment of insanity.

One is the entire separation of the recent from the chronic insane. No one would hastily give an opinion on such a subject without experiment. In the metropolitan district, where there are immense numbers of quiet demented, this mode has been found to answer well; but in counties, where the total amount of lunatics is under 800, I question the advisability of a separation on the ground of expense and difficulty of working. Chronic patients require better diet than the workhouse scale, and if you withdraw their working assistance, poor though it may be, from the asylum for recent cases, you greatly increase the cost of the latter. I believe up to 600 a mixed asylum works best. Many whose opinion is of value expect very shortly a change in lunacy legislation, which will affect private asylums, and also the boards of management of public asylums, giving in the latter a more direct representation to the ratepayers. The position of the medical proprietors of private asylums appears to me a delicate and difficult one, though it may be money-making, and I think if fair terms are offered, as certainly should be in a country like this if the State interferes, that medical proprietors should hail with joy any legislative interference which will free them from a position of difficulty and unmerited suspicion.

As to a change in committees of county asylums. From the humane and kindly, as well as from the economic (in the true sense) manner in which these institutions have been managed, and the feeling of security and faith in the good treatment of the inmates that is held in most counties, I do not believe that any material change will be made that will hamper the working or cause retrogression in treatment, especially in those asylums which are abreast of the times, and whose staff are conscientiously carrying out the proper aims of the asylums.

Before making any radical change in committees who have individually, with no sparing of time, trouble, or expense, devoted themselves to the carrying out of the Lunacy Acts in their respective counties, there ought, of course, to be an inquiry made into the present state of matters, and if changes occur proper provision for effecting such changes will surely be made. In a subject of such great importance to thousands unable in any way to see to their own interests, legislation ought not to be hasty, imperfect, or too tentative.

At first glance it may appear utopian to expect that insanity can be prevented by any means which are at present in our power; until lately, however, the same was said and thought about several other diseases. We know that an inherited faulty formation of bone may be prevented or lessened by proper attention to diet on the part of the mother during pregnancy and the child during growing life. That other inherited diseases, such as gout and rheumatism, may be warded off during the life of one generation, and the tendency to them reduced in the next by constant care and attention to habits and diet. That many ephemeral bodily diseases are the result of carelessness and indulgence is well known, even outside the profession. Every one knows the consequences of festal seasons, but I doubt whether the changes in structure of vital organs caused by excessive eating and drinking are properly realised, except by those who are in the frequent habit of making post-mortem examinations. Now, whether for treatment or prevention in dealing with purely physical diseases, physicians at once examine into, and, if possible, ascertain the cause. With a disease like insanity, which has mixed manifestations, which is strongly hereditary, which is often called into existence from a latent state by not one but many causes, and last, but of great importance, where the sufferer,

unlike what exists in most diseases, is unable to give an account of the invasion of the disease, of the variance in his habits of life from the normal, to account for this serious change in his condition and state,—in fact, in most cases, the principal actor in what has caused the disease is by the disease prevented from giving any information about it. This is a serious obstacle to research as to the causation of insanity, and it entails a necessity for greater and more careful investigation from collateral sources.

We know that old writers ascribe the absence of epilepsy in ancient days in Scotland to the castration in youth of all the males who took fits, and that by this the propagation of the disease was stopped. This treatment, though rough and against the sentiment of the present time, was no doubt efficacious. The shutting up in asylums of those who labour under mental disease to such an extent as not to be able to take care of themselves—weak-minded, erotic, and epileptic girls and youths—must undoubtedly stop what would be almost inevitable in these cases, the procreation of a nervously diseased set of illegitimate children. Even within the last thirty years or so was it the case that silly, weak-minded, or idiotic females, in whom the physique was at all developed, fell an easy prey to any seducer, and were often the parents of a succession of children, many of whom, if not all, were likely to be imbecile—at any rate, if they escaped at birth, far more likely than those of healthy descent to be affected by nervous disease at the critical periods of life. The present asylum system to a certain extent provides against this in cases which manifestly are quite unfit to be at large; but there are many of the class I allude to at large, spreading the mischief. So much for the prevention by transmission by those clearly insane or markedly weak-minded.

(To be concluded.)

REMOVAL OF THE RIGHT LOBE OF THE THYROID.

By F. A. PURCELL, M.D.,

SURGEON TO THE CANCER HOSPITAL, BROMPTON.

SARAH S. R.—, single, aged twenty-three, a strawplatter, from Dunstable. About three years and a half ago this girl noticed a slight enlargement in her neck, most towards the right side. Since then it has been steadily increasing, giving no pain. General health good. Catamenial discharge regular. She knows other women in the neighbourhood who have enlarged thyroids, and a patient in the hospital from her neighbourhood has goitre. The water at Dunstable is chalky. She attended the out-patient department for eight months for goitre, during which time all the usual remedies (ointments, liniments, &c.) were studiously applied without diminution in the size of the swelling, but rather a slight increase. At her earnest solicitation she was admitted to the hospital to have the growth removed.

Upon admission there was a tumour about the size of a large duck's egg at the right side of the neck, extending from about the third ring of the trachea to the upper border of the thyroid cartilage, overlapped by the edge of the sterno-mastoid muscle, yielding an indistinct sense of fluctuation. Also some thickening of the isthmus of the thyroid body, the whole moving with deglutition; at the same time with a sense of free movability in itself.

July 20th, the patient being under an anæsthetic, I made an incision two inches and a half long over the tumour along the anterior edge of the sterno-mastoid, avoiding the external jugular vein, which was nearer the middle line than normal. The mastoid muscle being drawn outwards with retractor hooks, I proceeded to break down the adhesions with the point of the forefinger and handle of the knife, and experienced some difficulty, as the adhesions were tough and fibrous in character. Having broken through some large branches from the superior thyroid artery, there was brisk bleeding till the ends were secured and tied with catgut ligatures. I now succeeded in quite turning out the right lobe, and came to the isthmus, which was considerably enlarged. This I detached from the trachea, getting well over to the left side, and secured it tightly in a catgut ligature before applying the knife. There was now hardly any bleeding, but a large cavity

existed at the lower end, extending well down towards the clavicle and the large vessels of the neck externally. A horse-hair drainage-tube was put in and the wound closely united with horsehair sutures; the carbolic spray, 1 in 20, playing on the parts all through, all strict antiseptic precautions (Listerian) being observed during and after the operation.

For twenty-four hours the patient complained of difficulty in deglutition, which was her only trouble. Union throughout took place by first intention, without a drop of pus at any time, the drainage-tube and sutures being removed on the tenth day. Discharged from hospital on August 7th. Upon examining the growth after removal, it was found to be made up of a number of small cysts with thin walls, one larger than the rest at about its middle. Anteriorly it was irregularly conical and prominent, posteriorly flat, and very dark livid in colour; it measured three inches and a quarter in length and seven inches around its largest part.

Manchester-square, W.

REPORT OF THE FIRST CASE OF OVARİOTOMY IN BARBADOES.

By F. B. ARCHER, M.B., C.M.

MARY B—, aged nineteen years, single, was admitted into the General Hospital, Bridgetown, Barbadoes, on August 11th, 1879. She first noticed a swelling of her abdomen eighteen months ago, more conspicuous on the left side. Had occasionally a little pain, but not much. Catamenia always regular. Has lost flesh, but is fairly nourished.

On the 11th September, at 2 P.M., the patient was put under chloroform and an incision three inches and a half long was made, extending from above the pubes to a little below the umbilicus. A few slight adhesions were now broken down, a trocar inserted, and nineteen pints of fluid drawn off. The cyst (which weighed 4½ lb.) was removed, the pedicle (a small one) was secured with a silk ligature, cut short and returned into the abdomen. The abdominal cavity was carefully sponged out with a solution of carbolic acid, all bleeding arrested, and the wound closed with nine silk sutures. Dry lint was placed over the wound, strapping and a bandage were applied, and the patient returned to her bed in the ward with the other patients. The operation lasted three-quarters of an hour. She vomited once only. In the evening the catheter was passed; she had ice to suck; one-sixth of a grain of morphia injected hypodermically; no vomiting; no pain. Temperature 101.4° F.

Sept. 12th.—Morning: Slept several hours last night. One pint of urine drawn off; one-sixth of a grain of morphia injected; nutrient enema given, and to be repeated every fourth hour. Evening: No pain, no sickness; seems to be getting on well. Temperature 100°.

13th.—Allowed some milk and beef-tea by the mouth to-day; nutrient enemata stopped; passes water naturally. Temperature 101.8°.

14th.—Had a good night. Temperature 99°.

15th.—Wound dressed; very little discharge; going on very well. Temperature normal.

16th.—Six stitches removed to-day; allowed to take soda water and brandy.

17th.—Wound dressed and the remaining stitches removed. Evening: Temperature 101°; pulse 120. She says she feels very well.

18th.—Had a good night; an enema was administered, and the bowels freely opened; allowed chicken for dinner. Temperature 100°.

19th.—Temperature normal; going on well.

From this date her temperature continued normal. On the 28th the wound was healed, and she was allowed to get up. Her bowels only move after enema. She remained in hospital some time longer and rapidly regained her flesh and strength. We had no apparatus for carrying out the antiseptic treatment, or it would have been used. She remained in one of the ordinary wards of the hospital along with the other patients.

This is the first time the operation has ever been performed in this island.

Bridgetown, Barbadoes.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.* lib. iv. Proœmium.

LONDON HOSPITAL.

AN UNUSUAL CASE OF LAMENESS; OPERATION; CURE.

(Under the care of Mr. FREDERICK TREVES.)

THE following somewhat peculiar case came first under observation in January last.

The patient was a perfectly healthy lad, sixteen years of age, well developed, vigorous, and free, so far as could be ascertained, from constitutional defect of any kind. He complained simply of great pain in the left foot when he attempted to walk, and this made him so lame that he had difficulty in walking to and from the house where he was employed, and where his employment, it may be noted, was sedentary. This lameness had existed for exactly a year, and was becoming more troublesome every month. The first occasion on which he noticed the pain in the foot was one evening when pulling off his boot. There was no history of injury of any kind, direct or indirect, nor could the patient account for the defect in any way. On examining him it was found that he walked just as a person would walk who had a tender spot on the inner side of the sole, that is to say, he walked as much as possible on the heel and outer side of the foot, a fact also well demonstrated by the unequal manner in which the sole of the boot had been worn away. On inspecting the foot it appeared perfectly normal. On being asked the seat of pain the patient pointed very precisely to the web between the great and the second toe, and to a spot exactly opposite to the metatarso-phalangeal joint. He spoke of the pain as being extremely severe, and as occasionally running up the front of the leg to the knee. It only came on, he stated, when he attempted to walk, or accidentally or purposely bent the great toe. After he had walked some distance the pain would continue perhaps for one hour, but otherwise when the foot was at rest he was perfectly free from discomfort. The metatarso-phalangeal joint appeared quite normal; there was no heat, no swelling, no tenderness, and not the least pain on interarticular pressure, and no pain on movement except when the great toe was flexed towards the dorsum. Forcible extension towards the sole was painless, as was also any rotatory movement, but when an attempt was made to flex the toe the pain was immediately induced at the spot indicated.

It was obvious so far that the pain produced by any attempt at flexion of the great toe caused the lameness; flexion at the metatarso-phalangeal joint being a necessary movement in the ordinary act of walking. It was possible also to understand that the act of removing the boot would be painful by the flexion of the toe almost necessarily caused in its withdrawal. On again manipulating the parts, it appeared that the base of the first phalanx of the great toe was a little more prominent than usual. The corresponding phalanx on the opposite foot presented exactly the same degree of prominence, and the enlargement seemed to be purely anatomical. The conclusion arrived at was that in the act of flexion the base of the phalanx was for some reason carried against the digital nerve situated in the web, and it was conceived that such a circumstance would account for the character of the pain, and its occasionally following the course of the anterior tibial nerve. It was found, too, that if the tissues of the web were drawn away from the great toe as far as practicable, the toe could then be flexed without pain.

Esmarch's bandage having been applied, an incision was made in the web, and the digital branch of the anterior tibial nerve was fully exposed. It was then found that the flexion towards the dorsum, the base of the first phalanx of the great toe, was carried forcibly against the nerve, but that in the opposite movement of extension the nerve was not touched. The prominence spoken of was obviously only anatomical, and might have been more apparent than

real, and produced by some inequality in the joint surfaces. About a quarter of an inch of the nerve, which appeared to be quite normal, was removed, and the wound was closed and dressed with dry lint. It healed without trouble, and the patient then found that he could walk without inconvenience, and that flexion of the toe, however violent, could no longer induce pain. He was seen about a month after he left the hospital, and he was then in every respect perfectly well, and had lost every trace of his lameness.

WESTERN DISPENSARY, EDINBURGH.

CASES FROM THE THROAT DEPARTMENT; REMARKS.

(Under the care of Dr. HUNTER MACKENZIE.)

CASE I. *Case of Syphilitic Ulceration of the Pharynx; dysphagia; rapid improvement under local and constitutional treatment.*—W. D—, aged fifty, married, labourer, applied to Dr. MacBride on the 18th April, 1880, and by him was transferred to Dr. Mackenzie. He complained of difficulty in swallowing, regurgitation of food through the nose, shooting pains in the ears, and general weakness. These had existed for about two months, but had become worse during the last two or three weeks. He acknowledged having had a chancre, followed by a bubo, when about twenty years of age, but never before had sore-throat. Now temperate, but at one time drank freely. Had had various manifestations of tertiary syphilis, and his wife had three miscarriages.

On examination patient was thin and sallow, scalp extensively studded with cicatricial marks, hair sparse and dry. Temperature 98°8', pulse 82. He had no difficulty in respiration, but there was great dysphagia, and he could only swallow fluids in small quantities. The tongue was furred, but not fissured. The retro-pharyngeal wall was deeply excavated, and covered with a foul slough, the ulceration extending transversely over the whole breadth of the wall, and vertically from the naso-pharynx to the epiglottic line. At the lower part was a peninsula of flabby granulation tissue, running into the sloughy mass, and resembling a new growth. There was an absence of cervical glandular enlargement. On laryngoscopic examination the veins at the base of the tongue were seen enlarged, the free edge of the epiglottis was serrated from old ulceration, and the ventricular bands were swollen, and overlapped the vocal cords to about one-third of their extent. The posterior nares were congested, not ulcerated.

The case was treated locally by free and frequent applications of an alkaline spray to the ulcerated surface, which cleared away quantities of the slough, and prepared the parts for the application of solutions of nitrate of silver, 90–240 grains to one ounce. Internally he was ordered the iodide of potassium, fifteen grains, thrice daily, before food, together with mercurial inunction each evening after the ulceration had ceased to spread. Under this treatment he made rapid improvement, and on May 2nd he reported himself feeling as well as ever, with no difficulty in swallowing even solid food. The headaches and attacks of giddiness from which he formerly suffered had also abated, and the ulcerated surface was quickly healing up. At his own desire he discontinued attendance on May 30th, feeling now extremely well, and having resumed work. He was, however, warned that the disease would most likely recur, the time during which he had been under treatment having been too short to produce a permanent cure.

CASE 2. *Case of Pulmonary Phthisis, with Laryngitis; paresis of, and papillomatous growth on, left vocal cord; improvement under constitutional and local treatment.*—Mrs. M—, aged thirty-six, was sent to Dr. Mackenzie by Dr. Carmichael of Northumberland-street, on March 22nd, 1880. She complained of hoarseness, difficult and noisy respiration, cough, and weakness. Never very strong, but had no hereditary tendency to phthisis. Had a severe attack of acute laryngitis in October, 1879, from which she never wholly recovered. Thenceforth she had been subject to severe sweatings, and had also got thinner. Dr. Lumgair of Largo, by whom she was treated during her acute laryngeal attack, reported that he suspected a syphilitic taint in the constitution of the patient.

On examination patient was thin and nervous; pulse 93, small; temperature 99°8'. There was marked inspiratory

strider, and the phonation was husky and broken. There was no pain, tenderness on pressure, or swelling in the laryngeal region. On laryngoscopic examination the fauces were pale, not irritable; the left vocal cord was entirely obscured by the swollen ventricular band on the same side, and a small papillomatous growth, evidently attached to the left vocal cord towards the posterior commissure, projected into the glottis. The left arytenoid cartilage and ary-epiglottic fold were swollen, and a similar swelling, but less in degree, existed on the other side. The epiglottis was free from swelling and there was no ulceration. On phonation, the left vocal cord was apparently immobile, and maintained the cadaveric position, whilst the right crossed the median line, so as to make up, as far as possible, for the defective movement of its fellow. There was slight comparative dulness at the right pulmonary apex anteriorly, with bronchial breathing; respiration jerky at left apex.

The treatment of the case was—(1) constitutional, consisting of the administration of one drachm of the syrup of the iodide of iron, with five grains of iodide of potassium, thrice daily (the patient was unable to take cod-liver oil in any form), and (2) local, embracing the occasional application to the larynx of a solution of perchloride of iron, one hundred and twenty grains to an ounce. To these was subsequently added (3) the continuous inhalation of undiluted creosote by means of a respirator specially constructed for the purpose.

Under this treatment the patient made good progress both as regards the general health and the local condition. This was shown by increase in weight, falling of temperature and pulse, and abatement in the amount of inspiratory stridor. On the 15th June the laryngoscopic appearances were far from healthy, but the partial subsidence of the tumefaction, and less prominence of the growth, were an improvement on what formerly existed, and contributed proportionately to the ease and comfort of the patient. The greatest benefit seemed to follow the creosote inhalations.

Remarks by Dr. MACKENZIE.—This case might be classed by some as one of laryngeal phthisis, but I have preferred to describe it as an instance of simple laryngitis on account of the absence of certain of the usual manifestations of phthisis of the larynx. The swelling of the arytenoid cartilages and ary-epiglottic folds, whilst resembling in its contour the pear-shaped tumefaction of phthisis, had not the peculiar ashy-grey opaqueness which characterises the last-named condition. The absence of irritability and pain, and normal condition of the epiglottis, which in the second stage (tumefaction) of laryngeal phthisis generally participates in the swelling, are also in favour of simple laryngitis. The paresis of the left vocal cord seemed to be peripheral and mechanical in character, from the inflammatory swelling interfering with the natural mobility of the parts; at least, no trace of any glandular or other enlargement could be detected in the course of the recurrent laryngeal nerves. In the inflammatory attack we have the origin of the papilloma, which generally arises in this way. The syphilitic taint alluded to in the history of the case was not manifested in the laryngeal affection, although Dr. De Havilland Hall has lately (THE LANCET, 12th June, 1880) recorded a case of syphilitic laryngitis, which yielded readily to treatment, where the appearances resembled those usually met with in laryngeal phthisis, but in which there was no lung affection.

Although the case in its laryngeal manifestations seems at the present time to be of a simple inflammatory nature, it is quite possible that it may eventually develop into phthisis, more especially as the lungs have already commenced to undergo the phthisical process.

GENERAL HOSPITAL, SHANGHAI.

PERITONEAL ADHESIONS IN TROPICAL ABSCESS OF THE LIVER; DEATH; REMARKS.

(Under the care of Dr. EDWARD HENDERSON.)

A Russian sailor was admitted on March 20th last. He was a well-developed man of about thirty years of age, thin, but not emaciated, and very anæmic. He appeared to be dying. His illness, it was stated, had lasted about six weeks; it had been characterised by fever of an uncertain type; latterly he had suffered from pain in the region of the liver, which had gradually increased. Physical examination was necessarily imperfect, but it was ascertained that the tissues of the back, legs, and thighs were dropsical, and that

there was fluid in the abdominal cavity. In the right nipple line there was nearly absolute dulness from the fourth rib downwards to a point three inches below the ribs—about eight inches in all. On the right side and in front over the liver the intercostal spaces were on a level with the ribs, and there was diffuse tenderness over this area. The urine was examined and found free from albumen. A mixture containing tincture of digitalis and compound spirit of ether was given, along with such suitable nourishment as the patient could take. On the following day he had rallied somewhat, and lay on his right side. The pulse could be felt at the wrist. The heart sounds were very feeble, but appeared to be normal; the apex beat could not be felt. No lengthened examination was at any time possible, but the diagnosis was in favour of hepatic abscess. On the 23rd it was deemed useless to delay operative interference longer, and it was decided to open the abscess by antiseptic incision, if the aspirator confirmed the diagnosis. Before deciding absolutely in favour of this method of operating, search was made for friction-sounds indicating peritonitis, and the probable presence of adhesions. Coarse friction was distinctly heard at one point below the margin of the ribs. Ether was administered, but after a few inhalations, insufficient to produce anaesthesia, the patient stopped breathing, and his pupils dilated widely. Artificial respiration was tried, and the tongue drawn forward, with the effect of again restoring the respiratory movements and a naturally-contracted pupil. This improvement was, however, of short duration, and the patient died. Immediately after death the large needle of Mathieu's aspirator was introduced below the ribs in the right nipple line, and, at a depth of about an inch, pus flowed into the receiver. The needle was then withdrawn. The body was examined on the following day.

On opening the abdomen pus was found lying on the surface of the right lobe of the liver in the meshes of a few adhesions, which were easily swept away by the finger. The puncture made after death came at once into view, pus issuing from it in a small continuous stream. At the back, below the coronary ligament and in a line with it, there were other adhesions, but these also were slight, and apparently recent. There were no other abnormal adhesions between the liver and its surroundings. The right lobe of the liver was the seat of an abscess as large as a man's head. Above and in front the walls of this abscess were formed only by a layer of fibrous tissue and the capsule; below there were about two inches of the secreting structure of the gland left. Clear serous fluid was found in considerable quantity in the cavities of the peritoneum, pleuræ, and pericardium.

Remarks by Dr. HENDERSON.—With so large an abscess, and so near an approach of pus to the surface, considerable and firm peritoneal adhesions might reasonably have been expected; their absence is a point worth noting, especially at a time when free antiseptic incision seems likely to become the recognised mode of dealing with the disease. The formation of adhesions is diagnosed by the occurrence of acute localised pain, and by the friction-sounds which at one time or other can be heard over the painful area. The immobility of the liver during the respiratory movements suggests itself as a further test, but I have myself had no practical experience of its usefulness. In the case just given the history of acute pain was absent, and friction was but once heard. In doubtful cases, when it is proposed to open the abscess below the ribs, it would be well to expose the surface of the liver by an incision sufficiently large to admit the finger; through such an opening the presence or absence of sufficient adhesions might be determined, and the subsequent steps of the operation arranged accordingly.

Such cases as the one under discussion are of course now rarely met with, but I have preserved the notes of a nearly parallel example which I saw at Shanghai in the autumn of 1869. At that time it was thought right by many practitioners to wait before opening an abscess in the liver until distinct bulging with œdema of the subcutaneous tissue indicated the near approach of the matter to the surface of the body. Some cases were, I believe, lost in this way, which, under more active treatment, might have been saved; but it cannot be denied that at that time the results of anything like early interference were most discouraging. The case to which I specially refer now was under observation in Shanghai for twenty-eight days, during which

time two proposals to open the abscess with a trocar were negatived in consultation. The patient died before the abscess showed any sign of pointing; and at the post-mortem examination, although an enormous abscess was found occupying the right lobe of the liver, and closely approaching the surface of the gland over a wide area, yet only a few inconsiderable and apparently recent adhesions were seen in the right infra-axillary region. I can well remember how triumphantly this was recognised as a proof of the folly of surgical interference in such a case.

In January of 1875 I saw a case in consultation which further illustrates the point. I regarded it as peculiarly favourable for operation. The patient, a young male adult, had been ill for ten days, during which time he had suffered considerably from pain in the region of the liver. When I visited him he was in bed resting on his right elbow, in a half prone position, to "ease the pain" he said. His general health had not then suffered seriously. The liver dulness was considerably increased, and the intercostal depressions were nearly obliterated on the right side, and in front below the fifth rib. There was a rounded prominence in the epigastrium, in which obscure fluctuation could be felt; this tumour was absolutely dull to percussion, and its dulness was continuous with that of the liver. The stethoscope was not used. The No. 2 needle of a Dieulafoy's aspirator, dipped in carbolic acid, was introduced into the centre of the swelling, and about two ounces of pus were drawn off. Two more operations at which I was present were done in the same way, as nearly as possible in the same place, and with much the same result. Ten days after the first operation the patient died rather suddenly, the abscess having burst into the peritoneal cavity. I witnessed the post-mortem examination. The abscess had given way posteriorly. There were no adhesions in front where the aspirator had been used, and the needle punctures were apparently closed.

At a post-mortem examination made in the Shanghai General Hospital in July, 1874, I saw a liver removed from the body of a male adult which contained, in a large cavity centrally situated, nearly three pounds of pus. In this case there was a complete absence of adhesions. During the four days the patient was in the hospital he complained of no pain or tenderness in the region of the liver; he was then, of course, dying, but was quite sensible and able to answer questions.

Even when the aspirator is alone used there is risk, unless the surface of the liver is sufficiently adherent to the parietes. An acute abscess of the liver cannot be emptied through the small needles supplied with aspirators, the fine channels of these being invariably blocked by the shreds of necrosed tissue to which the pus from such an abscess always contains. On the other hand, the large needles, through which alone evacuation can be effected, leave a wound by which the pus may easily find its way into the peritoneal cavity if the surface of the liver is still free. In the autumn of 1877 a death occurred in my own practice apparently in this way. My patient, a female, had dysentery. My first visit was paid on Oct. 8th. On the 14th a liver abscess was diagnosed, and she had acute pain and much tenderness in the liver area. On the 19th I punctured the abscess in the right hypochondrium, immediately below the ribs, with the large needle of a Dieulafoy's aspirator, repeating the operation on the 22nd. The presence of sufficient adhesions was inferred in this case from the character and duration of the pain, but the stethoscope was not used. She died on the 27th from general peritonitis. At the post-mortem pus was found lying between the abdominal parietes and the surface of the liver, in communication with the pus in the abscess. There were many recent adhesions between the liver and the surrounding parts. A little longer delay in operating in this case might have secured a favourable result.

It must not be supposed from the foregoing that I would for a moment council any return to the expectant treatment of hepatic abscess, the fatal results of what I have too often witnessed in former years. I am now only anxious to point out the necessity there is for care in operating, and to show how much may depend on the careful and intelligent observation of a case from day to day during its whole progress.

THE NEW HERTS CONVALESCENT HOME will be opened at St. Leonards on October 21st by the Princess Christian. About £1500 is still needed to meet the cost of the new building.

Reviews and Notices of Books.

The Riviera. By EDWARD I. SPARKS, M.A., B.M. Oxon. London: J. & A. Churchill. 1879.

IT is a fashion, and undoubtedly a good fashion, of the present day to send patients suffering from consumption and other constitutional chronic maladies to climates which may enable them to throw off their ailments. To wrongly advise a patient in such a matter means very often the mere emptying of his pocket for the benefit of the hotel-keeper and the undertaker; while sound advice, advice based upon real knowledge, will often prolong the existence of lives which are of inestimable value. The climate which will do harm or good is often extremely localised. The sending of a patient to the wrong town of a district, to the wrong part of a town which may have been judiciously selected, to a wrong hotel, or even to a wrong room in a well-selected hotel, may cause the best laid schemes and the kindest intentions to work mischief rather than benefit. In arriving at conclusions on such matters we must trust entirely to the information of those who live on the spot, and it is admitted that disinterested observers who are actuated by a purely scientific spirit are few and far between. On this account Dr. Sparks' book will be very welcome to the profession at large, for every chapter of it shows that it is the work of a man of learning and science.

The first chapter, on the meteorology of the Riviera, furnishes many important facts. The mean difference of temperature between sunshine and shade, during the winter months, is 73° F., and thus the risk of chill in passing from sunshine (averaging 129° F.) to shade (averaging 56° F.) is always very great. The mean winter temperature of the district appears to be from eight to ten degrees higher than that of London, the difference being least in the months of December and February. On the shortest day of the year (Dec. 21st) the sun is above the horizon in the Riviera for 8 hours 43½ minutes, as against 7 hours 40 minutes in England, and all through the winter months the Riviera day is slightly the longer. The main cause of the difference in temperature of different parts of the Riviera is the varying amount of protection afforded by the range of the Maritime Alps. Where the mountains approach the coast the snow-chilled winds from the Alps blow more or less completely over the towns nestling at the mountain-base. This is the case at the western end of the Riviera. Where, however, as at Genoa, plains intervene between the snow peaks and the town, the cold current from the north blows without let or hindrance. At Genoa the annual rainfall is 1317 mm., and there are sixty-seven rainy days during the winter months, while at Hyères, at the extreme west of the Riviera, the rainfall is only 746 mm., and the number of rainy days in winter only thirty-seven and a half. The temperature of the sea along the Riviera is about 12° F. higher than the minimum temperature of the air. The mean winter temperature of the sea at Cannes is 57·2° F., as against 49·8° F. along the Cornish coast, and about 42° F. along the east coast of England. There is no doubt that the high temperature of the sea is one cause of the mildness of the Riviera climate. The amount of rainfall during the winter at Nice is much greater than in London, but the number of rainy days is very much less; while the number of cloudless days is about ninety-six at Nice, scattered equally throughout the winter months, to twelve in London, of which two occur in November, none in December, one in January, another in February, two in March, and the remaining six in April. The mean humidity of the air (saturation being 100) varies between 70 and 74 on the Riviera and between 83 (March) and 90 (January) in London. The rainfall in the Riviera is subtropical in character,

violent while it lasts, but rarely continuous for many days together. The visitors to the Riviera are constantly in dread of the north-west wind, the *mistral*, which has parted with its moisture in sweeping over Central France. Its advent is always accompanied by a fall of the barometer. "The mistral is more felt the further west you go, though it is by no means unknown as far east as San Remo." The south-east wind, the *scirocco*, is the wind that brings the rain. The north-east wind, or *greco*, is bitterly cold; this is the wind which makes the climate of Genoa so trying, and it blew there for part of the day on 309 days in the year 1872. The north wind, or *tramontana*, blows over those places which are immediately protected by high mountains, but it finds access to places situated at the extremities of long straight valleys like Vintimiglia. The sea-breeze is felt along the Riviera during the middle of the day, but at sunset the land-breeze immediately sets in. The sudden cold which occurs at sunset is well known, and might have been inferred from what has been said regarding the difference in temperature between sunshine and shade. Dr. Marcet's experiment upon one occasion showed that between 4.5 P.M. and 4.27 P.M., the time of sunset, the fall in the thermometer was 9° F.; at 4.40 it had risen again nearly one degree, and fell ten more degrees before midnight. Fog and mist are unknown along the Riviera, snow is a great rarity, and prolonged frost never occurs; 25.7° F. was the lowest temperature observed in Nice for twenty years. In forming an estimate of the climate of the Riviera, it seems to us to be very necessary to guard against the utterances of occasional visitors, who only pay short visits. While one fortunate visitor may tell with rapture of a Christmas like an English summer, open-air excursions, picnics, warmth and sunshine, another, less fortunate, may tell of everlasting mistral "iced winds" from the north, and other discomforts. It is well not to listen either to the optimist or pessimist. A reference to Dr. Sparks' book will tell exactly what the climate is. A man of sense will not expect to find a climate without some drawbacks, and will be thankful to know that, should he encounter bad weather in the Riviera, he has probably left something infinitely worse in London.

Chapter II., devoted to the trees of the Riviera, will prove of great interest to those who have to find amusement during an enforced sojourn in the district; it is full of information. Chapter III. treats of the medical aspect of the Riviera; and Chapter IV. is devoted to a consideration of the journey. The remaining chapters treat in more detail of the various health-resorts along the Riviera, and in them will be found much indispensable information concerning Hyères, Cannes, Nice, Mentone, Bordighera, San Remo, Alassio, Pegli, Cornigliano, Nervi, Rapallo, and Spezia. These chapters show, among other things, how worthless are the utterances of interested persons as regards climate, and how easily an "authority" with local bias may blind himself to the shortcomings of the spot which he has selected as his professional habitat. To judge of a health-resort one must know it personally, unless able to refer to an honest book like that which Dr. Sparks has written. In the next edition we hope to see introduced a good map of the district and plans of the various towns. This would increase the value of the work immensely. As it is, we can most cordially recommend the work to our readers as one of exceptional worth.

On Deafness, Giddiness, and Noises in the Head. By EDWARD WOAKES, M.D. Lond., Senior Surgeon, and Surgeon to the Ear Department, at the Hospital for Diseases of the Throat and Chest. Second Edition. London: H. K. Lewis. 1880.

THE early demand for a fresh edition of Dr. Woakes' little volume is a sufficient criticism of its merits. Barely an interval of eighteen months has elapsed since the publication of the first edition. This circumstance becomes the more significant when considered in conjunction with the fact that

the work is rather a dissertation on some speculative points in aural pathology than a manual on diseases of the ear. In the preface to the first edition the author described his point of departure, and in the preface to the second edition he states that he has attempted to extend still further the lines on which he originally started. From considering the association of neuralgia with herpes, and the analogous phenomena attending wounds of nerves, Dr. Woakes was led to observe the nutritive correlation of regions and parts, otherwise unconnected, through the intermedium of vaso-motor innervation. In consequence of this relation any departure in any one region from its ordinary state is immediately appreciated by a corresponding set of nutritive changes in the other. The explanation of this mutual interdependence between the respective regions is, he thinks, to be found in the association of their afferent and efferent nerves with a given sympathetic ganglion, and in this way certain physiological and pathological processes in the ear, as well as tinnitus and vertigo, are investigated and explained.

The method which Dr. Woakes has followed in attempting to elucidate some of the more intricate problems in aural pathology has enabled him to lift the subject out of the low depths of narrow, and too often ignorant, specialism to the higher platform of scientific inquiry. Though Dr. Woakes' inferences may not all be equally conclusive they are always ingenious, and extremely plausible. His explanation of the association of inflammation of the inner and middle parts of the ear with dentitional derangements in infants is at once sensible and suggestive. The amount of preventable deafness due to neglected or despised inflammations during infancy and childhood is a sad reflection on medical practice. It would be no exaggeration to say that, of all cases of deafness, at least 70 per cent. are due to purely preventable or curable causes. The following is a good illustration of the way in which severe inflammation of the ear is often overlooked. An infant that is teething shows evident signs of acute suffering in its troubled face; it cries or shrieks piteously whenever its position is changed, especially if this be done suddenly, and it constantly raises its hand to its head. "Now, the point which I wish to emphasise is this," says Dr. Woakes. "The pain thus experienced is not what we vaguely call neuralgia; it is a definite trophic change, an inflammation taking place in the deeper-seated tissues of the ear, beginning with congestion and stretching of an acutely sensitive region, passing on to exudation and suppuration, capable of being recognised if the proper means are used for doing this." Often, however, the case is not seen till late, and the child either dies from an extension of the inflammatory processes to the brain or its membranes; or a sudden subsidence of the acute symptoms takes place, accompanied by a discharge from the ear. No more is thought of the affair, except, perhaps, to congratulate the parents on the existence of such a "useful derivative" as a copious discharge from the ear, which it would be folly to attempt to arrest. Meanwhile, the middle ear of the patient is undergoing suppurative inflammation; its delicate textures are breaking down, and soon irreparable mischief will be accomplished. This, we can affirm with the author, is no fancy portrait, but has occurred thousands of times, is occurring almost daily, and will continue to occur unless means be taken to recognise the true nature of the symptoms, and to treat them appropriately.

We cannot dwell on Dr. Woakes' explanation of deafness in adults arising from paresis of the palato-tubal muscles, nor on his ingenious speculations on ear-cough, ear-sneezing, vertigo, and noises in the head. No brief summary of his views could do full justice to the cogency and subtlety of his reasons. We prefer to commend the whole work to the thoughtful perusal of all intelligent medical practitioners who desire to rise above the level of mere routine empiricism.

THE LANCET.

LONDON: SATURDAY, AUGUST 28, 1880.

THE current number (August) of the *Contemporary Review* contains, among much interesting matter, a suggestive article, by Dr. KARL HILLEBRAND, on "Half Culture in Germany," in which "even Englishmen may find something to interest them." Our object in referring to this article is not so much to call attention to the state of education either in Germany or in England, as to give what emphasis we can to some of the principles which Dr. HILLEBRAND indicates. These principles are both logical and rational, and are, we believe, the only ones on which the methods of true education should be based. Of late years there has been a growing tendency to eliminate from general preliminary education everything that is not likely to be directly useful in a boy's subsequent career. The classical languages are the especial bugbear of so-called educational reformers, and it is proposed that natural science should be put into their place. The dictum is constantly dinned into our ears that chemistry, physics, botany, and biology are the well-springs of all intellectual and moral vigour, and examinations the final test of capability. Mnemonical accumulation of facts is the modern equivalent of culture, and stringency of examination is regarded as the measure of attainments.

It is gratifying to find an authority of Dr. HILLEBRAND's pretension taking a decided stand against these modern views. "Culture," he says, "does not mean a vast quantity of knowledge—on the contrary, it demands a wise restriction." There will, he goes on to state, always be some matters which we must ignore in order to be able to live at all, such as dirt in the physical, misery in the emotional, and technical knowledge in the intellectual world. As the cleanest of the clean must eat his bread and drink his wine without inquiring too curiously how they were made and who has handled them, and as the most compassionate person can hardly expect to protect the whole animal kingdom from suffering and persecution, so even the most learned among the learned will scarcely be so ambitious as to wish to master every branch of science. "In life itself," says Dr. HILLEBRAND, "we are obliged to restrict ourselves to what lies nearest to us, and the true purpose of the school is not to anticipate the lessons of life, but so to discipline the mind that it may be prepared to learn them from experience. Far too much is taught—nay, too much is read." This is, we fear, precisely the condition which is the bane alike of preliminary and professional education: "too much is taught—nay, too much is read." Anyone looking over the prospectuses of the various medical schools for the first time would be appalled by the number and complexity of subjects comprised within the medical student's curriculum. It requires actual experience to prove how chimerical all this outward show is, how valueless, how false! There is in it

nothing of training, and certainly nothing approaching to culture. Observation of facts merely as such is glorified to the exclusion of all exercise of reasoning, reflection, and judgment. The larger the number of facts that can be crowded into the student's gaze, the greater is the educational value supposed to be. But this is true only within very narrow and circumscribed limits. There soon arrives a stage at which numbers become confusing, and observation meaningless routine. Intellectual knowledge is individual and subjective—that is to say, unteachable. Experience alone can teach what life contains, and the schools can but train the organs which grasp that experience.

As to the relative merits of liberal education and professional education, Dr. HILLEBRAND maintains that when once a sound general education has been given, special knowledge is easily acquired in the technical schools. No early professional training can supply the place of a liberal education. He condemns as "false the opinion that the time is lost which is spent in learning things that do not bring any immediate profit," and maintains that it is much more advantageous to enter life with a completely formed and disciplined mind—that is, with a perfect instrument—than with a quantity of special knowledge.

Dr. HILLEBRAND's opinion of the relative value of the modern languages and a thorough study of mechanics and the natural sciences on the one hand, and the classical languages and mathematics on the other, as a means of general education, is very decidedly in favour of the latter. "Whoever considers," he says, "the matter, even superficially, will come to the *a priori* conviction that language, which is at once thought and the form of thought, while at the same time it is the symbol of all feelings, sensations, and things, must be a more important means of mental discipline than any other manifestation of the human mind, if only because it is the most general and comprehensive of all; that which embraces most of what goes on within us, which brings most clearly to our consciousness what happens around, which conveys most distinctly the communications between man and man." But the educational value of ancient languages does not lie merely in the literature to which they are the key; it is essentially formal. "Thus, Latin grammar is a course of logic presented in an almost tangible form. Greek, on the other hand, I might," he adds, "almost call a course of æsthetics, by means of which we learn to distinguish a thousand gradations of meaning which our barbarous languages will not allow us to accentuate." In short, Dr. HILLEBRAND sees in classical study not only the most effectual corrective to the atomical tendencies of our age, "which threaten, unless resisted, to reduce us to the condition of disconnected grains of sand"; but also the most admirable of mental gymnastics, "which, when applied by even the dullest and most awkward mind, renders it bright, pliant, and strong—the school of logical thought, of intuitive perception, and of just judgment." If this estimate be true, it must be allowed that the legislation and regulations for the preliminary and professional education of medical students have for a long time been in an entirely wrong direction. Those who have the charge of the preliminary training of intending medical students will do well to consider whether a liberal education such as

Dr. HILLEBRAND recommends will not also be the best equipment for a medical man.

THE mode of formation of callus is a subject of both practical and pathological interest. In the year 1865 M. RANVIER showed that the callus which is formed in simple fractures, in men and animals alike, passes through a cartilaginous stage, while in compound fractures there is no cartilaginous stage; new bone is at once formed from granulations which come from the medulla of the fractured bone. He showed also that suppurative inflammation does not interfere with the formation of bone in cartilaginous callus, when the latter has once been formed. These researches left still undecided the question of the cause of the difference in the process under the two conditions. This point has been further studied in an investigation described to the Académie des Sciences by two pupils of M. RANVIER, MM. RIGAL and VIGNAL. They find that (1) even in simple fractures the central plug always becomes directly bony in the middle of the medulla, which has assumed an embryonal structure. (2) When a part of the bone is scraped away, either down to the medullary canal or less deeply, the cicatrix is always directly bony, even when union is by the first intention, a fact also observed by M. RANVIER. (3) In a compound fracture, even if the fragments of bone are left exposed to the air for a considerable time, if suppurative inflammation can be avoided, and union by the first intention thus obtained, the callus passes through a cartilaginous stage. (4) That in a compound and suppurating fracture the callus is at first cartilaginous in the points not invaded by the suppuration, while even in simple fractures, in which the extremities of the bones are, from any cause, bathed in pus, the callus is still primarily bony. These different facts led the investigators to conclude that if in compound fractures the callus is primarily bony, it is because the periosteum, or more exactly the subperiosteal layer of cellular tissue, was destroyed by the suppuration; and they have arrived at the conclusion that this layer alone is concerned in the formation of cartilage, and that the medulla of both the Haversian canals and of the central canal forms bone directly. Several attempts were made to obtain bony tissue from medulla transplanted into the subcutaneous cellular tissue, but all failed, while subperiosteal tissue thus transplanted invariably produced bone which was at first cartilaginous, as M. OLLIER had already found. From the lower third of the tibia of a rabbit the periosteum was removed three or four times, so as to destroy all its osteogenic properties. Then, fifteen days after the last removal, the bone was broken in the middle of the denuded portion. Twelve days later, a period at which, in the rabbit, a cartilaginous callus is usually found, the animal was killed, and the examination of the fracture showed that in the midst of granulations proceeding from enlarged Haversian canals, there was a peripheral callus, purely bony. The experiment was repeated several times with the same result. A still more conclusive experiment was the one in which the periosteum was removed from one surface only, and the bone then broken. Upon that surface the osseous callus formed directly, as in the case of compound fractures, while upon the surface on which the periosteum was preserved the callus was car-

tilaginous. These experiments show that the subperiosteal layer, when there is active irritation, as in the case of fractures, contributes to reparation by forming cartilage. But there are numerous cases in which the subperiosteal tissue forms bone directly, and experimentally it could be made to form bone or cartilage at will; with slight irritation bone is formed, with greater irritation cartilage. In the same animal the periosteum was exposed on both legs; on one it was irritated gently by rubbing (as with an agate burnisher), and in the other leg it was irritated strongly, and the adjacent soft parts were bruised, so as to cause an extravasation. If union of the wounds by first intention was obtained, in the former osteophytes were found beneath the periosteum on the twelfth day, while in the latter there were only cartilaginous masses. The latter experiment explains the direct formation of bone at the points of the callus which are farthest from the fracture. In the experimental fractures it was invariably found that in the extremities of the oval mass of callus, bone was formed at once—the inflammation at these points being less active, the subperiosteal cellular layer formed bone immediately.

IN another column we print a letter from Dr. ROBERT BARNES, directing attention to certain practical aspects of the Guy's case which are in danger of being overlooked. The excuse pleaded by the nurse when before the Treasurer, as recited by Dr. PAVY in his letter of last week—namely, "that she had been given to understand that the patient was suffering from hysteria, and that she thought she was only putting in force the proper treatment,"—rests on three assumptions: "(1) That hysteria is a disorder rather moral than physical; (2) that, therefore, hysteria may properly be treated on penal principles; (3rd) that a nurse is competent, of her own motion, to apply that treatment." These are, as Dr. BARNES points out, very grave propositions. The first is simply absurd; the second mischievous; the third destructive of the first and last principles of medical practice.

It would be difficult to expose the misconception as to "hysteria" which seems to prevail in certain—even professional—circles more tersely or clearly than Dr. BARNES has exposed it. "Wherever the phenomena known as hysteria present themselves, there is surely underlying them as cause a pathological condition which it is the business of the physician to discover and to treat. To treat hysteria medically is to treat a symptom—a course sometimes judicious, but hardly scientific. To treat hysteria penally is, in plain language, to treat the patient brutally. Hysteria is no more an independent disease than is neuralgia, chorea, epilepsy, or other covert manifestation of disease or disorder of the nerve-centres. As well might we apply penal treatment to these nervous phenomena as to hysteria. The penal treatment of hysteria is a remnant of the barbarous era of medicine, when lunatics were so treated." This is a simple and forcible statement of facts. Cases of "hysteria," "neuralgia," "epilepsy," and the like, are on a footing with cases of ill-temper or passion, pain, fidgets, formulated or organised nerve-disturbance. They are not diseases, but states; and the troubles to which for convenience Art gives a name are known to Science only as the symptoms or expressions of a pathological condition which it is the duty of the physician to explore. We shall never be wholly

rid of the perils and contingencies of treatment for these pseudo-diseases until the practice of considering and describing effects as causes is abandoned.

Meanwhile it is necessary to observe that the line of reasoning adopted is not wholly faultless. The syllogism of the defence, as Dr. BARNES would hypothecate it, stands thus: Moral diseases require moral treatment (which is true in itself). 2. Hysteria is a moral disease (which is false, because hysteria is not a disease, and if it were it would not be moral). 3. Therefore hysteria requires moral treatment. The first proposition is accurate in the abstract, but its application is very limited because it is difficult to name more than one or two diseases which are even *supposed* to be moral. "Moral insanity" is the chief of these, and the tendency of scientific inquiry points to the conclusion that before many years this term will be eliminated from the nosology of mental disease. Every step onwards makes it increasingly evident that even the more purely mental phenomena are the expressions of a force acting exclusively through, and limited by, if not arising within, the physical area. Even though it be possible, as it clearly is, to operate upon the brain as an organ through the mental faculties which are its functions, and so to re-educate it, or improve its development reflexly, the fundamental principle of this method of treatment lies in the recognition that the phenomena of disorderly brain and nerve action are not diseases, although they proceed from pathological conditions. This much must be conceded. It is, however, necessary to point out that although the symptoms of a pathological condition do not constitute a disease, it may be necessary to treat the disease through the "symptoms," that being the only way to approach it. An illustration of this method is that to which we have alluded, the development of the brain by re-education. It would not, therefore, go without saying that because hysteria is not a moral disease—or a disease at all—it could not require moral treatment! The treatment of "symptoms" is sometimes the only possible mode of treatment, and in respect to *all* developmental diseases where the morbid condition is chiefly one of function, a large part of the treatment must be functional. The treatment of an atrophied and paralysed muscle is by exercise—that is function—and in so far as conduct is the outcome of brain action, conduct must be made the medium of brain treatment on the same principle that a muscle is first moved passively, and then stimulated by electricity to promote its nutrition and restore its normal state. We do not allude to this imperfection in the argument with a view to weaken it, but the rather to clear the line of reasoning of a possible obstruction.

It is plainly wrong to class hysteria as a disease, and there is not a particle of evidence which could even be pressed into service as an excuse for regarding it as a moral affection. To treat it penally is, as Dr. BARNES justly insists, "to treat the patient brutally." If it were otherwise, as the law at present stands, the moral treatment required would be out of place in an hospital. The use of the bath as a punitive measure has been long interdicted in the practice of establishments for the insane; it would be strange indeed if it were revived in hospitals. The main point, however, is the system and principle of *treatment by nurses or sisters*. This is a most serious evil, and one which cannot be too strongly denounced. Nothing should be left

to a nurse, whether it be the use of a bath at discretion, or the exercise of judgment as to the expediency of getting a patient out of bed. The physician's directions ought to be precise, and it is by failing to give definite instructions, and leaving details to nurses, that the growth of nursing into a separate system has been encouraged. A strong and clear bearing at the outset would have prevented the rise of this hydra-headed evil. Nothing can explain the omission to make every detail of hospital management a part of "treatment," except the neglect to recognise the fact that a hospital is something more than a home where sick persons happen to live, and in truth a medical establishment for the cure of disease; or the existence of a trouble-saving policy which seeks relief from the pressure of hospital work in leaving as much as possible to the nurses. Obviously no physician or surgeon can entertain the opinion that nursing ought to be something apart from, and independent of, the practice of the medical and surgical art. If any such notion prevail, let those who look on it with tolerance take warning from what has occurred in connexion with the asylums for the insane, where the relegation of moral and physical patients to attendants has led to the springing up of a class of officials who are more troublesome to manage than the patients, and who, when they are appointed by a house steward—the homologue of the hospital treasurer—are simply scorpions to the peace, and ceaseless enemies to the success, of asylum practitioners in lunacy. Regrets are vain. The up-starting of pretentious sisterhoods and pseudo-professional nurses has been permitted, if not encouraged. It only remains to exorcise the evil spirit which has been invoked. The sick poor are the sufferers by the new nursing system. Whatever inconvenience hospital physicians and surgeons may suffer must be patiently endured until it can be remedied. It is the penalty of the blunder which has been committed in dealing with the system of which it is the fruit. Meanwhile, in the interests alike of science and humanity, the assistance of the medical faculties of hospitals everywhere must be invoked to put an end to the nuisance and mischief of corps of nursing sisters and the "professed" who do not fulfil the qualification of being simply intelligent women content and modest enough to do what they are bid to do, in the way and at the time specified.

Annotations.

"Ne quid nimis."

CENSUS ENUMERATION IN THE UNITED STATES.

ALL interested in the science of vital statistics must be somewhat amused, if not incited to serious consideration by the local squabbling which is taking place in the United States with regard to the announced results of the Census enumeration now in progress. It is well known that there is much emulation among American municipalities as to the size of their respective cities, judged by the number of their population. It has, moreover, long been the conviction of most students of vital statistics that American mortality statistics are for the most part untrustworthy, not only from the defective system of death-registration which prevails in the United States, but also from the loose, not to say reckless, manner in which the population of its principal cities is estimated during the inter-census

periods. Let us take the city of St. Louis as an example. It has recently been semi-officially announced that the population of that city, at the Census just taken, does not exceed 375,000 persons, and that it may not exceed 350,000, when, as a local newspaper indignantly protests, "everybody knows that the population reaches or exceeds 500,000." The feeling which prompts this indignation is partially disclosed by what follows:—"How preposterous the official estimate of St. Louis is shown from the allowance of 475,000 to Chicago." We have before alluded in these columns to the incredible mortality statistics issued by the Health Department of the City of St. Louis, and attributed their fallacy mainly to an over-estimate of the population. We have before us the Condensed Statement of the mortality in that city during the year 1879. With regard to the population it is therein stated that it was 160,773 at the Census in 1860, and that according to the Government Census in 1870 it had increased to 310,864, "notwithstanding the depressing influences of the War." It is further intimated that by a recent enumeration in 1878 the population in 1879 was estimated at 503,000. The mortality statistics are calculated upon a round estimate of half a million; the result of which is that the 6167 deaths reported during the year give a rate of mortality equal to 12.33 per 1000. It is scarcely necessary to say that out of America no such low annual death-rate as 12 per 1000, in a large city, is ever heard of; and vital statisticians may be excused if they doubt the trustworthiness of such a death-rate. The death-rate in St. Louis during 1879 is, moreover, reported to show an increase upon a still lower rate in 1878. The continuance of so low a death-rate as 12 per 1000 in a stationary or life-table population would signify a mean duration of life of 83 years, while in England and Wales it does not exceed 40 years. We are able to calculate from the ages of the decedents in St. Louis, in 1879, that the mean age at death during that year was not quite 25½ years, and in no way approached the implied fourscore years. Making due allowance for the fact that the population of St. Louis, instead of being stationary, is a rapidly increasing one, it may pretty safely be estimated that the true death-rate of St. Louis is nearer 30 per 1000 than 12 per 1000. Convinced that the reported death-rate of 12 per 1000 is entirely fallacious, it is, even now that the new census numbers are beginning to be announced, exceedingly difficult to know how much this fallacy is due to an incomplete record of deaths, and how much to exaggerated estimates of the present population. It is said that the action of the Census Bureau is being severely criticised, on account of supposed serious imperfections in its enumeration. If, however, we may take the St. Louis case as a fair sample of the others, we have little hesitation in pronouncing the census number of from 350,000 to 375,000 far more worthy of trust than the 503,000 locally estimated from an enumeration in 1878. It may be hoped that the fallacy of so large a proportion of American mortality statistics, which will become the more patent when the new census figures are published, will direct renewed attention to the subject in the United States.

ADULTERATED BUTTERINE.

IN England we maintain the pleasing fiction that butter alone is allowed to be sold for food; but in France trade in imitation butter is openly carried on. M. Mège-Mouries is the author of a system for the manufacture of an economical fatty substance which is euphoniously termed "margarine butter." According to the original process the margarine, which may be found in most fatty substances, was extracted from fresh beef suet. When brought in contact with water containing a small quantity of carbonate of soda, and raised to a temperature of 40° C., the grease was liquefied and separated from all foreign bodies. It was then put under

hydraulic pressure in canvas sacking, which retained the stearine, while the oleine and the margarine were collected in the cylinders, and constituted a homogeneous paste, well suited to culinary purposes. This special description of butterine was sold in commerce as margarine, and when mixed with a little milk was known as margarine butter. For several years this substance found general favour. Families with restricted means and the small restaurant keepers found it a useful substitute for the butter they could ill afford to purchase; and had the matter rested there, no great complaint need have been made. The manufacturers thought, however, that this comparatively wholesome substance did not yield the large profits they desired. The precautions prescribed in the original process were neglected, the grease employed was derived from every source, and the result was anything but safe to the consumer. Ignoring this deterioration, it was recently suggested that margarine should be used instead of butter in the lunatic asylums of the department of the Seine; and the Ministry of the Interior consequently inquired officially from the Academy of Medicine whether it would be expedient to adopt this proposal. The question was submitted to M. Riche, of the Ecole de Pharmacie, and after various investigations this gentleman has replied that: "The primitive margarine has ceased to exist in commerce, and the margarine actually sold is an industrial product which lends itself readily to the practice of various frauds." Tallow from all sources, and at various stages of staleness, is freely used. Excessive pressure and the highest temperatures are employed in the process of manufacture, the better to disguise the abominable character of the fats; and so divergent are the means of production that it is impossible to establish or maintain any standard of quality. There is great danger that this latter-day margarine may be easily sold in consequence of the good reputation of the original margarine, though we have it on the high authority of M. Riche and the Academy of Medicine that the real substance has ceased to exist. It is to be feared also that the decisions and the labours of the Academy are not well enough known by the public at large to arrest the sale of spurious margarine. False butter is bad enough, but the adulteration of the already spurious article is a superlative degree of falsification which is not often taken into consideration, though but too often practised.

A MANUAL OF HYGIENE FOR INDIA.—PRIZE OF £100.

THE Government of India have offered a prize of £100 for the best Manual of Hygiene for the use of the British soldier in India. The work must be in clear and simple English, without theories, and thoroughly practical, showing the ordinary causes affecting health, the special dangers to health to which British soldiers are exposed in India, and more particularly during their first years in the country, and the best means by which these dangers may be averted. The work will, if accepted, be printed at the public expense, and become the property of the State. It must not cover more than fifty or sixty pages of print of small size. Competitors must send their manuscript addressed to the Secretary to the Government of India in the Military Department, Calcutta, so as to arrive there not later than the 31st March, 1881. The prize will be adjudicated by a committee, consisting of the Surgeon-General of Her Majesty's British Forces in India, the Sanitary Commissioner with the Government of India, and an officer of the Quartermaster-General's Department, to be appointed by His Excellency the Commander-in-Chief. The Government of India will not award the prize unless a manual is produced in all respects suitable for the purpose for which it is required.

Would it not have been well before this prize was offered

that the "Government of India" should have endeavoured to understand what a "theory" is, and particularly the distinction between a "theory" and a "hypothesis"? We can understand that the manual should be free from "hypotheses;" but how it is to be "without theories," if it is to be written in ordinary language, passes our comprehension. Moreover, what possible "manual" of hygiene can be written which will admit of being understood, and worth the paper it will be written upon, that is to be limited to fifty or sixty pages (assuming these to be of ordinary octavo size) even of small type? The capacity of the Government of India to commit follies in hygienic matters appears to be (and indeed must be, so long as it displays such astounding ignorance) inexhaustible.

THE PULMONARY VASO-MOTOR SYSTEM.

THE pulmonary branches of the pneumogastric nerve have, for a long time, been supposed to exert an influence on the contractile tissue of the pulmonary vessels. This opinion has, however, lately been contested by Brown-Séquard and Vulpian, who ascribed to the thoracic branches of the sympathetic the influence previously attributed to the pneumogastric. M. François Franck has been investigating the subject anew, and his results confirm the very conclusive experiments of Brown-Séquard. He has endeavoured to ascertain the vaso-constrictor action of the first thoracic ganglion upon the lungs by measuring the effect which stimulation of this ganglion exerts upon the circulation through the heart. If the vessels of the lungs contract, the pressure in the right side of the heart should be increased. Accordingly, it is found that when the nerves from the first thoracic ganglion are stimulated by an induced current of moderate intensity, for ten or twenty seconds, the pressure in the right ventricle gradually rises, remains high for about half a minute, and then slowly falls to the initial point. This result can hardly arise from any other cause than the contraction of the pulmonary vessels. If this be the cause, however, it should produce a corresponding fall in the pressure in the aortic blood, since the obstruction will hinder the passage of the blood to the left ventricle. The effect on the aortic system was estimated by measuring the blood-pressure at the central extremity of one carotid. The first effect was a slight rise, and this was followed by a considerable fall, which went on until the pressure in the right heart reached the normal point. The slight initial rise of pressure is an event which *à priori* reasoning would not have suggested. An explanation which M. Franck has given seems likely to be the correct one. The contraction of the vessels, which presents an obstacle to the action of the right heart, also expels an additional quantity of blood from the lungs into the left side of the heart, and the result is that the left ventricle, for a moment, sends an increased quantity of blood into the aorta, and this causes the transient rise of pressure. A very similar effect on the circulation may be produced by the compression of the vessels by excessive pressure of the air in the pulmonary vesicles. The effect on the right heart and venous system during severe coughing is, of course, familiar. M. Franck has reproduced it experimentally by inserting a tube into the trachea of a curarised dog, and then insufflating the lungs with considerable force. Lastly, the same phenomena occur as on faradisation of the sympathetic, including the initial rise in the pressure in the aortic system. The effect is produced equally well, whether the thorax is opened or closed—an important fact, since when the thoracic walls are intact some effect might be ascribed to the direct pressure upon the great vessels.

Another set of experiments were made to ascertain whether the pneumogastric nerves contain any fibres having an action on the pulmonary vessels. To learn this it was necessary first to eliminate the action of those nerves on the

heart itself. This was effected by placing the animal under the influence of atropine, which, as is well known, prevents stimulation of the cardiac extremity of these nerves from having any effect on the action of the heart. Under these conditions stimulation of the cervical part of the pneumogastric produced no action on the blood-pressure either on the right side of the heart or on the aortic system, which could suggest an action upon the vessels of the lungs. The experiments were repeated after the thorax had been opened, the colour of the lungs being observed, and at the same time the pressure on the pulmonary artery ascertained. Stimulation of the pneumogastric under these circumstances caused no pallor of the lungs, nor any increase of pressure on the pulmonary artery.

If, therefore, the vessels of the lungs can be made to contract by any reflex mechanism, as by irritation of the abdominal viscera, as has been asserted, the reflex action must be exerted through the sympathetic, and not through the pneumogastric nerves.

THE LATE MISS NEILSON.

DR. W. E. JOHNSTON, of the Boulevard Malesherbes, Paris, writes to *The Times* as follows:—"For the last five years I have had the charge of Miss Neilson's health during her visits to Paris, one of the treatments running through a period of four months. The disease from which she suffered principally was gastralgia—one of the forms of dyspepsia attended with neuralgia of the stomach, a form extremely fantastic in its coming and going, and in her case quite as dependent on moral causes as on errors of diet. The last fatal attack in the Bois de Boulogne was evidently one of her usual attacks of gastralgia, which might have been relieved then, as it often had been before, by a free use of morphine. The unfortunate lady sent her maid for me at seven o'clock, but to my great regret I was absent that evening on a visit to my family in the country, and did not hear of her illness till I heard of her death. At three o'clock in the morning, twelve hours from the commencement of the attack, during a most violent recurrence of the pain, she suddenly ceased to complain, went into a state of syncope, and died in the syncope. The post-mortem examination made the next day by Dr. Brouardel, Professor of Legal Medicine at the Medical School of Paris, and now one of the first authorities in Europe in legal medicine, disclosed the extraordinary fact, one of the rarest in the history of medicine, that in her writhing she had ruptured a varicose vein in the left Fallopian tube, and had died from internal hæmorrhage. Two quarts and a half of blood were found in the peritoneal cavity, and the ruptured vein presented an orifice of from four to five millimetres in diameter."

The following additional particulars of the fatal illness of the distinguished *artiste* will be read with interest:—Dr. Monnier, of 12, Rue Copernic, was sent for and arrived at four o'clock. He found great physiological disturbance and vesical irritation, pains in the back, and oppression of the chest with difficulty of breathing; pulse scarcely perceptible. He ordered tea; administered laudanum and ether, and gave instructions for linseed-meal poultices to be applied. The pain was not permanently relieved. Syncope occurred shortly afterwards, but the patient was restored by the application of warmth. Some time subsequently copious vomiting set in. About this time in the case a curious incident occurred, which somewhat disturbed the patient: a bat flew in at an open window and hovered around the bed. "Look at that great bird flying about me!" said Miss Neilson. After a while she grew quieter, and Dr. Monnier took his leave. Subsequently Dr. Gantillon was called in and ordered two pills (colocynth), which acted freely. At 3.30 Dr. Monnier received an intimation that the patient was

worse. On arrival at the house he found her apparently asleep, but was somewhat alarmed by her appearance. On returning to the room after a short absence, he discovered Miss Neilson had been dead about half-an-hour.

ENGLISH SURGERY IN JAPAN.

MR. C. J. MANNING, who left University College Hospital five years ago to undertake the duties of Surgeon to the General Hospital, Tokio Fu (Yeddo, Japan), and Lecturer in Surgery, is about to return to this country, his term of office having expired. We have received the following extract, a translation from the Japanese papers into the Yokohama English paper, which will show how well his services have been appreciated:—

“The term of service of Mr. Manning, of the Tokio Fu Hospital, having expired, the Governor of the Fu and the Superintendent of the Central Board of Health waited on the doctor at the hospital on the 1st instant, and gave him a certificate praising him for his skill and care in the management of the establishment, together with 350 dols. as a donation. Mr. Manning expressed himself pleased with the compliment thus paid him, and said the document would be valuable to him, but that he did not wish to accept the money, which he desired to be distributed amongst the poor of the Fu; it was accordingly handed over to the Fucho officers. Yesterday a grand entertainment was given to the doctor in the Seiyō Ken Restaurant.”

THE INFLUENCE OF PEROXIDE OF HYDROGEN ON FERMENTATION.

It has been shown by M. Paul Bert that oxygen at a high pressure destroys organised beings, and thus arrests all fermentations that are due to the growth of organisms, while it is without action upon the soluble ferments. It kills bacteria and microphytes, while it has no action on the salivary or pancreatic ferments. M. Regnard has instituted a series of experiments to ascertain whether substances which contain oxygen in a state of chemical tension—i.e., in a nascent condition—are capable of exerting the same influence. His first experiments, the results of which have been communicated to the Société de Biologie, have been made with peroxide of hydrogen. Some yeast was placed in two flasks containing a solution of glucose. To one was added a few drops of a solution of one cubic centimetre of peroxide of hydrogen in 100 grammes of ordinary water. To the other no addition was made. In the flask containing peroxide of hydrogen no fermentation took place, while in the other it proceeded rapidly. A quantity of common red wine was next taken, and divided into six parts. To three a few drops of peroxide of hydrogen were added, and the three others were left for comparison. At the end of a few days the latter were completely covered with mycoderms, while the others to which the peroxide of hydrogen had been added remained clear, and resembled in appearance that which had been exposed to compressed oxygen. If the quantity of peroxide of hydrogen was greater the wine became yellowish, and the colouring matter, oxygenated, fell to the bottom, the liquid acquiring an ethereal odour similar to that of sherry. Milk to which peroxide of hydrogen had been added, remained free from fermentation, and uncoagulated, at the end of a month. Two flasks were shown in which white of egg had been placed a month before. One had putrefied and stank horribly. To the other a few drops of peroxide of hydrogen had been added, and it was perfectly unchanged; urine and hydatid liquid behaved in precisely the same manner. On the other hand, the liquid was found to have no power to prevent the change of starch into glucose by saliva or pancreatic juice. The effect is thus exactly the same as that found by M. Bert with compressed oxygen.

The effect of the peroxide of hydrogen is not permanent.

If the oxygen is allowed to escape, putrefaction occurs. There are two possible theories regarding its mode of action. (1) The real action may be that of the nascent oxygen. (2) The effect may be due to its own molecular constitution. It is possible that, if the latter theory be true, compressed oxygen acts simply by forming, in the liquid exposed to its action, the peroxide of hydrogen, and M. Bert is inclined to accept this explanation of his researches.

These results are of interest, and deserve notice, but the influence of peroxide of hydrogen on fermentation is not a new discovery. Two years ago it was pointed out by Guttmann, and before him by Fraenkel (THE LANCET, 1878, vol. ii., p. 839). Of these observations M. Regnard seems to be unaware. The confirmation of previous research is important, but the case presents another instance of the ignorance of French scientists of that which goes on beyond the boundary of France, and which, as we lately remarked, renders so large a part of the scientific investigation in that country a series of rediscoveries of facts which have been already ascertained elsewhere.

TINNED FOOD.

LAST week we reported the poisoning, happily without fatal result, of a family at Barnsley from the ingestion of corned beef, which had been imported in the ordinary tin canister. We have since received authentic information of a case in which several members of a household suffered seriously after eating sardines preserved and vended in a similar enclosure. The father, who first partook of the fish, was affected but slightly, and failed to refer his ailment to what would appear to have been the real cause. Next day four of his children ate of the sardines from the same tin, and were attacked soon afterwards with severe vomiting, accompanied by considerable prostration. The other members of the family, who had not partaken of the sardines, experienced no disturbance of health. The facts seem to point to the tinned food as the source of mischief in this case, though whether the poison resided more immediately in the case, the solder which cemented it, or the fish itself, is not so evident. Meanwhile these recent instances suggest caution in the use of a description of food the consumption of which appears to be on the increase.

ANÆSTHETICS IN 1651.

IN a recent work, entitled “Histoire de la Médecine à Troyes,” Dr. Guichet relates that the College of Physicians of that town brought an action against a certain Nicolas Bailli for administering internal remedies to his patients and *putting them to sleep*. In defence Bailli declared that having observed that in great operations, amputations, incisions, actual and potential cauterisations, many patients slipped through his hands for want of sleep, he had studied the secrets of nature, and had at last found a cordial, or marvellous essence, which put them to sleep softly, and appeased their sensibility to pain.

DEATH OF SURGEON W. A. BURGESS, M.D., ARMY MEDICAL DEPARTMENT.

WE regret to announce the death, at Meerut, East Indies, on the 22nd July, of Surgeon William Armstrong Burgess, from the effects of a fall from his horse. Dr. Burgess entered the army as recently as September, 1875, and had nearly completed his first tour of Indian service.

POISONED HAM AND HERRINGS.

THE French police authorities have forbidden the sale of imported hams known in the trade as “Cincinnati.” The yellow material in which they are sewn is coloured with a chromate of lead. It is also said that they frequently

contain trichinæ. It has been found too that the golden hue, so appreciated by amateurs of "bloaters," is often imparted to them artificially by purveyors of this delicacy. Analysis has revealed here again the presence of one of the most toxic chromates.

THE Public Health Committee of the Corporation of Dublin have suggested in a recent report that, should a Convalescent Home be established, it be connected with Cork-street Fever Hospital; that a capitation fee for each inmate admitted from the city be paid by the Corporation; and that the funds collected for the erection of a Convalescent Home be transferred to the Governors of the Fever Hospital. The report has been adopted, with the exception of the clause pledging the Corporation to support a home at the hospital.

A SAD accident by which a member of our profession met with his death is reported in a local paper. Mr. H. J. Heywood, M.R.C.S., of Pendleton, to secure sleep whilst suffering from a painful malady had occasionally resorted to the use of chloral. The drug was, it appears, kept on the mantelpiece beside a bottle of prussic acid, which, one night last week, was taken in mistake for the hypnotic. The occurrence has created a feeling of general regret, and of profound sympathy with the bereaved members of the family of the deceased.

THE King's College Hospital "old students' dinner" is announced for October 1st, and will take place at the Inns of Court Hotel; Dr. Peter Eade, of Norwich, in the chair. It is to be hoped that the dinner will be as great a success as it was two years ago, when Professor Henry Smith acted as chairman, and that friends in the country will endeavour to be present. The honorary secretaries are—Mr. W. P. Goodall, Birmingham; Mr. Martin G. B. Oxley, Liverpool; Mr. H. Royes Bell, and Dr. Hayes, London.

THE French Minister of Public Instruction has named Dr. Mathias Duval, Professor agrégé of the Faculty of Medicine of Paris, to the posts of Director of the Laboratory and Professor at the School of Anthropology, vacant by the death of Paul Broca.

THE prize offered by Mr. V. F. Bennett-Stanford, of the value of £100, for the best essay on Hydrophobia, its nature, prevention and treatment, has been awarded to M. Bourrel, of Paris.

PROFESSOR GROSS, D.C.L., LL.D., &c., has been spending the past week in the Isle of Wight with Mr. Erichsen. He intended sailing for Philadelphia on the 25th inst.

THE physician of Lyons who endeavoured to emulate Dr. Tanner gave up the attempt after a week's trial.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

West Bromwich, Urban Sanitary District (area 5710 acres, population 53,609). Dr. Manley reports for 1879 a birth-rate of 42.6 per 1000 population, and a death-rate of 23.3. Infantile mortality was at the rate of 16.7 per 1000; and Dr. Manley holds, erroneously, as we think, that a high birth-rate means a high infantile death-rate. An epidemic of scarlet fever, the early severe weather, and the privations from bad trade, contributed to swell the mortality of the year. *West Bromwich* would appear to be in a transition

state in regard to sanitary matters, but the period of transition does not seem to be very clearly marked; and it is not quite clear that the change is beginning at the right end. Of the measures still required to be adopted in the district before "perfection" is attained, the Medical Officer of Health enumerates first the registration of infectious diseases, the provision of hospital accommodation for such diseases, and also of a mortuary and disinfecting chamber—all very necessary sanitary requirements if a sanitary authority is to do its duties effectually, but requirements we should be disposed to subordinate to the provision of the rudimentary conditions for the maintenance of health among a community. For it appears that even these are wanting in *West Bromwich*, as the medical officer of health enumerates among the further requirements of the place "public drainage" (only "now under consideration"), the "provision of pure water," "the prevention of building operations on insanitary sites," the regulation of new buildings, of the keeping of all kinds of animals, of lodging-houses, and of a local practice of cultivating damp in houses. We would reverse the order of his recommendations, putting those first which he gives last, and making those last which he gives first. Moreover, the death-rate from infectious disease, considerable though it may be, would not justify the sanitary authority in giving predominance to a particular method of treating them, above those general sanitary measures which are not only of the highest importance with reference to this one class of maladies, but are also of equal importance with reference to the other classes of disease which contribute to the mortality of the district.

PROPOSED SANITARY HOSPITAL AT PLYMOUTH.

Some time ago, under the combined pressure of a severe epidemic and the Local Government Board, the Town Council of Plymouth entered into negotiations for obtaining a plot of ground for the site of an infectious disease hospital. Pending the negotiations the epidemic ceased, and now that the Council is called upon to ratify the terms for the purchase of the site and give instructions for obtaining money for the purpose, doubts have arisen among the members as to the advisability of erecting a hospital at all, and it is obvious from recent proceedings that those members who are favourable to the scheme have cooled in their desire for its completion. Indeed, epidemics are fleeting; and it is clearly the opinion of several members of the Council that when over they are best forgotten. But, unfortunately for this easy-going view of the question, the Council are not allowed to forget, by reason of the Local Government Board continually refreshing their memory. Indeed the Council have to meet two evils—the evil of epidemics, which, however, recur only at intervals; and the evil of the Local Government Board, which they find to be a persisting one. The former evil may be conveniently forgotten at times, but the latter not; and the Council would appear to have promised the Central Board to make hospital provision. But, argues one member, the Council will be re-elected in November, and we cannot bind our successors; let us postpone the question in the hope that the next Council may take a different course to the present. Then, argue others, the site proposed to be bought is much too large for a hospital, and it is suggested that a part of it shall be laid out as a recreation-ground; let us convert it all into a recreation-ground. Recreation is a more pleasant way of spending time than rooting out infectious disease from our midst and housing it in a corner. What does it matter that the land has to be bought for hospital purposes? Are municipalities to be governed (Mr. Town Clerk notwithstanding) by rules of morality similar to those which apply to individual rate-payers? This sort of argument very nearly prevailed, for the Council decided to purchase the site, by a majority of one only. The erection of the hospital will still have to be considered, and November is approaching!

THE CULTIVATION OF THE INFECTIOUS DISEASES OF INFANTS.

At a recent meeting of the Orrell Local Board, near Wigan, in Lancashire, the Clerk, in illustration of the difficulties which beset the control of infection, mentioned a practice which exists in that district, of mothers deliberately exposing their young children to the infection of scarlet fever and whooping-cough, under the belief that it was better that the children should have the disease while young. He designated the belief as a "superstition." We would

rather term it a tradition, arising from the imperfectly understood results of experience. The practice described is by no means confined to the part of Lancashire under consideration. Our own knowledge of it is somewhat extensive, but the exposure, so far as we have met with it, has been invariably limited to the obviously mild cases of infectious disease, and two elements entered into the practice. First, there was the practically universal belief that the infectious diseases of children had to be undergone by every child, and the sooner they were got over the better for the child, both as to its chance of recovery and its subsequent welfare; and next there was the belief that if a child contracted the disease from a *mild* case, it would have a mild attack, hence mild cases were selected to *catch* the disease from. In both these elements there was a substratum of truth, which long experience and common observation had shown, and which was unchecked by the more precise observation of the medical man.

DRY ASH AND EARTH CLOSETS IN RURAL DISTRICTS.

Mr. Leonard Armstrong, the medical officer of health for the Newton Abbot Rural Sanitary District, has published in a separate form, for facility of circulation, a pamphlet on the "Advantages and Arrangement of Dry Ash and Earth Closets in Country Districts." The contents of the pamphlet form an appendix to his annual report, and he has done well thus to issue it separately. In this pamphlet he endeavours to show the sanitary advantages which would arise from the substitution of dry ash and earth closets for the kind of privy accommodation which commonly exists in rural districts, and which, as is too well known, usually constitutes the most formidable nuisance in a district. He adds, also, some observations on the disposal of slop-water, so as to avoid nuisance therefrom.

We cannot commend too highly efforts of this kind to instruct sanitary authorities and householders in the essential requirements of health in regard to the common structural arrangements of houses. Mr. Armstrong, moreover, is not content to confine himself to the enunciation of general principles. Convinced that water-carriage of excremental matters is rarely applicable to rural districts, he goes further, and gives plans and instructions for the construction and arrangement of a common privy suitable for them. Privies constructed on this plan would be a great improvement, and we are unwilling to criticise what would be a distinct advance on the common form of privy. But Mr. Armstrong has apparently omitted to observe that the Local Government Board has, in its model bye-laws relating to new buildings, laid down certain principles of privy construction, some of which are not observed in his plan. In a matter of this kind local authorities may not care to come into collision with the Board upon a principle of construction, and it is certainly, in the interest of the subject, desirable to avoid such collision. We should have been glad if the difference in principle could have been avoided in this case, lest it should breed trouble hereafter, and tend to weaken (so ready are people to seek excuses for not doing sanitarily what they ought to do) the beneficial effect which may be looked for from Mr. Armstrong's pamphlet.

SCARLET FEVER AT WARRINGTON—A NOTABLE EXPERIMENT.

Scarlet fever has appeared at Warrington, and the progress of the disease there will be watched with exceptional interest. In 1878 (if we mistake not the date) Warrington obtained from Parliament, in an Improvement Act, which the Corporation then promoted, powers to require the notification of infectious diseases, and, if the local authority deemed fit, for compelling the removal of persons suffering from them to hospital. Previously the Corporation had erected a hospital for the reception and isolation of patients suffering from infectious maladies. The present appearance of scarlet fever in the town is the first which has occurred, we understand, since the hospital was completed and the Corporation were given the extraordinary powers dealing with infectious diseases which are contained in the Improvement Act. Now the Corporation, it seems, aided by their medical officer of health, Mr. Joseph, and after conference with the medical men in the town, are determined to put the powers they possess for the isolation of cases of infectious disease into force, and endeavour to suppress this outbreak of scarlet fever at the outset. The result of this attempt

will be watched with no little interest. Already twenty of the earliest cases of the disease have been isolated in the Corporation hospital; but the disease is reported to be so very mild that it is feared the praiseworthy efforts of the local authority may be largely foiled by the non-recognition of slight cases. The disease, however, is at present confined to one locality of the town; and a house-to-house visitation is now being made there in search of cases; steps, moreover, have been taken to close the schools.

THE MEDICAL OFFICERS' SUPERANNUATION ACT.

A Parliamentary return has been issued showing the number of applications made under the Medical Officers' Superannuation Act (England) to boards of guardians for superannuation allowances. From this return it would appear that since the passing of the Act in 1870, out of 649 unions in England and Wales, applications for allowances have been received from medical officers by the guardians of 108 unions. In these unions 122 applications were made, 70 were granted, 50 were refused, and two had not been decided upon at the date of the return. Among the reasons for refusals of application, we find the following, "the guardians were of opinion that the officer after seventeen years' service, had been sufficiently paid for what work he had done;" in two instances, after forty-one and forty-two years' service respectively, "the officer was comfortably off;" in one instance, after forty-two years' service, the guardians had an "objection to the entire system of superannuation;" in another instance, after twenty-two years' service, because the officer "was not incapacitated by age or infirmity;" he left the union for his own advantage." In several instances superannuation allowances were not granted because the guardians held that the officer had sufficient means from other sources, either as private means or as derived from private practice.

A WHIP FOR SANITARY AND POOR-LAW AUTHORITIES.

It is announced that at a coming diocesan Conference in the West-Midland district the following resolution will be proposed—namely, "That it is the duty of members of the conference to see that the sanitary and other Acts passed for the benefit of the poor in their parishes are more carefully carried out than at present is the case in many districts." If this resolution be adopted the sanitary and poor-law authorities of the particular diocese must look for a troublesome time; but they may console themselves with the thought that if the supporters of the resolution have no clearer notion of the purposes of the sanitary "and other Acts" referred to than would appear from the phraseology above quoted, their active interference is likely to prove more harmful to their own influence than beneficial to their poor parishioners. If clergymen were to set themselves intelligently to cultivate among ratepayers a closer attention to, and more active supervision of, the doings of their sanitary and poor-law representatives, they would contribute to a great and much-needed work, and more certainly secure the objects which it may be presumed are had in view in the resolution quoted.

THE CONTROL OF INFECTIOUS DISEASES.

The growing interest of the profession, as we are pleased to think, in the question of the control of infectious diseases, is indicated in a pamphlet from the pen of Mr. Donald Murdoch, M.R.C.S., on the necessity for further suppression of infectious disorders, just published by Stanford. Mr. Murdoch, in common with many other medical men, sees that the present provisions of the law for preventing the spread of infection are very inadequate, and he offers various suggestions by which he thinks the law might be amended, and medical men and sanitary authorities enabled more effectually to hold in check infectious disorders. He views the matter chiefly from the medical point of view, and with reference to the help which might be given by medical men in bringing about the end he aims at; and he has not quite adequately appreciated in his recommendations the difficulties which influence legal men, magistrates, and sanitary authorities in dealing with the subject. He attaches primary importance to the recommendation that every legally qualified medical practitioner shall give notice to the sanitary authority of every case of infectious disorder that occurs in his practice, within twelve hours (twenty-four in rural districts) after the recognition of the complaint by him, and here at least he will find himself in accord with a large proportion of public-health reformers.

THE DRAINAGE OF WORKHOUSES.

The Local Government Board has issued a circular to Boards of Guardians relative to the drainage of workhouses. Nothing could well be better than the advice given in it, and altogether it forms an excellent summary of the primary requirements of the drainage of buildings. But the puzzle of the matter is this, that advice of this sort should at this late date be required in institutions so long and so rigidly (as it is presumed) supervised. So it is, however, and the circular states that the Local Government Board have had under their consideration the reports made from time to time by their inspectors regarding the system of drainage in operation at various workhouses and other poor-law institutions, and it is evident to them that in many instances the arrangements in this respect are not as satisfactory as could be desired. If guardians go wrong now as to drainage arrangements, in view of this circular, it must be from pure parochial perversity, and we may be permitted to hope that, in future, workhouses, and particularly the new ones, will furnish examples of such drainage as domestic dwellings should possess.

Dr. Griffin, medical officer of Louisburgh Dispensary district of the Westport Union, in a late report to the Local Government Board, states that a permanent fever hospital at Louisburgh is absolutely indispensable. The attention of the Westport guardians has been recently directed to this matter by the Board, but the former appear to doubt the necessity, and have requested Dr. Griffin to produce the names of the thirty-one fever patients stated to have been under his care.

A broker in the Borough has been heavily fined for having, under a distress warrant, removed articles of furniture and bedding from a room in which a patient suffering from small-pox was lying, and offered them for sale without previous disinfection.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

The high rate of urban mortality last week was again caused by the fatality of summer diarrhoea. In twenty of the largest English towns, estimated to contain in the middle of this year seven and a half millions of persons, or nearly one-third of the entire population of England and Wales, 5191 births and 3490 deaths were registered last week. The births exceeded by 6, and the deaths by 215, the average weekly numbers during 1879. The deaths showed, however, a decline of 77 from those returned in the previous week. The annual death-rate per 1000, which had risen steadily from 18.9 to 24.8 in the seven preceding weeks, fell last week to 24.3. During the past seven weeks of the current quarter the death-rate in these twenty towns has averaged 22.3 per 1000, against 25.5 and 17.8 in the corresponding periods of 1878 and 1879. The lowest death-rates in the twenty towns last week were 16.0 in Brighton, 16.4 in Bristol, 19.9 in Wolverhampton, and 21.3 in London. The rates in the other towns ranged upwards to 31.5 in Manchester, 33.1 in Salford, 34.5 in Leicester, 34.8 in Plymouth, and 39.7 in the borough of Hull. The high death-rates in these last-mentioned towns were mainly due to excessive diarrhoea fatality.

The deaths referred to the seven principal zymotic diseases in the twenty towns, which had steadily increased from 406 to 1100 in the ten preceding weeks, further rose to 1136 last week. These included 864 from diarrhoea, 105 from scarlet fever, 60 from whooping-cough, 48 from measles, and 40 from different forms of fever. The annual death-rate from these seven diseases averaged 7.9 per 1000 in the twenty towns; and while it was but 2.9 and 3.9 in Bristol and Brighton, it ranged upwards to 15.0 and 24.1 in Hull and Leicester. Scarlet fever showed the largest proportional fatality in Oldham and Leicester. Three deaths from diphtheria were returned in Birmingham. Small-pox caused 4 more deaths in London, but not one in any of the nineteen large provincial towns. The number of small-pox patients in the Metropolitan Asylum Hospitals, which had steadily declined in the four preceding weeks from 200 to 134, were 135 on Saturday last; 30 new cases of small-pox were, however, admitted to these hospitals during the week, against 15 and 20 in the two previous weeks. The Highgate Small-pox Hospital contained seven patients on Saturday last.

The fatal cases of diarrhoea in the twenty towns, which

in the nine preceding weeks had steadily increased from 51 to 807, further rose last week to 864. The annual death-rate from diarrhoea averaged 6.0 per 1000 in the twenty towns; it was equal to 3.8 in London, and to 8.1 in the nineteen large provincial towns. The death-rate from diarrhoea among the twenty towns ranged last week from 1.7 in Bristol, to 12.9 in Hull, and 20.1 in Leicester. In the last-mentioned town the diarrhoea rate has risen from 3.6 to 20.1 during the past four weeks.

The deaths referred to diseases of the respiratory organs in London, which had been 175 and 152 in the two preceding weeks, were 167 last week, and exceeded the corrected weekly average by 26. Of these 167 deaths 93 were attributed to bronchitis, and 48 to pneumonia. The annual death-rate from diseases of this class was equal to 2.4 per 1000 in London, and 3.7 in Liverpool.

HEALTH OF SCOTCH TOWNS.

In eight of the largest Scotch towns, having an estimated population of rather more than a million and a quarter persons, the annual death-rate last week averaged 18.6 per 1000, and was below the mean of the six preceding weeks; this rate was 5.7 below the average rate in the twenty large English towns. The rates in the eight Scotch towns ranged from 9.7 and 14.6 in Perth and Aberdeen, to 20.4 and 27.6 in Leith and Paisley. The deaths from the seven principal zymotic diseases in the eight towns were 127, against 125 and 122 in the two preceding weeks; they included 65 from diarrhoea, 22 from whooping-cough, 17 from scarlet fever, 8 from measles, 8 from diphtheria, 7 from fever, and not one from small-pox. The annual death-rate from these seven diseases averaged 5.1 per 1000 in the eight towns, against 7.9 in the large English towns. The excess of the zymotic death-rate in the English towns was almost entirely due to the greater fatality of infantile diarrhoea. There were no deaths from the seven zymotic diseases in Perth, and the zymotic rate was but 1.5 in Aberdeen, whereas it ranged upwards to 8.0 and 8.5 in Leith and Paisley; the excess in the zymotic death-rate in Leith was due to scarlet fever, and in Paisley to diarrhoea and whooping-cough. The fatal cases of diarrhoea in the eight towns, which had declined in the week before last to 51, rose again last week to 65, a higher number than has been returned in any week of the current quarter. The annual death-rate from this disease did not average more than 2.6 per 1000, while in the English towns the rate was equal to 6.0. The highest proportion of fatality of diarrhoea in the Scotch towns occurred in Greenock and Paisley. The 22 deaths from whooping-cough included 9 in Glasgow, and 7 in Edinburgh. Seven of the fatal cases of scarlet fever occurred in Glasgow and 6 in Leith. Four of the deaths from measles were returned in Glasgow; and diphtheria caused 3 deaths in Edinburgh, 2 in Glasgow, and 2 in Dundee. The deaths referred to fever, which had been 13 and 17 in the two previous weeks, declined last week to 7, of which 6 were recorded in Glasgow. The deaths attributed to acute diseases of the lungs (bronchitis, pleurisy, and pneumonia) were 39 in the eight Scotch towns last week, against 67 and 70 in the two preceding weeks; the annual death-rate from these diseases was equal to 1.6 per 1000, against 2.4 in London. The causes of 81, or 17 per cent., of the 463 deaths registered in the Scotch towns last week were uncertified; in the English towns the proportion of uncertified causes of death was scarcely two per cent.

HEALTH OF DUBLIN.

The rate of mortality again showed a marked excess in Dublin last week, and was equal to 37.8 per 1000, against 35.3 in each of the two preceding weeks. During the past seven weeks of the present quarter the death-rate in the city has averaged 32.6 per 1000, against 22.1 in London, and 17.9 in Edinburgh. The 228 deaths in Dublin included 56, or no less than 25 per cent., which were referred to the seven principal zymotic diseases, showing but a slight decline from the high number returned in the preceding week; 5 resulted from small-pox, 3 from measles, 15 from scarlet fever, 3 from whooping-cough, 5 from different forms of fever, and no less than 25 from diarrhoea. The annual death-rate from these seven diseases was equal to 9.3 per 1000 in Dublin last week, against 5.6 in London, and 4.8 in Edinburgh. The fatal cases of small-pox and measles showed a decline from recent weekly numbers. The deaths from scarlet fever corresponded with the number returned in the previous week. The fatal cases of diarrhoea, which had

averaged but 4 weekly during July, rose successively to 9, 23, and 25 in the first three weeks of August, and were equal to an annual rate of 4·1 per 1000; this rate, however, was considerably below the average rate in the twenty large English towns.

INFANTILE DIARRHOEA IN LEICESTER.

Infantile mortality has begun during the past few weeks to show the marked increase in Leicester which usually takes place in that time during the season of summer diarrhoea prevalence. The weekly number of deaths registered under one year of age in that town, which averaged but 13 during June, steadily and rapidly increased during July, and were successively 30, 42, and 48 in the first three weeks of August. This increase is almost entirely due to diarrhoea fatality, which caused but 2 deaths in June, 25 in July, and 19, 26, and 50 respectively in the three weeks ending last Saturday. The excessive fatality of diarrhoea in Leicester has been the subject of much investigation and many theories, but it cannot be separated from the fact that the rate of infant mortality from all causes is excessive in Leicester, and that the excess in the rate is only partially accounted for by the fatality from diarrhoea. During last year the proportion of deaths under one year to births in Leicester was 185 per 1000, although the year was remarkable for the small recorded fatality of diarrhoea. The nearest approach to so high a rate of infant mortality in the twenty large towns dealt with in the Registrar-General's weekly return occurred in Salford, where, however, the rate did not exceed 170 per 1000. Dr. William Johnson, the Medical Officer of Health for the borough, freely admits in his last report—what he was previously inclined to dispute—that the excessive death-rate of infants in Leicester is not confined to diarrhoea. During the ten years 1870–79 infant mortality in those twenty towns averaged 171 per 1000, and ranged from 141 and 158 in Portsmouth and London, to 216 both in Leicester and Liverpool; the nearest approach in the other towns was 192 in Leeds. Dr. Johnson in his last report gives some valuable and interesting tables conclusively proving what we have frequently noticed in these columns in connexion with the high rate of infant mortality in Leicester—namely, that the death-rate in the borough at all ages above one year not only compares favourably with the rates in other large towns, but is below the standard English life table rates at those ages. His suggestion that crèches or nursing-homes should be established under medical inspection, and visited by Ladies' Committees, is a useful one, but something more must be done before Leicester will lose the stigma which now attaches to it as the town in which infant life is least successfully cared for among our largest towns. Dr. Johnson wisely exposes the fallacy of attributing the high rate of infant mortality to the high birth-rate; we cannot, however, agree with him in regarding the high birth-rate in Leicester as a natural consequence of the excessive infant mortality. For the cause of the high birth-rate in Leicester it is unnecessary to look much beyond the fact that the town population includes an abnormally large proportion of young adults.

HEALTH MATTERS GENERALLY AT HOME AND ABROAD.

THE SANITARY COMMISSIONERSHIP OF INDIA.

A correspondent of the *Pioneer*, evidently well informed, questions the wisdom of doing away, at the present time, with the post of Sanitary Commissioner with the Government of India. Dr. Cunningham's reports, it is observed, have done this signal service, that they have shown clearly that very nearly half of the total deaths of the troops are due to three of the most easily preventable of all diseases—namely, cholera, typhoid fever, and dysentery. Of the total of 1212 deaths in the European army in India in 1878, cholera caused 226, typhoid 258, and dysentery 98, or altogether 582 out of 1212. Thus by abolishing the causes of these three diseases, the death-rate of the troops would be reduced nearly one-half. Dr. Cunningham has not had time apparently to make an exhaustive inquiry into the causation of disease at different stations. His reports are limited to mere expositions of numerical results without reference to the causes. But the time has now come for taking up systematically the investigation of the causes of

sickness in each station on the plan which has been pursued for many years with remarkable success in England by the medical inspectors of the Local Government Board. One single example will show how important it is that such an investigation should be made. In olden days Jullundur was one of the healthiest stations in India, and for the last year it has been one of the most unhealthy, and this change in its condition has coincided with the erection of barracks on which a vast outlay was incurred. These barracks were first occupied in 1872, and between that year and 1878 the occupants of them have suffered from three severe epidemics—viz., in 1872 cholera and typhoid, 1875 typhoid, 1878 dysentery and typhoid. It is very singular, too, that while the occupants of the new barracks have been unhealthy, the artillery, who continue to occupy the old style of barracks, remain in the enjoyment of the good health of former times. The death-rate per 1000 of the two bodies is shown in juxtaposition as follows:—

	1872.	1875.	1878.
European Infantry, new barracks...	31·8	18·75	66·28
Artillery, old barracks ...	14·29	6·25	5·99

"I feel satisfied," says the writer, "that if this remarkable case were studied with the same exhaustive thoroughness as has been brought to bear for some years on the study of epidemic outbreaks in England, a flood of light would be thrown on the causes of disease, not in this particular instance only, but in all other stations where dysentery, cholera, and typhoid fever prevail. But the very moment when problems of this kind were pressing on for solution, has been chosen for abolishing the appointment of Sanitary Commissioner altogether."

THE INTERNATIONAL RED-CROSS HOSPITAL, BADEN.

The Russian journal, the *Béreg*, states that after the Franco-German war the central committee of the Russian Red Cross Society established a hospital at Baden for sick and wounded soldiers. These were provided with medical and surgical treatment and food at the expense of the society, and 338 patients were received into the hospital, of whom 183 were discharged cured, 183 improved, and 16 without having received benefit from their residence there. After the Russo-Turkish war the Red Cross Society re-established a hospital at Baden, but to the time of the *Béreg* giving this notice, only one Russian soldier had been sent there. Dr. Heidenreich, the principal medical officer, believes that this must have arisen from the existence of the hospital not having been made sufficiently known by those likely to profit by it, and he appears to have asked the intervention of the Russian press in publishing information concerning the hospital.

SCAVENGING IN DUBLIN.

The Dublin Corporation had last Monday under consideration a report of the Committee appointed in February last to deal with the question of public and domestic scavenging. The Committee, after receiving the report of a deputation which visited Glasgow, Manchester, Liverpool, and other towns in December last, and obtaining from the City Engineer and the executive officer of the Public Health Committee reports embodying their opinions as to the best means to be adopted, have recommended that the Corporation should take entire charge of the scavenging, and have the same carried out by their own staff under a competent manager. The expense of the department is estimated at £28,700 per annum, or a trifle over one shilling in the pound on the city rates. The report has been adjourned for a future meeting of the Council.

THE RUSSIAN RED-CROSS SOCIETY.

A *Te Deum* was announced to be celebrated in St. Petersburg on the 14th instant on the despatch of certain sisters of charity of the Community of the Exaltation of the Holy Cross to the assistance of the sick and wounded of the expedition to Akhal-Teké. Countess Elizabeth Milintine, one of the sisters, accompanies the detachment, and Dr. Stcherbak is attached to it as delegate of the Red-Cross Society. The assistance despatched by the Red-Cross Society to the expedition, in nurses, medical men and material, did not reach the scene of action until the operations of the troops had terminated. The efforts of the Society were therefore directed to the amelioration of the state of the sick and wounded they found in hospital on both coasts of the

Caspian, but particularly on the Caucasian coast, where the greater number had been removed by the military authorities, and distributed in the hospitals of Baku, Temir-Khan-Schoura, Petrovsk, Grozny, &c.

REPORTED CHOLERA IN RUSSIA.

Russian journals report an outbreak of "cholera" at Saratov, on the Volga. The scanty particulars given suggest that the report refers to an outbreak of choleraic disease, probably caused by the consumption of some poisonous article of food, after the manner of the recent fatal choleraic outbreak at Welbeck.

WOOD PAVEMENT.

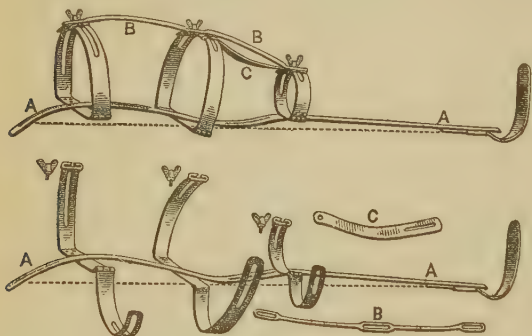
The Commissioners of Public Works have sanctioned a loan of £4000, part of the loan of £100,000 for the paving of Dublin, to be expended on wood pavements in certain portions of that city.

A further extension of diphtheria in the Government of Poltava, Southern Russia, is reported.

New Inventions.

DAY'S SPLINT FOR HIP-DISEASE.

THIS splint, which is the invention of Mr. E. O. Day, the medical officer of the Royal Hospital for Children and Women, is a modification, and we think an improvement, on Thomas's splint. It consists of a foundation rod, A A, extending behind the affected limb and the trunk. At its upper end this rod is recurved, so that any tendency to flexion when the child is raised by the foot is obviated. At its lower end there is a movable foot-piece which allows for growth, a very important matter to bear in mind when dealing with the chronic maladies of childhood. The trunk is grasped by two stirrup-shaped metal bands, which can be accurately fitted to the size of the body by means of slots and screw clamps. In this again we have a provision for growth and a possibility of utilising the same splint for more than one case. These bands being flat behind, prevent any



rolling movement of the apparatus, or any tendency of the foundation-rod to get to the outside of the limb. The thigh of the affected limb is surrounded by a circular metal band, also fastened by a slot and clamp. These three bands are united along their anterior aspect by clamps to a rod, B B, and thus the affected joint is enclosed in an absolutely rigid cage, while additional security is afforded by a flat brass rod, C, which is accurately fitted to the curve of the groin, and thus the perfect fixity of the joint is secured.

It is claimed for this splint that it is less cumbersome than most others, that it thoroughly immobilises the limb, maintains the parallelism of the legs, and dispenses with bandaging, and it certainly appears to us to be capable of doing all that is claimed for it. It is made by Mr. Eastgate, 73, Neale-street, Long-acre.

THE SERVICES.

WAR OFFICE.—1st Life Guards: Surgeon Henry Frank Hensman, from the 2nd Life Guards, to be Surgeon-Major, vice O. W. George, M.D., granted retired pay, and to have the honorary rank of Brigade-Surgeon; dated June 29th, 1880.

ARMY MEDICAL DEPARTMENT.—Brigade-Surgeon Thos. Teevan has been granted retired pay, with the honorary rank of Deputy Surgeon-General; dated July 30th, 1880. The promotion to the rank of Brigade-Surgeon of Surgeon-Major Charles Carroll Dempster is antedated to November 27th, 1879, such antedate not to carry pay prior to March 27th, 1880. Surgeon-Major Leslie Ogilvy Patterson and Surgeon-Major William Creagh are granted retired pay, with the honorary rank of Brigade-Surgeon; dated August 25th, 1880.

Surgeon-Majors to be Brigade-Surgeons:—John George Faught, vice J. P. Cunningham, M.D., promoted; dated April 17th, 1880. William Henry Muschamp, vice J. O'Nial, promoted; dated May 26th, 1880. Edwin James Hopwood, vice T. S. Hollingsworth, granted retired pay; dated June 9th, 1880. Stewart Aaron Lithgow, M.D., vice J. Hannan, deceased; dated June 13th, 1880. William George Nicholas Manley, V.C., vice T. W. Fox, M.B., promoted; dated June 23rd, 1880. Oliver Barnett, vice W. Macnamara, M.D., granted retired pay; dated July 21st, 1880.

G. R. Gilruth, gent., to be Acting Surgeon to the 1st Edinburgh Corps of Volunteer Artillery; dated Aug. 21st, 1880.

ADMIRALTY.—Fleet-Surgeon George Mason, M.D., has been promoted to the rank of Deputy-Inspector-General of Hospitals and Fleets, with seniority of the 20th instant. The following appointments have been made:—Fleet-Surgeon W. Ross, M.D., to the *Duncan*, additional for temporary service; Staff-Surgeons W. H. Stewart to the *Cleopatra* (when commissioned); Robert Turner to the *Duke of Wellington*, for the *Victory*; Thomas S. Burnett to the *Valiant*; Jephson J. Connell to the *Cleopatra*; M. F. Ryan to the *Valiant*; A. Turnbull to the *Bacchante*; G. Maclean to the *Duke of Wellington*, additional for Haslar Hospital (for temporary service); G. M. Cuffe to Haslar Hospital.

Surgeon-General G. A. F. Shelton, Army Medical Department, has been appointed to succeed Surgeon-General William Munro, C.B., as Head of the Medical Branch, War Office, Whitehall Yard.

Deputy-Surgeon-General Stanhope H. Fasson, M.D., has been ordered to Aldershot, as Principal Medical Officer, vice Surgeon-General Shelton.

Brigade-Surgeon J. Ogilvy, M.D., has been transferred from Portsmouth to Aldershot on promotion, and will act as Sanitary Medical Officer of that garrison.

FRENCH NAVAL MEDICAL SERVICE.

It would appear that the British is not the only Navy which experiences a difficulty in recruiting medical officers. The French, notwithstanding the existence of three schools of medicine for the Navy supported by the Government, find the supply of candidates unequal to the requirements of the Service. To remedy this, a reorganisation of the Medical Department has been proposed in connexion with the scheme submitted respecting the *cadres* of the Navy. As the subject of attracting to the Service a sufficient number of well-qualified officers is believed to be at present under the consideration of the Admiralty in this country, it may not be without interest to our readers to see what is proposed to be done in France. The Department is to consist of two branches—the Medical and the Pharmaceutical; and these, again, are subdivided into the Health Service (*service de santé*) and the Educational Service (*service d'enseignement*). The following is the proposed scale of officers:—

Medical Branch.

- | | | |
|----|---|------------------------------|
| 1 | Inspector-general of the health service, ranking with rear-admiral. | |
| 3 | Directors of instruction, | } ranking after rear-admiral |
| 2 | health service, | |
| 1 | Medical inspector. | } and before post-captain. |
| 10 | Chief medical officers of instruction, | } ranking with |
| 12 | general service, |  | } post-captain. |

- 13 Medical professors, } ranking with commanders.
 40 Principal medical officers, }
 200 Medical officers, 1st class, ranking with lieutenants.
 250 " " 2nd class, ranking with sub-lieutenants.
 150 Assistant medical officers, ranking with midshipmen.

Pharmaceutical Branch.

- 1 Apothecary-inspector.
 5 Chief apothecaries of instruction.
 1 Chief apothecary, general service.
 6 Professors.
 3 Principal apothecaries.
 20 Apothecaries, 1st class.
 28 " 2nd class.
 28 Assistant apothecaries.

The apothecaries are to have the same relative rank as the corresponding grades of the medical branch. The professors are to be appointed by competitive examination from the principal medical officers and apothecaries, or those of the first class; and the higher grades of the educational branch are to be filled by selection from the professors. The staff of each of the naval medical schools consists of six medical and three pharmaceutical professors, with five assistants. It is proposed to add two professors to each school.

The relative rank to be granted to the medical officers is, we believe, a new feature in the French Navy, and will tend more than anything else to raise the prestige of the department and remove the difficulty which has been found in obtaining candidates for it. We trust that in our own service the Lords of the Admiralty will remember that an assured position in the service, placed by regulation beyond the petty and annoying interference of individual officers, will do more to render the medical department of the navy popular and ensure a supply of candidates than any mere addition to the pay without the removal of existing grievances.

SERVICE EXAMINATIONS.

The following are the questions in Anatomy, Physiology, Medicine, and Surgery, set at the recent examination of candidates for H.M. Naval, British, and Foreign Medical Services:—

Anatomy and Physiology.

1. Give a description of the ulna; enumerate the ligaments and muscles connected with it, and indicate the points of origin from, or attachment to, that bone.
2. Describe the anatomical relations of the parts that enter into the formation of the inguinal canal, and of an oblique inguinal hernia.
3. Describe the formation of the cervical plexus and its anatomical relations; enumerate the principal branches of distribution, and especially describe the origin, course, and distribution of the phrenics, and the part they take in the mechanism of respiration.
4. Describe the anatomical relations, the structure and functions, of the great intestine.
5. Give a description of the anatomical relations and distribution of the deep femoral artery and of its branches.
6. Describe the glandular structures by which saliva is formed. Give an account of the composition and physiological uses of that fluid.

Surgery.

1. In a case of compound fracture of skull, with depression and symptoms of compression, what treatment should be pursued? Firstly, as regards the fractured bone; and, secondly, the condition of the patient? State what would be the prognosis in such a case, and the reasons for the conclusion arrived at. Describe the process by which any deficiency of bone is made good when recovery takes place.
2. Describe the symptoms of gonorrhoeal ophthalmia, its effects when not arrested, and the treatment to be pursued in its different stages.
3. What are the various causes of gangrene? Describe the symptoms by which each cause may be diagnosed, and the treatment of each variety.
4. Describe the various symptoms of hereditary syphilis, as they occur at different periods of life, and the treatment to be adopted for its relief.
5. Describe the constitutional and local causes which give rise to inflammation of veins, the various consequences liable to occur in such an attack, and the treatment to be pursued.
6. State the symptoms by which a psoas abscess, presenting in the thigh, may be diagnosed from a large cyst in the upper part of the femoral region. What are the pathological conditions attendant on psoas abscess, and what should be the treatment?

Medicine.

1. Describe (a) the causation, exclusive of traumatic causes; (b) the morbid anatomy; (c) the clinical phenomena and possible sequelæ; (d) the treatment of cases of cerebral hæmorrhage.
2. Give an account of (1) the intestinal lesions which are constant in cases of enteric fever, their progress and results in relation to the clinical phenomena; (2) the condition of the minute elements of (a) the glandular organs, (b) the heart, and (c) the voluntary muscles. Give a short summary of (a) the phenomena which are distinctive of enteric fever, and (b) the phenomena which it has in common with other febrile diseases.
3. Describe the symptoms, period of incubation, and usual course of a typical case of scarlet fever, with all its possible sequelæ.
4. Mention the causes, describe the symptoms and the appropriate treatment, of peritonitis.

5. Describe a case of puerperal fever.
 6. Give an account of (1) the source, the physiological properties, and medicinal uses of (a) ergot, (b) belladonna. (2) Name the pharmacopœial preparations and the doses of each of the preparations you name. What are the antidotes in cases of poisoning from them?
- Three hours were allowed for answering each paper.
 Sixty-nine candidates have passed the examination, and will proceed to Netley.

MEDICAL TRIALS.

ARUNDEL COUNTY COURT.

MIDWIFERY CONTRACTS.—VINES V. STUART.

THE judge (Mr. A. Martineau) on August 17th gave judgment in this case, which had been adjourned. Mr. Vines, surgeon, of Littlehampton, had brought an action against defendant for £1 ls. damages for breach of contract in not employing him to attend defendant's wife in her confinement. The plaintiff's case was that, being the medical attendant of the family, the defendant's wife had asked him to attend her in her accouchement, the probable date of which was notified by him. A short time before the event, however, some misunderstanding arose between him and the defendant, and thereupon the defendant gave plaintiff notice that his services in attending the defendant's wife in her approaching confinement would not be required. The judge said (we quote from the *Sussex Daily News*):—"The plaintiff now insists—1st, that there was a definite binding contract on the part of the defendant to employ him, the plaintiff, as a surgeon at the confinement; 2nd, that the damages to which a surgeon is entitled in such a case are liquidated by well-established custom, which fixes them at the fee which the surgeon would have earned; 3rd, that if not liquidated by custom, the proper measure of damage is the fee that would have been earned. I reserved judgment, first to consider the question whether the engagement amounted to a contract, for breach of which an action will lie; 2nd, to consider what the proper measure of damage is. I may observe that my predecessor, in a similar case, decided that the doctor cannot recover damages, but the present Registrar of the County Court at Brighton, who argued the case of the doctor before Mr. Furner, having informed me that he had seen an article in a medical journal commenting on that decision, and referring to a case in the High Court, in which a judge had laid down that the measure of damage is the fee that would have been earned, I reserved judgment, hoping to find the case, but I have not been able to do so. I have, however, found a decision of the High Court reported, which tends to show that the measure of damage is different. I must, however, first dispose of the question whether the damages are liquidated by custom at the amount of the fee that would have been earned; and I feel no difficulty in holding that no such custom is proved. It would, I think, be very unreasonable that the damages should be the fee that would have been earned, for the surgeon would then get the same sum without responsibility or labour that he would have earned with responsibility and labour; and to establish such a custom, I should require the evidence, not only of medical men, but of patients, showing that the custom is well known to and accepted by those who employ as well as those who are employed. I hold, therefore, that in this case the damages are not liquidated, and assuming that there was a binding contract the damages must be ascertained by me, sitting as a jury, and they must be measured in the ordinary way, and upon the principles applicable in cases of breach of contract. The proper way to arrive at the damages (if any) is to take into account on the one hand that if the alleged contract had not been broken, the surgeon would, in all probability, have earned £1 ls., but inasmuch as he would have earned that sum only with a certain amount of responsibility, loss of time, trouble, and labour, from which he has been freed, a corresponding deduction should be made from the £1 ls., the fee that would have been earned; and if I were to deduct 10s. 6d., leaving the surgeon with half a fee, my impression is that I should be very liberal to the surgeon, and that if he had had his choice between £1 ls. as remuneration for a great deal of trouble, and 10s. 6d. for doing nothing, he would have preferred the half guinea. I see my way, therefore, to the proper amount of damages, if there has been a breach of contract, for which an action will lie. But I have much more difficulty on the question of contract. I have no doubt

that a binding contract to employ a surgeon on some future day may be entered into, and in some cases I have no doubt such a contract is entered into; but I doubt very much whether the loose conversation between a surgeon and a lady in reference to the former attending her in her confinement on some distant day amounts to a definite binding contract, or that it is intended by either party that it should. The plaintiff lays stress on the fact that he made an entry in his books of the date in the presence of the defendant's wife, and that he could not leave home or go to a distance as long as he was under the engagement to attend. I do not think that alters the case. If there was a constraint there was no doubt consideration on both sides. I should observe—though this perhaps goes more to the question of the damages to which the plaintiff would be entitled if there were a contract—that for anything that appears to the contrary, the plaintiff in this case was fully employed and earning fees from other patients throughout the time that he would have had to devote to the defendant's wife if she had sent for him, and that he may have lost nothing. I lay no stress on the fact that the defendant gave notice to the plaintiff that his services would not be required before the event came off, or that the defendant having told the plaintiff that he had no confidence in him and did not want his services as medical attendant any longer. The plaintiff insists that, nevertheless, he ought to have been sent for. That is a mere matter of delicacy, as to which I say nothing, this being a court of law and not a court of delicacy. I think what passed between plaintiff and defendant's wife in this case did not amount to a definite contract upon which an action will lie. There will, therefore, be a verdict for the defendant, with costs."

SHEFFIELD COUNTY COURT.

Before T. Ellison, Esq. (Judge).

MASON v. PECK. — Mr. James Mason, surgeon, sued William Peck, mechanic, for £11 7s. 6d., for surgical assistance. Mr. E. Knowles Binns represented Peck. Defendant is a member of the London and Manchester Industrial Assurance Company, of which the plaintiff is the local medical officer. Peck, whilst ill, was attended by Mr. Mason. The plaintiff sought to recover the debt on the ground that surgical operations were necessary in the case, and his agreement with the Insurance Company did not provide for the payment by it for that kind of work. The defence was that surgical assistance was not at all requisite in the treatment, and that the claim was thereby unsubstantiated. Mr. Knowles Binns said he had not seen the agreements with the society. He wished to do so before the case was decided. His Honour said he never had a more important case before him since he sat in the court, and he thought Mr. Mason should be represented by a solicitor. Mr. Binns, wishing to argue the points, the hearing would have to be adjourned. The case, according to arrangement, will come on on Nov. 12th.

Correspondence.

"Audi alteram partem."

REGINA v. INGLE: THE PENAL TREATMENT OF DISEASE.

To the Editor of THE LANCET.

SIR,—The letter of Dr. Pavy in your last number is a complete vindication of his action in this deplorable case. One point—that on which it was attempted to build a justification for the nurse—deserves, however, further consideration. Dr. Pavy says: "A great deal more was made of hysteria in connexion with the case at the trial than it was entitled to receive. The nurse in the inquiry before the treasurer had excused herself by saying that she had been given to understand that the patient was suffering from hysteria, and that she thought she was only putting in force the proper treatment."

This plea, of course, is rightly repudiated by Dr. Pavy. Still, that it should have been put forward and received to any extent is evidence of the persistence of an error, which

is a reproach to medical science, and fraught with danger. This must be my excuse for offering the following observations.

Assuming this plea to be the real line of defence, three things are implied: 1, that hysteria is a disorder rather moral than physical; 2nd, that, therefore, hysteria may properly be treated on penal principles; 3rd, that a nurse is competent, of her own motion, to apply that treatment. If we admit the first proposition, the second *might*, perhaps, be accepted with some reservation; but admitting both, it would not follow that a nurse, acting on her own discretion, is competent to administer the penal treatment. But is it possible, in the actual state of medical science, to contend that the symptoms to which the conventional term "hysteria" is applied really constitute a morbid entity, or a special perversion of the moral element? In other words, is there such a thing as hysteria independent of bodily disease? I venture to affirm that there is not. Wherever the phenomena known as hysteria present themselves, there is surely underlying them as cause a pathological condition which it is the business of the physician to discover and to treat. To treat hysteria medicinally is to treat a symptom—a course sometimes judicious, but hardly scientific. To treat hysteria penally is, in plain language, to treat the patient brutally. Hysteria is no more an independent disease than is neuralgia, chorea, epilepsy, or other overt manifestation of disease or disorder of the nervous centres. As well might we apply penal treatment to these nervous phenomena as to hysteria. The penal treatment of hysteria is a remnant of the barbarous era of medicine, when lunatics were so treated. A favourite mode of treating lunatics in that barbarous period was by subjecting them to a protracted cold bath; and it is not a little curious to note that this was the remedy administered to the unfortunate woman at Guy's.

It may be freely conceded that in young women said to be hysterical there is a moral factor in the case which requires judicious moral management in addition to the more strictly medical treatment indicated by the underlying pathological conditions. But the physician must be extremely careful lest in the adoption of moral means he overstep the legitimate bounds of his profession, and trespass on the territory of the civil magistrate. And this it will be very difficult to avoid if he fall into the fundamental physiological error of supposing that moral or physical punishment is an essential element in the treatment of hysteria. Taking this view—one which cannot be overlooked—does it not follow that the physician who, without adequate safeguards, makes punishment a part of his *materia medica*, runs imminent risk of coming into collision with the law? Or to apply the argument to the case at Guy's, and supposing that the patient had suffered no injury from the cold bath, still, had not an assault been committed upon her?

Whether it be contended that hysteria is a moral perversion demanding punitive treatment or not, surely it is equally beyond the province of the physician, and, *à fortiori*, of the nurse, to administer it in this fashion. But I cannot help repeating emphatically that to regard hysteria as a moral disorder that can be usefully treated on penal principles is utterly unjustified by the actual state of medical knowledge. If we still use the word hysteria as "giving a name" to a disease, it ought only to be done provisionally, whilst we are searching for the morbid cause. Hysteria in this light, then, is simply an "asylum ignorantiae"; an asylum which it is time to close.

Before concluding these observations on the penal treatment of disease, there is one more remark I am tempted to make. The recent movement for instituting a distinct Faculty of Nursing as something independent of the authority of the Faculty of Medicine is one which concerns the public even more vitally than it does the physician. However much the physician may be pained and harassed at seeing his best efforts thwarted by the perverseness of the nurse, after all it is the patient who suffers most. If those very ignorant, and, therefore, very presumptuous enthusiasts who foster this "new system of nursing" were to make themselves the first subjects of the experiment; well, this new form of vivisection might find justification! But when ignorance and presumption perform dangerous experiments upon the helpless poor, whose inheritance is dependence upon charity, then this vivisection assumes the more odious character of cruelty, if not of something worse.

I am, Sir, yours, &c.,

ROBERT BARNES.

Harley-street, August 24th, 1880.

GUY'S HOSPITAL AND THE OFFICE OF TREASURER.

To the Editor of THE LANCET.

SIR,—The misdoings and mismanagement at Guy's having been now very freely discussed, it might be well, with a view to bring good out of evil, to see how the hospital despotism complained of came to be; how it became centred in the office of Treasurer naturally and necessarily; how the conditions of society and of these institutions are now so changed that the office as administered can no longer be tolerated; and, this done, the remedy would seem to be easy. The earlier hospitals—notably St. Thomas's, of which Guy's is to some extent an acknowledged offshoot and copy—admitted not merely the sick but the foundling and the depraved; the charter of Edward VI. gave powers accordingly for the management. At the weekly meetings of the Court of Governors in those early times are frequent notices of delinquents tried, sentenced to whipping and other punishments. A whipping-post, called “the crosse,” within the precincts, was in constant use, as its renewal and frequent repair shows. Even Sisters were whipped—notably Jane Thornton, in 1570, whose offence was no doubt grave, as the twelve stripes ordered were to be “well laid on;” others, younger, seem to have been privately whipped by the matron. Many with diseases the result of vice were first cured, then whipped or put in the stocks, as a warning before they were dismissed. Diseases pure and simple bearing upon insanity, or those lesser insanities which we call hysteria, were treated with punishment.

It was convenient to delegate many of these matters to the Treasurer and Matron. The power entrusted chiefly to the Treasurer was bit by bit enlarged, so that down nearly, if not quite, to our time this official became a despot. In the Order of the Hospitals, 1557,¹ the Treasurer's charge is acknowledged to be one of much pain and “attendance.” He may supersede the physician and surgeon in many particulars of their special office; certain malefactors are brought before him, and with the aid of one almoner he may examine, commit to prison, reprove, banish, put to labour, or being “diseased” may admit to the hospital. Here we see the *fons et origo* of the Treasurer's office, and can traditionally account for the hankering after the punitive which still remains. The late case would have been but an instance of old legal custom, and the tone of the old power is manifested when the Treasurer excuses the nurse in that it was but an error of judgment, which unhappily ended in death. These errors in judgment must, however, frequently recur in connexion with punitive treatment, or what may amount to nearly the same, treatment without the intelligent and responsible supervision of the doctor. Guy's has been officially noted as the place in which mischief was likely to appear. The Charity Commissioners, in their Thirty-Second Report (part vi., p. 780), say of Guy's: “One most important subject yet remains to be noticed—namely, the absolute and uncontrolled authority which is practically enjoyed by the present Treasurer (1840) in every department of the charity. Not only is the administration of the hospital in the management of the funds entirely in his hands, but the nomination of Governors seems mainly to rest with him. . . . Entire control of the Medical School is with him, in his private and individual capacity. He names the lecturers, exercises a sovereign and irresponsible authority. So large a concession appears to be unjustifiable.” They also say that “much confusion and injury may be anticipated as the result of the system.” This is signed, “Samuel Smith and Francis Offley Martin, Charity Commissioners.”² One of the greatest of Guy's modern teachers, James Blundell, notes as the root of the evil which existed then, as now, that “the hospital schools are governed by men not intended for the office, and seldom adequately prepared for so important a trust.” Although in some few particulars changes may have been made since 1840, the office is in the main managed as ever. The late Treasurer of Guy's acted, as he owned, upon his own personal responsibility, and used the hospital nurses in a case of quasi-medical police—that of the Welsh fasting girl Jacobs;³ and the doings of the present Treasurer, introducing vital changes in the

management of patients, without even the knowledge, much less the approbation, of the medical staff, prove that the office is as irresponsible as ever. I do not so much blame any personal Treasurer as I do the vicious system of giving such peculiar authority to a man destitute of medical knowledge. When the treatment of disease was quackish, astrological, and what not, and when the patients were not unfrequently of the scum of society, it might have been necessary; but now that these institutions are worked by men of the highest qualifications, by men fitted to grace the highest intellectual circles, and now that the practice of medicine and surgery has become a science, it is a barbarism to continue in the same way.

And now to the remedy. In the action at law *re* St. Thomas's Hospital, 1862, the Chancellor who tried the case acknowledged, as did the Attorney-General, that the parishes had an interest in the honest and judicious management of the great charitable institutions established in their midst exclusively for the sick and suffering poor, and that they therefore had a *locus standi*. Now, these doings at Guy's call for prompt and energetic action; the parishes may well take action once more. I do not think for a moment that the Charity Commissioners are equal to this work. It must, I think, be done by a Committee of the House of Commons; as the case lies in a nutshell, two or three days might suffice for a report. The evil and the results are of a magnitude enough to justify this course. It is for the South London parishes by their boards and vestries to petition for inquiry; action in this way in at least one parish is already promised, and the members for the borough would be glad to help. Even if the House has no time for this now, the demonstration would be of service against next session. The remedy would seem to be the abolition of the office of Treasurer, or of any government, directly or indirectly, by any one man, and to appoint a real, working, openly responsible committee of management, on which committee the medical staff must be adequately and efficiently represented. Perhaps the local governing bodies might once in three years appoint, say one suitable person for each borough, in one case Southwark and Lambeth to be *ex officio* on this acting committee, or to be among the acting governors, and under these an efficient secretary under the entire control of the committee, to give effect to their management.

I remain, Sir, yours, &c.,

WILLIAM RENDLE, F.R.C.S.,
Chairman of the Committee of South London Parishes,
re St. Thomas's Hospital in 1862-3.

Polperro, Cornwall, August 23rd, 1880.

TREATMENT OF CANCER.

To the Editor of THE LANCET.

SIR,—At present, when the profession are in expectation of getting a cure for this frightful disease, it has seemed to me advisable to call attention to a remedy which used to be in great vogue, but which has most unaccountably fallen into disuse. There is nothing indeed in medicine more remarkable than the fact of the way in which medicines, patent medicines too, are forgotten or thrown aside. Into the causes of this I am not now going to enter, but simply to state a well-known fact. The medicine I would now recall to notice, through your widely read pages, is the well known hemlock; and in saying this I am well aware of Harley's most valuable observations on this very drug. But it is as a remedy for cancer, in some at least of its forms, that I would here speak of it. Now, Sir, the evidence of the power of this medicine over cases of cancerous disease is very great indeed; and that man would do well to the profession who would simply make out a list of the cases where it has been so employed. Not that every case was bettered by its use, for this is not to be looked for, but that the majority were. It will be observed that I use the word “bettered;” as if I said “cured” it would be at once concluded what I advanced would not be worthy of a moment's consideration; though certainly there are plenty of cases in which a complete cure was effected; and this in cases of both what seemed open and occult cancer.

This evidence, it appears to me, seems quite sufficient to authorise us to fall back on the remedy.

It has been objected to the use of hemlock that its preparations are uncertain, and do not contain the active principle.

¹ Memoranda relating to the Royal Hospitals. Reprint, 1836.

² Reasons for Retiring, p. 21. ³ THE LANCET.

Granting that this is true, in a degree, it is certainly no reason for giving up its use. But I think that, with such a formidable disease as cancer, it would be well to use the hemlock which grows in other climates than Great Britain; for there can be no doubt that it is a much more vigorous plant abroad than amongst ourselves; and indeed the parties who first introduced it in Germany enter into particulars as to the locality in which it grows, the time of the year it is to be plucked, which prove their opinions on the matter.

The dose of the drug in common use, I may state once for all, is too small. The British Pharmacopoeia puts down the dose of the extract at from two to six grains, which is totally useless. To an adult not less than ten grains may be given; and I find a very suitable way of giving it is in an eight-ounce mixture, of which half an ounce, by measure, may be taken three times a day, each dose containing ten grains, which can be readily increased, and which will be needed in such a disease as cancer, for the dose must be pushed so as to produce its physiological effects. I speak specially of the extract as, on the whole, presenting the easiest mode of administration. It is not equal, I am aware, to the succus conii either in elegance or power; but the latter has very serious drawbacks, one being its expense, and the other the quantity of spirit which it contains. Used in the way indicated, I have found hemlock a very valuable remedy. In my hands it seems to possess two distinct effects, the first being the power of allaying pain, a matter of so much moment in cancerous disease; and the second, its restorative power on the frame, as shown by the change in the appearance of the patient; and, should there be an open ulcer, the alteration for the better in the sore. I have seen no absolute cure of cancerous disease, but I have seen several cases where the disease has been beyond question kept at bay, and the life of the patient by so much bettered.

More, Sir, could be said on this remedy, but enough I consider has been advanced to call the attention of the profession to what appears a very important subject by,

Yours truly,

Dublin.

HENRY KENNEDY, M.B.

ENTERIC FEVER IN TROPICAL CLIMATES.

To the Editor of THE LANCET.

SIR,—Kindly permit me to answer as briefly as possible the questions put by Surgeon-General Gordon in his commentary on my letter of the 31st ult.

He asks, "What is the precise sense in which the term 'enteric' is applied by the writer of that letter to the fever in India, which he describes?" In answer to this I would say that the "enteric" fever which I have observed and treated in India is "a definite disease, always recognisable after death in fatal cases by the pathological changes proper to it." This is, as it will be seen, a quotation from my own letter, in which I regarded it as an axiom that "enteric fever" (using that term as the synonym of the "typhus abdominalis" of the German school) exists in India as a specific disease, distinguished from all others by the pathological changes going on in the intestine, just as it does in temperate climates. This, however—which I must regard as a necessary premiss—Dr. Gordon would seem to deny, inasmuch as in commenting on another portion of my letter he says, "So far as the extracts from authorities and writers given in my reports justify a conclusion, that conclusion is that in fatal cases of fever due to *pythogenic* causes there are no post-mortem appearances of a nature beyond such as exist in fatal cases of non-specific fevers due to endemic and climatorial causes in India; also that appearances undistinguishable from them occur in other diseases than fever, and as results of certain poisons." This, it appears to me, amounts to saying that there is no such disease as I describe occurring in India recognisable and capable of differentiation from all other diseases by the pathological changes found in the small intestine after death, which disease is known all over the world as "enteric fever," "abdominal typhus," or "typhoid fever." If this be the opinion of Surgeon-General Gordon, it is evident that, denying, as he does, my premisses, he will not be likely to allow my conclusions. I confess, however, that I was not aware that there were any longer doubts as to the disease

which is known as "enteric fever" being pathologically as perfectly distinct in India as it is in temperate climates, nor can I understand how the position is tenable. The question, however, with which I attempted to deal was not the identity of the disease as it is observed in India and elsewhere, but, assuming such identity, to consider the question of causation. "Enteric fever" being "enteric fever," does it arise in India from climatorial causes, or is it essentially "pythogenic" in its nature? My arguments and conclusions on this point need not be repeated.

On one other point only need I touch—that is, the question of temperature as a means of diagnosis between "enteric" and "remittent" fevers. In a short paper which I communicated to the *Indian Medical Gazette* in 1877 I entered more fully into this point, upon which, in spite of Surgeon-General Gordon's criticism, I still repose the greatest confidence. I have not, unfortunately, a copy of the paper I refer to at hand.

The principal practical point is this: Given a patient who comes under our notice in the *first two days* of his illness, we can, by taking his temperature carefully night and morning, predict with almost absolute certainty, in uncomplicated cases, whether we are likely to have a case of "remittent fever"—that is, a fever of climatic origin—to deal with, or a case of "enteric." The value of this knowledge to the physician in the treatment of the disease cannot be over-estimated.

In conclusion, I trust that Surgeon-General Gordon will not consider that I offer this answer to his criticism of my letter in any dogmatic spirit. The subject is one of vast importance, and cannot be too freely discussed.

I am, Sir, yours faithfully,

Dublin, Aug. 15th.

GEO. S. RANKING, M.D. Cantab.

To the Editor of THE LANCET.

SIR,—Reading your number of Jan. 3rd, I met an article of Sir J. Fayer, M.D., on typhoid fever in tropical climates. As he wants the experience of physicians living in this climate, I take the liberty of troubling you with a few lines on the subject.

This town is situated inside of the tropical line of the south, and is two degrees south of Rio de Janeiro, Brazil. Here I have observed, in a year, nine cases of typhoid fever in persons from twelve to thirty-five years of age—five males and four females (eight white and one mulatto).

They all had fever from twenty-one to twenty-five days. Most of them had epistaxis, and one almost died from its severity. They had diarrhoea, some from the first, others from the seventh day, and more than half had severe intestinal hæmorrhage, requiring the energetic use of astringents.

There are physicians here who deny the existence of typhoid in this country, but I have seen many cases of this fever in the hospitals in Paris, London, and in the United States, and I find no difference between the fever treated there as typhoid and the cases I have seen here among the natives of this country.

The duration of the fever (twenty-one to twenty-five days), the general appearance of the patients, the epistaxis, the rose-coloured spots on the abdomen, the tenderness and gurgling in the right iliac fossa, the dryness of the tongue, the deafness, muscular pains, circumscribed flush on the face, sordes on the teeth, dryness of skin, pulse 100 to 120, debility, somnolence, mental confusion, and other symptoms resemble the typhoid fever of the countries north of the tropical line.

I am sorry in not being able to furnish the thermometric observations of these cases, for the patients were country people, living in farms, where it is impossible to keep daily observations of the patients, but I can assure you that from the fourteenth day the temperature generally fell.

In none of these cases did I give a grain of quinine. In the first stage, when the fever is high, I give ordinarily small doses of nitrate of potash, and in the last stage preparations of bark, alcoholic stimulants, Todd's solution, and externally linseed poultices and turpentine fomentations. No purgative is given, except in the first five days, when there is constipation. I do not allow any solid food, but give milk, beef-tea, coffee in small doses and frequently. Out of the nine patients I observed last month and part of this, eight are living, and well, and one died thirty-six days

after recovery, from eating cheese and a large piece of beef, probably producing intestinal perforation.

These cases are observed here in the last part of summer, which in Brazil ends in March and April.

I cannot give the precise cause of the fever here, but attribute it to decomposition of organic substances in some cases.

Two of the cases I treated were nurses who attended my typhoid patients and fell in sickness after their recovery. Most of them were living in isolated farms, where typhoid was never observed before, though Dr. Budd believed that this fever only originated from the stools of individuals affected with the fever.¹

The typhoid or enteric fever described by Murchison, Tanner, Niemeyer, Trousseau, Flint, Wood, and other European and American writers, and the cases I have observed here, are very similar.

I have no doubt they are cases of typhoid, and the treatment I use having produced good results, proves the correctness of my diagnosis.

I am, Sir, yours faithfully,

G. PIZA ALMEIDA, M.D.

Itatiba, Province of Sao Paulo, Brazil, March 20th, 1880.

PRELIMINARY EDUCATION.

To the Editor of THE LANCET.

SIR,—Although, as you have pointed out, elementary medical education is not a fit subject for interminable revision by the Medical Council, it is still a fit subject for continued discussion by the profession in general. Holding this opinion, I venture to express my views with regard to the subjects best suited for the preliminary examinations. If we consider the great amount of biological and physiological knowledge acquired in recent times, the importance and extent of our gains in various departments of science, the clear conceptions of force and energy which may now be commanded; if further we consider the importance of all these to a reflective practitioner, we should hesitate to debar him from attaining them by compelling him to useless toil. Of what possible use to him can be a smattering of Greek or Latin? Is it to be supposed for a moment that elegance of address or refinements of speech or thought entangle themselves in the pages of a Latin or Greek grammar; that a laborious effort to read the *Anabasis* of Xenophon gives him the culture which is supposed so needful? Could he even read the plays of Sophocles, might he not gain more from the dramas of Shakespeare? from his lyrics than from the Choral Odes of the older poet? Is there any prose literature to compare with our own? But, surely, if he acquires foreign languages at all they should be the modern German and French, so that he may be able to read their scientific works and make himself familiar with contemporary thought.

It is hardly too much to say that to compel a student entering on his medical career to obtain an imperfect acquaintance with the ancient languages, aware that what he has learned will forthwith be forgotten, is to give him an aversion to labour which will most likely spoil the earlier years of his work, and will certainly start him on a false method of gaining knowledge.

It seems to me that false conceptions exist as to "culture," and that "culture," as understood at present, is somewhat contemptible. The culture that a man wants is that which will enable him at least to understand the main advances in his profession, and, if it is in him, to give his aid to them.

Insight into character, sympathy of nature, and refinement are, in the main, neither acquired nor acquirable by any polishing machine. What we want in these times is that men entering the profession should be more or less familiar with "the new learning" of our time. They should know their own language and German and French sufficiently well to read works in these languages. They should also know the facts which will come prominently before them in chemistry, mechanics, dynamics, hydro-mechanics, electricity, heat, and sound, and such knowledge should be limited, practical, and thorough. In the same way they should know something of biology and physiology in a prac-

tical sense as a preparation for their after-study on a large scale.

A new world is springing up around us. The heroism and poetry of our time is scientific. In *Lebensfluthen im Thatensturm* the greatest minds are tracking the path of the *Erdgeist*. The intellectual national life is everywhere pressing forward more strongly to further knowledge of the material world and its wonders. Here lies our modern El Dorado. In this movement the medical profession must share largely. The fundamental facts of living protoplasm and the various stages of living matter illustrate themselves in the body of man. The interdependence of the animal functions in general, and of the mental processes in particular, with the nervous system, is receiving and demanding a closer and more extensive study. The applications of heat and electricity to health and disease necessitate some knowledge of these sciences. Illustrations might be indefinitely multiplied. But inasmuch as it is of equal, if not of greater, importance that a man should begin his life study comparatively fresh, able, and willing to work, the amount of these various sciences taught should be only what is essential. What we want is not barren discussions about the exclusion or retention of Greek or Latin, which must soon disappear, but an effort to arrange the essentials of scientific knowledge, disencumbered of unnecessary detail, so that they may readily come within the range of schools and the reach of young men about to enter the medical profession.

I am, Sir, yours obediently,

J. NIVEN, M.B.,

Deptford Hospital.

Fellow of Queen's College, Cambridge.

* * In accordance with our motto, we print the above letter, though, as our correspondent will see by reference to another column, our views differ somewhat from those he has here advanced.—ED. L.

"A CHEMICAL LUNG."

To the Editor of THE LANCET.

SIR,—As you thought my suggestion for purifying collections of foul air by chemical means worthy of notice in THE LANCET, perhaps a more detailed account of the scheme may not be unacceptable. Caustic alkalies are well-known to possess great affinities for carbonic acid and sulphur gases. In the case of the Underground Railway I propose to add a special chamber to each train—say a disused third-class carriage, open at each end, and so constructed that, by the aid of wings and 'chutes, it shall occupy as large a sectional area of the tunnel as is possible. Trays carrying caustic lime, kept moist by a tank of water on the roof or otherwise, occupy the whole interior space of the carriage, which may be placed either at the rear of the train or next the engine. Instead of trays carrying the alkali, in a solid or semi-solid form, sheets of canvas or other suitable material may occupy their place, and, by means of a reservoir of caustic soda above, be constantly kept wet, the surplus fluid being collected in a lower tank, whence an automatic pump, connected with the wheel of the chamber, pumps it up, to fall again through the sheets. Charcoal stacks may take the place of the sheets; the stacks made in frames easily handled, of fine branches arranged in crossed tiers, and kept constantly wet, as in the case of the canvas sheets. Again, a series of water-wheels, constructed of canvas or other suitable material, with rims dipping into a lower tank of caustic soda, and so formed as to carry up the fluid and pour it over their surfaces, the current of air as it rushes through the chamber sufficing to cause the wheels to revolve, and so to expose a surface, constantly wet with the chemicals, to the action of the air; and when the train passes into the open the wheels may be skidded, and so unnecessary waste of chemicals be avoided.

If a special carriage be considered impracticable, as some think, then an exhausting fan may drive the gases of the smoke box direct into a tank filled with the chemical solution, and the carbonic oxide which will issue, freed from other gases, may be converted into carbonic acid, either by causing it to pass through a tube under the ashpans of the furnace or else over a spirit or gas flame; or, again, electricity, evolved either by the friction of the train or by a special battery, may be called into requisition for the same purpose—viz., the conversion of the carbonic oxide into carbonic acid.

A punkah, constructed upon chemical principles, will, I

¹ It was perfectly well known to Dr. William Budd that nurses, or even medical men, in attendance on typhoid patients, might contract the disease in removing or inspecting the stools, and, having contracted, spread it, without being themselves attacked with fever, although probably suffering from slight *malaise*.—ED. L.

think, be found most useful in sick chambers, small rooms, and offices, and, if sufficiently large, at the stations of the Underground Railway, should it be necessary to purify the large volume of air that will not enter the chamber after it emerges from the tunnels. An eminent firm in London is constructing these punkahs, and hope soon to have them on public view. In theatres and other large buildings it is proposed to have one or more intakes in the roof, or elsewhere, connected by hose or tubes, with a sufficiently powerful exhausting fan in the basement of the building; the foul air from above is then driven through a tank, or other form of chemical lung, and allowed to escape and find its way back again to the upper part of the building, being cooled, if need be, or oxygen added if desirable. The application of this principle to the purification of the air in Turkish baths, and also to destroy any noxious gases emanating from cremation furnaces, is self-evident. Many have been the views taken of each individual portion of the scheme; experience alone can test its strong and weak points. As regards the Underground Railway, a few hours would be sufficient to form a decided opinion; with a single lung, the air, on entrance and exit, being analysed, would at once show the amount of foul gases passing through and destroyed in a given time and space. The necessary amount of alkali per train could then be easily calculated.

I am, Sir, yours, &c.,

RICHARD NEALE, M.D. Lond.

Boundary-road, S. Hampstead, Aug. 21st, 1880.

"INFLAMMATORY AFFECTIONS OF THE JOINTS IN CHILDHOOD."

To the Editor of THE LANCET.

SIR,—In a clinical lecture by Mr. Howard Marsh, on "The Treatment of Chronic Inflammatory Affections of the Joints in Childhood, with especial reference to Excision," which appeared in THE LANCET of July 31st, he points out in a very able manner the advantages of the treatment by rest and the use of leather splints, in which I entirely agree with him. He says, however, that many cases come under his notice of deformity as the result of other forms of treatment, and he asks the question: "Is surgery unequal to the treatment of these distorted joints—are not these just the cases for excision?" and in answering this question he says: "I grant these, if any, are the cases for which excision is appropriate; cases, that is, in which there is little or no disease, but much distortion. But the point is that you excise a joint not because it is the seat of incurable disease, but because it has been allowed to get out of shape. Prevent the deformity and the necessity for excision vanishes."

Now, in this I venture to think Mr. Marsh is in error, and the question should rather be answered thus:—Very many of these cases of deformity for which, in Mr. Marsh's opinion, excision is appropriate, and especially those affecting the knee and ankle, can be rectified by gradual extension after tenotomy, sometimes with a stiff joint, and in other cases with more or less motion, according to the extent of the original disease. From the number of contracted joints that have come under my notice, and which have been successfully treated by this method, I infer that the value of this mode of treatment is not sufficiently recognised.

I am, Sir, yours faithfully,

HENRY F. BAKER.

Hanover-square, August 3rd, 1880.

LEATHER STRAPS v. BANDAGES.

To the Editor of THE LANCET.

SIR,—The liability of bandages and slings, when required to bear any strain to stretch and ruck, must be generally recognised. This disadvantage is particularly noticeable when treating a fracture of the clavicle or acromion process. Mr. G. Cardy Edwards of Ipswich, fifty years ago, met this disadvantage in fracture of the clavicle by the use of a couple of round leather straps, with an oval pad with a buckle on it at one end, and holes at the other. These straps he applied as an ordinary figure-of-eight bandage, either pad being in front of either shoulder. The coolness, comfort, and firmness of these clavicle straps have induced me to keep and use them for the past twenty years.

Last winter the horse of the whip to the Duke of

Hamilton's harriers, while galloping across a ploughed field, placed its feet into a water furrow, threw the whip, and, in rolling over, struck his acromion with the edge of the back of the saddle and fractured it. I put it up in the ordinary way, with sling, pad, and bandage. At the end of forty-eight hours I was dissatisfied with its firmness, and thought possibly the frequency of fibrous union in these fractures might be due to the difficulty of keeping the ends in perfect apposition. I discarded the sling and bandage, and used the clavicle straps. One pad I placed under the elbow, and the other on the proximal side of the fractured acromion, and tightened the straps till the ends of the fracture were in perfect position. I had put a second buckle on the acromion pad, to which I fastened one end of a round leather strap, and carried it across the back, under the arm, and up in front of the chest, and fixed the end in the same buckle. The ordinary pad and the arm were kept to the side by another strap round the chest. Everything kept in perfect position. The clavicle straps brought the ends of the fracture quite close, and the second strap from the acromion pad made him, as he expressed it, "feel quite whole."

The coolness, firmness, and sense of security given by the leather straps, I think, ought to lead to the sling and bandage being discarded in their favour.

I am, Sir, your obedient servant,

Framlingham, Aug., 1880.

GEO. E. JEAFFRESON.

CASE OF COIN-SWALLOWING.

To the Editor of THE LANCET.

SIR,—Perhaps you may think it worth while to publish the following case as exemplifying the treatment alluded to in your number of July 31st, in a case of a child swallowing the tongue of a bell:—

A man, aged fifty-one, of rather irregular habits, swallowed three sovereigns at a gulp for the wager of a pot of beer. The next morning, being in a more thoughtful frame of mind, he consulted me as to what was best to be done, feeling apprehensive as to the result of the previous evening's folly. I directed him to eat as much solid food as possible, avoiding superfluous fluids. The fear of impending mischief seemed to stimulate his appetite, for he carried out my advice in a wonderful manner. In twenty-four hours he was rewarded by hearing the merry chink of his three sovereigns once again in his pocket. He had holes bored in his coins; one he wears appended to his watch-chain, perhaps to remind him of his foolhardihood, another he presented to a friend, who wears it in the same way, and the other was, I believe, exchanged to the loser of the wager for one which had not passed through the same unusual experiences.

I have frequently had occasion to advise eating, to the full, solid food in cases where foreign substances have been swallowed, and I cannot call to mind a single instance in which such treatment, when adopted immediately, failed to carry off the offending body. Although I have never seen an instance of fatal termination in any such cases where purgatives have been at once administered, I do know of some where prolonged anxiety and pain have been occasioned by such treatment, notably in the case of a woman who swallowed a date stone, and hoped to rid herself of it by immediately taking a dose of castor oil. This patient suffered considerable pain about the neighbourhood of the duodenum, striking through to the back, increased after eating, and sometimes accompanied with great anxiety and some feverishness. This condition lasted for many weeks, and only subsided very gradually.

Faithfully yours,

JAMES WORTHINGTON,

Surgeon to Lowestoft Hospital.

July 31st, 1880.

PARIS.

(From our own Correspondent.)

THE pestilential smells which have infested Paris for some time are awakening a feeling of indignation against the responsible authorities, which is expressed freely in the daily papers, and that quite independent of party spirit. A few days since, the well known critic, Francisque Sarcey, devoted an article to this matter in the *Dix-Neuvième Siècle*, and

invited the inhabitants of his district to sign the petition in preparation against the nuisance; and the *Figaro* of to-day prefaces some satirical remarks by the statement that "Paris est en ce moment infecté par les odeurs les plus épouvantables. Tous les égouts sont à découvert." The odours, which in reality emanate, as was stated in a previous letter, from the night-soil *depotoirs* which surround the city, and also from the carts and boats which convey the sewage outside the walls, are due to the neglect of the contractors in the use of disinfecting measures, and there seems to be no doubt about the connivance of the police at this abuse. M. Sales Roche, one of the most energetic of the municipal councillors in sanitary matters, has written a letter to the Prefect of Police announcing his intention of questioning him upon the subject when the Council resumes its sittings. He states that the day after the discussion, which took place about a month ago, the air of Paris was pure and respirable; but as soon as the holidays commenced, the smells made their reappearance worse than ever. "We cannot all," says M. Roche, "go to the seaside. Many, after a hard day's work, wish for a breath of fresh air in their evening walk. But at this hour the town is 'empoisoned.' Your administration has tolerated for months an abuse which would not be suffered for the space of twenty-four hours in the most obscure village in France." The *Petite République Française* thinks that the only remedy lies in the suppression of the bureaux, which are fallaciously called "sanitary," or "hygienic," and which cover the responsibility of the Prefect by a semblance of official sanction, which, as a matter of fact, they cannot withhold.

An operation of considerable interest was recently performed at the Beaujon Hospital by M. Tillaux. A man, aged thirty-one, had enjoyed good health until the 25th of last May, when he was suddenly seized with the most violent pain in the abdominal region. In spite of all treatment the pain continued; and after suffering for some days the patient applied to the out-patient department of the Lariboisière Hospital, where it was found that he had a tumour, which was supposed to be a floating kidney. For more than a fortnight he remained without any further advice, having intermittent attacks of pain, which lasted for some time, unable to eat or lie down without provoking an attack, and obliged to sit doubled up with chin on his knees. He then consulted Dr. Millard, physician to Beaujon, for his "floating kidney," who admitted him into the hospital for this affection, changing, however, the diagnosis after a time to that of chronic intestinal invagination. Continuous currents and rectal douches were tried for a time without any result, and finally, at the urgent request of the patient, it was determined to perform the operation of gastrostomy. The abdomen wall was incised by M. Tillaux with strict antiseptic (Listerian) precautions, and the hand being introduced into the cavity, a tumour the size of the head of a fetus was discovered, springing from the mesentery. An exploratory puncture giving no information as to its nature, it was freely incised, and found to consist of a cyst filled with caseous matter. The pedicle having been tied with catgut, the tumour was removed, and the stump returned after being washed with a strong solution of carbolic acid. Two days later there were threatening symptoms of peritonitis, but these passed off, and a perfect recovery ensued. The growth turned out to be a cyst which had developed in one of the mesenteric ganglia.

Paris, August 25th.

MEDICAL NOTES IN PARLIAMENT.

IN the House of Commons on Thursday, the 19th inst., the following papers were laid upon the table by the Clerk of the House:—Abstracts of the quinquennial returns of sickness and mortality experienced by Friendly Societies for the periods between 1855 and 1875; and abstracts of accounts for 1879 of English and Welsh county and borough lunatic asylums.—Mr. John Talbot gave notice of a question with regard to the drainage of that part of Westminster in which the public offices are situate.

On Monday, in reply to Mr. A. O'Connor, Mr. Mundella stated that the Crown nominees on the Medical Council were appointed by Her Majesty in Council, for a term not exceeding five years, in accordance with the provisions of the Medical Act of 1858. Section 8 of that Act provided that any person so nominated might at any time resign his

appointment by letter addressed to the President of the Medical Council.

On Tuesday the statistical report of the health of the navy for the year 1879 was presented. The following notice was given for next week:—Mr. Firth,—"To ask the Under Secretary of State for the Home Department whether he is aware that during the month of July last the Fishmongers' Company ordered the destruction of more than ninety tons of fish as being unfit for human food; that this loss was mainly due to the utter inadequacy of the fish market accommodation in London. Whether he is aware that such inadequacy arises from the fact that no new market can be established within seven miles of the City of London without the consent of the Corporation of London, and that the Corporation claim to prevent and have repeatedly prevented such establishment. And whether, having regard to the fact that this claim is founded upon charters granted at a time when the limits of the metropolis were co-terminous with the City, the Government are prepared to advise the cancellation of such charters and to support any measure introduced by the Metropolitan Board of Works, or other responsible authority or persons, for the establishment in London of markets for the people."

On Thursday, in reply to Mr. Beresford Hope (on behalf of Mr. Talbot), Mr. Adam said his attention had been called to an article in the *Builder*, in the heading of which some reference was made to the Government offices, but the article itself dealt with the main drainage system of Whitehall and Westminster. That was not under the jurisdiction of the First Commissioner of Works, and any application on the subject should be made to the Metropolitan Board.

Obituary.

PROFESSOR DR. FERDINAND R. v. HEBRA.

WE briefly chronicled in our columns lately the loss the Vienna School of Medicine had sustained in the death of Dr. Ferdinand R. v. Hebra, a professor whose fame was recognised throughout the civilised world. The death of one who exercised such influence on the branch of medicine which he made his specialty should not be allowed to pass without a record of his personal career, or an attempt to define the position he held in dermatology.

Hebra was born on the 7th September, 1816, at Brünn, and acquired his medical education at Vienna, where he obtained his doctor's degree in 1841. For awhile he turned his attention more particularly to surgery, but, before long, devoted himself to medicine under the illustrious Skoda, in whose department skin diseases were included, but without any effort at specialisation or organised treatment. Feeling strongly the unsatisfactory condition of this branch of medicine in Germany, both as regards its scientific position and the way it was taught, and recognising in Hebra an ability thoroughly fitted by its acuteness and zeal to deal with the subject, Skoda induced him to enter on the study of diseases of the skin; and the result was, in 1842 (the year of issue of the first edition of Erasmus Wilson's large work), the delivery of a private course of lectures by Hebra, which attracted considerable attention. The first step gained, his next object was to induce the authorities to found a special department for skin diseases. This, after much opposition, and chiefly by the influence of Skoda, he succeeded in achieving, thus enabling him to command ample material for his subsequent labours, as well as drawing a large number of students, by his masterly exposition of an intricate and ill-understood subject.

At this time, through the labours of Alibert, Biett, Gibert, Cazenave, Schedel, and Rayer, the Hôpital St. Louis in Paris was really the only School of Dermatology, and the influence of its professors was paramount. To appreciate Hebra's influence, it is also necessary to understand that at this time there was much disagreement on fundamental points between French and English writers; the nomenclature had grown intolerably cumbrous and unintelligible, and the whole study, notwithstanding Willan's great work and the fruitful and valuable labours of many French observers, was in a most unsatisfactory condition. As Hebra laboured on through the succeeding years he gradually tested all that had been previously written by means of his own

abundant material and accurate observation and comparison, sifting the wheat from the chaff, till he placed dermatology on a thoroughly scientific basis, and established sufficient facts to form a sure foundation for the labours of succeeding observers. He also did good work in simplifying the nomenclature, and classified skin diseases in accordance with the views of his colleague Rokitsky on an anatomico-pathological basis. Meanwhile, the extremely logical character of his writings, and his lucidity and capacity as a teacher, were widely extending his reputation, and increasing crowds of students from all lands attended his clinique in the rising Dermatological School of Vienna in preference to the celebrated Hôpital St. Louis. From America especially great numbers constantly attended his lectures, and Hebra's influence in stimulating research amongst his pupils and placing the study of skin diseases in its present position in that country is very remarkable.

In addition to his lecturing and teaching capacity, the quality of his writings, his influence in the extension of knowledge, his scientific reorganisation and simplification of the subject, and the foundation of a great school, which has eclipsed all others, we should mention the masterly way in which he observed several affections hitherto unrecognised as possessing special features, his endeavour to encourage the pathological study of dermatology, and the additions he made to our resources for the local treatment of disease, in the way of baths, caustics, soaps, and so on.

Although Hebra recorded the results of his incessant labours from time to time on a great variety of dermatological subjects, his greatest work is that on "Diseases of the Skin," translated by the Sydenham Society. He also published a well-known Atlas of Skin Diseases, and wrote the chapters on the Special Pathology and Therapeutics of Skin Diseases in Virchow's Handbook, besides editing for ten years the Proceedings of the Medical Society of Vienna.

For many years the professor enjoyed an enormous practice, for his fame attracted patients from afar, and his literary labours had been lightened by the eminent services of Professor Kaposi, who assisted him with the later volumes of his great work. Hebra's health had for some time been failing, and awaiting his end with much resignation, he died, full of honours bestowed by the medical profession in Vienna and by the Imperial Government, on August 5th, leaving a widow and five children. The eldest of his three sons is the well-known writer on skin diseases in Vienna, Hans Hebra, and one of his daughters is married to Professor Moriz Kaposi. The admiration felt for his talents and services to science, and the reverence with which he was regarded by his pupils and colleagues, were shown on more than one occasion during his lifetime, and at his funeral, which he desired to be very quiet, there was a large and respectful gathering to pay a last tribute to the memory of the illustrious professor.

Medical News.

UNIVERSITY OF LONDON. — The following candidates have passed the recent First B.Sc. and Preliminary M.B. (conjoint) Examination for Honours in the subjects indicated:—

CHEMISTRY.

FIRST CLASS.

Stroud, Wm., First B.Sc. (Exhibition), Owens College.
*Gee, Wm. Winson Haldane, First B.Sc., Owens College.
*Roberts, Thomas, First B.Sc., Birmingham and Midland Institute and private tuition.

SECOND CLASS.

Ledlie, Wm., First B.Sc., Christ's College, Cambridge.
Beverley, Richard Joseph, First B.Sc., private study.
Kensington, Arthur Hayes, First B.Sc., Royal School of Mines and University College.

THIRD CLASS.

Irwin, Wilfred, First B.Sc., Owens Coll. and priv. study.
Hart, Herbert Wheatley, Prel. Sci., Westminster and Guy's and Birkbeck Institute.
Fison, Alfred Henry, First B.Sc., Royal School of Mines.
Read, Alfred John, B.A., First B.Sc., Univ. of Edinburgh.
Edmunds, Percy Jas., Prel. Sci., University College.
McCabe, W. Alex. Bowes, Prel. Sci., University College and Victoria Coll. Jersey.
Walmsley, Robt. Mullineux, First B.Sc., private study.
Fowler, Alfred Henderson, Prel. Sci., Guy's Hospital.
Eiloart, Arnold, First B.Sc., private tuition.
Andrews, Edw. Collingwood, Prel. Sci., University College.

Snape, Henry Lloyd, First B.Sc., Owens College.
Cave, Edward John, Prel. Sci., St. Barthol. Hospital.
Macartney, Ed. Kendrick, Prel. Sci., University College.
Walker, Thos. Hollis, First B.Sc., Epsom College.
Thompson, Francis Clement, First B.Sc., private study.
Kimmmins, Chas. Wm., First B.Sc., Owens College.
Eves, Florence Elizabeth, First B.Sc., Newnham Hall, Cambridge.
Todhunter, Wm. Alfred, B.A., First B.Sc., private study and tuition.
Anderson, G. Elliott Caldwell, Prel. Sci., South African College and Guy's Hospital.
Wallace, Robt., First B.Sc., private study and tuition.

EXPERIMENTAL PHYSICS.

FIRST CLASS.

Turner, H. H., First B.Sc., Arnott Exhibition and Medal, Trinity College, Cambridge.
Stroud, Wm., First B.Sc., Arnott Medal, Owens College.

SECOND CLASS.

Edmunds, Percy Jas., Prel. Sci., University College.
Sutherland, William, First B.Sc., University College and private study.
Innes, Chas. Barclay, Prel. Sci., University College.

THIRD CLASS.

Allen, Henry, Prel. Sci., private study.
Gee, Wm. Winson Haldane, First B.Sc., Owens College.
Catchpool, Ed., First B.Sc., Roy. Polytechnic Institution.
Ledlie, Wm., First B.Sc., Christ's College, Cambridge.
Cave, Edw. John, Prel. Sci., St. Barthol. Hospital.

BOTANY.

SECOND CLASS.

Eves, Florence Elizabeth, First B.Sc., Newnham Hall, Cambridge.
Pearson, James, Prel. Sci., University College.

THIRD CLASS.

Brock, Jas. Harry Ernest, Prel. Sci., University College.
Earle, Walter Geo., Prel. Sci., University College.
Freeland, Freeland John, Prel. Sci., King's College.

ZOOLOGY.

FIRST CLASS.

Spencer, W. Baldwin, Prel. Sci. (Exhibition), Old Trafford School and Owens College.
*Jones, Samuel Cromwell, Prel. Sci., University College.

SECOND CLASS.

Eq. { Brock, Jas. H. Ernest, Prel. Sci., University College.
{ Thane, Edgar Herbert, Prel. Sci., University College.
Adam, John Geo., Prel. Sci., Old Trafford School and Owens College.

THIRD CLASS.

Arkle, Chas. Joseph, Prel. Sci., University College.
Eq. { Chapman, Harry Cecil, Prel. Sci., St. Barth. Hosp. and Royal School of Mines.
{ Edmunds, Percy Jas., Prel. Sci., University College.

* Obtained the number of marks qualifying for the Exhibition or Prize.

BRITISH MEDICAL SERVICE. — The following is a list of the candidates for appointments as Surgeons in the above Service who were successful at the competitive examination in London on Aug. 9th:—

Marks.	Marks.
S. A. Crick 2510	L. W. Swabey 1610
J. R. Dodd 2240	R. Haselden 1605
{ A. J. Struthers .. 2230	R. E. Ricketts-Morse 1600
{ G. E. Twiss 2230	{ W. J. B. Lyons .. 1590
R. F. Adams 2225	{ W. Rowney 1590
C. G. D. Mosse .. 2135	T. J. R. Lucas 1565
A. B. Cottell 2075	{ C. J. Addison 1560
T. Archer 2035	{ A. G. Kay 1560
S. G. Hamilton .. 2035	{ W. W. Pope 1560
H. J. R. Moberly .. 1990	{ R. Porter 1560
A. P. Hart 1955	{ R. C. K. Laffan .. 1555
{ H. J. Barnes 1930	{ C. A. P. Mitchell .. 1555
{ R. W. S. Sawyer .. 1930	{ G. J. Coates 1550
W. G. A. Bedford .. 1920	{ G. W. H. Cook .. 1545
R. Jenning 1910	T. B. A. Tuckey .. 1535
S. C. B. Robinson .. 1880	F. A. Harris 1515
H. S. Parker 1840	C. B. Lewis 1500
{ T. F. W. Fogarty .. 1825	{ T. H. Parke 1500
{ R. W. Ford 1825	{ F. A. B. Daly 1445
G. J. Coutts 1820	{ A. S. Rose 1445
A. Sharpe 1800	{ D. L. Porter 1430
{ C. L. Young 1800	{ J. Battersby 1425
C. Reid 1780	J. Maconachie .. 1415
W. J. Baker 1770	A. H. Morgan 1405
A. T. Sloggett 1755	C. H. Dixon 1400
R. R. N. Elmes .. 1715	T. Moynihan 1375
H. K. Allport 1700	M. W. O'Keeffe .. 1370
{ E. Butt 1680	{ T. J. O'Donnell .. 1360
{ S. Townsend 1680	{ J. Osburne 1355
T. R. P. Woodhouse 1675	{ H. E. R. Wolrige .. 1355
J. Gibson 1650	R. P. Hetherington 1315
J. H. A. Rhodes .. 1625	R. C. Johnston .. 1295
A. Hickman 1620	T. A. Dixon 1270
T. C. Nugent 1620	W. C. T. Poole .. 1250
G. S. Lewis 1610	

INDIAN MEDICAL SERVICE. — The following is a list of the candidates for appointments in the above Service

who were successful at the competitive examination held at Burlington House on Aug. 9th:—

	Marks.		Marks.
G. M. J. Giles ..	2385	J. Shearer ..	1795
J. L. Vangeysel ..	2250	A. H. Pierson ..	1790
A. R. W. Sedgfield ..	2240	G. M. E. McKee ..	1780
A. F. Ferguson ..	2070	H. M. Hakim ..	1755
S. Hassan ..	1970	K. C. Sanjana ..	1725
H. C. Banerji ..	1945	M. J. Kelawala ..	1715
E. F. H. Dobson ..	1930	G. E. Fooks ..	1700
H. N. V. Harrington ..	1885	F. De Conceicao ..	1685
W. Deane ..	1845	E. J. Doyle ..	1670
R. J. Polden ..	1840	J. A. Burton ..	1610
F. S. Peck ..	1830	M. P. Kharegat ..	1530
S. C. Nandi ..	1820	P. W. W. Boon ..	1500
K. H. Mistri ..	1815	J. W. T. Anderson ..	1460

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Aug. 19th:—

Cooper, Walter, George-street, Croydon.
Davis, William Henry, Newcastle-on-Tyne.
Divecha, Kalkhasov R., Bombay.
Lunn, Ernest Craven, Hull.
Reynolds, John Swatman, Upper Norwood.
Symons, George Francis, Stockwell Hospital.
Watkins, Christopher James, Mornington-road.

The following gentlemen also on the same day passed their Primary Professional Examination:—

Henry Settle, St. Bartholomew's Hospital; Charles Arthur Wigan, Charing-cross Hospital; Joel Harrington Douty, Middlesex Hospital; John W. Lynch and Arthur Knight Gale, London Hospital; Edward H. McLaughlin, St. Thomas's Hospital; Thomas Russell Pickthorn, St. George's Hospital; Peter Pigott, Guy's Hospital.

[The fourth name in our list of last week should have been printed "Oswald," not "Oswold."]

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—Upwards of 500 candidates have entered their names for the forthcoming preliminary examination in arts, &c., for the diploma of Member or Fellow of the Royal College of Surgeons of England, being the largest number on record. Cards of admission, with a time-table, will be forwarded to each candidate in the course of a day or two. The examination will commence on Tuesday, September 7th, at 9 o'clock A.M., at the University of London, Burlington-gardens, W.

A CONVALESCENT HOME is to be founded at Bexhill-on-Sea, at a cost of £12,000, with accommodation for a hundred patients. A sum of £6500 has been contributed by one donor towards the building.

MR. MACRORY, late honorary secretary to the Belfast Royal Hospital, has been presented with an illuminated address, in recognition of his services in connexion with the hospital during the past forty-seven years.

THE BRITISH PHARMACEUTICAL CONFERENCE, held this week at the Royal Institution of South Wales, Swansea, appears to have been well attended. Mr. W. Southall, of Birmingham, the President, delivered an address on the Pharmacy of Celsus and many later medical writers.

BEQUESTS ETC. TO MEDICAL CHARITIES.—Mr. Edward Pease bequeathed £1000 to the Saltburn Convalescent Home. By the will of Mr. William Fisher, late of Sheffield, the Sheffield Infirmary and the Hospital for Women, Figtree-lane, become entitled each to £250. The Right Hon. Joseph Chamberlain M.P., and Messrs. J. T. Chance, Thomas Gladstone, T. Kenrick, William Middlemore, and A. F. Osler, have each given £100 towards the proposed new Ladywood Branch of the Birmingham General Dispensary.

Medical Appointments.

Intimations for this column must be sent DIRECT to the Office of THE LANCET before 9 o'clock on Thursday Morning, at the latest.

ANNINGSON, B., M.D., M.R.C.S.E., has been reappointed Medical Officer of Health for the Borough of Cambridge. £250 per annum.
BARNES, H., M.D., has been appointed Consulting Physician to the Cumberland and Westmorland Convalescent Institution at Silloth.
DAVIES, J. W., L.R.C.P.L., M.R.C.S.E., has been appointed Medical Officer for the Clun District of the Clun Union, Shropshire.
EWART, W., M.B., M.R.C.P.L., has been appointed Pathologist and Curator of the Museum of the Hospital for Consumption and Diseases of the Chest, Brompton.
GLASCOTT, C. E., M.D., has been appointed Honorary Oculist to Henshaw's Blind Asylum, Old Trafford, Manchester.
JOHNSTONE, J. C., M.B., C.M., has been appointed Assistant-Physician to the Royal Edinburgh Asylum, Morningside.

KEYWORTH, G. H., M.B., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for the Wem District and the Workhouse of the Wem Union, vice S. B. Gwynn, F.R.C.S.E., L.S.A.L., deceased.

LOGAN, F. T. B., M.R.C.S.E., has been appointed Medical Officer for the First (A) District and the Small-pox Hospital of the Westminster Union.

MACINTYRE, A., M.B., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer for the Parish of Ardochattan and Muckairn, Argyllshire.

MASSON, W. H., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer for Districts Nos. 1 & 2 and the Workhouse of the Daventry Union.

MITCHELL, R. B., M.B., C.M., has been appointed Assistant-Physician to the Fife and Kinross District Asylum, vice Johnstone.

MOORE, Mr. E. H., has been reappointed Public Analyst for the Eastern Division of Sussex for one year. £50 and fees.

MORGAN, W., F.C.S., has been appointed one of the Public Analysts for the County of Glamorgan. 10s. 6d. for each analysis, and £2 12s. 6d. for each statutory report to Quarter Sessions.

PARKER, W. R., B.A., M.B., has been appointed Resident Medical Officer to the Fever Hospital, Netherfield-road, Liverpool.

PATTINSON, J., F.C.S., has been appointed Public Analyst for the Borough of Gateshead. £100 per annum.

PULLIN, F. B., L.R.C.P.Ed., L.F.P.S.G., has been appointed Medical Officer for the Churchstanton District of the Taunton Union.

REDWOOD, T., Ph.D., has been reappointed Public Analyst for the Parish of St. John and St. James, Clerkenwell, for one year. £100 per annum.

RIDDELL, R., L.R.C.S.Ed., has been appointed Medical Officer for the Cheriton Bishop District of the Crediton Union.

THOMAS, E. G., M.B. & C.M., has been elected Second Assistant Medical Officer to the Gloucester County Asylum.

THOMAS, J. W., F.C.S., has been appointed one of the Public Analysts for the County of Glamorgan. 10s. 6d. for each analysis, and £2 12s. 6d. for each statutory report to Quarter Sessions.

THOMPSON, R. E., M.D., F.R.C.P.L., has been appointed Physician to the Hospital for Consumption and Diseases of the Chest, Brompton.

THURNAN, F. W., M.B., C.M., has been appointed Medical Officer and Public Vaccinator for the Brafeld District of the Hardingsstone Union, vice H. Arnold, resigned.

WANOSTROCHT, V., M.B., C.M., has been appointed Medical Officer to the Escrick District of the York Union.

Births, Marriages, and Deaths.

BIRTHS.

BOWES.—On the 12th inst., at Berry Wood, Northamptonshire, the wife of J. Ireland Bowes, M.R.C.S.E., of a son.

JULER.—On the 22nd inst., at Wimpole-street, Cavendish-square, the wife of Henry Juler, Esq., F.R.C.S.E., of a son.

NORBURY.—On the 27th ult., at Simons Town, Cape of Good Hope, the wife of Henry F. Norbury, C.B., Fleet-Surgeon, R.N., of a son.

ORAM.—On the 19th inst., at Clapham-common-gardens, S.W., the wife of Richard R. W. Oram, L.R.C.P.L., M.R.C.S.E. (prematurely), of twin daughters.

PEACOCK.—On the 24th inst., at Forston House, near Dorchester, the wife of Henry Geo. Peacock, L.R.C.P., M.R.C.S.E., Assistant Medical Officer to the Dorset County Asylum, of a son.

ROSSITER.—On the 20th inst., at Cairo Lodge, Weston-super-Mare, the wife of George Frederick Rossiter, M.B., of a daughter.

SMITH.—On the 22nd inst., at Carlton House, Pembridge Villas, Bayswater, the wife of E. Stanley Smith, M.R.C.S.E., of a son.

WALLACE.—On the 22nd inst., at 243, Hackney-road, E., the wife of Frederick Wallace, L.R.C.P.L., of a son.

WILLMOTT.—On the 15th inst., at Bayswater, the wife of Julius J. E. Willmott, M.D., of a son.

MARRIAGES.

BARTLEET—KEMP.—On the 18th inst., at the Parish Church, Castleford, by the Rev. W. T. M. Sylvester, Rector, assisted by the Rev. J. J. Needham, Rector of Whitwood Mere, Harold Stock Bartleet, eldest son of Robert Smith Bartleet, Esq., J.P., D.L., of The Shrubbery, Redditch, to Edith Elizabeth Kemp, eldest daughter of Ebenezer Walker Kemp, Esq., M.R.C.S.E., L.S.A.L., of Bridge Foot, Castleford.

DAVEY—LANG.—On the 17th inst., at Christ Church, New York, Francis Albert Davey, M.R.C.S.E., younger son of the late William Davey, Esq., of Lyncombe, Bath, to Sara Emily, second daughter of Thomas Lang, Esq., of Langville, Georgia, U.S.A.

DUKE—MAY.—On the 14th inst., at St. James's, Clapham-park, Benjamin Duke to Annie Langford, only daughter of Robert Charles May, C.E., of Clapham-park, and 6, Great George-street, Westminster.

TODD—SCOTT.—On the 14th inst., at St. George's, Tombland, Norwich, by the Rev. Kirby Trimmer, Octavius Todd, M.B. & C.M., Surgeon, Army Medical Department, of Landour, Himalayas, India, to Kathleen Mary, second daughter of the late Robert Bagge Scott, of Norwich.

DEATHS.

BRIMS.—On the 13th inst., at Pitlochry, N.B., Elizabeth, relict of the late James Brims, M.D., of Mount Villa, Burnley, aged 48.

HEYWOOD.—On the 18th inst., at Pendleton, H. J. Heywood, M.R.C.S.E., aged 45.

KNOWLES.—At Newmarket-road, Cambridge, Edward Knowles, M.R.C.S.E.

THEED.—On the 20th inst., at The Vicarage, Lower Halstow, Kent, the residence of his brother, Frederick Theed, F.R.C.S., formerly of Rhyll, aged 66.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8 a.m. by Steward's Instruments.)

THE LANCET OFFICE, August 26th, 1880.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radiation in Vacuo	Max. Temp. in Shade	Min. Temp.	Rain fall.	Remarks at 8.30 A.M.
Aug. 20	30.07	N.E.	64	61	99	73	59	..	Overcast
" 21	30.16	N.E.	64	60	105	73	59	..	Cloudy
" 22	30.01	E.	66	60	106	74	58	..	Cloudy
" 23	30.03	E.N.E.	60	58	85	69	54	..	Overcast
" 24	30.05	N.E.	61	57	87	72	53	..	Overcast
" 25	29.99	E.	62	60	..	68	57	..	Cloudy
" 26	29.93	E.	65	63	..	72	59	..	Overcast

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET to be addressed "To the Publisher."

THE STUDENTS' NUMBER OF THE LANCET

will be published on Saturday, September 11th. Those gentlemen holding official situations connected with Medical Institutions in the United Kingdom, who have not yet forwarded the necessary information to our Office for publication in that number, are earnestly requested to send it *without the delay of a single post*.

A DISCLAIMER.

WE have received a communication from Dr. James Greenwood, M.R.C.S., of 48, Canonbury-square, disclaiming the authorship of a paper, entitled "A Case of Fatal Ulceration of the Duodenum, produced through Scalding by Hot Water used as a Hæmostatic, by J. R. Greenwood, M.R.C.S.," which appeared in our last number. Dr. Greenwood says, "I know nothing whatever about it. I have never sent any particulars to THE LANCET Office, nor did my son."

Twyford, Berks.—Dr. Coumbe should address his question to the Clerk, or to the Board of Guardians, who will no doubt give him the necessary information concerning the circumstances under which the Board (acting as rural sanitary authority, we presume) have called for the particulars to which he refers—information which we do not possess, and which must determine the question of fee.

Dr. Edward Haughton.—We cannot interfere in the dispute.

OBSCURE PAIN IN BONES AFTER INJURY.

To the Editor of THE LANCET.

SIR,—Would some of your numerous readers kindly give me their advice under the following circumstances?

In the year 1857, whilst residing in India as a civil medical practitioner, I was temporarily attached to the 13th Native Infantry, and served with them during the siege of Lucknow. On one occasion whilst engaged attending an officer who had been mortally wounded in a sortie I was struck on the right clavicle by the fragment of a shell. The shock was pretty severe, but it passed off in a short time, and Dr. Boyd, of H.M.'s 32nd Regiment, who examined the part at once, was unable to detect either fracture or dislocation of the bone, or the slightest abrasion or discoloration of integuments. I resumed duty next day perfectly well. In the year 1877 (that is, twenty years after the occurrence) I was suddenly seized with a pain in the humeral end of the right clavicle, extending in front as far as the nipple of the breast, and in the back along the right scapula to its inferior angle; and since that time to the present I have never been entirely free from it.

Having consulted some of the most eminent men of the profession and tried every means to obtain permanent relief without success, I now, as a *dernier ressort*, place my case in the columns of THE LANCET.

I am, Sir, your obedient servant,

PATRICK BRERETON,

Retired Medical Practitioner, I.C.S.

Limerick, Aug. 11th, 1880.

P.S.—My own opinion is that the affection is of a neuralgic character; but I wish to observe that my brother, the late Major Brereton, of the Royal Bengal Lancers, was a great sufferer from gout for many years previous to his death.

DEXTRO-QUININE.

THIS drug is stated to be growing in the estimation of physicians of the United States as a remedial agent in all diseases possessing a periodic character. Dr. J. J. Chambliss, in a paper in the *Louisville Medical Herald*, descants on its merits ascertained by an experience of its satisfactory results in a number of cases where the use of the sulphate of quinine was indicated. The dextro-quinine is recommended as being a safe and efficient substitute for the more expensive compounds of Peruvian bark, whilst its administration is said to be free from the so-called quinine eruption which frequently accompanies the use of the sulphate. It is also less bitter than the latter, and there is not so much certainty of the return of paroxysm in intermittent fever after its exhibition. Moreover, Dr. Chambliss asserts the especial efficacy of the dextro-quinine in "completely eradicating from the system the *materies morbi* in cases of the malarial cachexia where the blood has become so vitiated with malaria as to manifest itself at septenary periods in paroxysms of intermittent fever."

Breadtray.—1. Bristowe or Roberts.—2. Barnes.

PATIENTS' GRATITUDE, PUBLIC AND PRIVATE.

To the Editor of THE LANCET.

SIR,—I was rather startled when at church the other day on hearing the following notice read in a most impressive way to the breathless and listening congregation:—"L. L.—desires to give thanks to Almighty God for the great benefit she has received at the — Infirmary."

Now this L. L.—is a patient of mine, and I was more than astonished to hear her pouring forth her gratitude in this gushing manner. She had always been rather niggardly with her gratitude to me; indeed, had rather been inclined to impatience and grumbling, and it was partly to avoid this that I sent her, about the beginning of the year, as an in-patient to this infirmary.

I was called in again to see her when she returned, and found that she was not by any means cured, and that she was certainly far from feeling the gratitude her public prayers led me to believe. She told me she had been required when she left the infirmary to give this public testimony, and like all, or most of the other patients, had been provided with a printed form to give to the clergyman.

Now, Mr. Editor, I am a general practitioner, a member of a hard-wrought, underpaid, and often unappreciated profession, and do not by any means object to patients expressing their gratitude in a spontaneous way. It comes so seldom in my way that it falls like strange music on my ears. But surely you would object to me, or any other gratitude-craving mortal, insisting on our patients giving a public recognition of their feelings. This style of thing opens up a splendid field for the *outing* system. Why should a public institution do this thing if I may not? Why should it vaunt its cures (so-called) like any quack, when such an easy road to fame is shut to me? It may be urged that because it is a public charity, and supported by voluntary contributions, it is well, nay, imperative, to keep its existence before the public. But surely this can be done in a way somewhat less offensive to professional taste than by publicly praying over a patient's recovery, as if such an event were a national blessing, and an event which happens so seldom in the country that all who hear of it should rejoice. Being personally concerned I may have felt it too much, but under the circumstances such a proceeding seemed to me to outrage common sense, common fair dealing, and indeed common decency. "By their fruits ye shall know them," should be the guiding canon for public no less than for private practitioners.

The general practitioner (especially in the village) is already heavily enough handicapped in the race with the "big doctor," without calling in the aid of grateful prayers in the church service. No one could or would object were this the spontaneous offering of a really grateful patient, but when a printed form of public thanksgiving is pushed into the hands of patients on leaving the infirmary it becomes ridiculous, not only in the eyes of common sense, but in the eyes of the patients themselves. Such, however, is the opinion of

August, 1880.

A VILLAGE DOCTOR.

QUERY.

To the Editor of THE LANCET.

SIR,—I read with interest the report in your issue of the 14th inst., of a case of quassia poisoning at Newark, but it occurs to me is it not possibly a case of alcoholic poisoning? for when one remembers that at least nine drachms of rectified spirit were retained in the rectum, and absorbed by a child aged four years, I think the amount is sufficient, and likely to cause all the symptoms described; and again, the recovery was as rapid as the illness was sudden.

Yours truly,
Newington Infirmary, S.E., Aug. 16th, 1880.

REG. MAPLES.

A SUGGESTION.

To the Editor of THE LANCET.

SIR,—Some correspondence has lately been current in THE LANCET concerning the atmosphere of hot-air baths. I should like to know whether it is practicable to preserve tropical plants in the sudatorium, and if so whether they might not well be employed to counterpoise, as far as may be, the effects of unscientific ventilation.

Yours obediently,

Finsbury-circus, E.C., Aug. 17th, 1880.

H.

SEATS FOR SHOPWOMEN.

WE are glad to find that our advocacy of seats for girls in shops has the effect of moving inventors to improvement in this direction. A common objection raised by some employers is "*Stools and chairs are an intolerable obstruction and nuisance behind the counter.*" This safe retreat from our arguments and appeals is likely to be demolished. Messrs. Colman and Glendenning, of Norwich, and 62, St. Martin's-le-Grand, London, have placed before us a working model of an exceedingly simple and ingenious contrivance termed the patent automaton, which effectually removes the objection. It consists of a disc or seat of wood, supported on a single stem of iron, which at its base works in a socket secured to the floor. A touch is sufficient to cause the seat to fall into a recess (the space otherwise occupied by a very small drawer is sufficient), or to assume a horizontal position for use at the distance of about a foot from the counter. Though light, and even elegant in appearance, we are assured by the makers it is of ample strength and solidity. One recommendation will certainly be the ease with which it may be fixed, and its modest price.

Mr. W. Berry (Wigan).—The paper is marked for insertion.

"HOW ANTI-VACCINATION STATISTICS ARE MADE."

To the Editor of THE LANCET.

SIR,—I notice in your impression of the 21st instant a paragraph with the above heading. As my name is mentioned, it may be well for me to write a few words on the subject.

In the first place, the report of my evidence as extracted from the *Northern Echo* is inaccurate and not sufficiently full. My assistant, I stated, had attended the child about a month previously for a syphilitic eruption, and it had improved under the specific treatment. Being absent in the south at the time, he was not called. The eruption after death, as I saw it, could have been, in my opinion, no other than syphilitic. Secondly, from the history of the case, and my seeing the family, I formed my private opinion, for which I was asked at the meeting of the Court, that it was not hereditary, and that it might have been produced by vaccination if the operation had been performed carelessly. To prove how little worth was such an opinion, I gave an example to show that the age at which a child is usually vaccinated, or soon after, is very commonly the time when a hereditary syphilitic taint shows itself. The case was this: Shortly after I had vaccinated a child (about a fortnight after), syphilitic signs began to show themselves, progressed, and the child died. *The mother and father* blamed vaccination for it. As I am always extremely careful about the lymph I use, as also about the cleanness of the lancet, I told the parents it could not have been from the vaccination that the child died. About a year after another child was born, and I proposed not to vaccinate this one until he was six months old, *in order to show that it was not from vaccination that the former child had died.* About the same age this child was taken with the same signs, same rash, same progress to fatal end. I had not to "retract," but the parents were sensible enough to give up the idea of vaccination being the cause of death in the former case. For my part I am strongly in favour of compulsory vaccination and of revaccination, and urge it at every opportunity, and therefore felt much grieved that I had to express the opinion I did in open Court. By my qualifications I made my opinion of as little worth as evidence as I felt it to be myself. As I had sworn "to give the truth, the whole truth, and nothing but the truth," I considered I was bound to give truly my opinion, and, as weakly as I felt it myself, as evidence.—Yours truly,

West Hartlepool, Aug. 23rd, 1880.

EUSTACE M. SWANWICK.

A *Constant Reader* is quite mistaken when he states that the Indian Government has declined to recognise the rank conferred by Royal Warrant on the surgeons of the A.M.D. Indeed this higher relative rank is one of the grievances of the I.M.D. With regard to his complaint that the surgeon only draws 317 rupees a month instead of 450, which he conceives ought to be the rate, he must be aware that this was clearly laid down as the rate in the paper furnished to each candidate before he entered the service. We cannot, therefore, see that there is any reasonable ground of complaint on this point.

M.R.C.S. should bring the case under the notice of the Medical Defence Association.

W. E. M.—We are not aware that any such book has been published.

GUY'S HOSPITAL.

To the Editor of THE LANCET.

SIR,—Whether the nursing in any hospital is carried on by sisters, by ladies, or by women of the same class as their patients, that "system" which does not in every way render a hearty loyal obedience to the medical staff ought to be promptly extinguished. The ladies at Guy's, whatever they may be called, are not "sisters." The ladies nursing at University College Hospital are sisters, and, on the whole, the medical staff and this sisterhood seem to jog along pretty well together. The fact is, there are sisters and sisters, and if the doctors could only pick and choose the sisters to work under them, I believe even Guy's itself might be in peace and order in a week. Anyhow, I think it a great pity that Dr. Roxburgh used such an expression as "malign influence."

I am, Sir, yours faithfully,

ARTHUR BRINCKMAN.

All Saints', Margaret-street, Aug. 15th, 1880.

A MEDICAL CORONER AND A MEDICAL WITNESS.

THE *Belfast Evening Telegraph* reports a very unseemly altercation between the medical coroner for the borough of Belfast and a medical witness, Dr. Graham. The latter gentleman complained, when served with the summons, of insufficient notice, and we think most reasonably. He went in person to say that he had an engagement within ten minutes of the time at which he appeared. The coroner alleged no urgency in the case, and did not justify the short notice. Finally, the coroner ended by ordering the constable to take Dr. Graham into custody, and so detained him till he gave his evidence! Our contemporary asks, Is this a creditable proceeding? We should reply in a monosyllable of two letters; and we regret to find it very difficult to justify the coroner.

X.—We are aware of the grievance complained of, and will do our best to remedy it; but we think the publication of our correspondent's letter would do more harm than good.

"COMBATANTS AND NON-COMBATANTS."

To the Editor of THE LANCET.

SIR,—From an article with the above heading which recently appeared in one of your medical contemporaries, taken in connexion with some remarks of yours in a late issue upon the contemplated abolition of the power of exchanging between army medical officers at home and in India, it would appear that the old dictum of each succeeding Secretary of State for War in the days of agitation—namely, "that medical officers cannot expect to be treated differently from all other officers in the service" (e.g., in the matters of forage, exchanges, sick leave, &c. &c.)—is no longer to be heard, and that the old time-honoured custom of giving with one hand and taking from us with the other is still to obtain.

Government have certainly obtained a supply of candidates as a result of the last Warrant, and their troubles for a time are consequently at an end; but it may be well to remind them that the action lately taken by the whole profession in this army medical question can be taken again, though with very much more effect, now that men of the stamp of Lyons and Farquharson are members of the House of Commons.

Medical officers care not what they are styled, but since it is now a well-known fact that they expose their lives freely on the field and in the hospital, and that their mortality is, consequently, far higher than that of any other body of officers, it is surely high time that in the matters of exchanges and of reckoning half-pay service (due to ill-health incurred in and by the service) towards voluntary retirement, they should be treated in the same manner as their purely combatant brother officers, to say nothing whatever of those other departmental officers included "as part of the staff of the army," and so entitled to the advantages connected with voluntary retirement, as laid down for combatant officers in Clauses 83a and 83b in Army Circulars of 1st March, 1880, under the heading "Royal Warrant, &c."

I am, Sir, your obedient servant,

August, 1880.

X.

PROVISION FOR THE RELIEF OF SUFFERERS IN RAILWAY ACCIDENTS.

To the Editor of THE LANCET.

SIR,—In an article on "The Liabilities of Foreign Employers," in THE LANCET of July 24th, you mention the fact that in France the railway companies "provide each train with a large medical chest, with splints, bandages, and even the necessary implements for amputations, &c." Shortly after the terrible collision at Abbots Ripton, I wrote to *The Times*, suggesting that each train should carry such a chest in the guard's van, containing splints, bandages, and the means of arresting the hæmorrhage. The need of some such provision was brought forcibly to my mind by my own experience in a railway collision shortly before, where one of the passengers was seriously injured, and the collision having occurred between two stations, in a wild country, two hours elapsed before we could get even a draught of potable water. The suggestion, however, seemed to the general public to be so absurd that the editors of some provincial (and even colonial) papers made it the subject of special, no doubt to their readers, very amusing articles.

Perhaps, Sir, when it is known that this plan is already adopted in France, and if it receives the powerful assistance of your approval, it may some time in the distant future be thought worthy of adoption even in England.

I am, Sir, yours truly,

Manchester, August, 1880.

W. H. BARLOW, M.D.

CONSULTANTS VERSUS GENERAL PRACTITIONERS.

To the Editor of THE LANCET.

SIR,—In answer to a letter from "A Country Practitioner," I quite think the treatment received by country practitioners at the present day is intolerable, and should advise the gentleman to make himself conversant with all branches of his profession as well as he can, or else I am afraid he must not expect much consideration at the hands of a great many consultants and specialists. I live a few miles from a town of 60,000 people, and I find that etiquette is a thing unknown to the profession in it, so that I have suffered in a similar way to your correspondent; but I have taken measures to show my patients that such conduct is hateful to me, and not conducive to their happiness or health.

Yours truly,

August, 1880.

RUS IN URBE.

Nemo.—Works on the subject are legion. Write to Messrs. Spon, Charing-cross, and ask for a list of works published by them relating to sewerage and drainage and utilisation of sewage. Consult Parkes' and Wilson's text-books on Hygiene (Messrs. Churchill), and Professor Corfield's work on the Treatment and Utilisation of Sewage (Macmillan and Co.)

M. H. J..—We cannot advise; consult a practitioner.

"TREATMENT OF SCARLET FEVER BY WARM BATHS."

To the Editor of THE LANCET.

SIR,—Under this heading I saw a letter in THE LANCET of Aug. 14th, by Dr. Lush, of Weymouth. It so happened that at the time he refers to I was acting as assistant to Dr. Aldridge, of Dorchester, in Dorset. We had had a few isolated cases of scarlatina of a mild form for several months, but in the month of August, 1870, an epidemic burst upon the town and neighbourhood with terrible violence. I am sorry to be obliged to confess that many died, and that I cannot with Dr. Lush say "we did not lose a single case." The warm baths were tried in the way recommended by Dr. Lush, and in many cases answered admirably, but neither the warm, the tepid, nor the cold had any effect upon the worst cases.... Though I highly approve of warm baths, as soothing to the system, and calculated to keep up the action of the skin, still in the worst forms of this fever baths are no good whatever.

I am, Sir, your obedient servant,

F. WILLIAM SMITH, M.D.

Leamington, Warwick, August 16th, 1880.

"RUNNING" IMPULSE IN EPILEPSY.

To the Editor of THE LANCET.

SIR,—Your correspondent, Dr. J. D. Miller, describes an interesting case of the "running" impulse in epilepsy.

Some time ago I had the opportunity of observing a similar case, which was unusually instructive from being discovered to have been occasioned by masturbation. Measures were taken to put a stop to this practice, and the patient recovered from the epileptic symptoms.

Yours &c.,

August 24th, 1880.

GLYNN WHITTLE, M.A., M.D., &c.

COMMUNICATIONS, LETTERS, &c., have been received from—Mr. B. Squire, London; Mr. Spencer Watson; Mr. MacDowall, Bombay; Mr. Treves, London; Dr. Haughton, Norwood; Mr. Horn; Mr. Berry; Dr. Pullin, Sidmouth; Mr. Stroud, Farnham; Mr. Berridge, Redhill; Mr. Booth; Mr. Dobbin; Dr. Clouston; Mr. Verdon, London; Mr. Lory, Penze; Dr. Anderson, York; Mr. Hudson, Whitchy; Mr. Jackson, Sheffield; Dr. Power, London; Mr. Appleyard, Maidstone; Dr. Thomas, Glasgow; Mr. Reid, Milton, New Zealand; Mrs. Thorpe, Hereford; Mr. Morgan, Box; Mr. Kenrick, Aberystwith; Mr. J. H. Potter; Mr. Joseph; Mr. Banks; Dr. M. Skerritt, Bristol; Dr. Whittle; Dr. J. Thompson, Leamington; Mr. Swanwick, West Hartlepool; Mr. Tuer, London; Mr. Pearce; Mr. Hawkins; Mr. Gilbert; Dr. Duffield; Mr. Rendle, Polperro; Messrs. Street Brothers; Mr. Willoughby; Dr. Wallace, Hackney; Messrs. Dick, Radcliffe, and Co., London; Mr. Scott, Manchester; Mr. Woodin, Bethnal-green; Mr. Dent, London; Dr. Pinder, Bow; Messrs. Hyles and Son, Brighton; Mr. Day, Manchester; Mr. J. Greenwood; Dr. R. Sinclair, Dundee; C. H.; M. H. J.; Breadtray; The Director-General of the Army Medical Department; Looker-on; M.R.C.S.; R. W.; The Military Secretary, India Office; M.D.; C. R.; A Village Doctor; M.; Delta; M.D.; L.R.C.P. Ed.; Rus in Urbe; Nemo; Æsculapius; M.R.C.P.; Outis; J. P.; &c. &c.

LETTERS, each with enclosure, are also acknowledged from—Dr. Lewis, Basingstoke; Mr. Duke, Clapham; Mr. Abbott, Blackburn; Dr. Frith, Bolefield; Mr. Davidson, Meesham; Messrs. Harvey and Reynolds, Leeds; Dr. Leaborne, Wombwell; Mr. Burbridge, Coventry; Dr. Bower, Bedford; Mr. Simpson, Oldham; Mr. Madigan, Kilrush; Dr. Kirkman, St. Leonards; Mr. Hodgson, Crewe; Mr. Hyatt, Stow-on-the-Wold; Mr. Anderson, Newton-le-Willows; Dr. Marsh, Bradford; Messrs. Donisthorpe and Co., Exeter; Mr. Newcombe, London; Mrs. Barker, Ramsgate; Mr. Hutchinson, Snainton; Messrs. Wright and Co., Bir-

mingham; Mr. Bernstein, Birkenhead; Mr. Manton, London; Mr. Narbury, Cape of Good Hope; Mr. Mouritz, Runcorn; Mr. Dalrymple; Mr. Nason, Birmingham; Mr. Waddy, London; Dr. Wise, London; Mr. Lilly; Dr. Colmer, Yeovil; Mr. Steele, Norwich; Dr. Adams, Marlock; Miss Flower, Leicester; Dr. Crowther, Halifax; Mr. White, Bradford; Messrs. Grace, Bristol; Mr. Slyer, Brighton; Mr. Brough, Hampstead-road; Dr. Peacock, Dorchester; Mr. Kemp, Castleford; J. R., Axminster; P., F.R.C.S.; Alpha; Chirurgus; M.R.C.S., London; Delta, Reading; E. O. G., Borough; Delta, Derby; Medicus, Aberdeen; A. X., Axminster; H. F., Woking; Alpha, Audley; C., Chatteris; J. R., Borough; Semper Paratus, Ashton-under-Lyne; P.; Alpha, Borough; A. S.; T. B. P.; F. B.; C. W. S., Selby; Registrar, Bath; Princes, London; M.R.C.S., Brixton; Rus; X.; Archibald; Alpha, Lewes; M.D., London; Surgeon, St. Helens; M.; C. C. R., Poplar; C. R.; Doctor, Tunbridge Wells; Queen's-road, Dalston; R. B., Preston; L. R.; C. H. M.; Delta, Faversham; F. C. P.; &c.

Sussex Daily News, Shield, Chemists' Journal, Pharmaceutical Journal, Church of England Temperance Chronicle, Pendleton Reporter, Chicago Medical Times, Gaceta Médica de Sevilla, Night and Day, Medical Herald, Brighton Herald, Norwich Argus, Portsmouth Evening News, Temperance Record, West Sussex Gazette, Edinburgh Courant, Evening News, Buxton Advertiser, &c., have been received.

Medical Diary for the ensuing Week.

Monday, Aug. 30.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

ST. MARK'S HOSPITAL.—Operations, 2 P.M.; on Tuesday, 9 A.M.

Tuesday, Aug. 31.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 3 P.M.

Wednesday, Sept. 1.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.

ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.

ST. MARY'S HOSPITAL.—Operations, 1½ P.M.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at 1 P.M.

LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.

GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.

Thursday, Sept. 2.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations

CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M.

Friday, Sept. 3.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, Sept. 4.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

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A ready means of finding any notice, but is in itself an additional advertisement.

Advertisements (to ensure insertion the same week) should be delivered at the Office not later than Wednesday, accompanied by a remittance.

Answers are now received at this Office, by special arrangement, to Advertisements appearing in THE LANCET.

Terms for Serial Insertions may be obtained of the Publisher, to whom all letters relating to Advertisements or Subscriptions should be addressed.

Advertisements are now received at all Messrs. W. H. Smith and Sons' Railway Bookstalls throughout the United Kingdom.

The postal arrangements relating to the distribution of THE LANCET will be considered from time to time in the interests of subscribers.

Tables of Contents, with the Index of Advertisements, for each Number can be had on application to the Publisher.

Agent for the Advertising Department in France—J. ASTIER, 67, Rue Caumartin, Paris.

Clinical Lecture

ON THE

ESSENTIALS OF WOUND TREATMENT.¹

By SAMPSON GAMGEE, F.R.S.E.,

SURGEON TO THE QUEEN'S HOSPITAL, BIRMINGHAM.

GENTLEMEN,—Here is a pad of pure absorbent gauze and cotton, which has been removed from the left hand of a young person whom I happened to see the other day running down the street, to seek surgical aid at a neighbouring dispensary. Under a handkerchief stained with blood I found a clean-cut wound, extending an inch and a half from the dorsal aspect of the first knuckle round into the palm. A little artery spouted. The edges of the skin admitted of easy approximation, which I maintained with the elastic pad and a few compressing turns of absorbent bandage. In a few hours bloody serum had permeated the centre of the dressing, which was left to dry by evaporation. When, at the end of five days, I took off the bandage and pad, the fine linear cicatrix was barely visible, and the surrounding skin dry and painless.

I was in the hospital on April 29th when the man now before you was brought in. A cloth soaked with blood surrounded the left hand and forearm, and we were told that the accident had happened a few minutes previously, while the man was grinding a matchet,² on a millstone weighing a ton, and revolving rapidly by steam-power. The steel blade flew into several pieces, one of which appeared at a first glance to have nearly cut off the hand. The gaping wound extended for two and a half inches across the front of the wrist. The superficial tendons were divided, and the ulnar artery bled freely. I passed an acupressure needle under the proximal end of the divided vessel, and after satisfying

FIG. 1.



myself that the wound was free from a foreign body, brought the edges accurately together by five points of silver suture. The hand and forearm were surrounded with absorbent gauze and cotton pads and compressing bandage, the elbow bent at an acute angle, the palm of the hand rested on the upper end of the sternum, and perfect rest secured, by circular bandage round the trunk and the recumbent position. The acupressure needle was taken out on the fourth, the

stitches on the fifth day, when the wound was nearly healed. On the eighth day the man was made an out-patient, and the same dressing was renewed every fourth day. This is the fortieth day since the accident, and you observe how fine and firm the scar is, without any subcutaneous matting, and with perfect freedom of the joint in every direction.

From first to last, neither of the two cases I have just brought before you was touched with a drop of liquid; the healing process advanced steadily and without complication under dry absorbent dressing, elastic pressure, perfect rest and position.

I satisfied myself with looking on while the next case was treated on the same principles by our house-surgeon, Mr. J. W. Moore. Just before admission E. H. had fallen forward on the edge of a barrel, which inflicted a wound nearly three inches long a little to the left of the chin, exposing a considerable portion of the lower jaw and its depressor muscles. The edges of the wound were at once accurately adjusted with five points of silver suture, a fine drainage-tube was secured in the lower angle, and smooth pressure exerted with a fine soft bandage over a pad of pure absorbent gauze and cotton. The first dressing, with two sutures and the drainage tube, was removed the third day, when the absorbent pad was found to have taken up some sanguineous discharge, and the greater part of the wound was healed. The three remaining sutures were removed on

FIG. 2.



the eighth day. On the tenth day the wound was solid as it is now; the cicatrix linear, with the exception of the lower angle, which presents a slight pucker at the point where the drainage-tube was introduced. The dry absorbent and compressing dressing was changed four times altogether.

The essential features in the treatment of the three cases just briefly noticed were—firstly, accurate adjustment; secondly, absolute rest; thirdly, perfect drainage. The means for attaining these ends vary, but if you keep them steadily in view, and are light-handed and not meddlesome, you will not have much trouble in the treatment of the vast majority of incised wounds.

Here is a dressing (Fig. 3) I removed a few hours ago from the crown of the head of a private patient on whom I had operated three days previously for the removal of a sebaceous tumour. As soon as I had turned it out I adapted the edges accurately, and exerted pressure for a few minutes with the finger over a pledget of dry absorbent cotton; when this was stained with blood, I substituted for it a similar pledget soaked in styptic colloid, and over it a strip of dry lint. Under pressure for about three minutes longer the dressing dried and the patient left my consulting-room. When I saw him the next day, he was perfectly comfortable and attending to his business. It was not until the expiration of the third day that I poured a little ether over the pad to soften it; this was the work of a few seconds. On removing the dressing, the clean and dry scalp presented a firm cicatrix, of which you see, and feel, a linear cast in the centre of the dressing. The balsamum traumaticum of the old surgeons, the compound

¹ The materials of this lecture, condensed, re-arranged, and illustrated for the convenience of the readers of THE LANCET, formed the subject of four mornings' instruction to my clinical class, during the past session.

² A kind of slightly bent broadsword, used in the West Indian plantations for cutting down sugar-canes.

tincture of benzoine, collodion, and allied substances, are useful in wound treatment, on the same principle as Dr. B. W. Richardson's styptic collod. This substance is produced by saturating ether with tannin and gun-cotton, a

FIG. 3.³

little tincture of benzoin being added.⁴ It has the advantage of drying very rapidly and acting at the same time as a styptic and a splint, checking effusion and preventing motion.

A more formidable wound than any of the preceding, but treated on substantially the same principles and with equal success, was that of the patient now before you with this extensive cicatrix on the right side of his head. T. W.— was admitted into the hospital on April 29th, after being struck on the head by the beam of a steam-engine in motion. The wound commenced just behind and above the right ear, and extended upwards and backwards for a distance of three

FIG. 4.



and three-quarter inches, then forwards at right angles for four inches. The triangular flap was turned down and the bone exposed corresponding to its whole extent. Hæmorrhage profuse. The flap was replaced and secured with four silver sutures, a large dry pad of absorbent gauze and cotton, and a smoothly compressing bandage. Three days afterwards, the temperature being 102°4', the dressings were removed. The pad was soaked with a considerable amount of red serous discharge, but there was no redness of the skin, and the flap looked healthy and in good position; two sutures removed and fresh dry gauze and cotton pads applied, with

³ The engraving, of natural size, was taken from the dressing by Mr. Robert Paterson, of East Temple Chambers, who has executed the other illustrations from photographs.

⁴ Sampson Gamgee on the Treatment of Wounds. London: Churchill. pp. 31 et seq.

increased pressure. The temperature fell steadily and was normal at the third dressing on the seventh day after admission. There was altogether very little suppuration, and the man left the hospital (May 19th) at the end of three weeks, the dry absorbent pads having been changed six times, and the cicatrix being sound throughout.

No cases illustrate more forcibly than extensive scalp wounds the advantages of immediate, perfect, and immovable adjustment, dry and infrequent dressing, surface-drainage, and elastic pressure.

We have so far been engaged in considering the treatment of recent simple wounds. Here is a much more serious one. My attendance was requested on the 11th by Mr. P.—, who has kindly attended this morning for the class inspection. A fortnight previously a heavy piece of timber had inflicted a deep oblique wound in front of the right forearm just above the wrist. It was dressed with carbolic lotion, and, when inflammation supervened, with poultices. I found the man suffering intensely, the hand and forearm red and greatly swollen, wound measuring four inches by three-quarters of an inch, the bottom dirty grey, and the edges everted. I wiped the limb dry with a pledget of absorbent cotton, raised the hand vertically above the head, and surrounded it and the forearm as far as the elbow with dry pads of pure absorbent gauze and cotton. A softened millboard splint was placed on the dorsal, another on the palmar aspect of the limb, and a soft bandage applied with even pressure. The hand was now lowered and fixed on the chest, the tips of the fingers touching the opposite shoulder. A bandage round the trunk maintained immobility. The patient was at once easy, slept well the same night, and has not had a single bad symptom. He is engaged in an important patent manufacture, and has not lost an hour since I first saw him. The apparatus soon became loose from subsidence of the swelling; fresh cotton pads were applied with increasing pressure, and at the end of a week the wound was clean and half its former size, the surrounding skin pale, dry, and shrunken. In the course of a few days the healing advanced more slowly, and I dressed the wound with a lotion containing two grains of sulphate of zinc, a drachm of glycerine, and twenty drops of compound tincture of lavender, to the ounce of water, continuing the elastic pads and increased pressure. The stimulating effect was very apparent; the blue line of new skin advanced rapidly from the edge. I then omitted the lotion, and in another week the cicatrix was solid under a dry compressing pad. The cicatrix is now solid, and every movement perfect.

My first object was to empty the limb as much as possible of redundant blood; this I did by raising it vertically and compressing it under elastic pads of absorbent gauze and cotton and pasteboard splints. The latter are made with thin, rough millboard, which in the dry state tears easily to any shape, and absorbs water rapidly. According to the strength required, I put two or three thicknesses together, with intervening strips of bandage brushed over with thick mucilage. The material moulds beautifully under pressure, and acquires the strength of papier maché. When the swollen limb shrinks, accurate fitting being of the essence of success for pressure, the splints so constructed can be readily softened by pouring over them a small quantity of hot water; reapplied under pressure they mould and solidify again and again. The pads of absorbent gauze and cotton are beautifully elastic, a quality which is of the utmost value for safe, efficient, and comfortable pressure, which, with position, is the great agency for regulating the vital dynamics of the circulation, preventing effusion, and promoting absorption and healthy consolidation. For those who prefer the pads medicated with boracic, benzoic, or carbolic acid, Messrs. Southall Brothers and Barclay specially prepare them, but as a rule I only use the pure gauze and cotton pads, which may also be obtained from that firm. If, as sometimes is the case, a wound requires stimulation, I apply an appropriate lotion as in the preceding case. When the neighbourhood of a sore is very irritable, glycerine, pure or diluted with water, is an excellent application, as was long since demonstrated by Demarquay in a monograph of the highest clinical interest.⁵

The advantages derivable from an adaptation of therapeutic resources to the requirements of particular cases

⁵ De la Glycérine et ses Applications à la Chirurgie et à la Médecine. Par M. Demarquay. Troisième édition. Paris: Asselin. 1867.

are well illustrated by the next two patients to be brought under your notice.

I abstract notes taken by Mr. Aubrey Finch, while acting house-surgeon, of the history of T. H—, aged thirty-three, who presented himself in the out-patient room on the 17th of May. The patient is a well-built, healthy man, by occupation a wood-turner, standing all day at his work. Seven years ago a piece of lignum vitæ grazed his right leg, and produced inflammation and ulcers, which have never since entirely healed, though treated by a variety of surgeons. When I first saw the leg (May 17th) it was covered with varicose veins; the skin, especially in the middle third, was thickened, purple, shining, and very tense and tender. On the inner side was a sore three inches in length, one inch and a half wide, with dirty greyish-yellow surface, and a few weak-looking, flabby granulations; edges uneven. The measurements round the two calves, six inches below the patellæ, were—right, 14½ inches; left, 12¾ inches. Placing the man on his back on a couch, and raising the right leg vertically, the leg almost immediately became pale, the veins empty, and the tissues of the calf, previously so tense, flabby. At the expiration of sixty seconds from the time that an assistant held the right foot vertically above the pelvis, I measured the right calf at the exact spot previously measured. The decrease proved to be exactly one inch in one minute. A piece of lint soaked in glycerine was placed over the sore, the limb was covered with dry pads of pure absorbent gauze and cotton, bandaged with light pressure, and swung. The patient was at once easy, and two days afterwards the limb was pale and shrunken, the sore clean, healing, and much diminished in size. The same treatment was continued, and the note on the eighth day is to the effect that the sore had nearly healed, and the calf measured, at the point previously tested, 12¾ inches—a decrease of 1½ inch. On the twentieth day from the commencement of our treatment the large sore which had proved rebellious for seven years was firmly healed, and the surrounding structures were pale, supple, and painless. Rest, position, and pressure have doubtless been the great factors in this healing process, the glycerine acting as a soothing application to the sore and skin, which we found so exquisitely tender. The cotton pads absorbed whatever discharge was poured out, but their elasticity as a medium of smooth pressure was their chief value. Those of you who watched this and the other cases closely noticed the scantiness of the discharge. One effect of perfect rest, elevation, and pressure is to lessen the afflux of blood to a limb so considerably that there is only enough for nourishment—none, or scarcely any, for effusive and cell proliferation; so shrinkage, dryness, sweetness, and reparative consolidation proceed abreast.

These truths receive further corroboration from the case of severely contused and open knee-joint in Ward 3. The patient, E. L—, aged 15, was brought on the 21st of May last, with a wound two inches long just on the outer side of the left patella, which was exposed, as were also the external lateral ligament, the outer condyle of the femur, and the corresponding tuberosity of the tibia. There was free escape of synovia and blood. The wound was inflicted by the cog-wheel of a steam-printing machine in motion, over which the lad was kneeling. While Dr. Oliver administered chloroform, Mr. E. M. Osborn, the acting house-surgeon who admitted the patient, brought the edges of the wound together with three points of silver suture, covered the knee with dry pads of pure absorbent gauze and cotton, and with a compressing bandage immobilised the limb in the straight position by the aid of pasteboard splints. When I saw the case a few hours afterwards, the patient was so tranquil, and the apparatus in such good position, that I made no other alteration than to raise the lower end of the bed six inches, and place under the injured leg one of my sand-and-water pillows, to ensure more perfect ease and immobility. The copious notes record the happy progress of the formidable injury. The wound into the knee-joint closed thoroughly by the first intention, although a purely superficial sore resulted from the sloughing of the contused skin. The temperature has been high on several occasions, but there has never been the slightest redness of the skin or puffiness of the joint. The patella has been throughout well defined and movable. On an average the compressing cotton pads have been changed every five days, and there is no reason to doubt that the limb will in a short time regain all its former mobility and strength. I have never seen so

formidable an injury recover with less complication, and if you will study the case in conjunction with the others which I have brought under your notice, you will be assisted in forming a just estimate of the essentials in wound treatment. They are—accurate coaptation and absolute rest, to which position and pressure are eminently conducive. As a rule, dressing should be dry and infrequent, and drainage adapted to circumstances. No amount of clinical experience can dispense with the necessity of closely watching the thermometer; and while attending to the constitutional state, the local process of healing, when languid, may be accelerated by some of the well-known stimulating and cleansing local applications. When the parts are irritable soothing applications are of service, and of these the least harmful and most generally useful is glycerine.

In directing attention to a group of cases successfully treated on demonstrably sound principles of physiology and surgery, I have expressly avoided entering upon a controversy which has for some time divided the surgical world. Disputations may be more interesting than profitable; they often do much towards unveiling the truth, but they not unfrequently obscure it.

The adage that many roads lead to Rome finds abundant illustration in surgical practice. Pin your faith to no master; be a slave to no system. The scheme of nature is broad and comprehensive; truth is catholic and many-sided. Your chances of interpreting it rightly and practising it safely will be enhanced, in proportion as you keep your mind unbiased by theories and fashions, and strive to imitate nature in method and in means.

Lectures

ON THE

PHYSICAL EXAMINATION OF THE MOUTH AND THROAT.

Delivered to the Junior Class of Clinical Medicine, University College,

By G. V. POORE, M.D., F.R.C.P.,

PROFESSOR OF MEDICAL JURISPRUDENCE, UNIVERSITY COLLEGE; LATE ASSISTANT PROFESSOR OF CLINICAL MEDICINE; ASSISTANT PHYSICIAN, AND PHYSICIAN IN CHARGE OF THE THROAT DEPARTMENT OF THE HOSPITAL, ETC.

LECTURE VI.

STERTOR; HICCOUGH; THE EXAMINATION OF THE OUTSIDE OF THE NECK AND NASO-PHARYNX; DYSPHAGIA.

GENTLEMEN,—There are certain other pseudo-vocal sounds of which a few words may be said as to their value as signs of disease.

The first of these is *stertor*. *Stertor* is of two kinds—palatal and laryngeal; their import being very different. Palatal *stertor*, or snoring, is caused by a vibration of the soft palate, brought about by the in-rushing streams of air through the mouth and nose. It is most easily produced when air is admitted both behind and in front of the soft palate, and is often audible in those who sleep with their mouth open. The deeper the sleep, the more easily is snoring produced, owing probably to the complete relaxation of the palatal muscles. It is heard at its maximum in cases of apoplexy, cerebral concussion, and poisoning with alcohol or opium. It can be produced at will, and it seems to me most easily produced when the air is inspired with extra force in order to overcome some slight obstruction at a point above the soft palate. When we wish to imitate it, we partially open the mouth, put the compressor naris into action, and inspire deeply. When the mouth and nose are both wide open *stertor* is not so easily produced. With the nose completely closed it is possible to produce only a very imperfect *stertor*. With the mouth completely closed no *stertor* is produced even during very deep inspiration. In children and adults who have big tonsils excessive snoring is very common, owing to the increased force of the blast

of air which has to be drawn through the narrowed faucial aperture. It is worth considering how much extra work is thus imposed upon a child with big tonsils. The causes of palatal stertor are—(1) extreme relaxation of the palate; (2) increased force of inspiration.

Laryngeal stertor is not to be confounded with palatal stertor. It is a non-vibratile stridulous sound, and betokens some obstruction to the passage of air through the larynx. When this laryngeal stertor is permanent it is usually spoken of as stridor. When the larynx is irritated, as by the passage of a brush on to the vocal cords, the glottis is partially closed and the inspiration becomes stridulous. Of course, if the closure of the glottis were perfect no stridor would be produced, because the vocal cords could not be made to vibrate by the in-going blast. Stridor is produced by forcible inspiration through a partially closed glottis. It is an *inspiratory* sound, be it observed, and not an *expiratory* one. In cases of paralysis of the posterior crico-arytenoid muscles the glottis is only partially opened during inspiration; and if the inspiratory effort be at all quickened, the semi-approximated cords are made to vibrate, and stridor is produced. During expiration the cords are thrust asunder by the out-coming blast, and no stridor occurs. The presence of inspiratory stridor, combined with unimpeded expiration and good vocalising power, would be sufficient ground for the diagnosis of paralysis, or want of power in the posterior crico-arytenoid muscles.

I wish to draw your attention to the fact that, in the stridor which occurs in this condition, there is no question whatever of any spasmodic action. It is entirely a paralytic or paretic phenomenon. Now we have the same kind of stridor (1) in chloroform narcosis, when it is a sign of imminent danger; (2) in whooping-cough; (3) in laryngismus stridulus. In all these conditions it has been ascribed to spasm, but, as I think, without sufficient cause.

In *chloroform narcosis*, at a time when every other muscle in the body is in a state of complete relaxation, it does not seem reasonable to expect a laryngeal *spasm*; for, be it observed, this stridor only occurs when narcosis is far advanced, and all spasmodic muscular action (which is common enough in the early stages) has passed away. Again, the stridor is removed by a forcible traction on the tongue, which by reflex stimulation brings about a contraction of the posterior crico-arytenoid muscles. Lastly, there is no stridor during expiration, which there should be if the cords were *spasmodically* held in apposition. We have seen that stridor undoubtedly does occur as a purely paralytic phenomenon, and I believe that that which accompanies chloroform narcosis is paralytic also.

In *whooping-cough* the stridor is produced after a prolonged and violent expiratory effort, when the diaphragm descends with force, and air is drawn violently through the glottis. Now as long as the proper relation exists between the size of the glottic aperture and the rate of movement of the incoming air the respiration is noiseless, but if the chink be not opened wide enough, and the incoming blast be violent, then stridor is produced. Probably, or rather certainly, both these conditions exist in whooping-cough, and the assumption of a glottic *spasm* is beyond the power of proof. In whooping-cough vomiting is a prominent feature, and one can conceive that a catarrhal condition involving the larynx and anterior and upper part of the œsophagus might well interfere with the proper action of the posterior crico-arytenoid muscles which are close to the summit of the œsophagus.

The remarks which I have made concerning whooping-cough apply also to *laryngismus stridulus*—that sudden arrest of respiration, followed by a crowing inspiration, which is so liable to occur in sickly children, especially the rickety. We know that in rickety children the bones and cartilages are soft, and the muscles flabby and weak. We know also, from an experiment of Marshall Hall's, that if a syringe be tied into the lower end of the trachea of a dead animal, and a very rapid exhaustive movement of the piston be made, the soft parts around the larynx will fall together and prevent the ingress of air to the larynx. In the flabby-tissued rickety child it is highly probable that something of this kind occurs; the aryteno-epiglottic folds probably fall together, and the posterior crico-arytenoids very likely fail to act, and hence the difficulty of getting air into the larynx. It has been assumed that laryngismus stridulus is a true spasm because it is accompanied by the so-called carpo-pedal contractions of the fingers and toes, and spasm in one place has led physicians to infer a spasm in

another. These carpo-pedal contractions are probably brought about by the condition of asphyxia induced by the closure of the glottis. Convulsive action very commonly attends carbonic-acid poisoning, especially in children.

Hiccough is a symptom of disease concerning which a few words may be said. It is caused by a sudden spasmodic descent of the diaphragm at a time when the glottis is imperfectly opened, and hence a catching noise is produced by the passage of the air over the vocal cords. The essential part of the trouble is the descent of the diaphragm, which occurs suddenly and irrespective of any respiratory need. Normally, as the diaphragm descends in inspiration, the posterior crico-arytenoid muscles simultaneously contract and the vocal cords separate; but when the diaphragm descends suddenly and irrespective of any respiratory need, the vocal cords do not separate, and hence the noise of hiccough is produced. The cause of hiccough is usually to be found in an over-distended stomach, and it is very common in children in whom convulsive movements are very easily produced. Any irritation of the phrenic nerve on the under surface of the diaphragm, such as peritonitis, will cause hiccough. Irritation of the trunk of the phrenic will produce it also, and occasionally it is of cerebral origin.

Stridor may be inspiratory, expiratory, or both. One cause of inspiratory stridor is a failure of the glottis to dilate. It may be produced also by warty growths, which are drawn towards the glottis only in inspiration. A pure expiratory stridor may be caused by a growth below the cords being blown upwards into the glottic chink during expiration. A stridor accompanying both sounds is indicative of a narrowing of the glottis of a permanent character. It is very important to listen accurately to the time of any laryngeal noise.

There is one common symptom of throat disease concerning which it may be well to say a few words. This is *dysphagia*, or difficulty of swallowing. Dysphagia may arise from paralysis or spasm of the pharyngeal muscles, from pain, or from mechanical obstruction. Each of these four causes is produced by many different conditions, some of which I will enumerate.

Paralytic dysphagia is most common as a sequela of diphtheria, owing to paralysis of the soft palate and the superior constrictor of the pharynx. It occurs also in bulbar paralysis, and when, as generally is the case, sensation as well as motion is in abeyance, food is very liable to find its way into the larynx, to the imminent risk of the patient's life. Not unfrequently also food returns through the nose.

Spasmodic dysphagia occurs in its most marked forms in hydrophobia, and occasionally in spinal meningitis. It is said to occur also in belladonna poisoning, but whether this be due to spasm or to excessive dryness of the mucous membrane is not quite clear. Any source of irritation of the throat, such as a fish-bone, or possibly a small ulcer, may cause a spasmodic contraction of the pharynx. Occasional trifling spasm is not an uncommon occurrence with patients who suffer from irritative dyspepsia. The sensation of a "ball rising in the throat"—the so-called *globus hystericus* which is so common in hysterical subjects—is probably due to a spasm of the œsophagus and pharynx. Globus, you will observe, very rarely occurs with a clean tongue, and the subjects of it not unfrequently bear evidence of subacute gastritis. It is, I believe, very often a reflex phenomenon, caused by gastric irritation, reacting upon a highly nervous, hysterical constitution, and if you want to cure it you must always attend to the state of the digestive organs. A similar spasmodic condition is brought about during emotional states, and causes the well-known sensation of "choking." There is apparently some evidence for admitting that spasmodic contraction of the œsophagus is one of the causes of "stricture" of that organ.

Dysphagia arising from pain is met with very often. It occurs during all acute inflammatory conditions of the fauces, tonsils, and pharynx. Chronic ulcerations of these parts may also bring about a like result. When inflammation and ulceration attacks the posterior part of the larynx, especially when there is great "pyriform swelling" of the posterior part of the aryteno-epiglottic folds, accompanied by ulceration, as very frequently is the case in tubercular laryngitis or laryngeal phthisis, great pain in swallowing, and consequent dysphagia, is very common. Pain in swallowing, accompanied by hoarseness, should always make one suspect laryngeal phthisis, although a certain diagnosis is not to be made without the use of the laryngoscope and a careful

examination of the lungs. An enlarged and ulcerated epiglottis, no matter from what cause—tubercular, syphilitic, or cancerous,—often produces great pain in swallowing.

Dysphagia from mechanical obstruction in the throat is common, and amongst the causes of this condition I may enumerate—1. Inflammatory swelling of the fauces, tonsils, or pharynx. 2. Organic stricture due to cicatricial contraction following upon ulcerations produced by corrosive substances or syphilis. 3. Neoplasms of the œsophagus or pharynx, whether malignant or benign. 4. Abscesses encroaching upon and narrowing the calibre of the œsophagus. 5. Tumours of the neck, of any kind, pressing upon the œsophagus. 6. Tumours of the mediastinum pressing upon the œsophagus, including aneurisms of the aorta. 7. Among other causes are pericarditis, accompanied by great effusion, exostoses from the vertebrae, fracture of the hyoid bone, and carcinoma of the lungs or pleura.

It now remains to say a few words of the physical signs of the outside of the throat, from the angle and ramus of the jaw to the clavicular arch.

Enlargement of the lymphatic glands is one of the most common signs of disease here. Enlargement of these glands is brought about by any irritation of the region whence the lymphatics come which run into them; and sometimes, when no local cause for their enlargement is detectable, it is ascribed to a scrofulous habit. I would warn you, however, that even in scrofulous subjects there is generally to be found some cause for the enlargement of any special set of glands.

When the glands at the back of the head, behind the ears, and in the occipital region are enlarged, it often indicates some irritation of the hairy scalp, as from eczema or pediculi, and no practical man finding enlarged glands in the regions indicated would fail to suspect pediculi. The glands here are often hard and shotty in the early stages of syphilitic disease. The glands at the angle of the jaw may be enlarged from inflammatory or other trouble in the pharynx, tonsils, nasal cavity, tongue, ear, and mastoid cells. Enlarged glands beneath the jaw are often caused by decayed teeth. Irritative conditions of the larynx itself cause enlargement of the bronchial glands. In mumps the parotid glands are swollen, and cause globular swellings on either side of the face. The "*socia parotidis*"—the little piece of the gland which projects forward over the ramus of the jaw—is enlarged, and this fact is often of value in arriving at a diagnosis. Occasionally we see the thyroid cartilage of the larynx too prominent. This may be, and generally is, due to the large size of the cartilage. It is well to remember that the larynx may be thrust forward by growths behind it. We have had two cases lately in the Throat Department of epithelioma of the œsophagus, in which the great prominence of the larynx was a notable feature. The thyroid body is often enormously enlarged, giving rise to what is known as bronchocele or goitre. One or both lobes of the thyroid may be affected, and the size of the tumour varies enormously. These tumours—the different varieties of which it is not necessary to discuss at present—may compress the larynx and cause dyspnoea, or they may involve the recurrent laryngeal nerves and cause laryngeal paralysis. Besides their anatomical situation, the main point in their diagnosis is the fact that they follow the movements of the larynx during swallowing. This is not the place to speak of the various tumours of the neck—simple, malignant, aneurismal, &c. That is best left to my surgical colleagues.

Palpation of the laryngeal region is often of use. The larynx may appear too fixed, and the parts to the side and behind it may appear too solid and massive. This is very often the case in malignant disease of the œsophagus. In tuberculous disease of the larynx we may find distinct tenderness on pressure over the superior cornua of the thyroid cartilage. In cases of laryngeal tumour we may occasionally feel a distinct vibratile thrill during inspiration or expiration, or both, by palpation of the thyroid cartilage. Percussion of the larynx and trachea is not of much practical value, although capable of informing us of the presence of solid matter in the larynx, or of the occlusion of its orifice. It is instructive to percuss the larynx with the nose and mouth wide open, and to hear the clear resonant note given out under these circumstances. Then close first the mouth and then the nose, and hear how the percussion note gradually becomes dull and toneless as the superior openings become completely occluded. A similar failure in tone takes place when occlusion is due to pathologic causes.

The examination of the *naso-pharyngeal cavity* can be made partly by means of direct observation through the anterior nares, and partly by employing a reflector and mirror to illuminate that part of the pharynx which extends behind the soft palate upwards to the base of the skull, and into which the posterior nares open. The ordinary reflector is very useful in inspecting the anterior nares, and in order to get a good view, the nares may be dilated by gently pressing upon the tip of the nose with the forefinger, or by inserting the common nasal speculum, or, better still, the bivalve fenestrated speculum introduced by Fraenkel. If the short hairs which grow within the margin of the nostril are found to obstruct the view, they may be removed with a pair of scissors, or smoothed down by the application of a little ordinary soap. (One may here remark that in performing laryngoscopy on persons with heavy moustachios, it is often a great help to plaster down the hair by means of a little soap, and thus make it conform to the line of the lips.) The amount which can be seen in this way varies in different individuals, according to the amount of swelling of the parts and their natural configuration. Occasionally one can see the pharyngeal wall through the anterior nares.

The inspection of the posterior nares and adjacent parts by means of the laryngoscope mirror is by no means so easy as the inspection of the larynx. The great obstacle to a good view of these parts is the soft palate, which is very apt to contract, and by impinging against the pharyngeal wall effectually prevent the inspection of the parts above it. The position of the patient, of the light and the reflector, are the same as for laryngoscopy. The tongue must be depressed on the floor of the mouth by means of a rectangular spatula, which may be held either by the patient or the observer, the former being preferable, and in many cases necessary, as the observer often needs both his hands. The mirror, which should form a very obtuse angle with its handle, must be gently passed (the reflecting surface being, of course, turned upwards) to the back of the mouth, care being taken not to touch the pharyngeal wall or the uvula. It is often a good plan to pass the mirror to one side of the uvula in order to avoid it. In very favourable cases we shall be thus enabled to see, by moving the mirror first to one side and then to the other side of the uvula and varying its degree of obliquity, the whole of the upper pharyngeal cavity and the posterior nares. The parts which we can actually distinguish are (1) the septum narium, (2) the middle and lower turbinated bones in part, (3) the pharyngeal orifice of the Eustachian tube, and (4) the mucous membrane of the upper part of the pharyngeal cavity, rendered uneven by the adenoid tissue beneath it. These parts can only be seen piecemeal, and a great deal of skill and practice is necessary in order to recognise them. The greatest difficulty is generally experienced with the soft palate. The sucking of ice and the administration of potassium bromide may do much to diminish its irritability, and by practice the patient may acquire the habit of allowing his soft palate to be manipulated. Some help may be obtained by making the patient utter a nasal sound during the whole examination, so that the palate is kept free from the pharynx, and if this fails the palate may be drawn forward by means of a thin silvered spatula passed behind it, or a loop of thread passed round the uvula. Palpation is of great use in examining these parts. A probe passed through the anterior nares will often serve to detect pieces of necrosed and carious bone, and a probe or the forefinger passed through the mouth behind the soft palate will often give very valuable information as to the swelling and consistency of the parts examined. One finger may be passed through the mouth into the fauces, while a finger of the other hand is applied externally in the neighbourhood of the angle of the jaw. In this way a very good idea is obtained of any inflammatory exudation or thickening which may exist in the pharyngeal wall or the fauces.

The nasal passage may become occluded from various causes, and when this is the case the following symptoms are presented to us as detailed by Fraenkel:—1. The mouth is kept habitually open for breathing purposes both during the day and the night. The tongue gets dry from exposure, and the patient has a vacant silly look; the breath, owing to one channel being stopped, is drawn in with great violence. It is stated that children are liable to spasmodic asthmatic attacks, due, it is supposed, to the contact of air with the lungs which has not been warmed by passing through the nasal cavity; and it may here be mentioned

that adults who have nasal polypi have occasionally suffered from asthma, but whether this is due to obstruction or to some reflex irritation is doubtful. 2. When the occlusion of the nose occurs in infants, they are unable to suck for more than a few moments at a time, owing to the constant necessity of opening the mouth. 3. The sense of smell is abolished or blunted, owing to the impossibility of effective sniffing. 4. Expiration through the nostrils is impossible, and the flame of a candle cannot be blown out when the mouth is shut, neither can the nose be "blown" so as to expel accumulated mucus, &c. By holding a candle to the nose, and asking the patient to expire through the nose, we can tell which nostril is occluded when only one is thus affected. 5. The voice is altered; all nasal resonance is abolished; the tone is muffled. This mode of speech is often erroneously spoken of as "speaking through the nose."

The chief morbid conditions which may be seen by inspection of the naso-pharynx, and which may, among other symptoms, give rise to occlusion of one or both nostrils, are: 1. Catarrhal swelling of the mucous membrane, as is so commonly seen in an ordinary cold. This catarrhal swelling, it must be remembered, occurs also in epidemic influenza, measles, and some other conditions. The secretion of the mucous membrane in this condition, varying as it does from a clear, almost limpid fluid to a thick, tenacious mucus, is too well known to need description. Occasionally the nose becomes the seat of a true purulent inflammation. 2. In scrofulous and syphilitic subjects nasal catarrhs are apt to become chronic; the mucous membrane generally becomes thickened and hypertrophied, or atrophied and shiny, and the secretion is apt to form crusts which stink and give rise to the name of *ozæna*, by which this condition is often known. 3. Abscesses of the mucous membrane occur occasionally independently of disease of the bones of the nasal cavity. 4. Syphilis very commonly attacks the nose. The presence of mucous tubercles gives rise to the "snuffles," so commonly met with in syphilitic children. Syphilitic ulcerations and infiltrations are met with here as well as elsewhere, and these conditions often lead to destruction of the cartilages, caries and necrosis of the bones, and the consequent establishment of communications between the two nostrils, or between the cavities of the nose and mouth. 5. Among the rarer causes of nasal inflammation we may mention diphtheria, erysipelas, scarlet fever, and glanders. 6. Mucous polypi may grow from any part of the nasal cavity, and vary, as you know, very greatly in size. They are usually diagnosed without difficulty, although it is well to bear in mind that other varieties of tumours, such as carcinomata and sarcomata, are found in the neighbourhood. It is well to remind you also that a hernia cerebri projecting into the nasal cavity through a congenital fissure in the base of the skull has been mistaken for a polypus. 7. It is only necessary to mention the fact that foreign bodies, such as peas and lumbrici, are occasionally found in the nose.

A very common symptom of disease of the naso-pharynx is impairment of hearing, owing to the mechanical occlusion of the Eustachian tubes. When a patient complains of being deaf, you should always examine the pharynx.

INSANITY; ITS TREATMENT AND PREVENTION.

The Presidential Address for 1880 of the Border Branch of the British Medical Association.

By J. A. CAMPBELL, M.D., F.R.S. EDIN.,
MEDICAL SUPERINTENDENT, GARLANDS ASYLUM, CARLISLE.

(Concluded from p. 339.)

In talking over the matter of the causation of insanity with members of the profession in asylum practice, I have always strongly expressed my disbelief in purely mental causes having an influence to the extent generally supposed in producing this disease, and I have been frequently answered that my views arose from my principally dealing with cases in the less educated grades of society, and that among the educated and in the higher ranks purely mental causes were far more common. I still, however, adhere to my views, and think that cases are frequently supposed to be caused by extra study, mental anxiety, overwork, religious doubts,

when, in reality, other agencies, habits, and vices have been the real cause of all the mischief.

I have already placed before you the difficulties one experiences in arriving with anything like absolute certainty at the cause of disease. In several cases of clergymen, clerks, travellers, &c., I have, on careful examination, found that where all at first pointed to a mental causation, fuller inquiry showed a physical. I am quite aware that a few general remarks or isolated cases go for nothing in dealing with such a subject. I therefore submit the following.

I have most carefully examined into the causation of the cases sent to Garlands Asylum during the past two years. In this period 238 patients were admitted: in 153 the malady was distinctly due to physical causes; in 36 only to moral causes. I have already pointed out that exception might be taken to results arrived at in an asylum whose population is principally derived from an agricultural, or at any rate a manual, self-supporting source. Let us, then, look for a moment at a likely cause of insanity—mental shock or worry from money losses. One would imagine that few things could have a more deleterious effect on the human mind than losses which keep one tottering on the brink, or that cause distinct and total ruin at once. Thrilling tales are founded on such occurrences, and our profession occasionally record wonderful cases, the result of unexpected and sudden ruin or reverses in fortune, cases of death from shock, insanity, paralysis, sudden ageing, change in colour of hair, &c. Now one of the greatest commercial casualties which of late years has affected Scotland occurred by the stoppage of the City of Glasgow Bank on the 2nd of October, 1878. This failure caused very great distress to many, ruin to some, and most undoubtedly anxiety of a severe nature to all concerned with it directly, and to many others indirectly. From the report of the liquidators,¹ I find that there were 1093 shareholders in their own rights, 100 life renters, 192 bodies of trustees, 108 persons whose wives held stock, 34 shareholders as trustees; the total number of separate persons entered on the list was 1819; 599 surrendered their estates, unable to pay the first call made upon them; 354 who met the first call were unable to pay the second. I made an inquiry from the medical officers of seven royal asylums, two private, ten district, and two parochial, to find out how many patients up to the time of my inquiry (April, 1880) had been sent to asylums from this cause. I found that six patients were admitted in whom the disease was considered to be directly caused by this bank failure, while in two it was considered the indirect cause. In Garlands, in 1879, seventeen cases were sent in from excessive drinking, and these from two counties in one year. I do not for one moment doubt that many cases have been evilly acted upon by this failure; probably cases of insanity have occurred which did not require asylum treatment. I am only dealing with this failure as a factor in causing insanity, which required asylum treatment; and the result of my inquiry shows that a bank failure of a magnitude which allows one to call it a national calamity, which directly affected 1819 persons—and who knows how many indirectly?—which must have produced an appalling amount of mental shock, an immeasurable amount of anxiety and worry, and as yet unknown amount of hardship, only sent eight persons to the twenty-one principal Scotch asylums. This should lighten the minds of directors.

During 1876 and 1878 the Commissioners in Lunacy, with the co-operation of the medical officers of asylums, collected and tabulated certain data, among others the causes of the insanity (arrived at after careful scrutiny and consideration of each case individually on the part of the asylum medical officers), with regard to the admissions which took place into English asylums. I consider that the return for 1878 is the most accurate of the sort that we have ever had access to, and I therefore refer to it. 13,309 were admitted into English asylums during 1878. Moral causes as the excitant or predisposer were considered to have caused insanity in 3199 cases; domestic trouble, adverse circumstances, mental anxiety, overwork, religious excitement, love affairs, fright, and nervous shock—24 per cent. of the admissions only were caused by such agencies as I have mentioned acting directly on the mind.

When we turn to the physical causes we find 6418 cases accounted for by them, 48 per cent. of the whole admissions being attributable to direct physical causes, such as intemperance in drink, or sexual and venereal disease.

¹ I have to thank one of the liquidators for kindly furnishing me with their report.

No doubt some of the physical causes are distinctly non-preventable, such as old age; but many of them are, and it is satisfactory to have something tangible, recognisable, curable, and preventable to go on. Taking intemperance in drink, it is put down as the exciting cause of insanity in 1351 of the admissions, the predisposing in 415—altogether it is credited with causing 14·6 per cent. of the whole admissions. Lactation as a predisposing cause affected 15, as an exciting 101; it caused 1·9, nearly 2 per cent., of all the female admissions.

Education, elevation of the mental faculties, a diffusion of knowledge as to the requirements of the bodily health, an acquirement of desires for rational amusements and intellectual relaxations, among the mass, have for long been pointed out as the preventive for insanity caused by giving rein to the baser passions and appetites. As this is long in coming, we must look for, hope for, urge as far as we can, and point out, as we as a profession have done, and are constantly doing, stringent and easily enforced legislation which will deal with habitual drunkenness, prevent the adulteration of malt and spirituous liquors, and the sale of newly made spirits which contain constituents especially deleterious to brain-tissue. Such legislation must be enforced to be of value; permissive legislation on such a subject is valueless.

Are doctors sufficiently consulted by heads of families either as regards bodily or mental health—in fact, as regards the prevention of disease in their offspring? Are they not in the majority of cases merely called in to attempt to cure a disease which has been long going on, and which might have been prevented?

With regard to children, I believe medical men are now more consulted than they used to be about their proper nutrition in infancy and childhood; but is sufficient attention paid to their education, recreations, the choice of a profession, the capacity of the mind for severe mental toil, the question of bodily disease, its development under certain conditions and in certain occupations, and its power of being retarded or prevented by constant attention to bodily health and freedom from mental strain? Are such subjects properly present before the minds of parents, guardians, and the medical profession at large? This is a difficult subject, and each year it is becoming more and more pressing; and when we look at the causation of many cases of mental disease we have the conviction forced upon us that had such and such a case been in different circumstances, it would have been most unlikely that he would have become insane.

Then, leaving the period of childhood and coming to that of youth and budding manhood and womanhood, should not the primary laws of physiology be taught? Would it not be well for those who hope to live for the allotted span in this world to know how they live, and how best to live to keep living? and some truths, of course in a guarded way, should be communicated to them by their elders about their reproductive systems, which to many, especially those of a neurotic family, is the cause of many uneasy feelings, wonderments, and doubts. From my experience, I am quite sure that in many individuals of both sexes evil practices and habits have often arisen in ignorance—habits such as masturbation, with its train of evil consequences to mind and body, excitement, vacillation, depraved inclinations of all sorts, in the male; and similar, if less marked, mental changes, with hysteria predominating, in the female, an unhappy ruined life and weakened body, at the slightest, and in extreme cases existence in an asylum, a trouble and a care to all, for in such cases, at their worst, impulsiveness is a prominent feature, and dangerous outbreaks of short, almost momentary duration alternate with depression. Such persons are usually filthy in their habits, and nearly always end in complete dementia, frequently run their bodily health down to the lowest ebb, and die of phthisis.

Then, passing onwards, is marriage at present looked upon in its proper light? Are the prospects of a healthy progeny considered? Wealth, social position, even creed, are duly thought of—why not mental and physical properties? Each year one hears of marriages broken off for monetary or social reasons, but is the family history of the young couple ever considered—the great probabilities of disease in one or both, the family home broken up by puerperal mania, the children descended from two insane or phthisically-inclined parents, causing anxiety, discomfort, grief, and useless regret, instead of happiness, bright anticipations, and increase of love; and when, by eating the fruit, the knowledge is gained to see that all this could have been prevented, that

knowledge acquired in time might have enabled one to guide their selection, and to influence their love, as well in matters of this sort as in those of monetary and social consequence.

It would almost seem as if there was an elective affinity between persons with a neurotic taint, especially those descended from suicidally disposed ancestors. I have often been led to notice how frequently they intermarry. They are often in the blush of youth well-developed and good-looking, arrive more quickly at maturity than their more healthily constituted compeers, have more adaptation of character, are more subject to the emotions, and probably being more deficient in the sterling qualities required in life's journey, yield themselves with more *abandon* to the pleasures of the moment, without a care for the morrow. I think that in this probably lies the fascination often noticed in such cases as I describe. But while the state I have presented occurs in some instances, and at the early periods of life, there is another side to be heard, and even the individuals who while they are young present cheerful aspects often get morbidly dull in the middle and later periods of life. There are many neurotically descended who feel their burden from the first, and feel it more so from their surroundings. To be descended from insane or even peculiar and eccentric ancestors is a great hardship, but to have to live with them and be surrounded with a large circle of similarly constituted relatives is nearly as bad, and undoubtedly has a bad influence on the young. That people unintentionally acquire peculiarities from associates is well known; that a dread of an outbreak of nervous disease is often present in the minds of those who inherit strong neurotic taint is also well known; and that this dread may be almost extinguished, or kept constantly on the alert by the surroundings, stands to reason. Persons with strong neurotic taint should, for their own safety and happiness, live as much as they can amongst healthily constituted strangers. They should, as far as possible, keep clear of the associations which constantly bring their unpleasant inheritance before them prominently. In many cases a change of county, or even of country, is really a great safeguard. This should be known.

Only when such evils take place as puerperal mania is the advice of the medical man asked for or listened to as to the probability of a recurrence of the malady at the next confinement, or as to the time which ought to be allowed to elapse before the woman is again subjected to the dangers of another attack. After a severe attack of puerperal insanity the nervous system must take a long time to recover thoroughly; and though the patient may ostensibly be well, and not need asylum or other treatment, yet I believe that a considerable period without any extra calls on the system generally is necessary for total and complete recovery. I always tell husbands my views in this respect when I discharge patients who have recovered from puerperal mania, and advise for their own comfort that a year should elapse before another pregnancy; but usually such advice is unattended to, and a quickly following confinement brings a recurrence of the insanity. The most marked case that has lately come under my notice was E. J.—. Father drowned himself. She had been always rather nervous. Came in on May 15th, 1877, labouring under puerperal mania. This was two weeks after confinement. She was excited for a long time, but gradually got better, and was discharged on March 11th, 1878. I expressed myself strongly to the husband, pointing out that in this case, from the family history, it was even more essential than in ordinary cases that a considerable interval should elapse before the next confinement. This patient was readmitted, pregnant, on Sept. 21st, 1878. She continued in a state of excitement during her pregnancy, and was confined of an apparently healthy male child on Dec. 15th, 1878, 288 days from her discharge, so that she probably became pregnant within eight days of leaving. She is still in the asylum, an excited, hysterical female, at present entirely devoid of self-control. Had she not become pregnant, I think that in all probability she would have retained her reason.

In nearly all the cases of insanity from over-nursing that come under my observation the patient has been nursing up to the time of being brought to the asylum. In the majority of cases, after the milk has been got rid of by rubbing the breasts with a saturated solution of extract of belladonna in glycerine and the administration of a saline aperient, and the patient afterwards treated with iron and tonics, recovery is very speedy, if the patients were warned about such an

occurrence as nursing proving too much for them, if the too great drain on the system were prevented by partially feeding the child or entirely ceasing nursing when the bodily health was seen to suffer and the patient was becoming dull, the attack might be averted. I have always thought that medical advice was too tardily sought in such cases.

The time between gestations, even when not followed by immediate insanity, does not meet with the consideration it merits. I frequently see cases of mental disease, in many complicated with phthisis, in which numerous and rapidly following pregnancies have undoubtedly been the cause; and in a considerable number of cases of middle-aged and oldish women, with lowered vitality, broken-down constitutions, absence of nervous power, and consequent dementia or melancholia, I have, on scrutiny, clearly realised that unduly rapid pregnancies or miscarriages have been the cause of such a state. And yet in cattle this is avoided; a breeder of good stock, always after a miscarriage, does not allow another pregnancy till the time he would have done so had the female gone the full time.

That fright, nervous shock, illnesses, and mental anxieties exercise in some manner a direct influence on the unborn offspring through the mother is well understood. Maternal influences during the period of gestation is the one subject of this class which has received most attention, and great care is usually expended on the interesting patient. Probably the laws of some of the nations who did away with weakly offspring gave the initial impetus to this attention, but I doubt whether much family happiness would not result by attention to the life, health, and habits of would-be parents during the period immediately preceding gestation. It is well known that frequently children procreated during alcoholic excess are imbecile or hydrocephalic. Deviations from health, both mental and physical, may be a question of degree. One frequently sees the children of intemperate parents stupid, dull, and coarsely formed. I have no doubt the mental state of the parents during the period immediately preceding procreation has a great influence on the future child. I should like to hear, as some day we shall, something as to the effects of the siege of Paris and the Franco-German war on the children procreated in Paris during that eventful period. In Jewish history newly married men were exempt from martial service.

I trust that the portion of my address which deals with the treatment of insanity will convince you that practitioners in this department, as in the others of our profession, have at heart not only the good treatment of the patients, but also the advancement of our knowledge of the subject.

As regards the prevention of insanity, all our profession are interested in it. I have brought before you the thoughts which have occurred to my mind as worthy of your consideration. Ours is a progressive study; it should end only with our lives. As each year rolls past we should have observed some new facts, made ourselves more acquainted with the wonderful laws of nature which have specially to deal with humanity, and fitted ourselves to advise with such certainty as is to be expected from fallible man on many of the points upon which I have touched, for each year more will be expected from us in this direction.

HUMAN AND ANIMAL VARIOLÆ: A STUDY IN COMPARATIVE PATHOLOGY.

By GEORGE FLEMING, F.R.C.V.S.,

ARMY VETERINARY INSPECTOR.

(Continued from vol. i., page 334.)

I HAVE already alluded to the results of small-pox inoculations on the horse, and shown that, as on the ox, they were either negative or nearly so, the positive results yielding only the most trifling evidence of infection, and nothing at all like horse-pox being ever produced from the insertion of the small-pox virus into the skin of the horse, while retransmission to mankind only gave rise to small-pox. On the contrary, as we have seen, horse-pox inoculated on the cow produces what in every way corresponds to cow-pox, or on man to vaccinia. From the cow and man horse-pox can be transmitted indefinitely, and while its action is modified by repeated transmissions, its protective influence

against variola is undiminished.* This has been demonstrated times almost without number, from the days of Jenner up to the present date. The most interesting and instructive of recent demonstrations in this direction is that recorded by Dr. Pingaud, in a communication presented to the Paris Academy of Medicine a few months ago. Having observed, with Drs. Viseux and Thomas, an epizooty of horse-pox in February, 1879, he determined to make some experiments, and selected as a vacciferous subject a four-year-old horse affected with the disease, but whose antecedents were well known, and whose health at other times was excellent. The cutaneous eruption was discrete; there were only a few crusts of pustules about the hollow of the pasterns; but in the mouth, and within the upper lip, the mucous membrane was studded with vesicles offering the characteristic nacrous aspect. Lymph was collected from these pustules with the greatest care, and seven young soldiers of the 10th Hussars, who had not been vaccinated, were inoculated. On the sixth day six of the men showed at the seat of inoculation the characteristic vaccine vesicles, which had a somewhat inflamed base. From four of the soldiers lymph was taken; with this sixty-four men—eight of whom had not been vaccinated—were inoculated. In forty of these the result was positive—60 per cent. successful vaccinations. With none of the patients were there any serious inflammatory symptoms, and only in a very small number did the inoculations assume a furunculoid aspect. Calves were inoculated from the horse, but the proportion of successes was only 48 per cent., rather going to prove that the virus became weakened in the calves.

I have stated that horse-pox and cow-pox are almost, if not quite identical in their effects, when transmitted by inoculation to man, the ox, or the horse. Chauveau inoculated five horses and two asses with animal vaccine from Naples; the youngest animal was seven years old, the others from sixteen to twenty years of age. For five and six days there were no signs, but in from five to eight days the seat of puncture became markedly papulous, the papules increasing in size until about the tenth day, when they were acuminated, had a very broad base, and were red, painful, and hard. From the ninth to the twelfth day was the period of secretion, the epidermis becoming slightly raised throughout the whole extent of the papule by an exudation of limpid citron-coloured serum; this dried into yellowish transparent crusts, very different in appearance from those of vaccinia in man or cow. The secretion from the lymph continued for several days, and ceased from the thirteenth to the seventeenth day. When the crust was removed there appeared a moist granular red surface level with the skin, but having a deep central cavity, a kind of umbilicus, in which had been fixed, like the head of a nail, the prominent under-surface of the crust. There was no febrile reaction. In the asses there was shedding of the hair and epidermis in various parts, with abundant serous exudation. As compared with its evolution in man and the cow, the vesicle or pustule was slower, and there was a difference in its shape and character, the pustule being acuminated, the lymph scanty, and the umbilicus small or altogether absent; though in an ass sixteen years old the pustule had from the commencement a central umbilicus. In the horse the crust extends over all the pustule, while in man and the cow only the centre is covered. In the ox the lymph is rarely abundant, and there is never anything more than a thin brown crust; but in the horse the crust is wide, thick, rough on the surface, and transparent and citrine-tinted.

SHEEP-POX.

Sheep-pox differs from cow- and horse-pox in having a history extending over some centuries, and in being closely allied to small-pox in its extension, this depending not only on its contagious but also on its infectious properties, and the eruption being more or less general over the body. Indeed, so far as intensity of virulence is concerned, its appearing in an epizootic form, as well as the serious symptoms and mortality accompanying sheep-pox, there is the closest resemblance between it and human variola. We have seen that cow-pox and horse-pox are far from being serious disorders, the affected animals, in the majority of instances, being

very little, if at all, disturbed in health, while the diseases are not infectious, and not always very contagious.¹

In the first portion of this paper I alluded to sheep-pox being mentioned at the Vaccination Conference, and observed that it was there admitted that the sheep had a variola of its own. On again looking over the report of that meeting, it appears doubtful whether the speaker who referred to it thought it was peculiar to the sheep, or whether it was not also derived from human variola. The best proof that it has no relation whatever to small-pox is to be found in the fact that it prevails continuously, and sometimes most extensively and fatally, in countries where small-pox is extremely rare, as in East Prussia; and in regions where the latter is never absent, and is often epidemic, sheep-pox is only known as an imported disease. In England it is never seen unless introduced from countries where it is enzootic. The terrible outbreak which ravaged our flocks in A.D. 1276, and continued twenty-eight years, was due to importation from France; and the appearance of the disease in 1847 and 1862 was due to foreign sheep. It has been unknown in the country since the latter date.

Notwithstanding the close resemblance of sheep-pox to small-pox (the pustules in the former being, however, acuminated, the course of the malady very similar, the complications the same, and the mortality as great), yet the one disease has no influence either in the production of or protection from the other. It appears to be finally established that human variola will no more produce sheep-pox than it will cow-pox, notwithstanding the close affinity between the two; and while variolation will not protect from sheep-pox, neither will inoculation with the virus of the latter prevent mankind having small-pox. Some authorities have denied that ovine variola can be transmitted to the human species, and the extreme rarity of cases of supposed accidental transmission certainly gives countenance to the opinion. But several instances are recorded, nevertheless, of veterinary surgeons, who have been accidentally inoculated with the virus, suffering from local and general disturbance, like that produced by vaccination.² Korner³ reports that a child who tended (barefoot) sheep affected with variola, had a number of discrete and confluent pocks on both feet. This transmission occurred also to one of Korner's own children. On the back of the boy was developed a pock, which finally became as large as a five-pfening piece; there was severe concomitant fever. The child appears to have been inoculated while Korner was charging some capillary tubes with sheep-pox lymph from a pipette, a drop of the fluid, it is supposed, having fallen on him.

Röll has unsuccessfully attempted to inoculate cattle with sheep-pox, and sheep with cow-pox; but Zundel⁴ has given an instance in which two cows were directly infected through cohabitation with diseased sheep. Haubner mentions that inoculation with small-pox matter has sometimes produced pustules on the dog and pig; but reinoculation from these did not cause the malady in sheep. Hertwig and Hering assert that the malady is readily communicated to goats in a true form, and may be transmitted from them to sheep. In the goat the pustules are usually smaller, and the general disturbance is less marked. But transmission is very far

indeed from certain, as goats very often associate with sheep without becoming affected. Hering knew of an instance in which fifty-four goats grazed with diseased sheep, and only ten became sick. According to Kersten and Gerlach, reciprocal inoculation of goats and sheep is always successful; and according to the observations and experiments of Gasparin, Dominick, Curds, and Spinola, and, still more recently, Gerlach, there appears to be a close identity between the variola of hares and rabbits and that of sheep, inoculations from one species to the other always yielding positive results.

When vaccination as a protection from small-pox began to gain ground as its benefits were becoming more and more evident, many of the leading veterinarians on the Continent tried it as a protective against sheep-pox, but they soon discovered that vaccinated sheep were as susceptible to their own particular variola as the unvaccinated. Verrier, Gohier, Husson, Voison, and other veterinary surgeons, found that, no matter how successful the vaccinations had apparently been, the sheep took the disease, either accidentally or experimentally, as readily as before. For this reason vaccination is never attempted now, as it does not confer immunity from sheep-pox—a curious circumstance with regard to inter-variola among different species of animals.

The contagium of sheep-pox is very active, as has been already stated. The observations and calculations of Chauveau with regard to the infectiousness of the malady, compared with that of vaccinia, tend to prove that animals attacked with sheep-pox will infect a hundred times more readily than those affected with cow-pox. The sheep-pox lymph also, according to the same authority, contains in an equal volume and weight a much more considerable number of virulent corpuscles, and is much more potent than that of vaccinia. He has shown that if the latter is diluted with fifty times its weight of water, inoculation with it is uncertain in its result, while the sheep-pox matter may be diluted with 1500 times its volume of water before it is reduced to the same condition. He has also demonstrated that the activity of this matter, like that of every other virulent substance, resides in the solid particles or elementary corpuscles held in suspension in the serum, which is not viruliferous; and that an equal quantity of sheep-pox lymph contains thirty times more of these particles than that of vaccinia.

(To be continued.)

ENDOCARDITIS FROM VERY SLIGHT RHEUMATISM.

BY CLEMENT DUKES, M.D. LOND.,
PHYSICIAN TO RUGBY SCHOOL.

I HAVE found mitral disease so often in healthy young persons, where there has been no history of rheumatic fever to account for it, that I have been at a loss to know how it has taken place, especially as it has occurred in those not accustomed to take violent exercise,¹ and who are thus not likely to have over-distension of the heart and orifices, or injured valves.

Visiting, as I do, daily 400 boys, among whom the slightest deviation from health is referred to me, I am able to see the beginnings of illnesses. The following case may be instructive.

On Feb. 17th, 1880, I saw Mr. H—, who complained of aching down the front of the thighs and slight pain across the loins; his pulse was quickened, and his skin hot. Thinking he had got wet, and so chilled, I sent him to the sanatorium to give him a hot bath, and put him to bed for twenty-four hours, in the hope that he would be quite well then. At night his temperature was 101.6° F., and pulse over 100.

Feb. 18th.—His aching in the thighs had gone; the loin pain, though still present, was better; temperature 99.2°, and pulse 100. He passed a comfortable day, and the only discomfort was the slight pain across the loins, but his evening temperature was 102°, and pulse over 100. I examined him most carefully, but could detect nothing more, and he had no albuminuria.

19th.—Temperature 100°, and pulse 100; but he said he

¹ Depaul believed horse-pox to be infectious, and cites, in support of his opinion, an instance in which a cow was inoculated with the lymph from the nostril of a horse, when seventeen other cows inhabiting the same shed were soon after infected, cow-pox pustules appearing on the udder and teats. In addition, a horse kept in a badly-constructed box in this stable, and breathing the same atmosphere as the cows, was also affected, the eruption showing itself on different parts of its body. It is not at all improbable, however, that the cow-keeper and his assistants, who handled the diseased and healthy animals alike, were the chief agents in spreading the malady. Indeed, the wife of the cow-keeper, in milking the cows, was vaccinated on one of her fingers, and yet continued to handle the teats of the others, notwithstanding the pain she experienced. Bouley has had perfectly healthy horses and cows cohabit with diseased horses, and when the malady was produced in them he was always able to trace it to direct contact. During the epizooty at Alfort, in 1863, it was possible to transmit the horse-pox to a series of horses by placing them one after another in a stall which had been occupied by a diseased horse. Each animal became affected in turn, and at times its immediate neighbours also; but beyond those in that stable there were no further transmissions, all the other horses remaining unaffected. As Bouley justly remarked, a really infectious disease does not comport itself in this manner. Veterinary Surgeons Turenne and Mathieu have also experimentally demonstrated that horse-pox is not infectious, and this is in accord with my own experience.

² See *Medizin. Jahrbuch des Oesterreich. Staates*; also *Mittheilungen aus der Thierärztlichen Praxis in Preussen*, Jahrgang 17; and *Magazin für die gesammte Thierheilkunde*, 1873, p. 467.

³ *Mittheilungen aus der Thierärztlichen Praxis im Preussischen Staate für 1876-77 und 1877-78*.

⁴ *Journal de Méd. Vétérinaire de Lyon*, 1867, p. 185.

¹ Vide *British Medical Journal*, March 15th, 1873.

felt perfectly well. On the most careful examination I could find nothing else.

20th.—The same; but the boy could not understand being kept in bed when he felt perfectly well, and I could not sanction his getting up while his temperature and pulse were above normal.

21st.—After another careful and minute examination, owing to his temperature and pulse remaining the same, I detected a very soft and faint mitral systolic murmur.

This gradually increased in intensity every day, and on the 24th his temperature became normal, and continued so, but his pulse remained high for a time. He was kept quietly in bed for another ten days.

I carefully talked over the illness with his father, and told him he had endocarditis, which was a very serious matter; though by dint of the very greatest care, in not allowing any exertion for the next few months, its effects might all disappear; otherwise he would carry a maimed heart for the rest of his days.

On March 8th. he was unfortunately suddenly told he might go home for the rest of the term. Next morning when I saw him I was informed that he had been in a curious state, talking incoherently about things that had no existence at all, and he seemed thoroughly dazed at my visit. He was cheerful and happy, though incoherent, and had a quiet pulse. Whether his joy was too much for his state, or whether minute particles of fibrine were liberated from the mitral valve in the excitement of his sudden joy at the idea of going home, I cannot say; but I am inclined to think that this latter is what happened.

On June 11th I auscultated his heart, and there was not the slightest trace of murmur remaining. He was quite well.

The lessons to be learnt from the case, I think, are—1. That the most trivial amount of rheumatism may be accompanied by endocarditis. 2. That recent murmurs from endocarditis may and do disappear in young healthy subjects by dint of very great care while they are recent.

Rugby.

A CASE OF SUDDEN DEATH DURING ETHER ADMINISTRATION.

By ROBERT N. HARTLEY, M.R.C.S.

THE rarity of cases of sudden death during the use of ether as an anæsthetic is my excuse for entering somewhat fully into the following details.

The patient was a gentleman, aged sixty-six, who had for some weeks previously been the subject of symptoms which eventually culminated in complete obstruction of the bowels, the site of the obstruction being thought to be either in the lower part of the descending colon or the sigmoid flexure.

As the only procedure holding out any hope of prolonging life, it was decided, in accordance with the opinion of Sir James Paget and Mr. Pridgin Teale, and with the full consent of the patient, to open the bowel in the right lumbar region.

Before the commencement of the operation the patient was lying, or half-lying, in bed, with the head and shoulders well propped up with pillows, breathing regularly and without great effort. There was no complicating disease in heart or lungs, and the pulse, though rather quick and small, was not inordinately feeble. There was thus nothing to contraindicate the use of an anæsthetic, or to make one more than usually anxious as to its effect. Some artificial teeth worn by the patient had been previously taken out, and one of the pillows was now removed for the more easy adjustment of the inhaler.

Ether was administered by Clover's smaller inhaler, two ounces being the quantity contained in the ether-chamber. The patient took the ether without the slightest hesitation or resistance, moderately inflating the india-rubber bag with each expiration, and in two minutes was quite anæsthetic. He was now placed on his left side with the head lower, and in five minutes from the commencement of the administration of ether the line of incision was made by Mr. Teale. The patient was never allowed to become deeply "carbonised," and the inhaler was frequently withdrawn entirely. In ten minutes from the commencement of the operation, and

just as I was engaged in counting the carotid pulse, which was beating evenly and with a rather stronger impulse than before the operation, he showed an inclination to vomit, and ejected a quantity of brownish fluid smelling strongly of brandy. He then took one deep inspiration, and seemed as if inclined to vomit again; but his head sank back on the pillow, and he quietly died, making no further respiratory effort, except one short gasp during the performance of artificial respiration. Prompt exploration of the fauces failed to show any mechanical obstruction to the breathing, and in spite of an immediate resort to artificial respiration and all other available means for restoring animation, our efforts proved useless. An examination of the inhaler showed that a little more than an ounce of ether had been spent.

No post-mortem examination was made.

The interest of this case centres in the difficulty of defining the exact cause of death. The mode of death is one which unfortunately is not rare during the use of *chloroform* as an anæsthetic, but is almost unknown while a patient is under *ether*.

There was no mechanical obstacle to respiration by the regurgitation of anything into the larynx during the act of vomiting. Nothing solid had been introduced into the stomach for seven or eight days previous to the operation, and the vomited material consisted entirely of thin fluid. Moreover, there was no paroxysmal or convulsive seizure such as would be likely to follow a sudden mechanical interference with the act of breathing.

Two circumstances may have contributed to the suddenly fatal result:—

First, the distension of the bowels possibly interfering to some extent with the descent of the diaphragm, and hence with easy respiration, though neither before nor during the administration of ether had the patient shown any considerable difficulty or distress of breathing. Mr. Teale regrets, however, that he did not at once complete the operation, and rapidly open the bowel, and thereby reduce one factor—the distension by gas.

Secondly, the undoubted tendency to death from asthenia in cases of abdominal obstruction. In this particular case, the lungs having been more or less emptied of air by the act of vomiting, the additional quantity of blood drawn into the heart and large vessels by the next inspiratory effort might easily have brought the feebly acting heart to a standstill. Mr. Clover suggests to me that by the eructation of fluid containing brandy the ether may have been mixed with alcoholic vapour, which would add to its narcotising effect, and thereby tend to increase the cardiac depression.

Brixton-road, S.W.

ABSCESS OF THE CEREBELLUM.

By W. A. BERRIDGE, M.R.C.S., L.S.A.

I TRUST a general practitioner may be allowed to put upon record the following brief notes of a case of abscess of the cerebellum, as a small token of his gratitude for the instruction he received from Dr. J. Hughlings Jackson, F.R.S., and for the care bestowed upon his clinical education by his former teacher and now esteemed friend, Dr. Stephen Mackenzie.

A. D—, aged seventeen, had suffered from time to time since he was two years old from "gatherings in his head," which "broke," and "smelled very bad." He went to school when five years old, but never got on well. The schoolmaster said "he was stupid, and would not learn." Still he learned his letters, and could hold his own in play with other boys. He had no particular illness, never had scarlet fever, and had no signs of congenital syphilis, but often suffered from headaches and the aforesaid "gatherings."

When first seen (August, 1879) he was tall, pale, and rather thin. He spoke as I have noticed patients with organic cerebral mischief generally do, his words beginning with a "jerk" and ending with a drawl; or, in other words, the first part of a word being sharp and rather acute, the latter part grave and always prolonged. His mother said, "I have sent for you because he has a cold in his head, and cannot smell." On further inquiry, "he had headaches, occasional retchings, and felt giddy"; but he could not describe his "giddiness." He had no "reel." He ate ravenously. Urine 1015, acid, no albumen, no sugar. Temperature normal. He had no paralysis. Pupils dilated, but responded to light.

On examination with the ophthalmoscope, "the edges of both discs were rather indistinct, but there was nothing definite." After some treatment he improved, and was lost sight of for several weeks. When seen again (December 1879) his smell had returned, but he had lost his sight; he was quite blind. The edges of the discs were now quite obscured, the vessels partly covered by exudation; that is to say, he had well-marked double optic neuritis. He vomited frequently, and complained of intense pain at the back of his head. He had now the three cardinal symptoms—headache, vomiting, and double optic neuritis; he had also a long history of ear-discharge; so there was no difficulty in saying he had an abscess in his brain, and that he would die, most likely suddenly.

There was no marked change, and he died quite suddenly on March 12th, 1880. Next day, assisted by my friend and partner, Mr. F. B. Hallows, I opened the head. The convolutions were pale, and somewhat flattened. Nothing was noticed until slicing the cerebellum. There was a large abscess involving nearly the whole of the right lobe of the cerebellum, and containing about three ounces of what a surgeon would call "laudable pus." Permission could only be obtained to examine the head.

Redhill.

NOTES OF A CASE OF LYMPHADENOMA.

By W. BERRY, M.R.C.S.E., L.R.C.P. & S. ED.

HONORARY SURGEON, ROYAL ALBERT EDWARD INFIRMARY, WIGAN.

ON December 10th, 1879, I was asked to see Patrick O'B—, twenty-six years of age, a collier, living in a small house with deficient hygienic surroundings, and was given the following

History.—In August, 1879, he met with an accident in the coal-mine, being injured between two tubs and thrown on his back against the tram-rails. He was able, however, to walk to the surgery of the colliery doctor, who prescribed a liniment for him, which he applied. In consequence of this accident he was off work for one month; then he returned, working only one day, when he stated that he sprained his back owing to his work being heavy. He sought advice this time at the Wigan Infirmary, where he was admitted some time in September. He was discharged on the 9th of December without any improvement, feeling, if anything, weaker than when he entered.

Physical examination.—When I saw him in the evening of Dec. 10th he was lying on his back in bed, having a sallow, pasty appearance, with some puffiness underneath the eyes; respiration somewhat short and hurried; pulse 96, feeble; tongue slightly furred, with slightly raised papillae; and dryish, although he did not complain of much thirst; bowels slightly constipated, and appetite very poor; urine moderate in quantity, of high colour, with some lithates, but no albumen; respiration somewhat puerile, probably owing to its hurried character; no dulness on percussion; heart's sounds very feeble, especially second sound, which could not be heard distinctly, but no murmur. On examining his abdomen, in left iliac region was found a round hard swelling about the size of a large orange; this tumour was immovable, and seemed to increase in size at its base. The inguinal glands and femoral glands of both sides were hard and enlarged, but not painful. He complained of pain behind the abdominal tumour in his back, and attributed all his symptoms to the accident. I did not take his temperature, but the house-surgeon of the infirmary told me that when he was in that institution he had a temperature of 103° F. His wife informed me that he was strong and healthy previous to the accident, but after his death I learned he had not been in good health for some time. The man and his friends were anxious to have all his ailments put down to his accident, so that he might receive benefit from the Permanent Relief Society; hence the difficulty in obtaining a correct history and arriving at a true diagnosis.

I prescribed a mild aperient tonic for him, and ordered plenty of milk and nourishing food.

I saw him two and three times a week, but with no marked improvement in his symptoms. The pasty, puffy appearance of his face increased, his left leg and thigh became cedematous, bed-sores commenced to form over his hip and great trochanter, and the femoral glands enlarged. His breathing got more impeded, and debility much greater.

On Jan. 7th, 1880, the glands just above the clavicle on the left side were much enlarged and almost in one mass, and the posterior triangle of the neck also contained glands enlarged in size.

No history of syphilis could be made out. I came to the conclusion that we had a case of *lymphadenoma* to deal with; through neglect, however, a microscopic examination of his blood was overlooked, but the æmic appearance of his face was sufficient evidence of impoverished blood. He gradually got worse and died on Jan. 18th.

Through the kindness of the coroner, I got an order for a post-mortem examination, owing to the deceased's relatives seeking to obtain pay from the Permanent Relief Society. On January 20th, at 8 P.M., sixty-two hours after death, with the aid of my assistant, Dr. O'Reilly, and my pupil, Mr. Richards, I made a post-mortem. The body was emaciated, with swellings of enlarged glands in the neck, inguinal regions, and left side of abdomen, cedema of the left leg, a small bed-sore over left trochanter major, hæmorrhagic congestion over the buttocks and lumbar vertebræ.—Head: On removing the calvaria, the dura mater was found to be slightly adherent, the brain-surface (convolutions) pale, the arachnoid filled with serous fluid; when cut into it showed the same absence of blood; serum was also found filling both lateral ventricles.—Chest: Lungs in a state of collapse, lying at the bottom of the thorax, the pleuræ being filled with fluid. Lungs, on removal, found to be adherent in places. Heart lying flaccid in the pericardium, which contained very little fluid; on opening its cavities very little dark-coloured blood was found in them; the valves were healthy.—Abdomen: The liver was prominently in view, extending over into the left hypochondriac region, being much enlarged, but healthy in appearance when cut into. The spleen weighed about six ounces, but did not appear diseased. The stomach was distended with gas, as were also the intestines. The coats of the stomach were somewhat thinned, but not to any marked extent. The kidneys were normal in size, capsules easily removed, but the cortical portions thinned, otherwise healthy. On pulling over the small intestines and mesentery, there was found lying on the left side of the bodies of the two lower lumbar vertebræ a solid mass, firmly adherent. I removed a good portion of this tumour with the knife for subsequent examination; it was about the size of two kidneys, and was outside, but enveloped by, the peritoneum. A number of enlarged glands were found on the under surface of the mesentery, about the size of buttons, and these passed down chain-like into the pelvis, along the rectum, being larger on the left side. The glands in the femoral canal were also enlarged. The bladder was healthy.

Wigan.

A MIRROR OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proæmium.

WEST LONDON HOSPITAL.

A CASE OF HÆMORRHAGIC DIATHESIS; HÆMORRHAGE FROM THE MOUTH; DEATH.

(Under the care of Dr. THOROWGOOD.)

FOR the following notes we are indebted to Mr. Sidney H. Lindeman, house-physician.

William A—, aged eighteen, fairly well nourished, but presenting a strumous and anæmic appearance, and who for some time past had lived badly, was admitted on July 9th, 1880. He first attended as an out-patient on July 8th, and stated that on July 4th about 3 A.M. he found that he was bleeding from the gums. This lasted for about four hours and then stopped, but reappeared shortly before coming to the hospital. He had never, he said, noticed it before, but had been subject to profuse hæmoptysis, and at times had found "large blue lumps" on the chest, over the sternum, coming without any cause. These swellings lasted a few days, and then disappeared. He had never had any hæma-

temesis or melæna, nor, to the best of his belief, any effusion into the joints. He volunteered the statement that four of his relations had died of the same thing, but did not know what relationship they bore to him. This made him extremely anxious. He was ordered a gallic and sulphuric acid mixture, and a mouth-wash of alum. This seemed to have had a slightly beneficial effect for a time, but the bleeding returned as bad as ever the following morning (July 9th).

On admission a physical examination revealed a soft systolic murmur at the apex of the heart. Blood was oozing freely from the gums of the upper jaw on the right side. A mixture of iron and the liquid extract of ergot was ordered, and a mouth-wash was given containing equal parts of the tincture of perchloride of iron and water, and the patient was encouraged to suck ice freely. The bowels had acted well. He was put on a liberal diet, which he seemed to take with relish. The hæmorrhage, however, abated little, if anything. The same evening counter-irritation was tried to the back of the neck, but without any perceptible advantage.

On July 11th he presented a ghastly appearance. He had had a very bad night, and after dozing a little had vomited black discoloured blood at intervals. The hæmorrhage had not ceased for a moment. On examining the mouth, the blood seemed to be now coming with a pulse-like motion from the gums of the last two upper molars on the right side; it was watery-looking, and gave the impression of its being arterial. The man had no pain in any of his teeth, which were all sound and of exceptional whiteness. Considering the urgency of the case, it was thought that the actual cautery might be applied with advantage. Accordingly, Mr. Wright, the house-surgeon, passed the cautery along the bleeding surfaces on both sides of the teeth. This produced an eschar over the place; but the gums of the adjoining teeth now began to bleed. Lint soaked in a solution of the subsulphate of iron was now freely used, and the hæmorrhage was completely stopped for about one hour. At 3 P.M. it returned again from the mucous membrane of the cheek and the whole line of gums. The patient was now thoroughly exhausted, presenting a blanched and haggard look, and complaining of pain in the chest and epigastrium. A linseed-meal poultice was applied with relief, and the subsulphate of iron used as before, this time, however, with not such a happy result. Constantly vomiting altered blood and rapidly becoming weaker, he was at last unable to retain the nourishment necessary to sustain life, and died exhausted at 2 A.M. on July 12th.

CROYDON GENERAL HOSPITAL.

OVARIOTOMY; RECOVERY.

(Under the care of Mr. HENRY HORSLEY.)

FOR the following notes we are indebted to Mr. J. J. Newman, house-surgeon.

M. P—, aged forty, unmarried, had been under observation as an out-patient for some months previous to being admitted on Jan. 27th, 1880, for the purpose of undergoing the operation of ovariectomy. Her general health had been good two years before she first noticed that her abdomen was increasing in size; this was most marked in the right side. The swelling slowly progressed, and latterly she had experienced much dragging pain, chiefly in the right groin, and was felt more particularly when lying on her left side.

On admission she had the anxious and pinched expression so often seen in ovarian dropsy. She was of a rather spare habit, but her body was well nourished, and the excretions were normal. Menstruation was regular, and had never been very excessive. The greatest measurement over the tumour was thirty-four inches. There was dulness on percussion, and fluid vibration was perceptible, but not very well marked.

As the ovarian cyst appeared to be free from any extensive adhesions, it was thought to be a proper case for ovariectomy, which was accordingly performed on Feb. 18th. The patient was put under the influence of chloroform, as the bichloride-of-methylene apparatus was found to be out of order. The operation was performed antiseptically, thymol being used in the steam spray. The abdominal incision was five inches in length. The tumour was readily reached, and found to be free from adhesions. It was tapped with

one of Spencer Wells's trocars, the fluid being of a thick gelatinous consistence, having a greenish-yellow appearance. The pedicle, about an inch and a half broad, was transfixed with a needle, and the two halves were tied with a ligature of carbolic Chinese twist, No. 4 size, the ends of one of the ligatures being made to encircle the whole pedicle, which was then divided. The ligatures were cut off short, and the stump dropped into the abdominal cavity. The sponges used to clean out the peritoneal cavity were soaked in carbolic acid lotion (1 in 40). The external wound was closed by four silk-worm-gut sutures, which had been soaked in the carbolic lotion; the sutures were passed from within outwards, the peritoneum being included. Two superficial sutures of carbolic Chinese twist were inserted at the lower part of the wound; hyaloderma smeared with vaseline was placed over the incision, overlaid by pads of thymol and carbolic gauze, which were fixed with strapping and flannel binder. The patient was then removed to a warm bed in the same ward in which she had been operated upon, there being no other patient in the ward.

She made a good recovery, the temperature never rising higher than 99° F., and pulse never exceeding 96. She was sick several times during the night of the operation from the effects of the anæsthetic. The catheter was used regularly for the first eight days, and a hypodermic injection of morphia given nightly for the first week, during which time she was fed upon iced milk, beef extract, and a very small quantity of brandy. The wound healed by first intention, not a drop of pus being formed. On the eighth day all the sutures were removed. The bowels not having acted, warm soap-and-water enemata were used. She menstruated nine days after the operation naturally and comfortably. She left her bed in three weeks, and was discharged from the hospital in five weeks and a half, with an abdominal support. On July 10th she was in perfect health.

The tumour consisted of two communicating cysts—one large and the other much smaller.

MANCHESTER ROYAL INFIRMARY.

CHRONIC SYNOVITIS OF KNEE-JOINT; ASPIRATION OF JOINT.

(Under the care of Mr. HEATH.)

FOR the following notes we are indebted to Mr. Oliver Withers.

Annie G—, aged twenty-three, weaver, fair complexioned and well nourished. She began to suffer great pain in the right knee about three years before, and swelling then set in. The knee, however, neither looked red nor felt hot, but the pain continued, and became very acute, especially when she tried to walk. The swelling remained with but little variation in amount up to the time of admission. She had always had good general health. Had no recollection of injuring her knee, though she was often obliged to kneel for long together in her work. There was no history of rheumatism, and there was no evidence of struma.

The right knee-joint was swollen, the swelling chiefly affecting its upper part. There was distinct bulging on each side of the quadriceps tendon, and fluctuation was clearly felt across the joint. The knee felt of normal heat, and there was no redness of the skin. Night-pain was very acute within the joint, though there was no tenderness or pain when the sole of the foot was struck. The synovial membrane felt thickened, and the joint-cavity was evidently distended with fluid. Temperature normal.

On May 25th Mr. Heath aspirated the joint under the carbolic spray by pushing in the trocar on its outer side about one inch and a half external to the margin of the patella. About three ounces of a thin, dark straw-coloured fluid were removed. The wound was then dressed antiseptically, and the limb placed on a back splint, with a foot-piece to ensure rest to the joint. The next day the patient was quite comfortable, having slept soundly through the night. Temperature normal.

The leg was left untouched until June 1st, when the dressings were removed for the first time; the wound had quite healed, but there still remained some slight pulpy thickening in the joint.

On June 8th Scott's dressing was applied with a starch bandage over it. The knee was still painless. The temperature never rose above the normal line during the whole time she remained in hospital, and the pain was completely relieved by the operation.

ACUTE SUPPURATION OF KNEE-JOINT; ASPIRATION.

Martha V—, a thin, pale, delicate-looking woman of twenty-seven, had suffered with a swelled and painful knee for about a month. She had no recollection of having injured the knee, but her attention was attracted to it by the severe pain she felt in it, and she found a slight swelling on one side of the patella. This quickly increased in size until it spread over the whole joint, which became very hot and tender.

On her admission (May 17th) the knee was very swollen, hot, red, and painful. There was great bulging over the inner part of the joint, and the skin was very tightly stretched over the contained fluid, and was of a deep red colour. The knee was slightly flexed, and she kept it perfectly quiet on account of the acute pain which the slightest movement brought on.

Mr. Heath determined to aspirate at once. This was done under the spray, and five or six ounces of a sero-purulent flaky fluid were withdrawn. The limb was dressed like the former case. Axillary temperature 100° 6'. When the dressings were removed next day three ounces of pus escaped. Temperature normal; no pain. The limb remained bandaged after being dressed a few times from the 25th of May to the 2nd of June, when the wound was found to have healed. The joint was quite painless, and there was no return of swelling or other inflammatory symptoms. Patient left hospital with some joint-movement on June 18th. The temperature in this case after operation never rose above 99° 2', and from the sixth day to the end of the time was normal.

SHEFFIELD GENERAL INFIRMARY.

CONTUSED WOUND OF KNEE-JOINT: SUPPURATION; RECOVERY.

(Under the care of Mr. JONATHAN BARBER.)

FOR the following notes we are indebted to Mr. Charles M. Goyder, late house-surgeon, now senior house-surgeon at the Newcastle-on-Tyne Infirmary:—

J. G—, aged twenty-one, grinder, was admitted on Oct. 27th, 1879, suffering from contused wound of the left knee. He said that whilst grinding, the stone flew to pieces, and the sharp edge of a heavy fragment struck the outer side of the left knee-joint.

On admission there was a wound one inch in length, and transverse in direction across the outer side of the left knee-joint, in the interval between the external semilunar cartilage and the external condyle of the femur, completely severing the outer fibres of the ligamentum patellæ. On cleansing the wound, which contained much grit and dirt, the synovial membrane was found to be divided, and the cartilage covering the external condyle scored and abraded. There was no bleeding, but synovia escaped freely from the wound. The patient's general condition was good; pulse quiet. There were no symptoms of shock. The urine was healthy. The patient did not complain of much pain, walked to the infirmary, and was with difficulty induced to stay.

The wound was carefully cleansed at once, and the patient removed to bed. The joint was syringed out with a 5 per cent. solution of carbolic acid, a drainage-tube was inserted, and the usual antiseptic dressing was applied under the spray. The limb was placed on a back splint. Milk and beef-tea, together with perfect rest, prescribed. The evening temperature was 100° F. Next day there was a plentiful serous discharge, but the wound looked well. Morning temperature 99°. On the 29th the wound looked angry and tumid. The discharge was copious; the dressings were fetid, and at Mr. Barber's request were replaced by poultices of linseed meal. On the 30th pus was escaping freely. The morning temperature was 103°. There were great swelling and redness around the joint, with œdema of the limb above and below, and the man complained of intense pain with startings at night.

From this time the patient's general condition grew worse. Hætic supervened, and was soon followed by large abscesses in the substance of the thigh, but by none below the knee-joint. There was rapid emaciation; the tongue

was red and small; the pulse rapid and easily compressed. There were frequent rigors, the temperature varying from 102° or 103° in the evening to 99° in the morning. There were headache, sleeplessness, vomiting and purging, and great general depression.

The abscesses were evacuated through drainage-tubes. Chinchona with ammonia was administered internally, together with liquid nutritious food and a stimulant (brandy). Morphia was administered hypodermically to relieve pain.

The general condition gradually improved, through a long but steady convalescence. He was allowed to take solid food, with one pint of beer daily. At the same time he was put upon a McIntyre's splint, in order that as ankylosis took place the limb might be slightly flexed at the knee-joint.

Ankylosis gradually took place, and on March 18th he became an out-patient, with a firm, useful limb. On May 20th he was seen, and stated that his leg was perfectly firm, and becoming daily more useful to him.

KNEE-JOINT DISEASE; EXCISION; RECOVERY.

(Under the care of Mr. J. BARBER.)

S. K—, aged twenty, admitted Feb. 6th, 1880, suffering from disease of the left knee-joint. She stated that fifteen years before she injured the left knee by a fall, and that the limb had never been properly useful since, although she had continued to work and do some amount of house-work.

On examination the knee was seen to be swollen and bulged laterally; it was hotter than the right. The limb was straight, and only very slightly shorter than the opposite one. There was fluid in the joint, and the ends of the bones were expanded. Upon moving the limb flexion and extension were found to be limited, though the patella was free, and there was no grating. Lateral movements showed the ligaments to be relaxed. The heart and lung sounds were normal and the urine was healthy.

On March 10th, under antiseptic precautions, Mr. Barber excised the left knee-joint. The bone ends were found soft and diseased, and were freely removed; the synovial structures were thickened and pulpy, and they also were removed. There was very slight bleeding, and a drainage-tube was inserted between the bones, on a level with the extremities of a horse-shoe-shaped incision. The limb, after having been dressed, was placed upon a back-splint with an interruption opposite the knee. Milk diet was ordered. At 6 P.M., as considerable oozing had taken place, the wound was dressed by Mr. Kirsopp, assistant house-surgeon. Evening temperature, 99°.

Next morning the wound was dressed again and was doing well. There was no pain. The drainage-tube was removed and cleansed. Morning and evening temperature 98° 4'. On the 16th the wound was dressed. There were no signs of inflammation; the discharge was serous. On the 22nd the wound was healed, except at the opening for the tube.

On April 20th there was no motion laterally, and so far no inflammation or its results. The tube had been gradually shortened.

On May 12th the wound was entirely healed. There was good firm union, although not bony. Temperature throughout the case 98° 4'.

On June 5th the limb was placed in a starch bandage, and the patient was allowed to move about and get up. She complained of no pain, and felt perfectly well.

On July 29th the patient was going on extremely well, and although true bony union had not yet taken place, the knee was quite sound, and movement becoming less.

BELFAST ROYAL HOSPITAL.—The last Sunday in November is appointed for a general collection in Belfast in aid of the funds of the Belfast Royal Hospital, instead of the last Sunday in the year as heretofore. The employees and staff of the Brookfield Linen Company have contributed the very handsome sum of £40 18s. 5d. towards the funds of this charity.

A DEARTH OF WATER is threatened in the Clyde district. Greenock is stated to have only a thirty-six days' supply in store; and at Dumbarton, should the consumption be at the usual rate and the drought continue, the stock of water, it is feared, will be exhausted in less than a fortnight.

Reviews and Notices of Books.

Cours de Thérapeutique, professé à la Faculté de Médecine.
Par ADOLPHE GUBLER. Paris: Baillière.

THE name of Professor Gubler is probably not much known in this country, but few recent French physicians have inspired more affectionate regard and esteem among their pupils, or have at their death been more lamented. His last course of lectures was completed in July, 1878, and since his death they have been published under the supervision of Dr. Bordier. They have, however, been given to the public unaltered, from the shorthand notes of one of his pupils. The volume fully maintains its author's reputation. It is clear and fairly concise in style, and exhibits a wide knowledge of facts, old and new. The lectures possess, however, a characteristic which is very common at the present day in French medical literature—an endeavour, by extensive generalisation, to include all facts under general laws in a firm, if courteous, dogmatism, which does not like, and often will not tolerate, differences of opinion.

The work is not a systematic treatise on Therapeutics, but rather a sketch of the general principles of the action and use of remedies, illustrated by examples, some of which are given in considerable detail. Some general considerations on the nature and effects of remedies occupy the first four lectures. The various modes by which they are introduced are described in the next seventeen lectures. Four are then devoted to a consideration of the changes which drugs undergo in the system; and in the remaining lectures are discussed the modes of elimination of drugs, and the question of their antagonism. Drugs constitute but a part of our therapeutic arsenal, and the author's first task is to draw the necessary distinction between remedies and medicaments. He insists, with justice, on the therapeutical importance of many remedies which are not usually noticed in a survey of the subject. Foremost among these are moral agents, in which are included amulets and homœopathy—"encouragement and clear water" constituting the essential muniments of the latter. The mechanical and chemical effects of drugs are next glanced at, and the author then discusses the *modus operandi* of the large class of agents which do not act in either of these ways. Many drugs and articles of diet are capable of producing a profound effect even when given in small quantity. The theory is advanced that their operation is by yielding force to the system. The argument is based on the analogy of the liberation of force (heat, light, &c.) by substances in changing their state, and it is urged that no other theory is conceivable. It must be confessed, however, that the direct evidence in support of this theory is very small. Of an explanation of the action of many agents, as alcohol, coffee, &c., that they spare the tissues by lessening tissue consumption, Professor Gubler speaks in terms of contempt, but he brings forward no destructive evidence. Much as there is in physiology which cannot be explained by the known facts of mechanics and chemistry, there is even more that is thus inexplicable in pharmacology and therapeutics. The addition to the "radical forces" of the organism is regarded as the essential action of tonics, and stimulants are distinguished as agents which merely excite the evolution of the force furnished by the tissues. The ultimate effect is the same, the path by which it is reached is essentially different. The one increases, the other lessens, the force-producing power. The action of small and of large doses of strychnia is given as an example of this difference. The idea is, of course, that which underlies the name of "tonic" and "stimulant," but it may be doubted whether modern physiological knowledge should not make us hesitate before accepting it. That a simple stimulant may act ultimately

as a tonic, the effect of muscular exercise, voluntary or that artificial exercise which is produced by galvanism, abundantly shows; and it may well be that many true tonics are purely stimulant in their mode of action. The elective action of drugs on different parts is explained partly by their mode of elimination, and partly by analogues of chemical constitution between the drug and the tissues. The former explanation does but push the mystery a little further back, while the latter, supported though it is by the opinion of Liebig, rests on so small a basis of even presumptive evidence that it seems better to confess our ignorance than to attempt a dogmatic explanation.

In considering the medicinal substances which are drawn from the vegetable kingdom, M. Gubler directs attention to the remarkable illustration which they present (and which many inorganic drugs present likewise), that their influence has no relation to the constituents, but depends on the proportion and mode of arrangement of their elements. Drugs which are inert and those which are most potent are composed for the most part of the same elements. Their different action depends on the way these elements are grouped; as, for instance, we see in the similarity of combination in all the anæsthetics. Moreover, the most potent of the constituent elements—nitrogen—seems to render the compounds less active. Atropine contains less nitrogen than morphia; morphia less than theine. A still more striking instance of the effect of combination is afforded by arsenic, which, so potent a poison in an isolated form, is powerless when combined in cacodyl. Thus a slight change in constitution may profoundly alter the action of a drug. The beautiful discoveries of Fraser are quoted in illustration of this. The substitution of a molecule of ethyl for one of hydrogen in strychnia converts the most powerful tetanising agent known into one which paralyses the muscles, and thus we are able to understand how it is that the source of curara and of strychnia is almost the same.

The method by which medicaments are introduced into the system constitutes the next topic. The necessity there is that the substance should be in a liquid state is provided for, to some extent, by the solvent powers of the digestive juices, and of this one of the most important instances has only recently become known—the solvent power of albumen, contained so abundantly in the mucus of the alimentary canal, and which can dissolve even metallic mercury. But this method of administration has its disadvantages in the gastric irritation which many drugs occasion, and in the interference which they cause with the digestive process. An instance of the latter is furnished by some experiments with phosphorus. Having noticed a disturbance of digestion when phosphorus was given with food, M. Gubler obtained some gastric fluid from the dog by means of a biliary fistula. He placed some in a series of tubes with pieces of meat, and to some of these he added powdered phosphide of zinc. In a certain number of hours the tubes which contained only meat and gastric juice remained unaltered, while in those to which the phosphide of zinc had been added the meat was softened, browned, and half transparent. He has suggested an ingenious method by which the gastric irritation may be avoided and drugs kept from contact with the mucous membrane until the intestine is reached. This consists in enveloping them in fatty matter which is not acted upon in the stomach, but which becomes removed and absorbed when it reaches the intestine. It has been proposed to administer bile in this way when the secretion of the liver is deficient.

Into M. Gubler's discussion of the advantages and disadvantages of the introduction of remedies by the other mucous surfaces we cannot follow him in detail, but may mention one or two of the points on which he lays special stress. The statements which have been made regarding

the absorptive power of the mucous membranes of the bladder and vagina are singularly contradictory, but are reconciled by the different conditions under which the observations have been made. In health the absorptive power of these surfaces is very small; in disease it is very active. Hence, under the conditions in which we most want the local effect of remedies, we may apply them without hesitation, if they are not deleterious to the general system. Of all the mucous membranes the most active can be utilised only for vapours—that of the lungs. Some instances mentioned of the absorptive power of the lungs for liquids deserve to be better known. It was found at Alfort that from ten to fifteen litres of water introduced into the lungs of a horse were absorbed with great rapidity. Indeed, a constant current of water might be thrown into the air-passages, and the animal might die from the effect of the water on the blood and tissues, and yet the lungs after death be found free from water. These and other facts furnish a rational basis for the introduction of atomised liquids by the lungs, and even, within restrictions, of atomised solids. These subjects are discussed at length, and very ably, in the pages of M. Gubler's work.

An interesting chapter is devoted to the question of the administration of drugs through the undamaged skin. The experiments which have been made as to the absorption through the skin are carefully examined in the light of the author's own investigations. The facts that iodide of potassium is not absorbed from a bath, while a solution allowed to dry upon the skin is absorbed, are at first sight contradictory. Their reconciliation is found in the law that watery solutions are not absorbed, but that volatile substances do enter the system through the skin, apparently by their power of diffusion into the glands. If iodide of potassium is allowed to remain in contact with the skin, it is decomposed by the fatty acids, and the iodine thus passes in. Moreover, fatty substances are readily absorbed by the sebaceous follicles, and may carry with them substances which are dissolved in them, or which are in a state of fine suspension. The secretion of the sebaceous follicles, which facilitates this, hinders the absorption of watery solutions just as an oiled filter allows fat to pass through, and does not allow the passage of a watery solution which may be mixed with the fat. Thus many liniments, the basis of which is oily, are effectual. Moreover, the absorption is favoured by substances, such as chloroform, which can dissolve fatty matters, and therefore the secretion of the sebaceous follicles. The absorption of volatile, non-fatty substances is most active where the sebaceous glands are fewest, as in the axilla and groin.

The hypodermic method of administration receives its full share of attention, no less than five lectures being devoted to history, methods, application, theory, and dangers. The facts, admirably described, are for the most part well known. The author's opinion on the much-discussed question of the relative value of local injections—i.e., made into the part which is the seat of the disease—is worthy of note. His experience of the use of the hypodermic method is so large that his opinion on this point deserves special weight. It is strongly in favour of injection into the seat of the disease. The facts adduced in support of this view are, if well observed, conclusive. He states that in patients suffering from the rare condition of double sciatica the pain in the leg into which the injection is made is relieved far more than that in the other, and that this observation may be made alternately on either leg. Another interesting observation relates to the diminution of sensibility often to be noticed around the seat of the injection. He has observed this with injections of various substances, and uniformly when water only was injected. He attributes it to the hydration of the cutaneous nerves in their subcutaneous

course. It passes off when the local excess of water is removed. To this action the effect of injections of pure water is to be ascribed. He relates the case of a patient in whom he frequently substituted an injection of water for one of morphia, always with the effect of temporarily relieving the pain, which returned, however, much sooner when water was injected than when morphia was used.

The next four lectures are devoted to a consideration of the modifications which drugs undergo in the organism, illustrated by a lengthy and detailed study of the action of arsenic, in which, however, there is little that calls for special notice. Of more interest is the subject of the elimination of medicines, which is next examined at length. The faculty of generalisation, here as elsewhere throughout the work, carries the author into positions which are, we will not say untenable, but certainly less impregnable than their mode of statement would imply. For instance, he finds an explanation of a large class of facts in regard to the action and elimination of drugs in the relation which they bear to the constituent elements of the tissues. "Drugs are rejected the more rapidly, the more widely they differ from the normal components of the organism." Bernard has shown that the salts of potash are not tolerated so well as those of soda; they are indeed "muscular poisons." This is because there is little potash normally in the blood. Hence the potash is not expelled from the blood. The muscles contain normally much potash, and hence the potash in the blood accumulates in them in an excess which interferes with their nutrition. In the case of other salts the action of the same law is seen. Chlorides are better tolerated than bromides, and these than iodides, "always for the same reason" that the chlorides are in abundance in the organism, and hence are eliminated more rapidly. "Tolerance or intolerance for a substance is explained by its homogeneity or heterogeneity with regard to the organism which receives it." The reader will probably hesitate to accept the "law" as the sole explanation of the facts, and his hesitation will not be lessened when he reads, two pages further on, of some facts which are scarcely reconcilable with it (although the author appears unconscious of this)—namely, that iodide, bromide, and chloride of sodium are eliminated twice as slowly as the corresponding salts of potash, and that the same is true of the carbonates of soda and potash respectively. In truth, our knowledge of the action of drugs and the physiological chemistry of the tissues will probably have to be much more extensive before we can formulate the laws on which their elimination depends. We have not space to follow the author in his discussion of other facts relating to the elimination of drugs, and to their accumulation in the system.

In the final lectures the subject of the antagonism of medicines is very ably discussed, but on this subject we must refer the reader to the work itself. It will well repay perusal. As a guide to students, the small field which it covers, and the large amount of hypothesis which it contains, render it scarcely suitable. The teacher of therapeutics, however, will be rewarded by its study, on account of the extensive knowledge of facts, many of which are unfamiliar, the quickness to seize the relations of those which are apparently distant, and the long experience, which it displays.

Headaches; their Nature, Causes, and Treatment. By WILLIAM HENRY DAY, M.D., M.R.C.P. Lond., &c. Third Edition. J. & A. Churchill.

WHEN a work reaches a third edition, it may claim to have justified its author in writing it, and to be pretty independent of reviewers. There have been many previous works on headache, but it is to be admitted that Dr. Day writes at some advantage over his predecessors, inasmuch

as he is in possession of a deeper physiological knowledge of the problems involved in headache than was possible before the researches of Bernard, Ferrier, Jackson, and others. We are not yet, however, in possession of any such physiological knowledge as will enable us to comprehend all the mysteries of headache, or to know why one person's head is so constituted that it is more easy to say when it is not aching than when it is, and another's is so constructed that it never aches at all; why one person's headache always occurs on a Monday, and another's on a Friday, both of which are within our clinical experience. We are not yet ripe for any strict pathological theories of headaches. Dr. Day wisely says that "*he has relied rather on the investigation of facts as presented by the record of cases, than trusted to plausible theories.*"

In successive editions we should advise Dr. Day to discard theories even more freely than he has done, and all but strictly clinical classifications of his subject. By so doing he will still further simplify it. Some of his chapters seem tautological; as, for example, when he devotes one chapter to headache of cerebral hyperæmia, another to congestive headache, and another to plethora and increased vascular action. He describes no less than thirteen kinds of headache, exclusive of a chapter on headaches of childhood and early life, in which he mentions seven kinds of headache. It is, of course, difficult to discuss headache by itself, and to attempt to do so requires some justification. But it is so conspicuous and "commanding" a feature of human suffering that physicians may well be excused for giving it special consideration, though no better illustration could be adduced of the impotence of "specialism" than when it attempts to separate and to treat headache as an isolated disease. Dr. Day takes no such limited view of his subject, but, as a practical physician, regards it in the light of his patient's age, circumstances, history, and diathesis; he brings to bear upon it a large amount of experience and medical knowledge, and makes many therapeutical suggestions of much value.

On Preservation of Health in India. A Lecture, addressed to the Royal Indian Engineering College at Cooper's-hill, May 17th, 1880. By Sir JOSEPH FAYRER, K.C.S.I., &c.

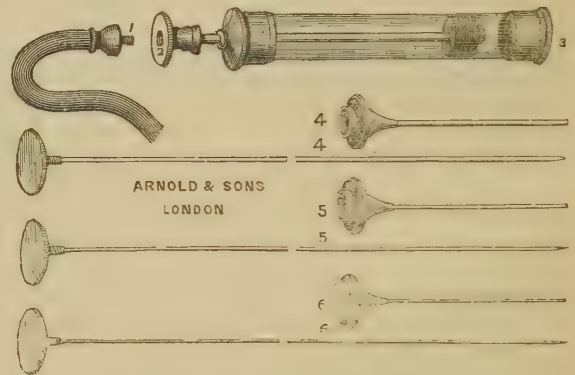
THE object of this lecture was to give to the young men educated at Cooper's-hill such information about the climate, mode of living, diseases, and means of preserving health in India, as would be likely to prove useful to them in the peculiar circumstances under which they are placed on commencing their service in that country. It appears that there has been a great amount of sickness among the young engineers who have gone out to India, and that much of it was of a preventable character, and might have been avoided by a very moderate amount of information as to the mode of life to be followed on first arrival in the country, and the best course to be taken to meet the first symptoms of illness. To remedy as far as possible the effects of this want of knowledge, Sir Joseph Fayrer was requested to deliver this lecture. In it he has given a brief sketch of the climate of the various parts of India in which the engineers are employed, and has pointed out the more prominent causes of disease and the best means of counteracting them. The latter may be briefly summarised as—Lead regular lives, avoid excesses of all kinds, take regular exercise, keep the bowels open, wear flannel, and as far as possible avoid exposure to the sun. He has also given a short description of the most prevalent diseases, and the measures to be adopted until medical aid can be obtained; and an interesting account of the effects of snake-bites, and how to treat them—a subject upon which he may be justly considered the highest authority. The lecture cannot fail to prove useful to those to whom it was addressed; but we would suggest to Sir

Joseph Fayrer that he would confer a still greater benefit upon them if he made it the groundwork of a short handbook on the subject, prepared with special reference to the work upon which, and the circumstances under which, the Civil Engineers in India are employed.

New Inventions.

EXPLORING ASPIRATOR.

MESSRS. ARNOLD have made for Dr. Hensley of St. Bartholomew's Hospital an exploring aspirator. It consists essentially of a syringe in combination with a cannula and trocar; the cylinder of the syringe being prolonged into a fine cannula, while the piston-rod is continuous with the trocar, so that the retraction of the trocar and of the piston causing aspiration is by one movement. The cylinder of the syringe is a glass tube fitted with similar screws at both ends, one of which fastens into the collar of the piston-rod; the other (3 in the figure) takes a screw-cap, by means of which cannulæ of different sizes may be fixed in air-tight



connexion. The needle passes completely through the piston-rod, and, when the syringe is filled, may be withdrawn by unscrewing at 2; the elastic tube, 1, can then be easily attached without any risk of air passing through the cannula.

The advantages of this instrument, as compared with the ordinary subcutaneous syringe used for diagnosis, are: it is stronger and made with a larger tube; the needle-point is at once withdrawn, and the orifice of the instrument cannot get blocked in inserting it; whilst after being used for exhaustion, it may be employed for the injection of anti-septic or other fluids if required. As compared with a larger aspirator, the advantages it possesses appear to be, that the risk of admitting air is considerably diminished, whilst the glass cylinder affords means of observing the flow of fluid close to its point of exit; also that a smaller cannula may be used than can be employed with a larger instrument. It is important, in using it, to see that all the fittings are in working order, and screwed tight.

DR. HAMERTON, resident medical officer of the Lambeth Infirmary, was presented with a handsome testimonial, on the occasion of his leaving, by the officers and others connected with the institution; it consisted of a microscope by Baker, a pocket case of instruments, a gold pencil-case, and a diamond breast-pin. Great regret was expressed by all at his leaving, he having held the office more than five years, and during all that time he was universally respected by his fellow-officers and loved by his patients.

BUTTERINE.—In a Dublin police-court last week, five traders were fined £2 each for exposing for sale as genuine butter a substance known as "butterine," or oleomargarine. This is the first occasion in Dublin that a prosecution has been instituted for the sale of butterine.

THE LANCET.

LONDON: SATURDAY, SEPTEMBER 4, 1880.

THE chief topic of Professor HUMPHRY'S Presidential Address at the recent meeting of the British Medical Association at Cambridge is especially deserving of notice at this time—the approach of a fresh medical session. For many years Professor HUMPHRY has devoted himself to the task of reviving the medical school at Cambridge, and in his address he discussed the subject at great length. He first showed that it was not the original intention of the founders and the first legislators of the University to exclude medicine from the studies at Cambridge. In the earliest College statutes permission or direction is given to some of the members to pursue the study of Medicine, and in the scheme for the University, which was in the main based upon that of the University of Paris, the Faculty of Medicine was placed on an equal footing with those of Theology and Law, and the provisions for teaching and graduating in the three faculties were identical. So, also, in the professorial foundations of HENRY VIII., by which the professorial system was made to supersede the method of teaching by regents, bachelors, and doctors, Medicine shared in common with the other faculties. How have these intentions to establish an actual medical faculty been foiled? The answer is neither direct nor easy, but may be found, says Dr. HUMPHRY, if at all, by a careful study of the history of the past. Some of the causes of failure are peculiar to Cambridge, and some appertain to rival English or continental cities and schools.

After a rapid survey of the history of medicine in Europe from the thirteenth to the seventeenth century, Professor HUMPHRY proceeded to consider in detail some of the circumstances that had militated against the existence of Cambridge as a medical school. The fame and reputation of many of the continental anatomical and medical schools, such as Salerno, Bologna, Paris, and Padua, attracted the best of the English youth, and when they returned to their native country Cambridge did not offer sufficient pecuniary or courtly attractions even for its own *alumni*. HARVEY, for instance, when he returned from Italy, settled in London; and CAIUS first practised in Shrewsbury, and then in Norwich. Even GLISSON, the Regius Professor of Physic in the University of Cambridge from 1637 to 1677, was a resident in London.

Another cause of Cambridge's failure was the ascendancy which the metropolis had gained by the foundation of the College of Physicians. In 1518 the learned LINACRE obtained from HENRY VIII. letters patent to found the College, with the privilege of licensing practitioners throughout the country. Lectures were delivered at the College, and London thus became the chief centre of medical teaching as well as of the licensing of medical practitioners. Thenceforth the metropolitan influence grew apace. Teachers, practitioners, and students were attracted in large numbers,

and the vast population afforded plenty of scope and material for the study of clinical medicine.

Another drawback was the religious restrictions imposed by the University. These restrictions, says Professor HUMPHRY, “wellnigh divested the University of the character of a national institution, and of its claim to public sympathy and regard.”

These defects have, however, at length been removed, and an opportunity is now afforded to Cambridge of taking a distinct place as a centre for teaching the preliminary subjects of medical study, such as natural philosophy, botany, chemistry, anatomy, and physiology. It is, perhaps, not possible, and it is scarcely desirable, to attempt to make of Cambridge a school of practical medicine and surgery; the material is lacking. Medicine, surgery, and pathology can only be adequately studied in the centres of large communities, but the pursuit of chemistry, anatomy, and physiology does not need the same extraneous conditions. Cambridge may very properly take the initiative in alluring would-be medical students to a higher grade of preliminary education, and as the general preliminary education improves the *status* of the medical student will rise in a corresponding degree. It will then not suffice to have the sciences of chemistry, anatomy, and physiology taught by junior medical practitioners, whose chief ambition is to gain a large medical and surgical practice in a big city. Medicine and surgery proper must, of necessity, be taught by trained and experienced practitioners; but chemistry, anatomy, and physiology are best and most worthily taught by skilled professors free from the distracting anxieties of practice. In this way Cambridge is capable of doing a service to the cause of medical education. Its University already possesses, or may easily acquire, the facilities for teaching these important preliminary medical subjects. To the metropolis and other populous districts must be always entrusted the task of furnishing the *matériel* and *personnel* of the strictly medical education.

THERE have been few subjects in pathology more debated than diphtheria, and the special lesion which characterises it—from which indeed it takes its name; and few about which so much needless confusion and mystery have clung. We may now fairly assume that the vexed question of identity between this disease and that styled “membranous croup” has been set at rest, and it is not intended here to raise it again. At any rate, it has been shown conclusively on all sides that there is no anatomical difference in the two diseases, but only a topographical difference as to the seat of the exudation; and similarly, one by one, all etiological, clinical, and other distinctions have faded before the exhaustive analysis of modern inquiry. Still, however, pathologists have differed much upon the subject of the nature of the false membrane in diphtheria, and it is only one instance out of many in pathological histology which show how various may be the interpretations put upon microscopical appearances. The reason for divergence of opinion is not a simple one. It depends, in one instance, upon the different stages at which the exuded product has been observed; in another, upon the different seat at which it has been formed; and sufficient account has not been taken of such essential points as these, whilst too much stress has

been laid upon other and more accidental features. The sad confusion which resulted from the introduction of the terms "croupous" and "diphtheritic," as general pathological phrases, indicative of various forms of inflammation of mucous membranes, with which the German school is to be credited, has done much to complicate the plain facts of the case; and the non-recognition of the fact that the effects of local irritation of a simple kind lead to changes on mucous membranes identical with those produced by the specific irritation of the diphtheritic poison is yet another element which still obscures the subject. A remarkably lucid exposition based upon carefully conducted study of this phase of the question by M. LEOIR, in the current number of the *Archives de Physiologie*, seems to us to be worthy of attention. Although this observer arrives at conclusions differing in some points from those of others, yet he has succeeded well in harmonising many discordant views, and has placed the matter in so clear a light that we think it well to briefly follow him in the course of his reasoning.

M. LEOIR commences by a brief historical summary of the views held upon the nature of the diphtheritic false membrane, and he shows how, from having held the opinion that this is purely a fibrinous exudation, pathologists have come round to view it as one of purely epithelial transformation, the first to enunciate this view being WAGNER in 1866. The truth indeed lies between these two schools, and the way at which this has been arrived has been by experiment. Many observers have hitherto tried to establish the identity between the membranous exudations following the application of irritants to mucous membranes and the specific membranous formations, but have been subjected to much hostile criticism, and have failed to carry conviction. LEOIR has followed the same course, producing the exudations on the fauces and pharynx in dogs, rabbits, and guinea-pigs, chiefly by means of ammonia, and observing the changes produced both by the naked eye and by microscopical examination at intervals varying from fifteen minutes to two or more days after the exposure to the caustic. He has thus been able to trace all stages of evolution of the false membrane. At first the change is simply denoted by redness of the affected patch, which sets in almost immediately after the application. But already the superficial cells of the stratified epithelium exhibit notable changes. A clear space appears around their nuclei; the cells are enlarged, but remain connected, whilst in the deeper strata there is evidence of their proliferation, and the vessels of the submucosa are gorged with leucocytes. About an hour after the application the patch has assumed a semi-transparent opalescent appearance; the perinuclear clear spaces have enlarged, the cell-protoplasm has become fibrillated and of a glistening character, whilst the nuclei remain in parts unchanged, in other parts increased in number but not in character. Thus in this stage the upper layers of what is now a distinct false membrane presents a reticulate appearance, wholly due to changes in the epithelial cells themselves; but in a very short time—five to eight hours—this primary reticulum begins to disintegrate, leucocytes and a fibrinous exudation penetrate the meshwork, until there is formed a thick white opaque membrane, that with which we are most familiar in diphtheria. In this third stage of its evolution the membrane can be resolved into two distinct parts—a *superficial*, com-

posed of fibrinous filaments entangling pus-cells, degenerate epithelial cells, and fragments of the primary reticulum, which still persists in a modified form in the *deeper* layer. In the fourth stage the membrane has assumed a yellowish-grey colour, the epithelial reticulum is almost entirely broken up and replaced by the exuded inflammatory material; and the final stage is that of disintegration of the false membrane, which assumes a pulpy consistency and yellowish colour. If the inflammation has been very intense, the vessels in the submucous tissue are compressed, and necrotic processes of a more or less deep extent take place.

Now, on comparing these changes with those which take place in pharyngeal diphtheria, a perfect similarity is observed between them. As may be imagined, M. LEOIR has had no opportunity of studying the earliest stage of the membrane in this disease, but he was enabled in two cases to meet with areas of exudation in the second or "opalescent" stage, and he found there the reticulum formed from altered cells, the nuclear proliferation, and the commencing invasion of the reticulum by fibrin and leucocytes, just as in his experimental cases; groups of micrococci being found in addition. And so, indeed, with the later and better known stages of the diphtheritic membranous formation; a close identity was found between it and that produced artificially upon the pharynx, fauces, epiglottis, and vocal cords. In the non-stratified epithelium of the larynx and lower air-passages there is no scope for the formation of the epithelial reticulum, and the false membrane is then almost entirely composed of leucocytes and fibrin, a distinction which sufficiently accounts for the well-known difference in the degree of adhesion to the subjacent mucous membrane in this site as compared with the pharynx. The fact that in diphtheria the membrane will re-form after being detached, whereas it does not in the case of simple irritation, is explained by the persistence of the cause of irritation—the specific poison—in the former case, and its absence in the other; and probably also from the blood-plasma being altered in diphtheria, and able more readily to traverse the coats of the vessels. Thus a diphtheritic false membrane is composed not of material simply exuded from the blood alone, nor of alterations in epithelium alone, but both the blood and the epithelial tissues have an important share in its production, the epithelial elements taking a far larger share in the regions where they are normally stratified than where they exist only as a simple layer; and in the former regions it can be shown how (except in a few rare instances, where the inflammatory exudation seems to pass through the epithelial strata almost *ab initio*) the false membrane is primarily of purely epithelial origin, how it becomes more and more mingled with products of exudation, which finally almost wholly compose it. The suggestion, too, is thrown out that cases of death from asphyxia in children, which may occur in the very early stages of the disease, do so by the glottis becoming occluded by the mere preliminary epithelial swelling in addition to the submucous hyperæmia, before the process has reached the stage of actual membrane-formation.

Whilst, moreover, no anatomical basis of distinction exists between diphtheria and croup, neither can any difference be established between the pseudo-membranous products fol-

lowing experimental irritation and those due to the poison of diphtheria. Nay, more than this. M. LELOIR declares that the same anatomical identity underlies all membranous inflammations of the mucous membrane, whether this be in "herpetic angina," in "pellicular" tonsillitis, mucous patches, chancres, &c. And if this be true, we have here only another illustration of like effects following a multiplicity of causes. It is surely far better to interpret facts in this light than to seek in the mere effects of disease for the differences which lie deeper in the organism—viz., the nature and mode of evolution of the so-called "irritant" (in its widest sense) that is at the root of the manifestations. The concluding paragraphs of this paper are taken up with a comparison between these processes and those of pustular eruptions on the skin, but space forbids our entering on the interesting and suggestive inquiries there opened.

ONE of the great therapeutical problems, if not the greatest of such problems before the profession in our time, is the treatment of chronic disease, and of those constitutional faults which underlie chronic disease. If the general practitioner will take his list of patients and write down in a corresponding list the names of each of their diseases, he will be surprised to find what a large proportion of his work has reference to disease that is not acute, and to ailments rather than disease. This impression is got from practice only. In a hospital the medical student sees a severe class of cases, medical or surgical, representing accidents and emergencies and exceptions, rather than the ordinary "ills that flesh is heir to." But he will not have been long in practice before he finds out how different is the set of facts and failings with which he now comes to deal, and how much his peace and satisfaction as a practitioner depend on the intelligence with which he can formulate a judgment with regard to them. He will find his nosological list will not run so much in the heroic style, such as pneumonia, fevers, cerebritis, and peritonitis. It will take less acute forms—as dyspepsia, phthisis, albuminuria, lithiasis, constipation, hæmorrhoids, hæmaturia, epilepsy, diarrhœa, shock, diabetes, cardiac faults, cancer, gout, &c. An acute case or two no doubt give a practitioner much trouble and anxiety for a few days, but such cases are soon over, and the general principles upon which they are to be treated are now pretty well matters of agreement. But with chronic derangements it is otherwise, and unless their significance be quickly and intelligently apprehended the patient drifts into disease, and often into dissatisfaction either with the medical art itself or with the practitioner who in the particular instance represents it. In the latter case he appeals to another practitioner, who brings the disease under definition, and perhaps detects its relation to a cause—a diathesis, or a habit, or a calling. He immediately figures as a superior practitioner, and invidious comparisons are instituted between one physician and another, when with a little more care and thought no occasion need have been given for such comparisons.

We urge the importance of attention to chronic forms of disease from a conviction that it will yield satisfactory results both in a scientific and a practical respect. The drift of our contention may be thus expressed: first, that much of the disease that shortens and embitters life,

where not altogether functional, is chronic—degeneration rather than disease; secondly, that there is reason to believe that the rate of such degenerative processes admits of being quickened or retarded; thirdly, that the indefinite retardation of a degenerative process is practically the extension of life to its natural limits, and the next best thing to a complete cure; that this retardation has come to be a prime function of scientific and practical medicine. We have not space for the elaborate discussion of these several propositions, but they are important with reference especially, be it noted, to the element of *time*, which, as the late Dr. STOKES used to say, constituted so important a factor in disease. Cases are recorded in which even cancer has extended over a period of twenty years or thereabouts. The question upon which light is needed is—Why did the cancerous process in these cases occupy so long a time? What was the condition of the patient, of his temperament, or circumstances, or diathesis, or of his medical treatment, which may be held to have exercised a retarding effect upon an intensely morbid degeneration? Surely if cancer can be extended over twenty years, the time may come when it may be extended over thirty, and practically cease to be a cause of premature death. And of course, if a case of cancer can be so protracted, it is still more reasonable to hope that less intense and virulent degenerations—such as tubercle, or fibrosis, or atheroma—may be so extended. What we urge is that the accomplishment of this extension is not only a part of the science and practice of medicine, but is a most urgent and withal hopeful part of medical work.

Chronic disease and slow changes are too apt to be left to drift, or regarded both by the patient and the practitioner as matters for domestic treatment. Can anything be more unreasonable? We are persuaded that the growth of general intelligence and education will convince the public that, apart from their acute illnesses, the confirmation of health and the strengthening of weak points in the physical system are to be looked for from ever-advancing physiology and medicine. We do not think that this great service of medicine is likely to be accomplished mainly by individual remedies, or by mysterious specifics. Medicines may contribute most importantly to it; but undoubtedly it will be done by Medicine rather than by medicines—by an intelligent use of all those means whereby glands and bloodvessels are preserved in their integrity and blood in its purity, and by bringing life to a close accordance with the laws of health and hygiene. Of late the interest of physicians has been largely devoted to pyrexial disease, to complaints attended by high temperature, acute phenomena, and urgent danger, and this with great advantage. Surely so, when one physician alone has been able to record 120 cases of uncomplicated pneumonia without a death. But meantime slow processes of disease are regarded with little more than pathological interest, whereas, if we be right in our views, they promise a field of hopeful and creditable work for the physician.

THE death has been announced of Professor Buhl, the value of whose researches into the histology of tubercle especially has been universally recognised by pathologists.

Annotations.

"No quid nimis."

THE METROPOLITAN HOSPITAL SATURDAY.

WE are very glad to see that the promoters of the Hospital Saturday movement in London are hopeful of a greater success than in previous years. This is a most modest expectation, and we devoutly hope it will not be disappointed. The fact is—and it ought to be very plainly stated—that the Hospital Saturday collection hitherto has been a thoroughly inadequate business. As the annual offering of the working-men of London to hospitals, from which they and their families derive enormous and almost exclusive benefits, whose doors are always open to them night and day, the five or six thousand pounds raised by the wage-earning class in the whole year are simply discreditable. We do not mean to blame the working-men themselves entirely for this, nor do we wish to blame anybody; but somebody must be at fault—either the working classes themselves or the Board of Delegates—for not devising an organisation or a scheme whereby more than about five thousand pounds can be extracted from them for this great cause. We are persuaded that such a sum does not in any way represent either their gratitude or their judgment in the matter. A collection on one given day seems to be an imperfect way of reaching them. They want the object brought home to them more forcibly and more directly, and they want to be asked for a repeated and even a systematic contribution. It is ridiculous to think that the working-classes of London, who are capable of so much organisation for political and economical purposes, are doing either themselves or the hospitals justice by such collections as have as yet been realised. One glass of beer a day less for a week would make a splendid improvement. The hospitals are very needy; some of them have to close many of their beds. It is a time for a great effort, and even for some personal sacrifice. The Hospital Sunday Fund has this year exceeded its last year's subscription by five thousand pounds. We shall be disappointed if the Hospital Saturday Fund does not do likewise.

THE EDUCATIONAL VALUE OF MUSEUMS.

DR. GUNTHER'S address, delivered before the Biological Section of the British Association for the Advancement of Science, will have the effect of calling the attention of the public at large to the high value set upon museums as a means of instruction even by those who are our pioneers in matters of science and art. A saying that has become trite is almost of necessity true also; and scarcely a day passes but each of us has an opportunity of recognising that

"Segnius irritant animos demissa per aures
Quam quæ sunt oculis subjecta fidelibus."

The collection of modern works of art, quasi-technological as it is, which was established by the late Prince Consort at South Kensington, and which took its origin in the Exhibition of 1851, is the most striking example of the solid value which a museum may have for a nation at large. It is not too much to say that in the thirty years which have elapsed since the first Exhibition we, as a nation, have gone from near the bottom to very near the top of the class in matters of domestic art; and no one will doubt that this result is mainly attributable to the collections at South Kensington, and to the science and art classes established, as it were, for the purpose of teaching how excellence, such as is manifest in the articles exhibited in the museum, is alone attainable. We have conclusively proved that "taste," a faculty which our fathers believed to be the exclusive property of the French, is more a matter of education than a question of in-born national genius.

It is to be hoped that the Biological Museum at South Kensington, now about to commence its career, will bear fruit as abundantly as has the neighbouring Museum of "Science and Art." As far as the museum itself is concerned there is every prospect that it will approach perfection. Miles of shelves, plenty of light, hundreds of thousands of specimens, and men who comprehend the science of arrangement and the art of display, are the factors necessary for the formation of a museum, and all these factors have converged at the Biological Museum of South Kensington. The central hall of the new building is to be devoted to an Index Museum, wherein the student may obtain a comprehensive bird's-eye view, as it were, of the domain of Biology before commencing his more detailed explorations in that particular branch which may most interest him. This should be an essential feature in every museum, and in a museum devoted to so wide a subject as Biology it is indispensable. It is to be hoped also that no parsimony will be shown in the matter of the library, which Dr. Günther rightly insists is a necessity for the new museum. A museum without a library is an absurdity, and it is almost inconceivable that so grand a building, reared at so vast an expense, should not contain an element so absolutely requisite for its utility. This omission will cost the nation an addition of about £100,000, and the library, when established, will probably be in an out-of-the-way corner, instead of in the most accessible spot possible. We should like to know who it is that is really responsible for this blunder, and it would be interesting to be informed of the history of the new museum, and what kind and what amount of counsel was taken with the scientific advisers (if there be any) of the Treasury before the architect was instructed to set to work at his plans. Some years ago a great railway company built at a cost of £80,000 a magnificent new station in a large provincial town, and it was not till the foundations were dug that it was discovered that no space had been allotted for a booking-office, and this omission seems to us to be scarcely less glaring than the omission of the library from the Biological Museum at South Kensington. A library is the very heart of such an establishment, and without one the new museum can be nothing but a veritable valley of dry bones. It is to be hoped also that demonstrations and lectures will be given in the galleries of the new educational establishment, and that, like its sister-museum, it will be instrumental in furnishing a stimulus to biological studies which will be felt throughout the length and breadth of the country and will pervade all classes. The Museum of Science and Art has made us the rivals, if not the superiors, of the French in matters of art. We hope that the Biological Museum will do something to bring us alongside our German brethren in matters of science.

DERMATOLOGY IN AMERICA.

IN our recent comments on the death of the Baron von Hebra, we noticed the marked influence he exerted in encouraging in America the study of the branch of medicine which he made his special field; and a recent notice of the fourth annual meeting of the American Dermatological Association, and the receipt of the Transactions of the third annual meeting (edited by Dr. R. W. Taylor), induce us to direct attention to the erudite and well-written address of last year's President, and to the character of the work in dermatology emanating at present from America. Professor Dubring of Philadelphia took for the subject of his address the "Rise of American Dermatology," and traced in a most interesting way the progress of the study of this subject from the time when it was "an obscure and neglected branch of medicine" until the present period. Up to 1836, when the establishment of a special Infirmary for Diseases of the Skin in New York and a delivery of a

course of lectures marked the increasing interest in the subject, notwithstanding the appearance of translations of the works of Willan, Bateman, Cazenave and Schedel, and occasional scattered meritorious memoirs, dermatology was in an utterly neglected state. From this time, however, American students flocked to the world-renowned Hôpital St. Louis, which for some years impressed the stamp of its teaching on their papers. There was an increasing demand for translations of the best European works, and from 1853 special clinics at the different dispensaries and hospitals were established. It was at this time that Hebra's reputation and the growing School of Dermatology at Vienna began to attract the crowds of American students, who, without neglecting the importance of the vast material accessible at Paris, now spent most of their time at the former city. On their return to the New World, stimulated by Hebra's example, imbued with his spirit, and fortified by his teaching and their devotion to the subject, these physicians found lectureships and special clinics gradually constituted for them at almost all the first-rate universities, hospitals, and dispensaries where they could pursue their work, so that at the present time America can look with pride at the numerous band of workers who are contributing year by year papers of first-rate importance on Dermatology, and advancing its studies in a thoroughly scientific spirit. We must especially congratulate our American brethren on the establishment of a first-class journal devoted to dermatology, on their complete union, and the harmony with which they work together, as seen in the foundation of their association and the meetings of the New York Dermatological Society, as also on the recognition of their position by the profession in America as earnest and thorough workers. All this reminds us of the need for examination of the state of things at home, which certainly compares unfavourably with that abroad; for, notwithstanding the important works of Willan, Bateman, Plumbe, Thomson, Wilson, and others, and the recent earnest teaching of Tilbury Fox, the vast material which Great Britain and her dependencies affords for the study of skin diseases is not well utilised; and there is no union for the furtherance of work, as seen in America, or as exemplified in the newly-constituted society, for fostering the study of diseases of the eye in this country. We hope the day is not far distant when in the land of Willan may be seen an earnest band of workers devoting themselves with one accord to the study of this branch of medicine.

STATION HOSPITALS IN INDIA.

THE Government of India have for some time past had under their consideration the advisability of establishing General Station Hospitals for their troops, British and Native, instead of the present Regimental ones; and, under instruction from Government, the Commander-in-Chief has recently issued orders authorising the Surgeon-General of H.M. British Forces in India to introduce the Station Hospital system at certain garrisons in Bengal. It is ordered that the existing hospital and other buildings are invariably to be made use of, the present empty condition of the Indian Exchequer forbidding any present outlay for new works. We cannot but express our satisfaction at this contemplated change in the organisation of our military hospitals in India. Whatever may be the divergence of opinion amongst military men as to the relative merits of the Regimental or the Station Hospital systems, there can be no doubt that as the latter has now for several years been successfully worked at home, and in all parts of the globe except India, that country should be brought into unison, so far as climate and general surroundings permit, with the hospital arrangements that are ordered for the Army generally. The introduction of the Station Hospital system will

effect a considerable saving in medical establishments generally, not only in the cadre of the medical officers detailed for duty in India, but in medical subordinates, hospital servants and attendants, surgical instruments, medical stores, clothing and equipment. It is patent that the aggregation of the sick into one or two buildings, instead of being spread out into the numerous small units of Regimental hospitals, must conduce to a large financial economy; and if the details of organisation are carefully and judiciously worked out by the responsible head of the Medical Service in India, there can be no reason why the Indian military hospitals should not, both for the comfort and care of the sick, be as successful as are our own in England. In Afghanistan General Field Hospitals have been adopted from the commencement of the campaign, and with signal benefit; so that the system, tried in time of war, and with all the disadvantages of such a climate and country as Afghanistan, should readily prove its superiority when introduced under more favourable conditions.

OIL OF EUCALYPTUS.

In the *Deutsche Medicinische Wochenschrift*, No. 30, Dr. Siegen of Deutz narrates some of the results he has obtained from the use of the oil of *Eucalyptus globulus* in antiseptic surgery. He was induced to experiment with it at the suggestion of Professor Binz, and since 1872 has carried on his investigations of its antiseptic properties. He prepares the solution of the oil by dissolving three grammes in fifteen grammes of alcohol, and diluting with 150 grammes of water. In this solution he soaks ordinary gauze. This dressing is applied in the wet state, covered with the usual gutta-percha tissue, and the whole kept in position by means of gauze bandages. Thus prepared, the eucalyptus gauze does not appear to irritate or produce eczema upon even sensitive skin, and is perfectly antiseptic.

In one case of a child with caseous glands of the neck Dr. Siegen operated—first dipping the instruments in a 2 per cent. solution of the oil and washing the surfaces with the same—by scooping out the contents, draining, and applying a wet eucalyptus dressing as above described. Although the spray was not used in this case, the discharges which had penetrated the gauze were quite sweet upon the third day. The slight amount of pus remained odourless, and on the eighth day the cavities had contracted and healed. In a second case, of a child with right genu valgum, he removed a wedge-shaped portion of the tibia, and after fracture of the fibula and proper adjustment of the bone, dressed with eucalyptus gauze, using the thymol spray. The bone wound healed forthwith, and on the tenth day after the operation only a superficial strip of granulations remained.

In a child with purulent inflammation of the elbow-joint and fistulous openings, Dr. Siegen performed resection of the joint under the thymol spray, and after washing out the wound with an 8 per cent. solution of chloride of zinc, dressed with thymol. The discharges from the wound remained, however, still offensive and profuse, whereupon he changed to eucalyptus dressings, having in the first place washed the surfaces with a 1 per cent. solution of permanganate of potash. After the first dressing the secretion of offensive pus ceased, and the wound rapidly healed.

His fourth case reported was an abscess of the knee, which was similarly treated, and with equally favourable results.

Dr. Siegen's experience has taught him that a 5 per cent. solution of oil of eucalyptus may be employed without any drawbacks. Dressings prepared with this solution may be left undisturbed for four or five days, whilst the 2 per cent. solution dressings remain aseptic for three days.

Dr. Siegen's researches confirm those of Schulz, published in the *Centralblatt f. Chirurgie*, 1880, No. 4, on the use of oil of eucalyptus in antiseptic surgery.

MEDICAL EDUCATION IN THE UNITED STATES.

It is very gratifying to see in the United States indications of dissatisfaction with the low and lax requirements of many of the schools, which in number exceed anything we have to complain of. Every State has several medical schools and boards. The period of education is short, and the examinations are of most various degrees of efficiency; there is not, as with us, any uniform requirement that the student, before commencing medical studies, shall have passed an examination in preliminary education. But many schools lately have made it a condition of admission that entrants must pass such an examination, and they deserve great praise for making such a stand. This step may temporarily reduce the number of their students, but the permanent effect must be advantageous. It would be exceedingly desirable to have published annually a list of those schools which require a preliminary education, and those which do not. Amongst those which do we may mention Bellevue College, New York, the Harvard University, and the Michigan Medical College. There is a disposition not only to secure that entrants into the profession shall have the necessary mental qualifications, but also to extend the period of medical study, which in many of the schools is very short. We would impress on the friends of sound medical education in the States the urgent necessity of reducing the number of competing schools and boards. If this cannot be done, the only other remedy of a great evil will be the creation of an Association of colleges which make medical education and examination a serious business, and from which all loosely conducted institutions should be excluded. There is already an association with this object, but we should be glad to know to what extent it has succeeded.

FETAL ENDOCARDITIS.

THE recognition of fetal endocarditis during intra-uterine life is a diagnostic achievement worthy of note. A girl aged seventeen was admitted into Professor Peter's ward at La Pitié near the end of her pregnancy. An active foetus could be felt in the uterus. The double sound of the fetal head could be heard in the usual situation, but instead of the customary *tic-tac* the first sound was replaced by a blowing murmur, almost immediately succeeded by a sharp sound like the normal second sound, and this was followed by a brief silence. The series was repeated about 130 times a minute. At first the interne, M. H. Barth (who records the case in *La France Médicale*), thought that the murmur was that described by Naegele as due to the compression of the umbilical cord, but its precise limitation to the area in which alone the sounds of the fetal heart were heard, and the absence of any uterine contraction which could cause the compression of the cord, convinced him that the sound must be due to a lesion of one of the cardiac orifices. The murmur was again heard next day, when the labour was actually commencing. The child was born dead, having apparently died during the last period of labour. The child was well-formed, and the organs were healthy with the exception of the heart, which was enormously hypertrophied, and seemed alone almost to fill the thoracic cavity. It was nearly globular in form, the right half being much larger than the left. The valves on the left side of the heart, and those of the pulmonary artery, were healthy, but the tricuspid valve was the seat of a "plastic vegetative endocarditis," the free edge being thickened, covered with projections, and its upper surface being uneven. The chordæ tendinæ were shortened and thickened, maintaining the valves in contiguity to the walls of the ventricle, so that it was impossible for them to fulfil their normal function. The right ventricle was dilated and greatly hypertrophied.

The case has a practical lesson. The labour offered no diffi-

culties to which the death of the child could be ascribed, and it was doubtless due to the cardiac lesion. In such a case, in which fetal endocarditis has been diagnosed, the acceleration of the labour by all possible means is desirable, to afford the child a better chance of life. The mother, it may be noted, had never suffered from rheumatism, and presented, in her history, nothing to which the fetal condition could be ascribed. Whether she had suffered from syphilis is not noted.

FEEDING TO LIVE, AND LIVING TO FEED.

THE chemistry and, what may be called, the "physiology" of food and feeding compose a subject which is, of course, trite to the profession, and has been made almost tedious to the public. Nevertheless, we venture to offer one or two remarks for general consideration. The points to which they relate have possibly been overlooked in the attention given to matters which appear to possess claims of higher importance. First, there is an essential difference between appetite and hunger. Appetite is the result or expression of a number of longings or desires which do not necessarily indicate a systemic need of nourishment. Mere appetite *may* indicate organic need, but, if so, the organ in which the requirement exists is the stomach, and it is quite as likely that the viscus demands the food for its own functional purposes, as to pass it on to the system generally. The notion that appetite is a low degree of hunger, and hunger an intensified form of appetite, does not seem to be borne out by facts. The two desires or longings are different in their nature. Appetite is the craving of the apparatus of taste, and sometimes of the digestive organs; while hunger is the demand of the organism as a whole or of some of its parts for food. Use the words appetite and hunger how we may, there are actually two needs to be expressed, and much mischief arises from confounding them. The one cry for food which we call appetite is an affair of habit or caprice, and may, for a time at least, be stimulated by appealing to the sense of taste, or promoted by certain cordials and stimulants; but, looking at the matter from a physiological point of view, it is difficult to see what we gain by exciting the organs of digestion to take food unless the system is in a condition to receive it. The rational mode of procedure would seem to be to wait the expression of a need arising in the system—in short, to look to hunger rather than appetite as an incentive to the act of feeding, instead of exciting the palate and sense organs to take food when we have no organic reason to suppose that there is an inner need of it. There are certain evil consequences of the civilised mode of feeding by appetite, on the basis of habit, which it may be useful to point out. First, separating appetite from hunger, and developing it as an independent sense or function, there naturally springs up a fashion of life which may be described as "living to feed." The purveyor of food trades on the tastes and cultivated longings of the consumer, and the consideration what to eat and what to drink comes to occupy a place in the self-consciousness which it was probably not intended to fill, and in so far as this is the case man is more animal, and less spiritual and intellectual, than he ought to be; although it may be conceded that the refined taste of the cultivated nature is less offensive than the simple voracity of the savage. There are some who contend that man is the gainer by the development of his appetite. If this be so, the gain is a good not unmixed with evil. Another drawback is, that by severing appetite from hunger we lose the indication of quantity which nature gives with her orders for food. The man who eats a regulated number of meals daily with a duly stimulated and organised habit, probably eats much more in the twenty-four hours than his system requires, or the organism as a whole is constituted to deal with. The organs of digestion aid

assimilation are overworked, and hence, doubtless, many of the most troublesome diseases. A glance at any table showing the length of time which the commonest articles of food take to digest will show that the fashionable stomach can scarcely ever be empty. Again, so much solid food being taken, or, which amounts to the same thing, small quantities of food being deposited in the stomach so frequently, an artificial system of "flushing" becomes necessary, and a considerable amount of fluid is "required," not because the system needs *water*—which is the only liquid it actually appropriates, let us dose it with what we may,—but because the apparatus of digestion cannot perform the task imposed upon it except by the aid of fluid to moisten its surface and free the mechanical reservoirs from the *débris* of food with which they are encrusted. Moreover, this artificial appetite tends to the amplification of bulk in respect to food. The quantity of each description of food taken is diminished, because the meal is subdivided to suit the taste; but the total bulk is increased. We do not say the weight of food consumed is greater, but its substance is extended by the multiplication of dishes and sauces, so that the points of contact—the stimulating superficies of the food, so to say—are extended. It should not be forgotten that hunger is the natural expression of organic need; while appetite may be, and generally is, the pampered product of cultivated modes and habits of existence. Appetite in its development tends to living to feed, while with the guide of hunger a man only feeds to live.

A CONSTANT BATH TREATMENT OF FEVER.

DR. REISS, of Berlin, has proposed the employment of the bath in the treatment of typhoid and other febrile diseases, in a somewhat novel form. The antipyretic effect of brief and powerful refrigeration is often transient, and at the height of the disease hourly or half-hourly baths have to be employed. It is proposed, therefore, to employ a continuous but slighter refrigerating agent—namely, to keep the patient constantly in a bath of lukewarm water. A temperature of 88° has been found the most convenient. The use of such baths obviously prevents considerable practical difficulties, which are, however, not insurmountable. The patient should lie in a sheet suspended, hammock-like, within the bath, and when the first inconveniences are over the patients enjoy it, and can be kept in it for a whole day or several days. Dr. Reiss has tried the method in forty-eight cases of typhoid (besides one incompletely treated case). It was used only in pronounced cases, for the most part in the early stage, the bath being commenced at from the third to the twelfth day. The temperature was taken every one or two hours, in either the rectum or axilla. As a rule the bath was continued without intermission for the first twenty-four hours, unless the fall of temperature was too great. After the second day the rule was followed to take the patient from the bath whenever the rectal temperature was below 99·2°, and to reimmerge whenever the temperature rose above 101·5° F. The results are said to be strikingly good. With the exception of some very obstinate cases, the temperature fell quickly in the bath so as to reach the normal in from twelve to twenty-four hours. On removal, the temperature rose rapidly in the earlier stages of the disease, more slowly in the later periods, so that the intervals between successive baths were at first short and afterwards gradually lengthened. In obstinate cases, in which the bath at 88° F. did not reduce the temperature below 102°, transient cooler baths were employed to keep the temperature down.

In forty-two cases available for comparison, the duration of the bath-treatment varied between seven and thirty-eight days, and was, on an average, 18·2 days. Of the forty-eight cases, three died, giving a mortality of 6·2 per cent. In two of these there was pneumonia. The latter fact seems to suggest that this method is not free from the danger of occa-

sionally doing harm, but the influence of the bath on the other symptoms of the disease is said to have been not unfavourable. The pulse remains frequent, contrasting with the depressed temperature, but it often improves in quality. The most favourable effect is produced upon the cerebral symptoms, somnolence or delirium rapidly ceasing. Any severe pulmonary or intestinal symptoms were absent in most of the cases.

ACTION FOR RECOVERY OF SURGICAL CHARGES IN SCOTLAND.

THE *Dundee Courier* of August 25th gives a good account of an action for recovery of charges by Dr. McCallum, of St. Martin's, in the case of a patient who had sprained her wrist. The patient, being impatient, went off to one of those persons who are apt at discovering fractures and dislocations which have no existence. He diagnosed "dislocation," and the patient declined to pay the charges of Dr. McCallum on the ground that he had misunderstood the case and had charged too high. Dr. McCallum showed his respect for his own diagnosis and treatment, as well as his charges, by taking the matter into the Sheriff's Court. By consent of parties the Court remitted the case for report to Dr. Bramwell, of Perth, who made an able statement of it, and entirely confirmed Dr. McCallum's diagnosis and charges. The Sheriff, of course, decreed for the sum claimed with expenses. The procedure is altogether worthy of consideration and imitation. If County Court judges would, with consent of parties, oftener refer to practitioners of standing, and be guided by their decision, much time and money and good feeling would be saved.

CHOLERA IN INDIA.

WE regret to find by our letters from India received by the last mail that cholera has made its appearance in several stations in Bengal and the North-West provinces. In Lucknow the 13th Hussars and Royal Artillery had several fatal cases in the last week in July. At Moradabad the 2nd Queen's have also had a few cases, though of a milder type; while at Allahabad the 2nd Batt. 22nd Regt. has suffered somewhat more severely, losing ten men and an officer (Dr. Noad, whose death is referred to elsewhere) in a few days. In the Punjab, cholera has also appeared at Peshawur, at Tangi in the Peshawur Valley, and at one or two places in the Khyber. We sincerely trust the troops returning to India from Cabul by this route will not again experience such a severe epidemic as was encountered last year, and which decimated some of our finest regiments, notably the 10th Hussars and 4th Battalion Rifle Brigade, whose losses between Jellalabad and Ali Musjid were terribly heavy.

PEROXIDE OF HYDROGEN AS AN ANTISEPTIC.

OUR attention has been drawn to an omission in an article which appeared in our last number on "The Influence of Peroxide of Hydrogen on Fermentation," by which an apparent injustice was unwittingly done to a distinguished English observer. In noticing the recent researches of M. Regnard on this subject the prior investigations of Dr. B. W. Richardson on the antiseptic properties of the peroxide should have been referred to. As early as 1858, we believe, Dr. Richardson called attention to this quality of the gas; and two years ago, in the Cantor Lectures, delivered before the Society of Arts, he dealt very fully with the question of oxygen and peroxide of hydrogen as preventers of putrefaction. A single extract from Lecture IV. of the series will suffice as an example:—"I took a strong bottle with a thick neck, placed in it muscle of beef, and charged it with ordinary oxygen gas. Then I put into the bottle a measured quantity of solution

of peroxide of hydrogen, introduced the fluid in such a way that it did not come into contact with the meat until a cork was inserted into the neck of the bottle and tied down, after the manner of the cork of a soda-water bottle. The bottle was then turned until a portion of the meat came in contact with the solution of peroxide. With that contact there was rapid evolution of oxygen, and a pressure of gas equal to three atmospheres was produced. In this condition small specimens of beef were preserved through the return voyage [to Rio Janeiro and back] and came home in a state of excellent preservation."

THE DEMAND FOR THE APOTHECARIES' LICENCE.

MR. BRADFORD, in the evidence which he intended to have given before the Select Committee of the House of Commons, naturally made a point of the fact that the licence of the Apothecaries' Society is still in much demand. It becomes interesting to know whether the demand is an increasing or a decreasing one. In answer to our request, Mr. Bradford has kindly furnished us with the following data, giving the average number of persons who, in three successive decades, have taken annually the licence of the Society:—

In the decade 1850-1859	295.1
" 1860-1869	291
" 1870-1879	214.9

Making allowance for increase of population, it appears from these figures that the demand for the licence is considerably on the decrease.

THE CANAL BOATS ACT.

MR. GEORGE SMITH, of Coalville, is still dissatisfied with the working of the Canal Boats Act of 1877. In a letter to *The Times* he complains that the measure is in many places little more than a dead letter, though in others it is working satisfactorily. On a visit to one of the midland registration districts a few weeks since, he found the local inspector doing his work well, but outside his city boundaries and within a radius of six miles, twenty-five to thirty boats could be seen unregistered and uninspected, and here overcrowding of both sexes existed as flagrantly as before legislation was attempted. Mr. Smith recommends that the 5s. registration fee be made an annual payment, that the school-inspector be allowed to enter the boats, and the children's education be ensured by the use of a pass-book, similar to the plan proposed to meet the case of gipsy children.

AN earnest attempt is being made by several influential inhabitants of Sydney, New South Wales, to establish a Hospital Sunday movement in that city. The principal medical charity there, the Adelaide Hospital, appears, however, to be a purely Government institution, and on this account the proposal has encountered the opposition of the Anglican bishop and others. The advocates of the scheme have now obtained the active co-operation of the mayor (Mr. E. T. Smith) as chairman and treasurer, and this important accession to their ranks is regarded as an augury of their success.

THE following paragraph appears in the *New York Herald* of the 17th ult.:—"Philadelphia, Pa., Aug. 17th, 1880. John Buchanan, dean of the 'Eclectic Medical College,' who was under heavy bail for his appearance before the United States Court to answer charges of fraudulently issuing medical diplomas, ended his career this morning by drowning."

A DISTINGUISHED service reward of £100 per annum has been conferred upon Sir W. M. Muir, M.D., K.C.B., Director-General of the Army Medical Department.

DR. EDWARD B. SINCLAIR, King's Professor of Midwifery in the Medical School of Trinity College, and Physician to Sir Patrick Dun's Hospital and Maternity, has received the honour of knighthood in recognition of the public service he has rendered by training soldiers' wives as midwives.

WE regret to announce the death from cholera at Allahabad, East Indies, on the 31st of July, of Surgeon Hartley J. Noad, A.M.D. Mr. Noad obtained his commission as a surgeon in the Army in August, 1878, and is the first officer who has fallen a victim to the cholera epidemic this year.

DR. BATEMAN of Norwich and Dr. Hack Tuke of London have been elected Corresponding Members of the Society of Psychiatry of St. Petersburg. Dr. Tuke has also been elected an Honorary Member of the American Association of Hospitals for the Insane.

AT the meeting of the Pharmaceutical Conference at Swansea, on the 25th ult., an address and 500 volumes of books were presented to Professor Attfield.

THE fifty-third annual session of the German Naturalists and Physicians will take place in Dantzic from Sept. 17th to the 24th of the present year.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Kensington.—Among the reports of Metropolitan medical officers of health, Dr. T. Orme Dudfield's annual reports have long held quite a special position. They treat not only of the health and sanitary condition of the particular district, the parish of St. Mary Abbot's, Kensington, over which he exercises sanitary supervision, but of those numerous general questions which concern Kensington in common with the rest of the metropolis. Hence his reports have a much wider interest than that which attaches to the locality to which they primarily refer, and they form singularly instructive commentaries on questions relating to the general sanitary administration of the metropolis. The experience of Kensington is reported not merely in the immediate interest of that important district, but it is made to serve as a text illustrative of yet unsatisfied requirements, or for elucidating difficult questions concerning the public health of that district and the metropolis at large.

Dr. Dudfield's report for 1879 is now before us. We do not propose to follow him in the careful analysis he makes of the vital statistics of his district; neither do we propose to occupy ourselves with his examination of the causes of death during the year. We shall touch only on a few of those questions of more general interest which he takes occasion to discuss in the course of his report.

And, first, with reference to the atmospheric diffusion of small-pox contagion from the Fulham Small-pox Hospital into localities adjacent to the hospital, including places within the parish of Kensington. Dr. Dudfield enters into this question at considerable length, and is enabled to furnish additional detailed evidence from previously unpublished letters of the medical superintendent, Dr. Makuna, to show that the cases of small-pox which occurred in the localities surrounding the hospital had their origin in the ordinary mode of communication of the disease from case to case, the assumption that the hospital was concerned in the dissemination being wholly gratuitous. The patients attacked, it was found, had almost without exception been visiting localities where the disease was prevalent, or had been in direct or indirect communication with persons suffering from the disease. There seems little doubt, more-

over, that had the Metropolitan Asylum Board, or, perhaps, we should say the Local Government Board, taken the least intelligent interest in this question of small-pox, clear histories of the cases of small-pox in the vicinity of the hospital might have been obtained from the beginning, and the mischievous accusation against the hospital stopped at the outset. But, notwithstanding the warning at Hampstead, where a course was followed similar to that pursued at Fulham and the other small-pox hospitals, and where in consequence the Metropolitan Asylum Board has found it impracticable to rebut the evidence as against the hospital, both the Metropolitan Board and the Local Government Board have been and are determined to treat the question as a mere Poor-law question. The latter Board has not recognised a public-health duty in the matter, although the Central Public Authority, and the former Board, encouraged by the Central Board, has treated it on the purely parish basis. "The presumed extension of disease beyond the precincts of the hospital concerns the next parish and not ours"; and to this view of the question the Local Government Board has assented. We see the results of this short-sighted policy in one form in the Hampstead Hospital case; and other and not improbably graver forms will, we fear, follow.

Dr. Dudfield discusses the attempt of the Government to deal with the question of hospital accommodation for infectious disease in the metropolis by Section 15 of the Poor-law Act, 1879, which enables the Metropolitan Asylums Board to contract with vestries and district boards for the admission of patients into their hospitals. The provision has practically failed, and must fail, Dr. Dudfield holds, until pauper and non-pauper patients can be clearly discriminated. Dr. Dudfield is disposed to represent the vestries and district boards in a very virtuous light in the discussion, but his account of the matter reads to us much more like an ingenious evasion by those bodies of an important duty, such as the metropolis has been familiarised with since 1871-72, than action worthy of being attributed to higher considerations. However this may be, this is quite a subordinate matter in view of the relation of the Poor-law authority to hospital administration for sanitary objects. Sanitary authorities have certainly serious grounds for holding aloof from Poor-law administration, and we agree with Dr. Dudfield that until the hospital treatment of infectious diseases is severed from Poor-law administration the question at issue will never be satisfactorily solved.

Dr. Dudfield's observations, tending to show the necessity for legislation to ensure in the metropolis the compulsory disclosure of the occurrence of infectious diseases, deserve careful consideration.

We must pass over several general questions without remark, and we say, in conclusion, that as a description of what is involved in the sanitary administration of a metropolitan district, this report is of the greatest interest.

Sidmouth.—Dr. Pullin's report for 1879 shows a birth-rate of 20·30 per 1000 of the population, and a death-rate of 20·00 per 1000. In plain figures, the births exceeded the deaths only by 2; and the rate of mortality of this beautifully situated place, on the south coast of Devon, with its diminutive population of less than 4000, came perilously near to that of a large town. It is well-known that the sanitary authority of Sidmouth have been so content with the natural advantages of the position of the town, and the high reputation of its medical officer of health, that they long held any serious efforts for maintaining the wholesomeness of the place superfluous. Not long ago, however, they were stimulated to take a somewhat more rational view of their functions and duties by the Local Government Board, acting upon local complaint; but, small as the place and the population are, there is, according to Dr. Pullin's report, a good deal of sanitary work to be done in it before it can offer fully those local conditions of wholesomeness which visitors to health-resorts should desire in their individual interest. With abundant excellent water accessible, it is by no means certain that the occasional visitor may not have to drink water from wells polluted with sewage; and it would appear that 400 of the population—that is to say, one-tenth—are dependent for their water-supply upon "a single hand-well, inconveniently remote from most of them." It is proposed to lay down 1466 yards of sewerage, which being done will secure to the town, Dr. Pullin states, a drainage so complete and efficient that nothing will be left to be desired; but which left undone shows how exceedingly inefficient the sewerage of the town has been and must continue to be until the projected works are completed. More-

over, no precautions appear to be taken to cut off the direct communication of the house drains with the sewers; and, strange to say, the "D" trap is regarded with approval, even by the medical officer of health. The sanitary condition of cottages would appear to be receiving detailed attention, and Dr. Pullin states that closet accommodation, "generally speaking," is "satisfactorily provided." He adds, however, that "the exceptions have been again and again brought to the notice of the [Local] Board, and as their absence continues to prove a serious nuisance to tenants, their immediate erection should be insisted on." Their absence proves also the apathy of the Local Board to the true sanitary interests of the place. Nuisance from piggeries and slaughter-houses has been diminished, but not done away with; and it might be inferred from Dr. Pullin's phraseology that in these matters the Board had to deal with piggeries and slaughter-houses as numerous as the ordinary houses of the town, instead of a few places, nuisance from which ought not to have required three months in dealing with effectually.

REPORTS OF POOR-LAW MEDICAL OFFICERS.

Dr. Alfred Sheen sends us a copy of his annual medical report, 1879-80, to the Cardiff Board of Guardians on the workhouse and schools of the Union. It is somewhat unusual, we believe, for reports of this nature to be printed and issued, but the practice now followed at Cardiff might be usefully copied elsewhere. Dr. Sheen's report gives an interesting account of the movement of patients in the workhouse, and touches upon several matters of interest relating to the medical administration of these institutions. He writes of the Cardiff workhouse as losing much of its original intention as a test of poverty, and becoming to a very large extent an institution for the treatment of sick paupers; and he observes with reference to this state of things, that "it behoves those in authority, in the interests of the sick poor, and so indirectly of the ratepayers, to facilitate the recovery of these sick paupers by every means in their power." The Cardiff guardians are acting upon this view of the subject, as exemplified by the erection of an excellent hospital and the appointment of a staff of paid nurses. Referring to the question of the use of stimulants in workhouses, Dr. Sheen remarks: "The discussion has tended to do good where it has awakened medical officers to a greater sense of their responsibility in this matter; but to attempt to treat many cases we get in a workhouse infirmary without stimulants is, to say the least of it, harsh and unfeeling."

THE SANITARY CONDITION OF WHITEHALL.

Our contemporary the *Builder* has been directing attention to the state of drainage of Whitehall and the district of Westminster generally. Of its own knowledge it speaks ill of the subsidiary drainage of the low-lying parts, and, on the authority of Sir Joseph Bazalgette, it takes except on to the principle on which the main-drainage of the district has been carried out. It holds, in fact, that "a reconsideration of the drainage of Westminster is a matter of primary importance in the behalf of the public health"; and although when a question was asked in the House of Commons on this subject Mr. Adams answered that it was matter which rested with the Metropolitan Board of Works, and not with the Government, we should have thought that the Government had at least sufficient personal interest in it, so far at least as Whitehall was concerned, not to put it lightly aside or to leave it to the good-will and pleasure of the Metropolitan Board of Works without an expression of opinion, if the allegation were correct. Moreover, there was more involved in the question than Mr. Adams admitted. In regard to main-drainage, no doubt he was right in saying that it was a subject in which the Metropolitan Board of Works was concerned; but in regard to subsidiary drainage he was judiciously silent. The subject arose out of the illness of Mr. Gladstone and the rumours that gained prevalence at the beginning of his indisposition that he was suffering from typhoid fever. It was curious to no e how very generally this suspicion was roused simply because the Prime Minister occupied one of the houses in Downing-street. It seemed to be taken for granted that the drainage of the buildings there must necessarily be defective, not because they were old buildings, but because they were under the direction of a Government department. There appears to be much more of sound reason in this argument than is commonly understood. It is believed that the massive pile of buildings forming the new Government

offices is a marvel of bad sanitary arrangement and drainage. It is known that the defects in the office of the Local Government Board have been of the most serious character, and it is to be inferred that they still continue to be so, for it is found necessary to keep the corridors of this portion of the new building charged with carbolic acid to an extent positively sickening to not a few members of deputations who have had the misfortune to visit Mr. Dodson lately. If this be the state of things in the new buildings, what may be inferred of the drainage arrangements of the old, built at a time when sanitary requirements were in vogue of a much cruder kind than ought to be tolerated now? If Westminster, whether old or new, has much of its drainage arrangements carried out in the same fashion as Whitehall and the Government buildings there, the question at issue covers wider ground than the Metropolitan Board of Works can deal with, and is one that in the interest of the Government, the Legislature, and the inhabitants of the district in general, it would be well to submit to public inquiry.

THE METROPOLITAN WATER-SUPPLY.

Colonel Bolton, R.E., the water examiner, in his report on the state of the water delivered by the Metropolitan Water Companies in July, says of that derived from the Thames, that although there were not more than twelve days in which the stream was free from turbidity, the filtration was generally efficient, and the filtered water clear, if not bright. In previous reports Colonel Bolton has discussed briefly the question of a "standard of filtration"; in this report he refers to the desirability of instituting a "standard of quality." He devotes, moreover, a part of his report to the brief consideration of the negligence of householders in the storage of water, and particularly the filthy condition in which cisterns are too commonly kept, especially as observed in the tenemented and cottage class of houses. He alludes to the illustrations of this neglect which may be so abundantly observed from the windows of the trains on many of the lines of railways leaving London. And he directs attention also to the frequency with which the waste-pipes of cisterns are directly connected with sewers, and to the liability to pollution of the water with sewer-air in consequence. These are very old and very scandalous defects, but in the state of sanitary administration in the metropolis we see little hope of their being amended in detail except by the general extension of a "constant" water-service on the one hand, and the adoption of buildings' bye-laws by the local authorities on the other. A very gradual extension of the "constant" service is taking place, and we live in hope that some day even a metropolitan sanitary authority may awake to a reasonable understanding of the magnitude of the health interests involved in the question. It rests chiefly with the local authorities to secure the boon of a constant water-supply for the metropolis, and to get rid of those scandals of domestic storage which too often converts the filtered and deep well-water distributed by the water companies into a filthy, disgusting fluid—disgusting alike to taste and smell.

THE DRAINAGE OF WORKHOUSES.

When last week we had occasion to notice the circular recently issued by the Local Government Board on the drainage of workhouses, we fell into the double error of under-rating the capacity of Boards of Guardians for going wrong, and of over-rating the power of the Local Government Board in setting them right. We learn that the Chester Board of Guardians have within the past two years erected a new workhouse, and that this building is quite a marvel of structural perversity. Hardly had the occupants been installed before the building began to fall to pieces; and this state of things above ground proves to be paralleled by the condition of things below ground. The drainage is, indeed, reported to be in so bad a state that the Local Government Board has had to interfere, using the imperative powers it holds in reserve for wilful guardians. The Chester Board "grumbles" at being victimised in a new building for which it alone can be responsible, and for which it has paid £40,000. It will be interesting to know by what miracle of ingenuity this extraordinary muddle can have been brought about, and the various presumed checks or powers on careless Guardians evaded. We hope some member of Parliament in the course of next session will ask for information and papers on the subject. First, there are the Guardians, then there is the

general inspector of the Local Government Board, that Board itself, and its architect, all of whom must have a hand in the matter before the local architect and contractor can proceed with the building, and yet the result may be as reported. Evidently the outer world of ratepayers has not penetrated much beneath the surface of the mysteries which surround local and central Bumbledom.

REMOVAL OF PATIENTS TO SANITARY HOSPITALS.

Considerable trouble would appear to have been experienced at Chesham, in Bucks, during a recent prevalence of fever, in inducing patients to be removed to the sanitary authority's hospital. Particularly it has been found difficult to persuade parents to have young children removed. We infer from the local journals that much of this difficulty has arisen from the sanitary authority having allowed their hospital, during a period of freedom from infectious disease, to get out of repair, and so to become prejudiced in the eyes of the community. This should be a caution to authorities possessing hospitals. At the best people are not eager to avail themselves of these hospitals, and no needless antipathy should be created against them. These institutions are new to our communities, and the latter have not had time to become acquainted with the advantages to be derived from them. It is surprising, however, in how many instances, where thoughtful care has been used, the objections to entering sanitary hospitals have been overcome. It should never be forgotten in respect to children that Dr. Ashby of Grantham succeeded during a recent epidemic of scarlet fever in prevailing upon parents to make large use of a tent hospital erected by the sanitary authority on his advice.

Dr. Hardwicke recently held an inquest in Coldbath-fields Prison on the death of an individual who had been removed from his house at Fulham in a dying state under an order of the magistrates, and in consequence of proceedings of the sanitary authority against him in that his house was unfit for occupation. The Coroner observed that the case was a very cruel one—an expression of opinion in which the jury concurred.

It is reported that recently considerable alarm was caused in the parish of St. George-in-the-East by the sound of an explosion in the common sewer. It was subsequently ascertained that this had been produced by the sudden closing of a penstock at one of the storm overflow outlets. The concussion of air thus produced was so great as to disturb some of the work at a side entrance of the sewer.

The Local Government Board for Ireland have urged upon the Waterford Board of Guardians the necessity of adopting prompt measures for improving the sanitary condition of Mooncoin before the winter sets in; and have acquainted the guardians that application can be made for a loan for that purpose under the provisions of the Public Health Act, as suggested by the dispensary committee.

A common lodging-house keeper was recently charged at Stratford-on-Avon with having infringed the bye-laws of the urban sanitary authority. His house was licensed for 21 lodgers, but on an inspection was found to contain 50. He pleaded in defence that during the harvest season lodging-houses had to be conducted on "Irish notions."

The Health Committee of Liverpool have recommended that the Town Council should seek the assent of the Local Government Board to a proposal for the erection by the Council of artisans' dwellings, to meet the domiciliary necessities of a large number of poor people who have been dislodged from the foul corner called Nash Grove.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

The increase in the rate of urban mortality last week may again be considered due to the fatality of summer diarrhoea among children. In twenty of the largest English towns, estimated to contain in the middle of this year seven and a half millions of persons, or nearly one-third of the entire population of England and Wales, 5041 births and 3605 deaths were registered last week. The births were 144 below, whereas the deaths exceeded by 330, the average weekly numbers during 1879. The deaths showed an increase of

115 upon the number returned in the preceding week. The annual death-rate per 1000, which in the preceding week declined slightly, rose again last week to 25.1, which was the highest rate recorded during the current quarter. During the past eight weeks of the quarter the death-rate has averaged 22.7 per 1000 in these twenty towns, against 25.4 and 17.8 in the corresponding periods of 1878 and 1879. The lowest death-rates in the twenty towns last week were 16.4 in Bristol, 19.4 in Oldham, 20.9 in Plymouth, 21.0 in Portsmouth, 21.2 in London, and 21.4 in Brighton. The rates in the other towns ranged upwards to 32.9 in Manchester, 33.1 in Salford, 34.5 in Leicester, and 35.0 in Liverpool. The high death-rates in these last-mentioned towns were mainly due to excessive diarrhoea fatality.

The deaths referred to the seven principal zymotic diseases in the twenty towns, which had steadily increased from 406 to 1136 in the eleven preceding weeks, further rose to 1239 last week. These included 958 from diarrhoea, 105 from scarlet fever, 76 from whooping-cough, 49 from different forms of fever, and 32 from measles. The annual death-rate from these seven diseases averaged 8.6 per 1000 in the twenty towns; while it was but 4.6 and 4.9 in Bristol and Brighton, it ranged upwards to 15.7 and 20.9 in Salford and Leicester. Scarlet fever was proportionately most fatal in Sunderland and Norwich. Of the 16 deaths from diphtheria 13 were returned in London. The 32 fatal cases of measles were the lowest number recorded in any week of the present year. Small-pox caused 3 more deaths in London, but not one in any of the nineteen large provincial towns. The number of small-pox patients in the Metropolitan Asylum Hospitals, which had declined from 200 to 135 in the six preceding weeks, further fell to 128 on Saturday last; 26 new cases of small-pox were, however, admitted to these hospitals during the week, against 20 and 30 in the two previous weeks. The Highgate Small-pox Hospital contained 11 patients on Saturday last.

The fatal cases of diarrhoea in the twenty towns, which in the ten preceding weeks had steadily increased from 51 to 364, further rose last week to 958. The annual death-rate from diarrhoea averaged 6.7 per 1000 in the twenty towns; it was equal to 3.8 in London, and to 9.4 in the nineteen large provincial towns. The death-rate from diarrhoea among the twenty towns ranged last week from 2.7 and 3.2 in Oldham and Bristol to 13.0 and 18.1 in Sheffield and Leicester. In the last-mentioned town the diarrhoea rate showed a decline from that of the preceding week.

The deaths referred to diseases of the respiratory organs which had been 152 and 167 in London in the two preceding weeks, declined to 124 last week, and were 14 below the corrected weekly average. Of these 124 deaths 63 were attributed to bronchitis and 40 to pneumonia. The annual death-rate from diseases of this class was equal to 1.8 per 1000 in London, and 3.2 in Liverpool.

HEALTH OF SCOTCH TOWNS.

In eight of the largest Scotch towns, having an estimated population of rather more than a million and a quarter persons, the annual death-rate last week averaged 18.4 per 1000, showing a further decline from the rates, 20.1 and 18.6, in the two preceding weeks; this rate was, moreover, 6.7 below the average rate in the twenty large English towns. The rates in the eight Scotch towns ranged from 13.1 and 15.1 in Greenock and Aberdeen, to 27.3 and 28.4 in Perth and Leith. The fatal cases of the seven principal zymotic diseases in the eight towns were 123, against 122 and 127 in the two preceding weeks; they included 63 from diarrhoea, 17 from whooping-cough, 16 from scarlet fever, 13 from diphtheria, 12 from fever, 2 from measles, and not one from small-pox. The annual death-rate from these seven diseases averaged 5.0 per 1000 in the eight towns, against 8.6 in the large English towns. The excess of the zymotic death-rate in the English towns was due to the greater fatality of infantile diarrhoea. The zymotic death-rate in the Scotch towns ranged from 1.3 and 1.9 in Greenock and Perth, to 6.4 and 10.7 in Paisley and Leith; the excess in Paisley was due to diarrhoea, and in Leith to scarlet fever and diarrhoea. The fatal cases of diarrhoea in the eight towns, which had been 51 and 65 in the two preceding weeks, declined to 63 last week; the annual death-rate from this disease did not average more than 2.5 per 1000 in these eight towns, while in the large English towns the rate was equal to 6.7. The highest rates from diarrhoea in the Scotch towns were recorded in

Aberdeen and Leith. The 17 deaths from whooping-cough (a decline from the average of recent weeks) included 7 in Glasgow and 3 in Dundee. Six of the fatal cases of scarlet fever were returned in Glasgow, 5 in Leith, and 4 in Edinburgh. Eight deaths from diphtheria were registered in Glasgow, and a fatal case of measles was recorded in Glasgow and Aberdeen. The deaths referred to fever, which were 17 and 7 in the two previous weeks, rose to 12 last week, of which 11 were returned in Glasgow. The deaths attributed to acute diseases of the lungs (bronchitis, pneumonia, and pleurisy) were 55 in the eight Scotch towns last week, against 70 and 39 in the two preceding weeks; the annual death-rate from these diseases was equal to 2.2 per 1000, against 1.8 in London. The causes of 110, or 24 per cent. of the 458 deaths registered in the Scotch towns last week were uncertified; in the English towns the proportion of uncertified causes of death scarcely exceeded 2 per cent.

HEALTH OF DUBLIN.

The rate of mortality in Dublin last week corresponded with that of the previous week, which was so high as 37.8 per 1000. During the past eight weeks of the present quarter the death-rate in the city has averaged 33.3 per 1000, against 22.0 in London and 17.8 in Edinburgh. The 228 deaths in Dublin included 63, or no less than 28 per cent., which were referred to the seven principal zymotic diseases, showing an increase of 7 on the number returned in the preceding week; 9 resulted from measles, 5 from scarlet fever, 8 from whooping-cough, 5 from different forms of fever, and no less than 36 from diarrhoea. The annual death-rate from these seven diseases was equal to 10.5 in Dublin last week, against 5.6 in London and 2.5 in Edinburgh. No death from small-pox was registered in Dublin last week, and it may be noted that since the first week of February, 1878, the city has not been free from a fatal case of this disease. Measles and whooping-cough showed an increase in fatality, whereas the deaths from scarlet fever declined. The fatal cases of diarrhoea, which had averaged but 5 during the first five weeks of the current quarter, were 23, 25, and 36 in the three following weeks; the annual death-rate from diarrhoea in Dublin last week was 6.0 per 1000, against 6.7 in the twenty large English towns.

HEALTH MATTERS GENERALLY AT HOME AND ABROAD.

SANITARY TRAINS IN WAR.

The Russian journals contain notices of two works recently published, one a report by the manager of the Red Cross Society on the proceedings of that Society during the late Russo-Turkish war, the other a report of the *état-major* on the work done by sanitary trains during the war. In these reports some interesting particulars are given of the advantages derived from the use of these trains. It would appear that sanitary trains were first used in the war of 1866, and that the experience of their use in the subsequent Franco-German war led to the conclusion that they were available only for the removal of one-third of the sick and wounded from the seat of war. Judging from the experiences of these two wars, it was estimated at the beginning of the Russo-Turkish war that ten trains would suffice for the wants of the Russian army, but the Emperor was asked to authorise the formation of fourteen. At the outset of the war, however, it was found that the larger number was insufficient; and in the end no less than thirty-two trains were organised, each of which was continuously at work for an average period of 465 days. Of the fourteen trains first formed the Red Cross Society undertook the organisation and management of ten. The total number of sick and wounded transported from the seat of war into Russia by the sanitary trains was 218,296, and in addition 40,254 soldiers slightly wounded were sent by ordinary military trains. As to the advantage of these sanitary trains, apart from the fact of their relieving dead-lock from overcrowding in the hospitals at the seat of war, it is noted that 80 per cent. of the patients reached their destination in a state of convalescence. The mortality in the trains in the course of transit was 255. The number of medical men and attendants attached to the trains was 1280, and of these 319 were attacked by contagious maladies whilst on duty. The part taken by the Red Cross Society in this great evacuation of

sick and wounded extended to no less than 106,025 patients, besides the important assistance given generally in the work of transferring the patients to the Russian lines of railway at Jassy, on the Roumanian frontier, where at times the accumulation of patients became all but unmanageable from their great number and the insufficiency of shelter. Occasionally 2000 were despatched to their further destination daily. The report relating to the Red Cross Society refers to the augmented difficulty of their work from the "explosion" of "purple typhus" among the sick and wounded, the disease having been communicated to them by the Turkish prisoners. It is added that all measures to arrest the spread of the malady failed, until the evacuation of the sick and wounded was directed along other routes.

THE VACCINATION ACT, 1880, INDIA.

The preamble of this Act sets forth that it is expedient to give power to prohibit inoculation, and make the vaccination of children compulsory. To this end it is enacted that the Act shall apply only to such municipalities and cantonments situate in the territories administered respectively by the Lieutenant-Governors of the North-Western Provinces and the Punjab, the Chief Commissioners of Oudh, the Central Provinces, British Burmah, Assam, Ajmer, and Coorg, within, in fact, the Presidency of Bengal. Municipalities may adopt the Act by a majority of votes, and local governments may, with the approval of the Governor-General in Council, apply it to cantonments. The Act prohibits any person who may have undergone inoculation from entering within any area where the Act is adopted before the lapse of forty days from the date of operation, and without a medical certificate to the effect that he is no longer likely to spread small-pox. Public vaccinators are to be appointed, and all unprotected children from the age of six months to fourteen years if a boy, and eight years if a girl, where the provisions of the Act are in force, are to be vaccinated. Children who have been vaccinated are to be submitted to the vaccinator for inspection of results. The vaccination of a child is ordinarily to be performed with such lymph as may be prescribed under the Act, provided that, first, if animal-lymph is so prescribed and the parent or guardian of any child desires that such child shall be vaccinated with human lymph, it shall be so vaccinated; and, second, if in any local area in which animal-lymph is procurable human lymph is so prescribed, and the parent or guardian of any child desires that such child should be vaccinated with animal-lymph, and tenders to the vaccinator the amount of such fee, not exceeding one rupee, as may be fixed by such rules in this behalf, such child shall be so vaccinated. No fee is to be charged by public vaccinators. Municipalities and cantonments where the Act is put in force are empowered to frame rules regulating its administration, including, among other matters, the nature of the lymph to be used, and the supply of a sufficient quantity of such lymph. The penalties for breach of the provisions of the Act are severe, the fines being extensible to 50, 500, and even 1000 rupees, according to the provisions violated, and the imprisonment ranging to three and six months.

GAUGING OF PUBLIC SEWERS.

The United States National Board of Health have been causing a series of gaugings of sewers to be made in various parts of the States, with a view of determining the size of conduits needed for the removal of the greatest amount of sewage-matter produced by given populations, or, in other words, to determine the degree to which it would be safe to reduce the sizes of public sewers in cases where the object is only the removal of the foul sewage-matters of households, manufacturing establishments, public institutions, &c. A first report on the subject has been presented to the Board by Mr. Geo. E. Waring, jun., and is published in No. 6 of the Board's bulletin for the current year. The observations are not numerous, but they show how largely the size and cost of sewers may be reduced by the exclusion of storm-water from them. Thus, Mr. Waring observes that when the Commission of the National Board of Health recommended the system since carried out at Memphis of lateral sewers of six inches diameter, and a main outlet of twenty inches, for a prospective population of 60,000, they provided a wide margin for contingencies. He adds: "The result of these investigations cannot fail to be of the greatest practical value, especially in the case of the smaller towns, where the cost of constructing the usual storm-water systems

is so great as to be prohibitory. Incidentally, the advantages to all towns, large or small, of adjusting the size of the sewers to the actual work of removing foul wastes must be regarded as most promising.

DIPHTHERIA IN RUSSIA.

The epidemic of diphtheria in the government of Poltava is reported to be gradually diminishing, and the disinfection of infected houses is being carried out according to the suggestions of Dr. Hübner of the Red Cross Society. A sanitary commission has been established, and in order to facilitate its operations each district has been divided into five or six sanitary subdistricts, and these again into eight or ten quarters. At the head of each subdistrict is placed a medical man, and of each quarter a schoolmaster. For the disinfection of the cottages of the peasants it has been decided by the commission that three pounds of sulphur shall be burnt in each one infected; but in cases where the occupier objects to this process, free ventilation and the burning of vinegar are to be substituted. Diphtheria appeared in the town of Catherinoslaw on the 4th of August. It was believed that the disease had been imported from Bakhmout. The epidemic is declining rapidly in Kiew—thanks, it is said, to the care and energy of the Red Cross Society.

SANITARY CONDITION OF MULLINGAR.

The registrar of Mullingar district, in a recent report, states that it is impossible to carry out the Sanitary Act as intended by the Legislature, owing to the want of a plentiful supply of pure water for drinking purposes and for flushing the sewers, the greater number of which are at the surface, and give off most deleterious gases during the warm weather. The surface sewers on the north side of the town are in a most insanitary condition, owing to the want of flushing, and several of the residents have complained of the nuisance. With reference to the supply of water, there is, it appears, only one well, and that an open one, the water from which Dr. Cameron of Dublin does not consider suitable for drinking purposes; while a large number of the private pumps have been condemned, owing to sewage-contamination, and it is probable that nine-tenths of those at present in use, if examined, would be found equally impure.

THE HEALTH OF CALCUTTA.

Dr. McLeod's report for the second quarter of the year shows that the temperature of the hot season had been "remarkably moderate," with "nothing very remarkable about the humidity, rainfall, and barometric pressure of the month. The price of food had also been "moderate and falling." The fever mortality was low in each month of the quarter, and cholera caused fewer deaths than in the corresponding period of any year in the previous decade. The deaths from diarrhoea and dysentery were also below the average. Ten deaths only were recorded from "the new disease" beri-beri, seven in April and three in May. Dr. McLeod refers to an interesting report on this disease which he had received from Dr. Lovell, the chief medical officer of the colony of Mauritius, where beri-beri appeared in December, 1878, reached its climax in February, 1879, and disappeared in the June of that year, after having caused 729 deaths.

YELLOW FEVER.

In THE LANCET of July 31st we reported, on trustworthy information as we believed, the occurrence of numerous cases of yellow fever on board the Royal Mail Company's steamer *Derwent* on her homeward voyage, and the existence of the disease on board when she touched at Havre. The *Revue d'Hygiène* has made inquiries of the medical officer of health of Havre, Dr. Launay, on the subject, and ascertained that the sickness which occurred on board the *Derwent* was not yellow fever, but bilious remittent fever.

A proposition to establish conduits of water in the city of Samara, first broached by the local authority in 1860, but which proved abortive then for want of funds, and Las to the present year remained dormant for the same reason, has now been revived with hope of a successful issue. A special committee has been appointed by the Municipal Council to consider the question, and the population is hopefully looking for a near future when the supply of water will be abundant.

and the chances of such privation of the fluid as was suffered in 1877 set aside, when, among other incidents, half the city was burned to the ground from the inability to control the flames owing to the deficiency of the water-supply.

THE NEW ROYAL INFIRMARY AT EDINBURGH.

IF we have delayed giving our readers a description of the magnificent new hospital which has been built by public subscription in the Scottish capital, and which was opened for the reception of the sick some ten months since, it is not because we in any way fail to estimate the importance of the undertaking which has been brought to such a successful issue, but rather because we wished to defer a detailed description of the building until it had been in use for some months, and until those who have to work in it had become acquainted with its good as well as, possibly, its weak points. The erection of a hospital at an expense which has been almost unlimited in a city which has been long recognised as one of the capitals of medicine and of thought is no common event, and justifies the expectation that such a combination of circumstances would furnish a building as perfect as it is possible for a building to be in our present state of knowledge, and one which should serve as a model to others, and which should furnish many a useful lesson to architects and sanitarians. These expectations have been, to a great extent, fulfilled, and we shall endeavour to make the reader fully acquainted with the characteristic features of the new building, and in doing so we shall not scruple to draw attention to any points which may seem to us to be susceptible of improvement. Not to be hypercritical upon such an occasion is to fail in our duty, and we feel sure that our Scotch friends would be the first to resent a notice which adopted a merely laudatory and not a critical strain.

The site.—The site chosen for the new infirmary is probably the best which could have been selected, and it appears to us to fulfil every requirement. It is on one of the highest points, and near to the centre of the city, so that it is readily accessible from all points, and therefore is likely to be of maximum utility to the poor whom it is intended to serve. It is close to the University also, so that the students will lose no time in going from their academical to their clinical studies. The ground is eleven and two-thirds acres in extent, and slopes gradually downwards from its most northern to its most southern limit. In this way the drainage of the soil is easily effected, and the whole of the buildings placed upon it receive a maximum amount of sunlight and air. The plot occupied by the infirmary is bounded on the north by the open grounds of George Heriot's Hospital, and on the south by the beautiful public parks known as "The Meadows" and "Bruntsfield Links"; on the east, a broad avenue known as "Meadow-Walk" separates it from the new University buildings, while on the west side is Lauriston-lane. That such a capital site could be found in the middle of a large city is not a little remarkable, and, although we understand that some of the promoters of the new infirmary very strongly wished it to be built upon the site of the old one, we feel sure that few, now the thing is done, will regret the extra expense which the change of site has entailed. The ground, which cost £62,438 10s. 5d., or about £5300 per acre, was previously occupied by George Watson's Hospital, and the architect has cleverly managed to utilise the old building in that block of the new one which is devoted to the nurses and resident students.

General plan.—The plan adopted is that which is now familiarly known as the "pavilion" plan, and it seems probable that in the "pavilion" we have reached a fixed point in hospital construction, from which no very material departure is likely to be made. The administrative block (George Watson's original building) forms the very centre of the plan, and north and south of it are two systems of pavilions, that to the north (consisting of six pavilions) being devoted to surgical cases, and that to the south (consisting

of four pavilions) being devoted to medical cases. All the pavilions run almost due north and south. A corridor connects the northern extremities of the medical or southern system of pavilions. This corridor is only one storey high, so that the space between these pavilions is almost fully exposed to the purifying and sweeping action of both northerly and southerly winds, while a maximum amount of sunlight finds its way into the space because it presents its full surface to the south. The surgical or northern pavilions, six in number, are divided into two groups of three by a great central building, four storeys high, having a handsome turreted clock tower. This building forms one of the chief architectural features of the edifice. It contains a grand entrance-hall and staircase, board room, treasurer's room, and officers' room, and from it run three corridors, the southward to the medical pavilions, and two others east and west to the surgical pavilions. From each of these surgical corridors two pavilions run northward and one southward, so that of the six surgical pavilions four run northward from the connecting corridor, and two (smaller than the others) run southward. The four main surgical pavilions running to the north form, necessarily, three courtyards, each of which is quite open to the north, but more or less closed in to the south. The central court contains an entrance lodge, and is almost completely closed to the south by the four-storeyed main building. From the entrance lodge the ground in this court slopes upwards to the main entrance, which is on the first floor of the main building, and this rise in the ground partially obscures the windows of the lowest wards in the pavilions on either side.

Owing to the main entrance being upon the *first* floor, and to prevent (apparently) the necessity of descending to the ground floor in order to pass to the various pavilions, the connecting corridor of the surgical pavilions is two storeys high (about 30 ft.), and it is obvious that this blocks out to a very serious extent both sunlight and wind. Thus it will be seen that the three surgical pavilion-courts face only to the north, and are very much blocked to the south by the main building and tower, by the two-storeyed corridor, and by other buildings which encroach upon what should have been left as an inlet both for sunlight and for southerly winds. The obscuration of those windows of the lower wards which look upon the central court is also very undesirable. The fact that the main entrance is upon the first floor necessitates a gradual slope in the long corridor which runs southward from it to the medical pavilions. To what extent these undesirable points in the general plan may have been avoidable, we have no means of knowing. They are probably, in part at least, due to the fact that the architect was compelled to utilise the building of "George Watson's Hospital," which has been absorbed into the new infirmary. Great praise is due for the ingenuity shown in making use of this building, which the managers found ready to hand upon the estate which they purchased, but to what extent it may have interfered with the attainment of perfection in the plan of the new infirmary we cannot say.

Each pavilion has three ward-floors and an attic. The height of each pavilion from the ground to the eave of the roof is 46 ft., and from the ground to the ridge 63 ft. The two central medical pavilions are 112 ft. apart, while the two end pavilions are 100 ft. from the more central ones. (In our sketch-plan all the medical pavilions are erroneously represented as equidistant from each other.) The two central surgical pavilions are 158 ft. apart, while the two end ones are only 88 ft. from the central ones. The medical pavilions are 173 ft. 6 in. long, by 33 ft. wide (outside measurement), while the four chief surgical pavilions are 128 ft. by 33 ft. The two surgical pavilions running southward are 59 ft. 6 in. by 28 ft. The surgical or northern frontage of the hospital looking towards Lauriston-lane extends along a line of about 480 ft., while the medical or southern frontage looking over the meadows is about 450 ft. long.

Style.—The style chosen by the architect, Mr. Daniel Bryce, and admirably carried out by his nephew, Mr. John Bryce, is that which is well known as the Scotch Baronial, the prominent features of which are stepped gables and turrets. The material is stone, with slated roofs, and the general effect produced is exceedingly happy. The building is solid, handsome, and imposing, and there is an entire absence of useless and frivolous ornamentation. The tint of the stone, however, is somewhat sombre, and under a grey sky there is a certain gloominess about the edifice not altogether desirable. The free extremities of the pavilions are flanked by turrets in which are placed the sanitary offices of the

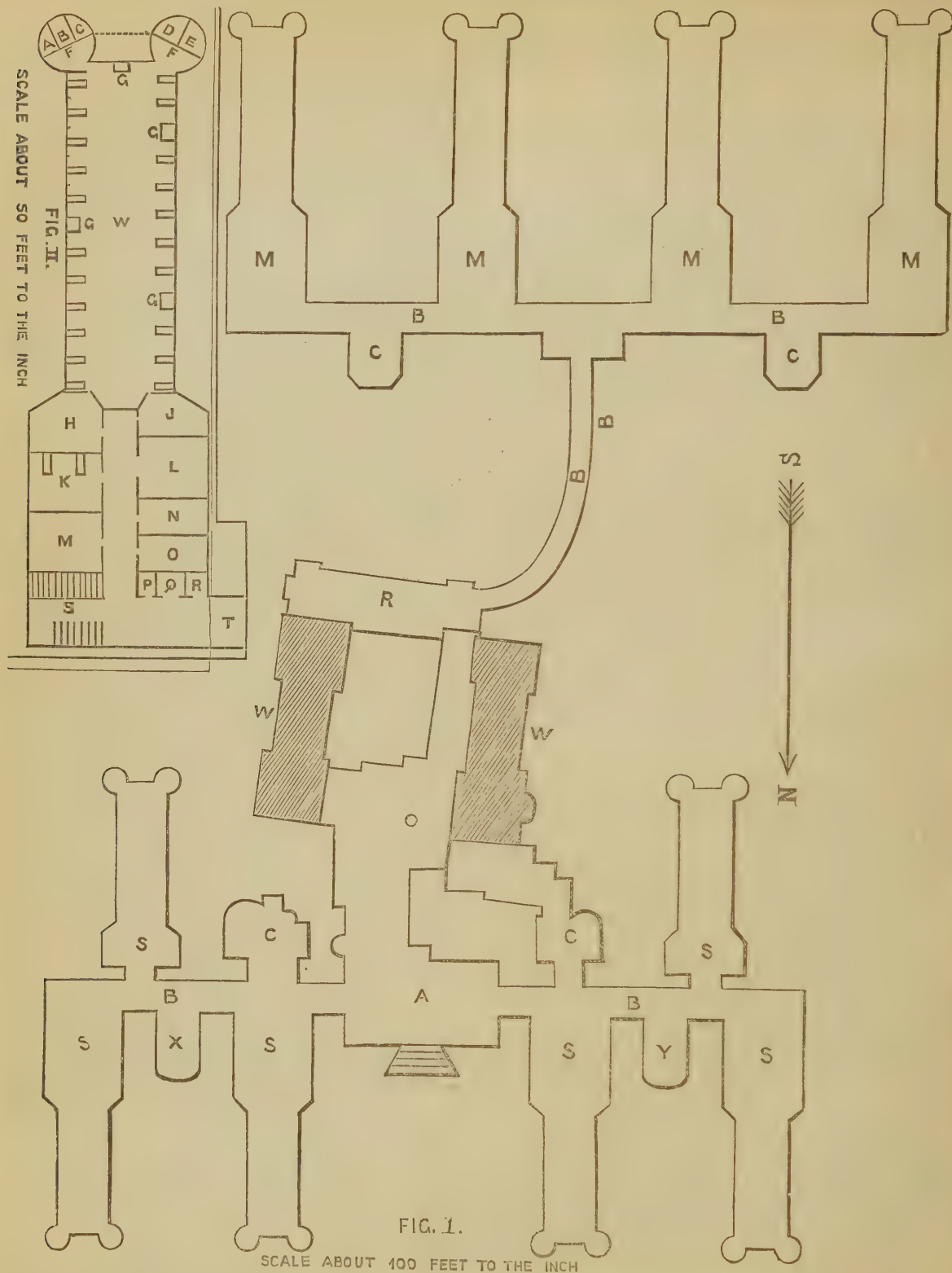


FIG. I.—Sketch plan (reduced from a larger plan kindly furnished to us by Mr. John Bryce, the architect), showing the general disposition of the buildings of the Edinburgh Royal Infirmary. A, Central administrative building and grand entrance. B B B, Corridors. C C, Clinical lecture theatres. M M, Medical pavilions. S S, Surgical pavilions. O, Operating theatre. R, Medical reception room. W W, George Watson's original building (deeply shaded), converted into a home for nurses and resident students. X, Students' hall. Y, Casualty room.

FIG. II.—Floor plan of Eastern Medical Pavilion. A, Watercloset. B, Urinal. C, Slop sink. D, Bath-room. E, Lavatory. F, Lobby. W, Ward with twenty-one beds. G G, Fireplaces. H, Nurse's room. J, Doctor's room. K, Private ward. L, Day-room for convalescents. M, Ward-kitchen and sink. N, Bath-room and watercloset. O, Mattress-room. P, Dinner-lift. Q, Patient's lift. R, Dust-shoot and dirty linen shoot, and sink. S, Staircase. T, Corridor.

These sketch plans, made by ourselves, are only approximately accurate.

wards, and one cannot but be struck with the admirable manner in which the Scotch baronial style lends itself to sanitary purposes. We are informed, however, that the turret of the Scotch baron's castle is, so to speak, the real ancestor of the sanitary turret of the modern hospital, and that the baronial turrets were not unfrequently used as latrines, the moat below being the receptacle for the soil. It was often necessary to have two latrine turrets, the one or the other being used according to the direction of the wind, for a hurricane could counteract the laws of gravity, and that which should have fallen into the moat occasionally took a contrary direction.

Details.—We may now consider the arrangements of the pavilions themselves, and if we describe one pavilion it is only necessary to multiply it by ten to get an idea of the entire hospital. Our observations were chiefly made upon an empty ward floor in one of the surgical pavilions, but the arrangements are almost precisely similar, differing only in scale, throughout the hospital. This pavilion, 128 feet long, consists of a low, dry basement, three ward floors, and an attic. The pavilions are 33 feet wide towards their free end, but slightly wider at their attached ends. The eaves are surmounted by stepped gables at the end and sides bearing the chimneys, and pierced with narrow windows to give light to the attic; the towers at the end are each twelve feet in diameter, and are surmounted by conical tops pierced with louvred openings for purposes of ventilation, and surmounted by ornamental vanes. In the middle of the wide attached end of each pavilion is a square louvred turret with conical top and vane, used entirely for ventilating purposes, of which we shall have more to say hereafter.

We will now proceed to the top ward floor of the pavilion and examine its arrangements. Ascending by a stone staircase 6 ft. 6 in. wide, winding in a spacious well-hole some 20 ft. square, we find ourselves in a paved corridor 12 ft. wide by 15 ft. high, from which access is obtained to the six top floors of the surgical pavilions. If the pavilion be an end one the entrance to the ward is flanked on one side by the staircase and on the other side by a food lift, a patient's lift, a little room containing a sink and dust shoot, and also a foul linen shoot. These shoots run right through to the corridor in the basement. We understand that it has already been decided not to use the foul linen shoots, and certainly the dust shoots ought not to be used either, since they open into the lower heated corridor, and quite close to the entrances to the lifts through which heated air charged with impurities has the chance of finding its way to every floor of the building. We hope by this time it is recognised that by perforating a building with vertical shafts, whether for staircases, lifts, or shoots, we diminish to the vanishing point the great principle of separation and isolation which is the only *raison d'être* of pavilion hospitals. Leaving the corridor we enter the pavilion, the ward being approached by a passage some 60 ft. long and 9 ft. wide, giving access on either side to certain apartments which occupy the wide attached portion of each ward floor. These apartments are, on one side a ward-kitchen, a mattress-room, a day-room for convalescent patients, and a nurse's sitting-room looking into the ward; and on the other side a bath-room and W.C., a private ward containing two beds, and a "doctor's room" for examining urine, &c. In addition to these apartments, there is (on the top floor) a small wooden winding staircase, giving access to the attic storey. The entrance to the ward is closed by swing doors, and pushing these aside we find ourselves in the ward itself. This is 75 ft. 8 in. long, 28 ft. 6 in. wide, and 15 ft. high. It contains fourteen beds only, so that each bed has the magnificent allowance of about 153 ft. of area, and about 2300 cubic feet of space. These are amounts which are considerably in excess of those allowed in any other general hospital in the country. Not only is the cubic space allowed to each patient very large, but the means of renewing the air and thoroughly ventilating the ward appear also to be most ample. On either side are seven windows running from about two feet from the floor to within a few inches of the ceiling, and at the free extremity of the ward are two windows and a glass door. The lower three-quarters (about) of the windows open sashwise, but the upper part consists of a pane of glass revolving vertically on an axis. This is opened and shut by an iron rod, and its position being determined by the medical officer or nurse, it is fixed by a simple lock, and cannot be interfered with by patients. In fine weather the windows will afford most ample means of ventilation. In addition to these there are

a number of fresh air inlets, which are situated on the floor level immediately beneath each of the windows. Each of these is about 8 in. square. They are simply channels, running through the walls to the open air, and closed at their outer ends by an iron grating. This grating is closed or opened by means of an iron valve, hinged from the bottom or the top (we saw both arrangements), and worked by means of an iron rod running along the channel to its opening in the ward. The patients' lockers are built into the window recesses, and are fitted round these fresh-air inlets, the length of which they thus practically increase. In some of the wards these inlet channels slope gradually downwards to the outside grating, and one which we measured had a length of 2 ft. 8 in. from the ward to the grating. These channels, about eight inches square, and nearly a yard long, are obviously not easy to clean; and when the channel has a downward slope, and the valve closing the grating is hinged from below, material which rolls or is blown down the slope is stopped by the valve from escaping through the holes in the grating, and it is obvious that no brush would serve to cleanse the somewhat acute angle formed by the floor of the channel and the valve of the grating. In one ward, and only one, we found that portions of an old surgical dressing had lodged in this very spot, and we mention the fact because it is evident that air entering a ward through a dusty or a dirty channel may disseminate much that is, to say the least, undesirable. In the turret-annexes (of which we shall have more to say), a hot-water coil has been placed exactly in front of one of the fresh-air inlets, so that the cleansing of it is thus rendered not merely a matter of difficulty, but an absolute impossibility. It ought to be an axiom of hospital construction that every air inlet should be susceptible of rapid and perfect cleansing. The ward has three open fireplaces, one at each side, and one at the end under the centre window. Two of these are Galton's grates, with inlets (12 in. by 12 in.) above them for warmed fresh air. Exclusive of the windows and doors, the fresh-air inlets are probably nearly sufficient to renew the air in the ward about twice an hour without draught. Fresh air delivery is everywhere horizontal, and nowhere vertical. The ward is equally well provided with outlets for foul air. There are, first of all, the three fireplaces. Beneath each bed is an outlet 6 in. by 9 in. At each of the four corners of the ward there are two large outlets—one near the floor and one near the ceiling; and at either extremity of the ward, close to the ceiling, there are also outlets—twenty-four outlets exclusive of fireplaces and gas flues. These outlets are a very special feature in the hospital. Each of them is connected with a brick flue, terminating on the attic storey in a wooden tube, which travels backwards to the louvred turret placed over the attached end of the pavilion. The attic storey is therefore to a great extent filled by a compact mass of wooden tubes connected with the exhaust flues of the wards below. These tubes terminate round a hot-water tank situated in the louvred turret, and it is intended that the rarefaction of the air in the tubes caused by the heat of the tank shall maintain a constant outflow of foul air through the tubes. This use of hot water as a means of air exhaustion is due to the late Mr. Daniel Bryce. We were not able actually to see the tanks and tube-ends, but we were assured that the outflow of air through the tubes was well maintained. Some of the tubes leading from the lower wards are as much as 200 feet long, and the total length of exhaust tubes in the building must be very considerable indeed. It is hardly possible to think upon such a system as this, ingenious as it undoubtedly is, without sundry misgivings. The chief reflections are, what kind and what amount of matter will collect in one of these long tubes in the course of twelve months, and what possible results may happen in the case of a back current being accidentally established? Supposing, for instance, the hot-water apparatus fails some day in the middle of winter, that the water in the turret tank freezes while a powerful exhaustion is going on through the ward fireplaces, what will happen then? The hospital has been provided with a series of long tubes, having a hot-water tank at one end and three fireplaces at the other, and we did not clearly understand how it has been ensured that the current of air in these tubes shall always be in one direction. When our chimneys smoke (and all chimneys do smoke occasionally) we know the worst of it, and all the material brought back into our rooms is inert and antiseptic. But if a foul exhaust-tube should "smoke," what then? On theoretical grounds we should

hesitate to adopt this system of exhaustion, and we trust that the managers of the Royal Infirmary will take steps to furnish the scientific world with some exact information on the action of these tubes. Two anemometers, each indicating a current in one direction only, should be kept permanently at the ward orifice of each tube in some ward set apart for experiment, and the amount and direction of the daily current during a whole year should be recorded. If it should be established that an occasional puff of air regurgitates from these foul flues into the ward, it is a question whether their potentiality for harm does not altogether outweigh their utility as ventilators.

(To be concluded.)

THE SERVICES.

HEALTH OF TROOPS IN AFGHANISTAN.

THE information which has reached this country respecting the health of the troops on the march from Cabul to Candahar is very satisfactory. The distance from Cabul to Khelat-i-Ghilzai was accomplished in seventeen days, being rather more than fifteen miles a day, with a loss by death of only one European in a force of 2836, and four native soldiers out of 7157, and six camp followers. We may infer from this that every possible attention has been paid to the sanitary condition of the troops. We regret to observe by a letter in the *Times*, signed "An Anxious Mother," that similar care does not seem to have been taken of the troops at Gundamak. In a letter from her son, an extract from which is published, details are given which, if correct, show an utter disregard of sanitary considerations in the selection of the site for a camp at Sufed Sung, and he adds, "The doctors are kicking up a tremendous row about it." We trust the military authorities will cause an investigation to be made into the real facts of the case, and, if substantiated, into the steps taken by the medical officers to prevent so shameful a neglect of sanitary precautions. In former days a medical officer had no power to interfere. Now he has not only the right, but it is his duty to point out to the officer commanding any circumstances likely to affect injuriously the health of the men. It is clear, therefore, that an inquiry should be forthwith instituted to ascertain what representations were made by the medical officer in charge, and whether, finding them disregarded, he made a report in writing to the commanding officer. If he did, the responsibility resting upon the latter is very serious, and unless he can show that it was impossible to carry out the recommendations it will be clearly the duty of the military authorities to take such steps as will prevent the repetition of such utter neglect of the health of the men and disobedience of the standing orders of the service.

NAVAL MEDICAL DEPARTMENT.

Rumours are current that the Admiralty are opposed to making a new grade of rank in their service to correspond with that of brigade-surgeon in the army, but that they are not unwilling to increase the retired pay of fleet surgeons to a maximum of thirty shillings a day, as given in the army to brigade-surgeons. This is strange, and we shall have something to say on the subject hereafter; but for the present suffice it to express the hope that the age at which fleet-surgeons may receive that rate of retired pay will be made to correspond with that at which it is obtainable by brigade-surgeons in the army.

Deputy Surgeon-General H. Hassard, the principal medical officer of the 2nd Division Cabul Field Force, was compelled by ill-health to return to India the last week in July, and will rejoin his appointment at Umballa as the administrative medical officer of the Sirhind Circle.

ADMIRALTY.—The following appointments have been recently made:—Fleet Surgeon Gerald Molloy and Surgeons J. T. Henwood and A. W. May to the *Achilles*; Fleet Surgeon W. H. Adam to the Royal Marine Artillery; Surgeon F. A. Jeans to the *Minotaur*; Staff-Surgeon J. Lamber to the *Tamar*; Staff-Surgeon E. W. Doyle to the *Coquette*.

Staff Surgeon Charles Strickland has been promoted to the rank of Fleet Surgeon in Her Majesty's Fleet, with seniority of 22nd August.

MILITIA MEDICAL DEPARTMENT.—The undermentioned officers resign their commission; also are permitted to retain their rank, and to continue to wear the uniform of their regiments, on their retirement:—Surgeon-Major Samuel Swain Scriven, M.D. (Royal North Gloucester Militia), and Surgeon-Major William Bulmer (5th West York Militia).

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE following special notice has been issued for the information of candidates for the Membership as to the payment of fees for the Primary and Pass Examinations:—

"All candidates presenting themselves for the first time, whether at the primary examination or at the pass examination for the diploma of member, will be subject to the payment of fees in accordance with the provisions of the following bye-law of the College, and all candidates who shall hereafter be rejected at either of these examinations will also be subject to the conditions of the said bye-law:—

"9. The fee of twenty guineas, over and besides the fee for the preliminary examination and the stamp duty, shall be paid by every person prior to his admission as a member. Every candidate for the diploma of member shall, prior to his first admission to the primary professional examination, pay a fee of five guineas, and such fee shall be allowed him as part of the said fee of twenty guineas payable on his admission as a member, and shall be retained whether he pass or fail to pass such examination. No candidate shall, after failure at any primary professional examination, be admitted to a subsequent primary professional examination without paying a further fee of three guineas, which shall be retained whether he pass or fail to pass such examination, but shall not be allowed as part of the said fee of twenty guineas. Every candidate shall, prior to his first and every subsequent admission to the final professional examination, pay a fee of fifteen guineas over and above all charges for stamps; but in every case of failure to pass such examination the sum of ten guineas and the charges for stamps shall be returned to the candidate. The fifteen guineas paid on admission to any final professional examination by a candidate who shall be successful thereat shall be allowed him as part of the said fee of twenty guineas payable on his admission as a member."

Correspondence.

"Audi alteram partem."

FEVER IN MAYO.

To the Editor of THE LANCET.

SIR,—In THE LANCET of Aug. 14th there is given an able and instructive report on fever in Swinford Union, County Mayo. According to that report the climate of Mayo generally, including Swinford, is remarkably damp, rainy, and cold; the condition of the people was that of extreme poverty, their huts affording no more than 200 cubic feet of space to the occupants, the only means of ventilation, the chimney, if such exists, and the chinks in the door; a water-supply from wells, into which sewage-matter of every nature freely passed, collections of filth poisoning the air; a dietary consisting almost exclusively of Indian meal, badly cooked, and often used without milk; in times of distress their clothing pawned; five or six persons sleeping in the one bed, owing to the dearth of bedclothes. The chief types of disease met with were "simple continued and enteric fevers," diarrhoea and dysentery, and typhus. Among the chief features connected with enteric cases are enumerated epistaxis, melæna, emaciation, rachialgia, arthritic, osteal, and abdominal pains, and "the usual relapses of enteric fever." Closely allied to the enteric cases, both as to causation and symptoms, were those of diarrhoea and dysentery; in each it was the rule for all the members of a family to suffer from one or other of these affections; and then, in the statistics given, we are informed that twelve

admissions occurred by "enteric or simple continued fever," but no deaths by "enteric or simple continued fever."

Here, then, it appears to me we have in operation conditions under which disease, adynamic in type, becomes a natural result, whether as fever, diarrhoea, or dysentery. Nothing is stated in the report in question regarding *specific poison*, neither, apparently, was it deemed necessary under the circumstances to assume the operation of other than the conditions enumerated. But with reference to remarks that have been made in some of my papers on fevers among British troops in India, I am induced to believe that the observations now quoted may aid in clearing up certain points in which observers at home and observers abroad seem to experience some little difficulty in mutually understanding each other. The conditions of the climate of Mayo and of the people, as described, are in complete opposition to those under which the soldier in India lives; inasmuch, then, as on the one hand we have in full operation the causes of asthenic disease, so we have on the other—namely, that of the young soldier in India, those of sthenic. An eminent London physician has designated "enteric" fever a *multiform* disease; in the remarks quoted the term enteric is used in connexion, and, to all appearance, synonymously with that of "simple continued" fever; the affection so designated is described as prevailing together with typhus, and it is specially stated that "closely allied to the enteric cases, both as to causation and symptoms, were those of diarrhoea and dysentery." May I, therefore, be permitted to observe that with a view to indicate as clearly as may be the precise nature of the cases in Mayo alluded to as of enteric fever, it would, I think, be useful were a short statement given of—(a) the phenomena and causation, whether specific or non-specific, of the cases so designated; (b) of the precise respects in which they are allied to, or identical with, or different from those of typhus, simple continued fever, diarrhoea, and dysentery, from one or other of which "it was the rule for all the members of a family to suffer" during the epidemic alluded to; (c) the precise significance intended to be conveyed by the term *enteric*—that is, whether as indicating the existence of intestinal disorder in the course of true specific fever, or the presence of a specific form of fever, whether with or without intestinal disorder, or as a synonym of simple continued fever, or if in any other sense, its exact nature. As, according to the high authority alluded to, "enteric or typhoid" fever is *multiform*, it may, perhaps, become practicable, from a consideration of the points above indicated, to learn how far the disease referred to in Mayo represents a separate and independent affection, or a *condition* occurring in the course of others.

I am, Sir, yours, &c.,

C. A. GORDON, Surgeon-General.

Cambridge-gardens, W., August 24th.

ON SCLEROTOMY.

To the Editor of THE LANCET.

SIR.—In his remarks on the treatment of glaucoma by sclerotomy, Mr. Bader has overlooked an important aid to treatment—viz., the use of eserine before and after the operation. There are some cases, and those generally the most severe and urgent, in which the local application of eserine gives no results either in causing contraction of the pupil or in reducing tension, and in these sclerotomy or iridectomy should be at once performed. But a large majority of glaucomatous eyes are very rapidly and beneficially affected by eserine, and its effects are to some extent a guide in the choice of an operation. If the pupil contracts and the tension is perceptibly reduced after repeated use of the drops, there is every prospect of a successful result after sclerotomy; and not only so, the operation is more easily performed, and is less likely to be followed by protrusion of the iris. If, on the other hand, the pupil and the eyeball tension remain unaffected by the eserine, there is still a fair prospect of curing the glaucoma by sclerotomy; but iridectomy is, I think, generally preferable. If, however, a sclerotomy has been performed under such circumstances, the after-use of eserine will often prevent "enclavement" of the iris and its occasionally troublesome effects.

In a paper read by me at a meeting of the Clinical Society in 1876, I ventured to express the opinion that sclerotomy would be "the future remedy for the great majority of cases of glaucoma." I am therefore very glad to hear that the

senior ophthalmic surgeon at Guy's is also in favour of this operation. I cannot quite go so far as he does in thinking that "in course of time the operation will be adopted in every case of glaucoma," but I still think that with the aid of eserine very few cases will require any other operation besides sclerotomy, and that in cases where one sclerotomy seems to have failed it is better to repeat it than to resort to iridectomy. I have now under observation a patient upon whom I performed sclerotomy four years ago. The results are permanent and very good. The occasional loss of an eye from carrying the incision too far back must not be taken as an argument against sclerotomy properly performed. The same thing may and has happened after iridectomy, and possibly, in some instances, from the same cause.

I am, Sir, yours obediently,

W. SPENCER WATSON, F.R.C.S.

Henrietta-street, Cavendish-square, Aug. 25th, 1880.

WOOLSORTERS' FATE.

To the Editor of THE LANCET.

SIR.—In THE LANCET of March 9th, 1878, and again in the No. for December 20th, 1879, appear "annotations" directing attention to the deleterious effects of the dust upon the woolsorters, and it is added that alpaca wool, mohair, &c., seem, besides, to have the power of producing blood-poisoning.

As to mohair, &c., I know nothing, but as to alpaca I beg to offer the following observations:—

Arequipa is the centre of the alpaca trade—nine-tenths of the export passing through this town, and the business is entirely in the hands of foreign houses, chiefly English. The alpaca lives in the interior at heights ranging from twelve to upwards of eighteen thousand feet above the sea-level. The wool is brought down here by mules, ponies, llamas, and a little by railway. When it arrives it is teased out, well shaken, picked, sorted, and then pressed into bales. This work is all performed by women with the exception of the pressing, which, requiring considerable muscular exertion, is done by men. All these manipulations are conducted in sheds which are freely ventilated by natural means. I have frequently visited these sheds, and always found the air highly charged with dust.

And now as to the health of the workpeople. I may premise that I have been in medical charge of the foreign houses for about twenty years. If any of the workers, especially of the old hands, are sick I am requested to see them, as a good woolsorter who is honest—i.e., cannot be bribed to pass bad wool—is a person of value. Upon taking a review of their cases I cannot find anything particular about them. Certainly I find no evidence of any fever (blood-poisoning) or other disease peculiar to them. Even with respect to lung affections, they seem to be no more prone than the rest of the population. In fact, they are perhaps more healthy than their class generally, which may be attributed to their work being light and well paid. On entering these sheds one sees a number of small, somewhat stout, healthy-looking Indian women, some of them with infants. These latter lie about amongst the wool, and are quite healthy. Some of the present sorters may be said to have grown up in the sheds, and yet show no signs of disease. The men are necessarily strong and healthy, otherwise they could not do the work.

Taking a more general view of the subject, I am disposed to think that the bad effects of mere dust—that is, dust which is not seriously irritating, owing to some particular mechanical or chemical property, such as grinders, patent fuel makers, &c.—are exaggerated, and that these effects ought rather to be attributed to badly-ventilated rooms and consequent rebreathing of air, to low pay and consequent bad alimentation. If dust *per se* were so injurious, and not, as a rule, so easily got rid of by the action of the ciliated epithelium of the lung, many more people ought to suffer. Take, for example, the muleteers who travel about this coast. Owing to the scarcity of rain they are from morning to night in a cloud of dust raised by their mules. On arriving at their destination they are thickly covered with dust. These men may get an attack of bronchitis or pneumonia, as they sleep in the open air taking care of their mules, but they are not liable to any form of phthisis or other chronic lung disease.

Allow me to repeat that as to mohair, camel's hair, or

other Eastern wools, I cannot say whether they may give rise to bacillus anthracis or any other form of blood-poisoning; but I think I have proved that alpaca must be held guiltless.

I am, Sir, yours truly,
J. DICKSON HUNTER, M.D. Edin.

Arequipa, Peru, April, 1880.

SUPRAPUBIC PUNCTURE OF THE BLADDER.

To the Editor of THE LANCET.

SIR,—Attention has been recently drawn in your columns to the value of suprapubic puncture of the bladder in cases of retention. This operation has been justly extolled as of great value; and so far as I am aware, the method of puncture adopted when an aspirator is used is considered to be a perfectly safe measure, and to have had so far no case of death recorded against it. I think it might be of use, therefore, to record a case where the results were not so satisfactory.

A few years ago a young man with a history of previous stricture was admitted into the London Hospital with retention that had appeared suddenly after exposure to cold and an outburst of drunkenness. All attempts at catheterism failed, as did also the treatment by hot baths, opium, and a dose of croton oil. The bladder was, therefore, aspirated above the pubes without preliminary incision. Next day the patient passed water spontaneously. On the third day a small catheter was passed, and the patient insisted on leaving the hospital. In less than a week he returned very ill, developed symptoms of pelvic cellulitis, and died in about three weeks. The stricture had given no further trouble. The post-mortem showed no trace of the wound in the bladder, but very extensive suppuration of the pelvic connective tissue.

Another case in the hospital about the same time gave great support to the other side of the question of prognosis. A seaman started on a voyage with a stricture and a medium-sized catheter. He passed the catheter once a week. One day, when on the high seas, he found himself unable to pass either his urine or his instrument, and no surgeon was on board. His symptoms of retention becoming very severe, he deliberately punctured his bladder in the middle line above the pubes with the small blade of a penknife, allowed the water to run out by the side of the knife, and then introduced his catheter into the bladder through the wound. He kept it there until he found he could pass it *via* the urethra. The wound healed well, and the man recovered without an evil symptom.

I remain, Sir, yours faithfully,
FREDERICK TREVES, F.R.C.S.,
Assistant Surgeon and Senior Demonstrator of
Anatomy to the London Hospital.

Gordon-square, W.C., Aug. 1880.

WORK AND PAY IN PROVIDENT DISPENSARIES.

To the Editor of THE LANCET.

SIR,—The subject of Provident Dispensaries being one of considerable importance and interest to the medical profession, I should be glad if you would allow me to publish the following account of one which has been working for two years and a half.

In the beginning of 1878 Messrs. Tangye Brothers, engineers, Cornwall Works, Birmingham, started, at their own expense for twelve months, a Provident Dispensary for their workpeople, their wives and families, after which time their *employés* were to contribute towards its support.

The cost of making certain alterations in a house already existing in connexion with their works, furnishing the same for the resident medical officer, and as waiting and consulting rooms, fitting the dispensary with all necessary appliances, supplying drugs and surgical instruments, together with the salaries of the medical officer and dispenser, was upwards of £1000.

At the end of 1878 it was decided that the *employés* should contribute as follows towards its support: men 4s., women 4s., children over thirteen years of age 4s., other children 1s. 6d., per annum; families consisting of five or more children under thirteen years of age were to pay a

maximum sum of 15s. per annum for attendance upon all members. These sums were not to include attendance in midwifery cases or vaccination, these being left to the discretion of the medical officer.

The services of the medical officer and dispenser were entirely retained for attendance on members of the dispensary.

The following is the account for the six months from January 1st to July 1st, 1880:—

There are now 2890 members, composed as follows: men, 1297; women, 554; children over thirteen years of age, 60; other children, 1056; and 57 families included in the 15s. per annum fee. The total amount received has been £237 0s. 4d. The expenditure has been as follows: salaries of medical officer and dispenser, £191; drugs, £57 12s. 5d.; surgical instruments, &c., £2 8s. 5d.; railway fares, &c., £1 3s. 4d.; rent, rates, and taxes, £17 10s.; sundries (coal, gas, &c.), £6 6s. 9d.; total, £276 0s. 11d. Leaving a deficiency on the half year of £39 0s. 4d.; besides which there is no allowance made for the use of a conveyance, which has been required on an average twice each week.

The amount of work done stands as follows:—The number of fresh cases of illness has been 1728: of these 877 have been men, 280 women, 571 children; 487 have been too ill to come to the dispensary, and have therefore been visited at their own homes, and to these 3078 visits have been paid. There have been 5250 consultations at the dispensary, and 8463 bottles of medicine, &c., have been supplied.

It was thought that it would be of interest to keep an account of the number of men, women, and children visited during the months of May and June; this was accordingly done with the following result: men 25; women 60; children 88; total 173.

I am, Sir, yours faithfully,
CORDLEY BRADFORD, L.R.C.P., M.R.C.S., L.S.A.
Smethwick, August, 1880.

INDIAN MEDICAL SERVICE.

To the Editor of THE LANCET.

SIR,—Several recent numbers of THE LANCET which have reached me show that, contrary to the spirit of the motto which heads your correspondence columns, and in misapprehension I feel quite sure of the actual merits of the case, you have refused admission to letters from officers of the Indian Medical Service on the subject of the recent changes in their Service. Apart from the homely proverb that "they who wear the shoe know best where it pinches," the fact that such a number of letters have been addressed to you, that a deputation had lately an interview with the Secretary of State for India, that numerous petitions are at the present time being submitted to the Viceroy, and that others are in course of presentation to Parliament, might have convinced you that there was "something in" the agitation. There are several events in the history of our service which show that we are far from being an unreasonable body of men. Your strong point appears to be that we are wrong to object to the principle of selection. We are very far from doing so, if the principle is fairly applied, and, indeed, in combination with seniority, it has always governed promotion to the administrative ranks in our service. But what has happened to us is this: that though ours is in its essence a military service, many of us who have stuck to the legitimate, that is the military, line, find that as we are approaching the period at which we might expect promotion, and should undoubtedly have got it under the old rules, it is retarded or altogether taken out of our reach by the administrative rank having been split into two, a military and civil, the appointments in the latter being reserved exclusively for men who have passed most of their service in civil employ. The effect of this rule is that the promotion of some of our most distinguished men has been greatly retarded, and in some cases rendered impossible; for it must be borne in mind that the superannuation rule requires a man to retire at fifty-five if he has not been promoted to deputy surgeon-general; consequently a man who enters the service at twenty-five cannot get promotion at all unless it comes to him within the thirtieth year of his service, and it is exceedingly doubtful whether it will ever under the new rules be attained within that period; seeing that before the split in the administrative grade twenty-six years was an average service on promo-

tion, it is not too much to say that it has been retarded at least four years.

When, in conclusion, I say that this misfortune and disappointment of their hopes has happened to men whose only fault has been that they have stuck to the military line, I think it will be conceded that the widespread dissatisfaction which exists is not to be wondered at. I purposely omit any allusion to the subordination of the military portion to the Army Medical Department, our inferior rank, rates of pension, paucity of honours, &c.

I am, Sir, your obedient servant,

Bengal Presidency, Aug. 4th, 1880.

F.R.C.S. ENG.

** Our correspondent must have read "several recent numbers of THE LANCET" very carelessly if he drew from them the conclusion that we do not think the officers of the I.M.D. have legitimate cause of complaint and very real grievances. But we do not consider exaggerated or incorrect statements to be the most likely means of having them remedied. In the above letter our correspondent writes of "the administrative rank having been split into two, a military and civil, the appointments in the latter being reserved exclusively for those who have passed most of their service in civil employ." But he omits to say on what authority this statement is made, and we are not aware of the existence of any such rule. On the contrary, the General Order regulating the service states that it will be the duty of the Surgeons-General, *inter alia*, "to propose transfers between the military and civil departments; to recommend for promotion to the administrative grades," &c. "Selections will be made in each Presidency from the whole Indian Medical Service of that Presidency, and the principles of selection hitherto followed in making such appointments will be observed." "Although the administration of the Indian Medical Department is divided into two branches, civil and military, Indian medical officers will remain, as now, military officers, those in civil employ being only lent to the civil department."—ED. L.

MEDICAL NOTES IN PARLIAMENT.

In the House of Commons on Thursday, Aug. 26th, a return was presented, on the motion of Mr. Alex. Brown, showing, in a tabular form in order of years, all the local visitations which have been made by medical inspectors, &c.

On Saturday Mr. Stansfeld gave notice that next session he would bring in a bill to repeal the Contagious Diseases Acts.

On Monday Mr. Callan moved for a return, which was ordered, of correspondence between the Inspector-General of Constabulary and the Governors of Dr. Steevens's Hospital relative to the treatment of constabulary patients in the said hospital, referred to in a letter of T. H. Burke, Esq., under-secretary to the secretary of the Board of Superintendence of the Dublin Hospital, under date the 24th day of October, 1878.—Mr. Firth put a series of questions, which appeared in last week's LANCET, as to the destruction at Billingsgate, in the month of July, of ninety tons of fish which was unfit for human food. Mr. Arthur Peel replied that seventy-five tons of the fish came by land carriage, which was more likely to spoil them than carriage by water, and of the remainder twelve tons were taken from a vessel which had lost its stock of ice. The bad condition of the fish was not owing to insufficient market-accommodation, but to the hot weather and dulness of sale, in consequence of the unusually large quantity brought to market in July. Greater facilities for sale would perhaps enable an earlier distribution of the fish to be made; but the Corporation of London denied that their market monopoly was prejudicial to the public. However, they would offer no resistance to the establishment of another market if it were proved to be necessary, and the Home Secretary was willing to consider any well-founded representations which would be made to him on the subject.—Mr. Arthur Moore gave notice that he would make the following inquiries of the Chief Secretary for Ireland: "Whether his attention has been called to the

statement in Dr. McCabe's recent report on Belfast Workhouse, that within the six months from January to June eighty-two infants have died in that institution; and if he would inform the House what percentage of the whole number of infants this represents. Whether in the case of persons not entitled to gratuitous relief, but seeking treatment for infectious diseases in Irish Poor-law hospitals, and willing to pay for the same, there is any regulation which precludes them from using their own clothing, and compels them to adopt the regular pauper-branded garments; and, if such regulations exist, whether he is prepared to modify them, with the view of inducing the middle classes to avail themselves of these hospitals, and thereby raise the standard of medical treatment, and avoid grave dangers to public health."

On Tuesday the sixteenth detailed annual report by the Registrar-General of births, marriages, and deaths in Ireland during the year 1879 was presented.—On the motion of Mr. Bellingham, a return was presented, showing the murders, &c., in England, Wales, and Ireland in three years, ending respectively the 29th day of September and 31st day of December, 1879. Another return, moved for by the same hon. member, was presented, showing how many Boards have availed themselves of the Dispensary Houses (Ireland) Act, 1879.—Dr. Farquharson gave notice of the following questions: To ask the Under Secretary to the Admiralty whether or not it is the intention of the Admiralty, in view of the existing unpopularity of the Naval Medical Service, and the consequent difficulty in obtaining eligible candidates, to take immediate action to remedy the grievances of the Service, and place it on a footing of equality with the Army Medical Service; whether the report of the Committee appointed by the late Board of Admiralty to inquire into the acknowledged grievances of the Naval Medical Department, as announced by the late First Lord of the Admiralty in introducing the Naval Estimates for the current year, has been completed and presented to the Board; and whether or not it is correct that only seven candidates were found eligible during the last twelve months to fill the vacancies, seventy in number, at present existing on the list of naval medical officers.

On Wednesday, a petition for redress of grievances was presented from Surgeon-Major Robert Bird, of the East India Medical Department. A return was presented, on the motion of Mr. Hopwood, of the proportion of deaths from small-pox amongst children in 1847, and from 1855 to 1878. Mr. A. Moore called attention to certain grave abuses and irregularities in the management of Belfast Workhouse, and Mr. Forster promised inquiry into the matter. Subsequently Mr. Moore gave notice that next session he would move a resolution demanding a reform of the Irish Poor Law and its administration.

On Thursday, replying to Mr. Moore, Mr. Forster said the regulations of the workhouse hospitals did not admit of patients wearing their own clothes; and that was a very necessary regulation, as otherwise, if convalescents returned home in the same garments as they had worn in a fever hospital, the disease would quickly spread. At the same time, there was no regulation that patients in a fever hospital should wear the regular pauper garments, and a circular had been issued to guardians forbidding it.—Mr. A. M. Sullivan asked the Secretary of State for War if he would lay upon the table copies of all letters and telegrams relative to the medical appointment offered by the War Office to and accepted by Dr. R. D. Nicolls, of Navan, but which was subsequently prevented, without any explanation to Dr. Nicolls. Mr. Childers said he had looked into the papers in this case, which occurred before he took office. The post accepted by Dr. Nicolls was in the gift, not of the War Office, but of the officer commanding the Navan Division, subject to the approbation of the General commanding in Ireland. The appointment of Dr. Finigan was duly made by them, but some of the communications sent by the War Office to Dr. Finigan were very carelessly written, and he (Mr. Childers) had severely reprimanded the officer in fault.—Sir Henry Peek asked the Secretary of State for War whether his attention had been called to a report made by the officers of health to the Wandsworth Local Board relative to the sanitary condition of the Royal Patriotic Schools on Wandsworth Common, in which it is stated that the sewage lies in pools on the land adjoining the schools, and has been the cause of fever amongst the children? And, whether he proposed to take any steps to prevent these schools becoming a source of danger and disease to the neigh-

bourhood? Mr. Childers replied that he had no authority whatever over the schools of the Patriotic Society. They were managed by a Royal Commission entirely independent of the War Office. To enable him, however, to answer this question, he obtained from the secretary to the Commission an explanation, which he did not consider satisfactory, and he had caused an official communication to be addressed to the Commission.—In answer to Mr. Moore, Mr. Forster said he was making inquiry as to the high rate of mortality amongst the infants in Belfast workhouse, and it appeared to be about 30 per cent.

Obituary.

HENRY FRANCIS BURDETT, M.R.C.S.

WE record with regret the death of Mr. Henry Francis Burdett, Surgeon, of Birmingham. Although Mr. Burdett took little part in questions affecting the politics of the profession, he exercised at one time no inconsiderable influence. He was in all respects a good representative of the general practitioner of a past generation, and with this aspect of his life it may not be uninteresting to deal briefly.

Born at Gilmorton, in Leicestershire, of which place his father, the late Rev. D. J. Burdett, M.A., was the rector, he was sent to Uppingham School at an early age, and remained there till he became apprenticed to the late Mr. Morgan, of Lichfield. He remained with the latter for four years, and then entered at University College, London, where he completed his medical education. He passed the L.S.A. examination in 1836, and became M.R.C.S. Eng. in 1837. Possessed of these qualifications, he married a daughter of Mr. Jones, a surgeon at Lutterworth, and at once settled in Birmingham. Without friends or a connexion of any kind, he began to fight the battle of life with resolution, and, having acquired an exceptionally good knowledge of his profession, his progress was satisfactory and reassuring. In the conduct of his business the chief characteristics of the man soon made themselves conspicuous. Ever intolerant of imposture, Mr. Burdett was noteworthy for the frankness and candour with which he treated all who consulted him. Imbued with a belief that the aim of a general practitioner should be to secure as far as possible cash payments, and such practice mainly as would guarantee a certain income, he soon became surgeon to numerous sick clubs and friendly societies. It was one of his axioms that it is desirable that an account should immediately follow the termination of an attendance. By this method gratitude becomes the stimulus which secures prompt payment. An eloquent speaker, it was his custom to attend the annual gatherings of the Odd Fellows and Foresters. At such meetings his practical eloquence was much appreciated, whilst its forcible common sense led to the effectual removal of many abuses. In a few years Mr. Burdett's practice became a large and increasing one, and till within two years of his death he continued to discharge the active duties of his profession with untiring energy and commendable perseverance. His success was not inconsiderable, for he has left his wife a beautifully situated and fairly large estate at Knowle, Warwickshire, where he latterly resided. His views upon professional subjects were strongly conservative. He could not be got to admit that the new order of things was on the whole better than that of an earlier period, and he held the doctrine that every member of the profession should serve an apprenticeship, and should devote the whole of his time and energies to his profession.

Personally, Mr. Burdett was one of the kindest and most liberal of men. Very many can lovingly testify to this fact, and at his funeral some of his old patients came long distances that they might place a last offering of affection on his grave. The coffin was covered with flowers, and many will sincerely mourn his decease. The deceased gentleman was typical of a class of men who are rapidly disappearing, and we are not sure that their loss to the profession is either small or inconsiderable.

Mr. Burdett died at his country residence, The Coppice, Knowle, Warwickshire, on August 22nd, 1880, and was buried in the family vault at Packwood, in the same county,

on Friday, August 27th. In accordance with the written instructions, found after his death, the funeral was of the plainest possible description—no crape, hat-bands, or plumes were to be seen. He was carried to the grave by eight of his old men-servants; and his coffin bore, by his desire, the inscription—"Henry Francis Burdett, aged 65, formerly a surgeon of Birmingham, and always a firm believer in salvation through our Lord Jesus Christ." He leaves a widow, one daughter, and three sons.

Medical News.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Aug. 26th:—

Bertolani, John Hewetson, Park-road, New Wandsworth.
Collins, Edward Tenison, Bridge-street, Wednesbury.
Parker, Hibbert Sullivan, Disraeli-road, Putney.
Thomas, John Lloyd, Beaumaris, N. Wales.

The following gentlemen also on the same day passed their Primary Professional Examination:—

William Edward Rauson and Michael William Russell, Middlesex Hospital.

At the recent examination for the prizes in Materia Medica and Pharmaceutical Chemistry, the successful candidates were—

1st.—Arthur William Wheatly, student of St. Bartholomew's Hospital. A Gold Medal.
2nd.—William Watson, student of Guy's Hospital. A Silver Medal and a Book.

A SUM of £1000 has been awarded to the London Hospital by the rector and churchwardens of the parish of St. Edmund the King and Martyr, out of surplus funds of a parish charity of which they are the trustees.

The wife of a labouring man, in the Old Kent-road, was last week delivered of four children at a birth, three boys and a girl; two only have survived. The mother on a previous occasion had given birth to twins.

THE sting of a wasp is stated to have been the immediate cause of the death of a woman at Coggeshall, a few days since. The deceased was, it would appear, the subject of heart disease, and fatal syncope ensued a few minutes after the attack of the insect.

A FRESH series of lectures to the metropolitan police on the first treatment of injured persons has been organised by the St. John Ambulance Association. The classes will meet at Scotland-yard, Arbour-square, Kennington-lane, Blackheath-road, Albany-street, and Twickenham.

LADY HARRIET SCOTT BENTINCK has given £4000 to the International Hospital at Naples, to enable the Committee to acquire a building of their own. It is stated to be one of the conditions of the donation that an English-speaking physician and an English nurse be always kept in the hospital, and that, in case of the dissolution of the hospital, the money be handed over to some other charitable institution of the English community at Naples.

DEATH FROM HYDROPHOBIA.—A little girl died last Tuesday, in Belfast, from hydrophobia. Deceased was bitten by a rabid dog on the 21st of July last, and was conveyed to the Belfast Royal Hospital where, the wound was cauterised. On Saturday last symptoms of the disease manifested themselves, and the sufferer succumbed three days afterwards.

Medical Appointments.

Intimations for this column must be sent DIRECT to the Office of THE LANCET before 9 o'clock on Thursday Morning, at the latest.

ABBOTT, C. E., L.K.Q.C.P.I., M.R.C.S.E., has been appointed Medical Officer for District No. 7 of the Baintree Union.
BENTHALL, A. E., M.R.C.S.E., has been appointed House-Surgeon to the Hartlepool's Hospital and Dispensary, Hartlepool.
BISS, C. Y., M.A., M.B., M.R.C.P.L., M.R.C.S.E., has been appointed Assistant-Physician to the Metropolitan Free Hospital, Spitalfields, London, E.
BROMLEY, J. B., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for the Tibbury Parish of the Halstead Union.
EDMONDS, W., M.D., F.R.C.S.E., has been appointed Registrar and Chloroformist to the Evelina Hospital for Sick Children, vice Bowlby, resigned.

GALPIN, R., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for District No. 6 of the Braintree Union.

HAYWARD, J. W., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer and Vaccinator for the Whitstable District of the Bleas Union, vice Mr. Williams, resigned.

HEALE, A. L., M.R.C.S.E., L.S.A.L., has been appointed Surgeon to the Provident Dispensary and Cottage Hospital, the Ladies' Charity, Odd Fellows' Club, and Public Sanatorium, Warwick, vice J. R. Nunn, deceased.

MCBEATH, W., M.D., C.M., has been appointed Medical Officer to the Fourth District of the Eccleshall Bierlow Union.

MCLEARN, I. C., M.D., M.Ch., L.M., has been appointed Medical Superintendent of the Highgate Infirmary, vice Bruce, resigned.

MELLER, C. M., M.D., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer of Health and Public Vaccinator for the Carisbrooke District of the Isle of Wight Union.

MILLS, S. B. A., L.R.C.S.Ed., has been appointed Medical Officer to the Danaghmore Dispensary, Newry Union.

PALMER, B. A., M.D., has been appointed Medical Officer to the Crossmaglen Dispensary, Castleblaney Union.

REYNOLDS, R., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for the Stambourne and Ridgwell Parishes of the Halstead Union.

RICHARDSON, T. W., M.R.C.S.E., L.S.A.L., has been appointed one of the Medical Officers to the Free and Provident Norwich Dispensary.

SANDFORD, H. V., M.D., has been reappointed Medical Officer of Health for the Combined Rural Sanitary Districts of Bromyard, Hereford, Ledbury, Leominster, and Weobley Unions. Salary £500 per annum.

SIMPSON, T., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for District No. 5 of the Braintree Union.

THOMSON, R. T. W., M.B., C.M., has been appointed Medical Officer to the Alvington District of the Rothbury Union.

TRIMBLE, C. J., L.R.C.P.Ed., L.R.C.S.L., has been appointed Medical Officer to the Fifth District of the Preston Union.

VAISY, T. F., M.R.C.S.E., L.S.A.L., has been appointed House-Surgeon to the Bucks General Infirmary, vice Blood, resigned.

Births, Marriages, and Deaths.

BIRTHS.

ADAM.—On the 25th ult., at Crichton House, Dumfries, the wife of James Adam, M.D., Medical Superintendent Crichton Royal Institution, of a son.

BULL.—On the 26th ult., at Holland House, New-cross-gate, S.E., the wife of William Bull, F.R.C.S., of a daughter.

GREENHILL.—On the 27th ult., at Cotehele-terrace, Stoke, Devonport, the wife of J. R. Greenhill, F.R.C.S.E., Surgeon-Major, Army Medical Department, of a son.

MITCHELL-BANKS.—On the 26th ult., at Rodney-street, Liverpool, the wife of W. Mitchell-Banks, M.D., F.R.C.S.E., of a son.

PEACOCK.—On the 24th ult., at Forston House, near Dorchester, the wife of Henry George Peacock, L.R.C.P., M.R.C.S.E., of a son.

PRICKETT.—On the 26th ult., at Albion-street, Hyde-park, the wife of Marnaduke Prickett, Esq., M.D., of a son.

PRITCHARD.—On the 29th ult., at South-hill-park, Hampstead, the wife of Urban Pritchard, M.D., F.R.C.S.E., of a son.

MARRIAGES.

ALLCHIN—HOLLAND.—On the 19th ult., at the Church of the Ascension, Esopus, N.Y., William Henry Allchin, M.B., F.R.C.P., of London, to Margaret, elder daughter of Alexander Holland, of New York.

BLACKLEY—BURGESS.—On the 17th ult., at St. John's, Hackney, J. Galley Blackley, M.B., of Gordon-street, Gordon-square, to Fanny Collyer, elder daughter of Frederick J. Burgess, F.R.C.S.E., Ext. L.R.C.P.L., of Grove-place, Hackney.

POOLEY—KENDRICK.—On the 10th ult., at the Parish Church, Bushbury, by the Rev. M. B. Moorhouse, Vicar, assisted by the Rev. R. S. Rowan, Vicar of St. James's, Rochdale, Dr. R. C. Mason Pooley, of Rochdale, to Rosa, second daughter of David Kendrick, Esq., J.P., of Oxley House, Wolverhampton.

WHITE—PULLEN.—On the 25th ult., at the Church of St. Stephen the Martyr, Avenue-road, N.W., O. M. White, M.R.C.S.E., of Tottenham, to Annette Jane, daughter of W. H. Pullen, of Wellington Mansion, St. John's-wood.

WILLIAMS—JEUNE.—On the 25th ult., at The Slad, William Blundell Williams, Esq., M.R.C.S.E., of Much Hadham, to Henrietta Amelia (Amy), younger daughter of the late Lieut. F. A. Jeune, 25th B.N.I., and stepdaughter of John C. Collins, M.D., of Steanbridge, near Stroud.

DEATHS.

LAWRENCE.—On the 31st ult., at Benhall Vicarage, Suffolk, after a short illness, John Travers Lawrence, M.R.C.S.E., of Launceston.

MITCHELL.—On the 31st ult., at 21, Pepys-road, Hatcham, S.E., Robert Mitchell, Surgeon, formerly of Manor House, Deptford, aged 75.

NICHOLAS.—On the 28th ult., accidentally drowned while bathing in the Orwell, Ipswich, George James, second son of G. E. Nicholas, M.D., of Wandsworth, aged 18.

PRITCHARD.—On the 27th ult., at Crescent Lodge, Kingston, near Portsmouth, John Frederick Pritchard, Staff-Surgeon R.N. (retired), third son of the late Vice-Admiral Pritchard, R.N., aged 52.

WAKE.—On the 16th July, at Limocksloof, near Fauresmith, Orange Free State, South Africa, Edward Baldwin, eldest son of E. G. Wake, M.D., of Upper Holloway, aged 20.

WHITMORE.—On the 25th ult., at his residence, Castle Hill, Ealing Dean, John Whitmore, M.D., formerly of Wimpole-street, Medical Officer of Health for Marylebone, in his 70th year.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 9 a.m. by Steward's Instruments.)

THE LANCET OFFICE, September 2nd, 1880.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radiation in Vacuo	Max. Temp. in Shade	Min. Temp.	Rain fall.	Remarks at 8.30 A.M.
Aug. 27	30.13	N.E.	62	60	80	69	59	..	Overcast
" 28	30.21	N.E.	64	62	103	82	60	..	Overcast
" 29	29.18	E.N.E.	68	61	108	76	58	..	Fine
" 30	29.96	E.	68	63	89	72	59	..	Hazy
" 31	30.02	W.	63	61	99	79	58	..	Overcast
Sept. 1	30.23	N.W.	62	59	105	77	57	..	Fine
" 2	30.37	W.	67	63	101	76	59	..	Hazy

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Local papers containing reports or news-paragraphs should be marked.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

Lectures, original articles, and reports should be written on one side only of the paper.

We cannot prescribe, or recommend practitioners.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET to be addressed "To the Publisher."

THE STUDENTS' NUMBER OF THE LANCET

will be published on Saturday next, Sept. 11th. Those gentlemen holding official situations connected with Medical Institutions in the United Kingdom, who have not yet forwarded the necessary information to our Office for publication in that number, are earnestly requested to send it *without the delay of a single post*.

IGNIPEDITES.

SURGEON-MAJOR B. EVERS, M.D., writing in the *Indian Medical Gazette* on this obscure disease, recommends as the treatment to be adopted the use of iodine and its preparations. The relief following the employment of this drug is, he states, very gradual, and it will only be after a fortnight or three weeks that the patient will recognise that the burning in the soles of the feet is less. Later Dr. Evers administers dilute phosphoric acid, strychnia, quinine, and iron.

Dr. Ruedi, (Davos).—The communication should be forwarded to the magazine in which the article referred to appeared.

THE NITRIC ACID TEST OF URINE.

To the Editor of THE LANCET.

SIR,—I should like if one of your numerous readers could give me, through the medium of your journal, an explanation of the following curious phenomenon:—Twice lately, on adding a few drops of pure nitric acid to some urine which had been boiled, the latter immediately turned to a deep claret colour, with some amount of effervescence. The specimens were both turbid, of a dirty brown colour, loaded with lithates; reaction acid; specific gravity about 1020; a trace of albumen in one, none in the other; no sugar in either; pus in large quantities in both.

I remain, Sir, yours truly,

Cardiff, Aug. 24th, 1880.

* * The development of colour, referred to by our correspondent, on the addition of pure nitric acid to urine that has been boiled has been the subject of much discussion among urologists. The opinion generally held is that it is due to the oxidation changes of indican—a substance which exists in extremely minute quantities in normal urine, and which in some conditions may become increased. The development of the reaction is generally noticed in the urines of patients suffering from wasting diseases, as phthisis, chlorosis, Bright's disease, &c.—ED. L.

TESTS FOR PURE COFFEE.

THE last-issued number of *Cassell's Magazine* contains the following description of some simple tests for the genuineness of coffee:—"Take a little of the coffee and press it between the fingers, or give it a squeeze in the paper in which it is bought. If genuine, it will not form a coherent mass, as coffee grains are hard, and do not readily adhere to each other; but if the grains stick to each other, and form a sort of 'cake,' we may be pretty sure of adulteration in the shape of chicory, for the grains of chicory are softer and more open, and adhere without difficulty when squeezed. Again, if we place a few grains in a saucer, and moisten them with a little cold water, chicory will very quickly become soft like bread-crumbs, while coffee will take a long time to soften. A third test: Take a wineglass or a tumblerful of water, and gently drop a pinch of the ground coffee on the surface of the water without stirring or agitating. Genuine coffee will float for some time, whilst chicory or any other sweet root will soon sink; and chicory or caramel will cause a yellowish or brownish colour to diffuse rapidly through the water, while pure coffee will give no sensible tint under such circumstances for a considerable length of time. 'Coffee mixtures' or 'coffee improvers' should be avoided. They seldom consist of anything but chicory and caramel (burnt sugar), which, of course, deceive by the rich, dark infusion they give."

MEDICAL ETHICS AND PRACTICE IN NEW ZEALAND.

To the Editor of THE LANCET.

SIR,—Having just noticed in No. XIII. of THE LANCET two communications on the title of "Doctor" and "Medical Advertising," I wish to call your attention to the state of these things in this and other colonies.

The Medical Acts here are of such comparatively recent date, and administered with such culpable laxity, that the amount of entirely unqualified work done is very great. Chemists, indeed, all practise openly and without check, denominating themselves on their shop-fronts as "dispensing and prescribing chemists," and indeed often with the sanction of the law, as illustrated by a decision given a short time since by the magistrate of Wellington, in which he acquitted a chemist of *malpraxis* on the ground that he was fit to undertake slight cases, having been the resident dispenser at the hospital for some years. How can any man without a thorough professional education diagnose between a slight case and another? For these reasons the title of "doctor" is universally employed in the colonies, as, whatever qualifications a man holds, he is regarded by the outside public as an unqualified man unless he calls himself "Dr."

Again, in the matter of the reprehensible practice of advertising which you so strongly condemn. The practice prevails here extensively, and it is regarded as so absolutely incumbent on a man starting in a new place to do so, that all do so at first, many permanently. Enclosed I send you a beautiful specimen which I cut out of a New Zealand paper which came into my hands, and in which there were also advertisements by an M.B. Lond. and a German *Æsculapius*. The doctor of the advertisement I send you has the qualifications he describes.

As to any etiquette prevailing amongst practitioners in New Zealand at least, I can only say that it has been an unknown quantity among pretty well all whom I have had the honour of meeting.

Yours &c. (enclosing card),

New Zealand, December, 1879.

DOCTOR.

J. F. N.—The information given by our correspondent is not sufficiently precise. The Warrant to which he refers was issued on October 1st, 1858. If, as seems probable, the training was over by that date, he had not the slightest claim to the allowance at F.O.'s rate, and if it had been issued to him in error, he was bound to refund it.

POISONING BY CHLORAL HYDRATE.

To the Editor of THE LANCET.

SIR,—The amount of chloral hydrate necessary to cause death seems rather uncertain. I should be very glad to know from any of your readers who may have had experience in the matter what they consider the smallest fatal dose for an adult.

I was called in last June to attend a lady, aged forty-seven, who had been suffering severely from neuralgia, and who had spontaneously flown to chloral hydrate for relief. When I arrived I found her insensible, or at least very nearly so. She uttered a few incoherent words at intervals, but did not recognise me, though we were well acquainted. The usual symptoms of poisoning by chloral were present. I found a six-ounce bottle by her bedside containing some solution of chloral hydrate, and which was labeled "Solution of chloral hydrate, ten grains to the drachm." Her friends informed me that this solution had been made up at her request by a neighbouring chemist, and that she had taken several doses during the night; in fact, all that I saw gone from the bottle, which had been quite full. I took home the bottle, and found seventeen drachms absent; in other words, she had taken 170 grains of the drug in about twelve hours. She made a good recovery, but still fails to perceive the danger she had run.

Should a chemist be allowed to sell such a solution to an ordinary customer (with whom he may be acquainted) without having a written order or a physician's prescription?

I am, Sir, yours truly,

A. ST. CLAIR BUXTON.

The Grove, Hammersmith, Aug. 24th, 1880.

Ignoramus.—By the Births and Deaths Registration Act, 1874, sec. 40, it is enacted that "any person who makes any false certificate or declaration under or for the purposes of this Act, or forges or falsifies any such certificate or declaration, or any order under this Act, or, knowing any such certificate, declaration, or order to be false or forged, uses the same as true, or gives or sends the same as true to any person, shall for each offence be liable on summary conviction to a penalty not exceeding ten pounds, and on conviction on indictment to fine or to imprisonment with or without hard labour for a term not exceeding two years, or to penal servitude for a term not exceeding seven years."

Mr. Leighton Kesteven's paper will be published in an early number.

"TREATMENT OF SCARLET FEVER BY WARM BATHS."

To the Editor of THE LANCET.

SIR,—Referring to Dr. Lush's letter in THE LANCET for August 14th, I wish to say that if he adopts the plan of giving three warm baths daily for every scarlatina case he may see, he occasions an unnecessary amount of labour and trouble. An ordinary case of scarlatina requires no such inconvenient treatment, and some very severe cases will not be benefited by it, but will frequently resist any treatment whatever. Dr. Lush's reasons for giving them are—"1st, they bring out the rash; 2nd, lower the temperature; 3rd, comfort the patient." In an ordinary case the first symptom is generally established, and is one of the diagnostic marks of the complaint. The second is also characteristic, and need not be interfered with; it will subside with the rash, or soon after. As to the third, Dr. Lush does not mention the actual temperature of his baths, but I presume them to be between 94° and 98°. This, no doubt, does comfort the patient, just as an ordinary warm bath comforts a person in good health; but I believe it exerts an inappreciable effect on the course of the disease.

In this hospital, where we have special facilities for bathing, we have treated 753 cases of scarlatina, with 94 deaths. Three of the latter have occurred in the warm bath or immediately on emerging. Bathing of some sort is daily employed here in almost all cases for the "comforting" effect, for cleanliness, and for hastening desquamation.

There is one application of the bath where I think I have seen in several cases good to result—at least some of them have recovered. When the patient has been restless, with foul ulcerated throat, offensive discharges from the nose, diffuse swelling about the glands of the neck, little or no rash, blue surface, quick pulse, high temperature or sometimes abnormally low, inability or unwillingness to take nourishment, and a general cadaverous look, I have had him placed in a bath of Condy's fluid and water at a temperature of 100°, and forcibly syringed his nostrils and fauces with the water from the bath, so as thoroughly to remove all offensive matter. Then after five or ten minutes, with only the head above the surface, the contents of a large jug of cold water has been dashed upon the forehead and scalp, an injection of beef-tea and brandy administered, and the patient wrapped up, still wet, in a blanket, and kept warm. Comfortable sleep is nearly always induced, from which the patient generally awakes improved. The treatment sometimes requires to be repeated two or three times at such intervals as the progress of the case suggests. The sleep and quietness produced by this means seem to me to be the main factors in any improved condition of the patient—sleep which cannot safely be procured in any other way that I know of.

The letter from Dr. Smith, of Leamington, published in your issue of to-day, somewhat qualifies Dr. Lush's statement, and I am inclined to think with him that "neither the warm, the tepid, nor the cold bath has any effect on the worst cases."

I am, Sir, your obedient servant,

The Fever Hospital, Bradford, Aug. 28th, 1880.

W. K. RIX.

THE POOR-LAW MEDICAL SERVICE AND COMMISSIONS OF THE PEACE.

To the Editor of THE LANCET.

SIR,—Having been informed, by what appeared to be a reliable authority, that a district or workhouse medical officer would not be able to retain his appointment if placed on the Commission of the Peace, or if acting as a Justice, and feeling it was desirable to get a legal opinion thereon, I wrote to the Local Government Board on the subject, and received the enclosed reply, which it would be well to make public, as I feel satisfied that some Poor-law medical officers have hesitated to accept this distinction from fear of jeopardising their appointments.

I am, Sir, yours obediently,

Soho-square, Aug. 28th, 1880.

JOSEPH ROGERS.

Local Government Board, Whitehall, S.W.,
11th August, 1880.

SIR,—I am directed by the Local Government Board to acknowledge the receipt of your letter of the 30th ultimo, and, with reference to the inquiries which it contains, to inform you that an appointment as medical officer under their Regulations would not legally prevent the person so appointed from being placed on the Commission of the Peace or acting as a Justice. The Board may, however, observe that the Statute 5 and 6 Vict., c. 57, s. 14, would prevent his serving as a guardian so long as he holds the office of medical officer, as they consider that that enactment applies to *ex-officio* as well as to elected guardians.

I am, Sir, your obedient servant,

WALTER J. SENDALL, Assistant-Secretary.

Joseph Rogers, Esq., M.D., 33, Soho-square, W.

Asculapius.—1. The student who had passed the primary examination for the L.R.C.P. Edinburgh, and who desired the diploma of the College of Surgeons of England, would have to pass the primary examination in England as if he had not passed in the Edinburgh College. He would have to do the same if he were a licentiate of the Edinburgh College or Colleges. In reply to our correspondent's second question, we can only answer, No.

ENTERIC FEVER IN TROPICAL CLIMATES: MILK-TREATMENT.

To the Editor of THE LANCET.

SIR,—The letter you publish in your issue of August 28th from Dr. G. Piza Almeida on the subject of typhoid fever touches on a point of considerable importance to my mind.

During the past sixteen years I have treated many cases of enteric fever both at home and abroad, and many years ago I came to the conclusion that a medicine as a cure for the disease did not exist, and that most of the remedies used were positively hurtful. During the past two years I had the opportunity of close daily observation in some twenty cases which occurred in India. Many were fatal, and to prevent the great mortality which is usual in such cases there all kinds of remedies were prescribed, but at the same time "plenty of nourishment" and stimulants were given to "support" the patients, and in my opinion herein lay the fatal mistake. Enteric fever, as I have seen it, whether in England, Central America, or India, is a febrile state, producing or accompanying subacute (verging into acute) inflammation of the gastro-intestinal tract of mucous membrane; and, considering this to be the case, I have always based my treatment on the supposition that everything, whether food or medicine, that passed over that tract while in an inflamed condition, or required an active state of its glandular system, must in the end tend to a fatal issue by the usual consequence of continued irritation—viz., wearing away of the structures implicated, of which mischief purging and hæmorrhage from the bowels are clear indicators.

To find, then, something that, while it would nourish and support the patient during a long illness, would not produce any irritation, or, if it did, the least possible, occupied my attention, and, so far as my own cases go, I was rewarded by not losing a single one. I refer to milk and cream. The moment I had reason to suspect that I was attending a case of enteric fever, I insisted by every means in my power on no other food being given (for twenty-five days if I was certain of the nature of the malady), except milk in various forms. Milk taken cold, two ounces every fifteen minutes, when not asleep, I advised; but patients did not like the too frequent draughts, and used to prefer to take it in larger quantities less often; if in the twenty-four hours two or three quarts were consumed I felt satisfied. Milk made solid by boiling with a small piece of Irish moss made a grateful change, a little cream and sugar being added; or the milk with its curd taken from it, in the form of whey, would be relished by a thirsty patient, with high febrile excitement. Thirst, the patient's greatest friend, is of frequent occurrence. Should the patient yield to the craving for food he so often feels, and take even a slice of bread, it will be almost certain to cause bowel irritation, producing thin stools or bleeding, as the case may be. If a stimulant is needed, a few drops of good brandy in the milk may be taken so long as two teaspoonfuls are not exceeded in the twenty-four hours; but I prefer to do without it if possible. Very little medicine of any kind was called for in my cases: glycerine, in twenty-minim doses, three times a day, or a little castor oil if the bowels are confined, and there is a tendency that way if the milk-treatment is faithfully carried out. I have found a concentrated lime-water added to the milk of use in some cases, but have been surprised how well the milk diet agrees with most people if taken without other food; but it must be persisted in for the entire time the disease is known to run its course, and, as far as my experience goes, that is from twenty-two to twenty-eight days. After the milk diet is begun to be varied, the change must be gradual, and much care and attention paid to local manifestations, should they appear.

I remember well a case that I was called in to see in consultation in India, where the milk-treatment was adopted for sixteen days, and where the doctor attending, thinking all was well and the patient convalescent, yielded to a request, and ordered beef-tea, wine, brandy, and chicken to "nourish the frame," as he told me afterwards, little thinking we would so soon meet together to inquire into the morbid condition of the affected parts on the post-mortem table.

To these remarks I would add that I have seen a persistent high temperature for over fifteen days end in the perfect restoration to health of the patient; and in enteric disease, as we see it in tropical countries, I never lose faith through the readings of the thermometer.

In conclusion, I must say I fully endorse the words of your correspondent when he says, "I do not allow any solid food, but give milk," though I can follow him no further, as I think beef-tea produces often much mischief in enteric fever.

Should this letter be the means of bringing before the notice of physicians the form of treatment I have mentioned, I feel certain that the death-rate of enteric fever, now so high in tropical climates, will fall, till it be regarded as one of the least fatal of all formidable affections the physician is called upon to treat.

I am, Sir, yours faithfully,

J. PERCIVAL HUNT, M.D.

August, 1880.

An Old Subscriber.—The practitioner in question did not act consistently. According to his own statement, he took less than the minimum fee of a physician. He was clearly practising as a general practitioner. The practitioner was a "physician" in the sense of being a licentiate of a College of Physicians, but not in the sense in which the public understand the title. At the same time we cannot quite agree with our correspondent that prescriptions of general practitioners who dispense their medicines are the property of patients. Patients in such a case are supplied with medicines. If, in addition, prescriptions are asked for, it is not unreasonable that a fee should be charged by the practitioner.

HOSPITAL BED CARDS.

To the Editor of THE LANCET.

SIR,—A correspondent asks the opinion of hospital surgeons whether it is advisable to publish the disease under which a patient is suffering by placarding it above his bed. As a hospital surgeon, I decidedly negative the propriety or advantage of this being done. There are many cases in which it is desirable that neither the patient nor the other inmates of the ward should know the disease. There are other cases so doubtful (as in the late Guy's manslaughter) where the physician cannot give a correct diagnosis, and therefore may mislead the nurse (capital was intended to have been made of this at Dr. Pavy's expense). There are also not uncommon instances where the patient, being admitted for one disease, is afterwards found to have another and perhaps a more important malady.

Allow me to mention a point to which your leaders have not alluded. I was in court during Mr. Justice Hawkins's summing up, and he laid very great stress on the inaccuracy of the clinical reports, contrasting the statements therein made with the evidence given by Dr. Pavy, and condemning the discrepancies. Everyone must have felt the justice of his remarks.

As an old Guy's man I have been much pained by the notoriety of recent proceedings there, and sincerely trust that the comments of the learned Judge will induce the authorities of the hospital at once to "set their house in order," and give to the medical officers entire control over the treatment of the patients committed to their charge.

I am, Sir, yours truly,

W.

August, 1880.

Mr. G. R. Gilruth will find the announcement on page 354 of our last number.

Rusty.—Dr. Wickham Legg's.

THE DOSE AND VALUE OF CALCIUM SULPHIDE IN ACNE.

To the Editor of THE LANCET.

SIR,—An article in one of your issues for this year, written by a gentleman whose name I regret I cannot at the moment recall, advocated the use of calcium sulphide in acne, in doses of one-tenth of a grain three times a day, which he cautiously increased in one or two cases to a much larger dose—namely, to one-fourth of a grain—with very excellent effect. The extreme difficulty, and at the same time the great desirability, of adding to those internal remedies which are of real efficacy in the treatment of skin diseases, induced me to follow his example, and to ascertain if possible his reason for cutting down his dose to such very moderate proportions. One opinion only, even when based on repeated observations, has, of course, but a very limited value. However, for what my statements may be worth, I am in a position to say that, commencing with one grain for a dose three times a day, I found no inconvenience experienced by the patients. I therefore increased it by degrees at short intervals up to five grains three times a day in several cases of acne. I am now going on to six grains three times a day, because I have found that a slight feeling of nausea produced by a five-grain dose disappeared speedily on a continuance of the dose. Now, even with this twenty-fold maximum dose, which is apparently tolerated without inconvenience of any kind, I have not, so far as I can judge, done very successfully—that is to say, I failed to effect such a modification of any of the numerous cases of acne in which I have tried it, as may, for example, always be obtained by the inunction of sulphur ointment. I hope that other observers may decide the matter more definitely.

I am, Sir, your obedient servant,

Weymouth-street, W., Aug. 19th, 1880.

BALMANNO SQUIRE.

LOCUM TENENS.

To the Editor of THE LANCET.

SIR,—I have had some considerable experience as a locum tenens, from the consulting physician to the hard-working country practitioner, in practices where fifty visits daily and an average of three midwifery cases weekly, and in others where about five or six visits completed the day's work; but my fee has been invariably the same—£3 3s. per week, with travelling expenses. In one place I should be surrounded with every domestic comfort; in the next the living would be of a most meagre character, treated with suspicion, and the domestic arrangements most uncomfortable. In some I received an extra fee for my services, with thanks; in another I could not even get my fee. Could not some society be formed for registering gentlemen willing to act as locum tenens, and at the same time inquiry be made as to the work, responsibility, and general domestic arrangements of the principal?

I am, Sir, your obedient servant,

August, 1880.

LOCUM TENENS.

URTICARIA.

To the Editor of THE LANCET.

SIR,—May I be allowed to ask, through your columns, whether any of your readers can help me to give a little boy, aged three, relief from very distressing attacks of urticaria. He suffers from habitual constipation, for which he has been treated in many ways. Every six weeks or so this trouble increases so much that nothing but enemata of oil are of any use. The urine shortly becomes scanty and of a deep orange tint, and the urticaria then appears. The spots occur everywhere, even on the face; but the chief distress arises from the soles of the feet, which become completely covered. Three or four doses of magnesia are administered each day, and many local applications have with but slight success been tried—viz., vinegar, tincture of benzoin, lead lotion, spirit lotion, and eau-de-Cologne, the latter seeming to be of the most service. The diet has been carefully looked to, without any benefit in warding off the attacks. It strikes me that in all probability there may be some empirical means known to some by which relief may be obtained, and I should be very grateful for information.

I am, Sir, yours &c.,

August 31st, 1880.

H. H. N., M.R.C.P. Ed.

COMMUNICATIONS, LETTERS, &c., have been received from—Sir Jas. Paget; Lieut.-Colonel Bolton; Surgeon-General Gordon; Mr. G. Fleming, London; Messrs. J. and A. Churchill; Dr. Heidenstam, Larnaca; Mr. S. Elliott; Messrs. Arnold and Sons; Mr. J. W. Smith, Doncaster; Dr. Drummond, Newcastle-on-Tyne; Mr. W. J. Tyson, Folkestone; Dr. Ruedi, Davos; Mr. St. Clair, Buxton; Mr. J. S. Hanson, London; Mr. Wheeler, London; Mr. Batty, Liverpool; Mr. L. Kesteven, Wellington, N.Z.; Mr. Mitchell, Norwich; Dr. Cameron, Huddersfield; Mr. A. H. Jones, Northampton; Dr. Hunt; Mr. Shore, Southampton; Mr. Prideaux, Wellington; Mr. Furlong; Mr. Groom; Dr. Sandford, Hereford; Mr. Rix; Dr. Holden, Sudbury; Mr. Christophers, Bath; Mr. E. Downes, Kashmir; Dr. C. Neill, Ryde; Mr. Davis, London; Mr. Dobbin; Mr. Armstrong, Newcastle-on-Tyne; Mr. P. Bell, Edinburgh; Mr. Bate; Mr. Thomas, Glasgow; Mr. T. Cooke; Dr. Rogers, London; Mr. Gilbert; Dr. v. Harlingen, Philadelphia; Mr. Moxhay, Reading; Dr. Page; Mr. Hind, London; Mr. J. M. Scott, Lymington; Mr. Hartley, Brixton; Mr. Symonds, Oxford; Mr. Cornish, Manchester; Messrs. Garden and Co.; Mr. Layton, Kelsor; Mr. Slyer, Brighton; Mrs. Grubb, St. Leonards; Messrs. Stirley and Clifford, Stafford; Mr. Potter, Sheffield; Dr. A. B. Squire; Mr. H. Kimpton, London; Mr. Casson, Ulverston; Mr. Armstrong, Newton; Dr. B. W. Richardson, Teignmouth; Dr. Gorman, Cape Town; Dr. J. Edmunds; Mons. J. Duraud; Dr. Mears, London; Mr. R. Cresswell, St. Helena; Dr. Campbell, Carlisle; Dr. Sturges, London; Mr. E. Vitali, London; Dr. Wyllie, Edinburgh; Dr. Macadam, Edinburgh; Mr. Hindmarsh, Alnwick; Dr. Sinclair, Dundee; Mr. Berridge; Mr. Laing, Truro; The Director-General of the Army Medical Department; J. F. N.; H. H. N.; Clericus; M.R.C.S., London; Coward; Lunacy, London; Omega; J. A., Callington; B.M.; L.R.C.P.; &c. &c.

LETTERS, each with enclosure, are also acknowledged from—Dr. Walley, Bradford; Miss Emblin, Coventry; Mr. Black, Edinburgh; Mr. Field, Taunton; Dr. McNeill, Tiverton; Mr. Griffiths, London; Mr. Nichols, Walsingham; Mr. Hammett, Taunton; Dr. Combe, Exeter; Mrs. Gauntlett, Kensington; Mr. Newton, Exeter; Mr. Francis, Cambridge; Messrs. Horne and Co., Edinburgh; Dr. Spowart, Sheffield; Mr. Robson, South Shields; Dr. Skerritt, Bristol; Mr. Cullimore, Ennis; Mr. Hudson, Swindon; Messrs. Foote and Son, Sheffield; Mr. Farmer, Bridgewater; Mr. Thorp, Hertford; Mr. Williams, Sunderland; Miss Flowers, Leicester; Mr. Seymour, Coventry; Mr. Kinder, Leicester; Mr. Philpot; Mr. White, Bethnal-green; Messrs. Smith and Son, Manchester; Mrs. Pearce, Camelford; Mr. Heywood,

Manchester; Mr. King, Gloucester; Mr. Stodart, Finsbury; Mr. Pinder, Bow; Messrs. Porteous and Co., Glasgow; Mr. Haywood, Whitstable; Mr. Wicks, Bicester; X. F. Z.; G. H. B., Holloway; S. R.; Medicus, Birmingham; Medicus, Sheffield; J. W.; Dispenser, Liverpool; R. H. J.; Mercury; Tarsus; Arachnoid; A. H. J.; A. A.; Medicus; M. A. F.; Medicus, Leeds; A. B., Ambleside; Polygala; Beta, Lewes; F. J. N.; Registrar, Bath; Medical, Bath; H. R. L.; Hollinbrook; S., Liverpool; King's-road, Chelsea; Delta; W. B. M.; M. P., Manchester; P. F. R. C. S.; G. H., Newcastle; J. P., Melton; Beta, Lewisham; Medicus, Darlington; H. B. M.; Medicus, Chesterfield; Medicus, Edinburgh; D.; Medicus, Chester; A. B., Liverpool; V. B., Brighouse; A. B., Worcester; Alpha, Talk-on-the-Hill; M.D., Devonport; No. 613; E. C. M. P., Holloway; &c.

Western Gazette, City Press, France Médicale, Revista de Medicina, Canadian Journal of Medical Science, Indian Medical Gazette, Coffee Public-house News, St. Louis Courier of Medicine, New York Herald, Science, Hertfordshire Mercury, Monthly Homoeopathic Review, Boston Medical and Surgical Review, El Médico y Cirujano Centro-Americano, L'Union Médicale d'Orient, Foochow Herald, &c., have been received.

Medical Diary for the ensuing Week.

Monday, Sept. 6.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; on Tuesday, 9 A.M.

Tuesday, Sept. 7.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 3 P.M.

Wednesday, Sept. 8.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
KING'S COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at 1 P.M.
LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.

Thursday, Sept. 9.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M.

Friday, Sept. 10.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, Sept. 11.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

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Tables of Contents, with the Index of Advertisements, for each Number can be had on application to the Publisher.

Agent for the Advertising Department in France—J. ASTIER, 67, Rue Caumartin, Paris

THE LANCET.

LONDON: SATURDAY, SEPTEMBER 11, 1880.

ADDRESS TO STUDENTS.

HIPPOCRATES begins his famous Aphorisms with the memorable exordium — "Life is short, and Art is long; the occasion fleeting; experience fallacious and judgment difficult." More than two thousand years have passed since "the Physician of Cos" separated Medicine from Speculative Philosophy and gave it a scientific basis. In that long interval a hundred generations of practitioners have come and gone, but the Art of Medicine, surviving the unceasing change of men and manners, has grown in magnitude and grandeur with the lapse of years. Individual lives are short, and one generation follows another in quick succession, but Medicine remains perennial in its youth. The pupil of to-day becomes the master to-morrow, and upon those who are just about to begin the study of Medicine will soon devolve the labour and responsibility of the practice, as well as the duty and privilege of upholding the dignity and extending the scope and usefulness of the Healing Art.

This is a task not to be lightly or capriciously undertaken. More than any other calling in life, the study and practice of Medicine require the happy conjunction of a sound mind in a sound body. No amount of mental vigour will compensate for the absence of physical health. The nature and character of medical studies, as well as the exigencies of medical practice, make calls upon the health and strength that only robust constitutions can meet. During the four or five years of the medical curriculum, at one of the most active periods of physiological growth, the student is compelled to spend a large portion of his time in the vitiated atmosphere of ill-lighted and ill-ventilated lecture-rooms, or in the pernicious air of dissecting-rooms, or amidst the subtler poisons of hospital wards; his only respite being the crowded moments he may snatch for private study. None but strong men pass through this ordeal with impunity, and none but strong men should make the trial. A sound constitution is therefore a prime requisite for those who enter the medical profession; and those to whom this is denied should turn their thoughts to a quieter and a less laborious calling.

Granting a healthy body, the next qualification for a medical student is a tolerably good and a well-trained intellect—an intellect that, in the words of Mr. HUXLEY, is a clear, cold logic-engine, with all its parts of equal strength and in smooth working order. Nature will determine quality, but for the training we must trust to a large extent to the general preliminary education. The best possible form of that education is and always has been a difficult problem.

The preliminary and professional education of a medical student in modern times is different from, but not in all respects better than, that of the student in ancient Greece in the age of PERICLES, or in Italy during the twelfth and thirteenth centuries. HIPPOCRATES is said to have been

taught gymnastics by HERODICUS of Selymbria; rhetoric by GORGAS of Leontini; and philosophy by DEMOCRITUS of Abdera. His knowledge of Medicine he originally acquired by assisting his father in the treatment of patients who resorted to the Asclepion of Cos, and by studying the reports of cases inscribed on the votive tablets that were collected and stored in that famous sanctuary. Later on we shall have occasion to refer to the regulations and restrictions imposed by FREDERICK II. on all who wished to engage in the practice of medicine in the Kingdom of Naples six hundred years ago. It is enough to recall the fact that under that régime some of the best and greatest minds in the Middle Ages were nurtured and matured.

The chief difference between the ancient and the modern constitution is that formerly the curriculum and the prescribed mode of study were trusted to educe the necessary skill and culture, whereas in the present day there is a disposition to disregard the curriculum altogether, and to rely solely upon examination as the measure of attainments. Knowledge, it is alleged, is the only condition of fitness, and examinations are the best and surest means of ascertaining whether the necessary knowledge has been acquired. If the student is equal to the examination-test it matters little how or where he gets his knowledge. It is, however, a fair subject for debate whether this confidence in the efficacy of examinations is not misplaced, and whether a well-arranged curriculum, properly carried out, is not, after all, a better guarantee of culture than any examination, however stringent. A clear distinction must, however, be drawn between the preliminary education and the professional education. The preliminary education, as we shall endeavour to show, should be mainly directed to developing and training the intellectual faculties, whereas the professional is almost wholly technical, and is chiefly concerned in imparting special knowledge and special skill.

As no chain is stronger than its weakest link, and no edifice stable that has shifting foundations, so no training will be effectual that is not based on correct principles. Unhappily, there is a sad want of agreement as to which are correct principles. There are just now at least two rival and contending theories of education—the old and the new, the liberal and the technical, the literary and the scientific. The one aspires to make a man capable and cultured, the other aims at the acquisition of "useful knowledge" and technical skill. The leading principles that seem to characterise the modern theory are—"first," to quote the unapproving words of Mr. JOSEPH PAYNE, "that the curriculum ought to be considered as a counterpart or reflex of the world of knowledge to which it is introductory, and that, therefore, the *omne scibile* of the latter should be represented in the former." The other principle seems to be that as men are often found "unpractised, unprepared, and still to seek," in regard to the circumstances in which they are actually placed in life, we should anticipate the difficulty by making children acquainted beforehand with "the leading kinds of activity which constitute human life"—in other words, "with all varieties of practical business." Stated in its bare simplicity, the theory requires the boy to be provided by his education, "first, with *all scientific knowledge*; and, secondly, with *all practical knowledge*, as his proper equipment for the battle of life." In contra-

distinction to this theory is that which affirms the development and training of a completely-formed and disciplined mind, not the acquisition of knowledge, however valuable in itself, to be the true and proper end of elementary education.

In inquiring into the end of education—and we are now speaking exclusively of general education—it is not enough to appeal to the etymological signification of the word. It does not help us much to say that education means the calling forth of all the mental and bodily powers, if we entertain opposite and contradictory opinions as to the way in which these powers should be called forth. The ultimate end of all education is, says MILTON, to fit a man to perform justly, skilfully, and magnanimously all the offices of life; or, in other words, to fit him for his sphere in life and action, and to make him equal to all the tasks they impose. Education itself is the process by which the individual is enabled to attain this end, and not the end itself, and it should imply the cultivation and improvement of the physical and intellectual powers. The end of musical education is the appreciation and enjoyment of the beauties of Harmony, but the Education involves long and tedious study of dry and uninteresting and apparently irrelevant details. Skill in playing a musical instrument is only acquired by diligent, laborious, and even painful practice. The full fruition is attained only when eye and ear and hand have been made the ready ministers of an educated will. So it is with the work of life. We should seek not “to anticipate the lessons of life, but so to discipline the mind that it may be prepared to learn them from experience.” Herein consists the common error of prescribing for the young and unformed the same methods as for the adult, and the radical fallacy of the vaunted utilitarian theory of education. In the excellent article by Dr. KARL HILLEBRAND on “Half Culture in Germany,” to which we called attention a fortnight ago, it is maintained that the training of the young should tend to develop what is human—that is, common and lasting to all—and that the education should, therefore, be general, and as free from professional tendency as possible, while that of the mature should be directed mainly, if not exclusively, to special or professional subjects and aims. Dr. HILLEBRAND pertinently adds:—“A youth of eighteen, who in our days possessed the classical and mathematical education with which PASCAL and LEIBNITZ left school, would still be completely trained and fully prepared to enter life.”

The dispute, therefore, turns entirely on the estimate of the respective value of the classical languages and mathematics on the one hand, and modern languages, mechanics, and the natural sciences on the other as a means of general education. The advocates of each opinion seem often to forget that either may be good or bad according to the manner in which it is employed. The facts of comparative anatomy, as such, are neither more nor less effectual as aids to culture than the facts of comparative grammar. Their value depends upon the uses they are put to. Book-learned natural science is quite as profitless and more contemptible than the worst evils of the classical system of education.

Even if his judgment could be trusted, the intending medical student has, however, but little to do with deciding what subjects shall be comprised within his general education.

Every portal to the profession is more or less jealously guarded by an examination in the subjects of general education. One or other of these examinations must be passed before the candidate can be registered as a medical student, and, consequently, the officially-recognised medical curriculum can only be begun after the passing of a preliminary examination. Though the standard varies within very wide limits, there is great similarity in the nature and number of the subjects required by the various examining boards. With an almost identical list of subjects, one board may not require a higher standard than a boy of moderate industry and average intelligence may touch by the time he is fifteen years of age, while another board may pitch its standard so high that only industrious young men of seventeen or eighteen can reach it. In deciding at which board he will present himself for his preliminary examination, the student should select that which implies the best general culture. It need not be the most difficult examination; indeed, preparation for such an examination is not unfrequently preventive of true culture. Lastly, the student should not be in too great a hurry to bring his preliminary education to a close. His desire should be to obtain the best general education he can, though in doing so he may have to postpone his strictly medical studies for a year or two.

We must not, in these observations, be supposed to sympathise with that form of priggishness which prompts a young man to prate everlastingly about the improvement of what he is pleased to call his mind. There are some men who constantly strain after an impracticable ideal of moral excellence, while they neglect the exercise of the ordinary public and domestic virtues, and others give themselves up so completely to the labour of improving their minds that they never make any decent use of the brains that Nature has given them. It is as if a man should expect to become a skilled performer by cleaning and polishing the internal mechanism of a musical instrument. What everyone who wishes to do any good in the world has to learn is to make the best use of his native powers. It is not enough to accumulate a confused heap of intellectual bricks and mortar; we need likewise the skill to put them together. Nor, on the other hand, will architectural skill avail without the bricks and mortar. A well-stored memory, under the guidance and control of a robust and disciplined intellect, is the best attainable outcome of any system of education. It ought, therefore, to be borne in mind that, although the preliminary education should be as general as possible, it should nevertheless be so planned that the special training of after-life may be added to it. In addition to the ordinary subjects of general education, not omitting the despised smattering of Latin and Greek, the would-be medical student should at least have a reading acquaintance with both German and French, and should likewise know something about one or more of the various branches of natural science. There is no department of natural science at all comparable with botany as a training for the youth of both sexes. Properly pursued, it is calculated to promote health and physical well-being, and to train the mental faculties in the scientific method. In no other department of science do the same facilities occur for complying with all the conditions of inductive philosophy—namely, observation, comparison, classification, and generalisation.

The student having obtained the best general education his means or abilities will allow, his thoughts will naturally turn to his medical career. In what way is this to be entered upon? Formerly, the almost invariable custom was by way of apprenticeship; but of late years the system of apprenticeship has grown into disfavour, and the medical curriculum is now commonly begun and ended at a medical school. Many circumstances have conspired to bring the apprenticeship system into abeyance. The predisposing cause was, perhaps, the common disregard of the conditions of apprenticeship both by principal and pupil. The essence of apprenticeship is that a master binds himself to teach, and the apprentice undertakes to learn, some art or profession. But in the medical profession, as in most other callings, the master usually forgot to teach, and the pupil, after the subsidence of his first flutter of enthusiasm, did not care to take the trouble to learn. The pupil became, as it were, an irregular, unpaid assistant. Another blow to the system was the passing of the Medical Act, and the compulsory registration of legally-qualified practitioners. From the time of the passing of this Act examinations have more and more been relied upon both by the profession and the public as a final and sufficient test of fitness. No one can have his name enrolled on the Medical Register without passing an appropriate examination, and the public is satisfied with the protection which examinations are supposed to afford. Moreover, when it was discovered that those who had not served an apprenticeship had, if anything, rather less difficulty in passing these examinations than those who had, there gradually arose a natural disinclination to pay a large premium for the equivocal privilege of acting as errand boy, book-keeper, dispenser, and unqualified assistant to a general practitioner. Though it may be true that the system of apprenticeship was flagrantly abused, there are some reasons for doubting the wisdom of discontinuing it altogether, and of relying exclusively upon the observance of a prescribed course of study, and the imposition of examinations to provide competent practitioners. The successful practice of medicine does not consist wholly in merely physical diagnosis and the administration of particular nostrums. There is often something more than the mere pathological lesion to be looked to—there is the intricately complex assemblage of emotions and passions, and feelings and prejudices, which we call *man*, to be thought of and considered. This requires a combination of perspicacity, tact, and judgment that can only be learned by experience, and cannot be imparted. Physicians of all ages have recognised this fact. In ancient Greece physicians paid great attention to the study of philosophy and rhetoric, in order to understand the mental and moral constitution of man, and to control or counteract the effects of his caprice. When HIPPOCRATES rebuts the opinion that it is not possible for anyone to know medicine who does not also know what man is, and how he was made and constructed, it is against the delusions of the Sophists and their specious fallacies, and not against true philosophy, that he protests. For a similar reason, no one was allowed to study medicine at Salerno who had not gone through a prolonged course of study in logic. In the absence of a similar provision now-a-days, it would not be amiss for an intending medical student to spend twelve months under the surveil-

lance of an educated and experienced practitioner. If judiciously observed this arrangement would afford an excellent introduction to the stricter instruction at a medical school. During that twelve months the student might learn enough of Chemistry, Pharmacy, Materia Medica, Osteology, and Elementary Physiology to enable him to take an immediate and intelligent interest in these subjects, when he does enter a medical school.

Another advantage of a short pupilage would be a salutary break between the restraint of school life and the sudden and uncontrolled freedom of city life. If the time were not wholly wasted, not only would useful knowledge be gained, but the character would be more established, the sense of responsibility heightened, and the natural disinclination to work corrected and removed.

In another respect we might imitate some of the older regulations, and especially those in force at the University of Salerno. Not only was the preparatory study of logic for three years insisted on at Salerno, but the subsequent medical curriculum extended over a further period of five years. When this was completed the student had to pass two examinations, and then to spend at least a year on trial with an experienced practitioner before he was allowed to engage in practice on his own account. Notwithstanding the enormous increase in the number and complexity of the facts now to be learned by a medical student, the ordinary medical curriculum occupies little more than half the time it did six hundred years ago. Short as it is, there are not a few persons, believers in the unfailing efficacy of examinations, who would abbreviate it still more. Against the prudence of such a proposal much might be said; though it is not our present object to propose or oppose any reforms, but rather to encourage the student to bring to his medical studies the best general culture he can, and then to devote the longest time he may to learning the Science and Art of Medicine.

Little need be said here of the way in which this time should be spent. This will be mainly determined by existing arrangements and regulations. At the beginning of his medical career the student will have to conform to the Method of Instruction, following implicitly the authority of his books and the utterances of his teachers. Soon, however, he will have to supplement instruction by observation. Then will he enter the threshold of that method which has been of such signal service to mankind. From observation he will proceed by easy stages to comparison, and from comparison to classification, thence to generalisation, till he finally discovers that Identity amidst Diversity which Professor JEVONS tells us is the real business of Science. The student will then perceive the difference between his general education and his professional, and the direct bearing of his studies on his future career. His education is, in fact, entirely technical: he is learning to do something, to qualify himself for a calling.

In this calling, happily, moderate talents honestly employed may effect much. Though medicine and the allied sciences afford plenty of scope for the highest efforts of genius, yet humble talents may never despair of doing useful and honourable work. Sir ISAAC NEWTON was wont to declare that whatever service he had done to the public was not owing to any extraordinary sagacity, but solely to industry

and patient thought; and Dr. THOMAS YOUNG, the brightest ornament of our profession, famed alike as a philologist, philosopher, and physician, had little faith in any peculiar gifts of genius. The original intellectual differences between men he believed to be much less than commonly supposed. He was himself one of the most conspicuous examples of unflagging industry and uncompromising thoroughness, and he often quoted with approval the lines from some stanzas addressed by Dr. BARNARD to Sir JOSHUA REYNOLDS:—

"Then say'st not only skill is gained,
But genius too may be obtained,
By studious imitation."

CHANGES IN THE MEDICAL SCHOOLS AND HOSPITALS.

THE changes during the past year have been comparatively few and unimportant, and not more than may be reasonably accounted for by the natural progress of events. Though one or two well-known and respected names are missing from the lists, the death-roll is neither so long nor so saddening as it was last year. In London, Charing-cross Hospital has lost its venerated Consulting-Surgeon, Mr. Hancock; King's College its accomplished Ophthalmic Surgeon, Mr. Soelberg Wells; and St. Bartholomew's its best-known Surgeon, Mr. Callender. The Leeds School has been robbed of its trusty friend and supporter, Dr. Heaton; and Manchester has lost a promising surgeon by the death of Mr. Bradley.

At *Charing-cross* the Hospital has lost its senior consulting surgeon by the death of Mr. Henry Hancock, and Dr. Lees has migrated to St. Mary's. In the *School* the only change is that Dr. W. Houghton has succeeded the Rev. J. C. Saunders as lecturer on Botany.

At *Guy's* the only change is the appointment of Mr. H. Moon, as full dental surgeon, *vice* Mr. Salter.

At *King's College* Mr. Cheyne has been appointed one of the demonstrators of Surgery, and assistant-surgeon to the hospital, in place of Mr. Gerald Yeo, resigned; and Mr. McHardy has been appointed professor of Ophthalmology, and ophthalmic surgeon to the hospital, *vice* Mr. Soelberg Wells, deceased.

At the *London Hospital* Dr. Ramskill has been appointed consulting physician, and Dr. Fenwick full physician. Dr. F. Warner and Dr. Ralfe have been appointed assistant physicians, and Mr. F. Treves has been appointed assistant surgeon. In the *School* Dr. S. Mackenzie has succeeded Dr. Sutton as lecturer on Medicine, and Mr. James Adams has succeeded Mr. Couper as lecturer on Surgery, and the late Mr. Maunder as teacher of Operative Surgery. The other changes are Mr. Treves, teacher of practical anatomy, *vice* Dr. Wilson, resigned; Dr. Warner, lecturer on Botany; and Dr. H. G. Sutton, lecturer on Pathology, in place of Dr. S. Mackenzie. Mr. Munro Scott has succeeded as warden Dr. Norman Chevers, resigned.

At the *Middlesex Hospital* Dr. Greenhow has been made consulting-physician, and Dr. Coupland promoted to the rank of full physician. Dr. J. K. Fowler has been appointed assistant-physician, and Mr. Arthur Hensman, aural surgeon.

At *St. Bartholomew's* Mr. Willett has been promoted to a full surgeoncy, *vice* Mr. Callender, deceased; and Mr. Butlin has been appointed assistant-surgeon. In the *School* Mr. Bruce-Clarke, Mr. Edwards, and Mr. Griffith have succeeded Messrs. Roeckel and Shuter as assistant demonstrators of Anatomy.

At *St. George's Hospital* Mr. Pollock has been made

consulting-surgeon; Mr. Haward full surgeon; and Mr. W. H. Bennett and Mr. Dent have been appointed assistant-surgeons. In the *School* Mr. Stirling has succeeded Dr. Cavafy as lecturer on Physiology, Dr. Ewart has succeeded Dr. Ralfe as lecturer on Physiological Chemistry, Mr. Bennett has succeeded Mr. Stirling as lecturer on Histology, Mr. Donkin has succeeded Mr. Wanklyn as lecturer on Chemistry, and Dr. Owen has succeeded Dr. Ewart as lecturer on Morbid Anatomy.

At *St. Mary's Hospital* Dr. Lees has been appointed assistant-physician, *vice* Dr. Farquharson, M.P., resigned; and Mr. Malcolm Morris has succeeded the latter gentleman in the Skin Department. Mr. Pepper has been appointed supernumerary assistant-surgeon. In the *School* the only changes are, Mr. Pepper, lecturer on Histology, *vice* Dr. Shepherd, resigned; and Dr. Shepherd has been appointed joint-lecturer with Dr. Cheadle on Pathology.

At *St. Thomas's Hospital* Dr. Sharkey has been appointed assistant-physician, and Mr. Anderson assistant-surgeon. Dr. Gulliver has succeeded Dr. Sharkey as resident assistant-physician. In the *School* Dr. Sharkey has been appointed additional lecturer on Physiology; and Dr. Payne collector with Dr. Greenfield on Pathological Anatomy.

At *University College Hospital* Dr. Roberts has been made full physician; and Dr. T. Barlow has been appointed assistant-physician, and Mr. J. W. Bond resident medical officer. In the *College* Dr. Poore has succeeded Dr. Maudsley as Professor of Medical Jurisprudence.

At the *Westminster Hospital* there have been no changes.

At *Queen's College, Birmingham*, at the *Bristol Medical School*, and at *Cambridge* there have been no material changes.

At *Leeds*, Dr. Churton has been appointed lecturer on Clinical Medicine and physician to the Infirmary, in place of Dr. Heaton, deceased.

At *Newcastle-on-Tyne* (University of Durham) Dr. Oliver has been appointed lecturer on Practical Physiology.

At *Liverpool* there are no changes.

At *Manchester* (Owens College) the vacancies caused by the death of Mr. Bradley have not been filled up yet.

At the *Sheffield Medical School* there have been no changes.

At the *University of Aberdeen* and at the *University of Edinburgh* there have been no changes, except the appointment of Mr. A. Smart as assistant-physician to the Infirmary in Edinburgh.

At the *University of Glasgow* the only changes are the appointment of Dr. Charteris as professor of *Materia Medica*, *vice* Dr. Cowan; the appointment of Dr. Bayley Balfour as professor of Botany; and the appointment of Dr. Yellowlees as lecturer on Insanity.

At the *Glasgow Royal Infirmary* Dr. Johnstone Macfie has succeeded Dr. Cassells as aural surgeon.

At the *University of Dublin* Dr. Macalister has succeeded Dr. McDavel as professor of Anatomy.

At *Carmichael College, Dublin*, Dr. Francis Henston has been appointed lecturer on Systemic Anatomy.

ON BOOKS.

ALTHOUGH the only sound knowledge is that obtained from personal observation and practice, yet no one would imagine that these sufficed for thorough education. There are many things in medicine which, to be sure, can only be learnt by oral precept and practical example; but there is neither time nor opportunity for the student in the present day to learn the whole of his art by these means, whilst the science (if it may be so called) of medicine is only to be learnt in books. Hence the student must, if he wish to be

thoroughly schooled, devote a considerable portion of his time to reading. Of course, he must not err on the other side, and degenerate into a bookworm; for his concern in after-life is with matters of practical import, involving the prompt recognition of the features of disease or injury, and the decision as to the choice of appropriate treatment. Reading will not furnish him with all his knowledge, but it will enable him to store his mind with facts of great importance and value.

Whilst, then, he should be careful not to absorb too much of his time in the perusal of books, he should endeavour to devote an adequate amount of time to it, and should always seek to read with a definite purpose and understanding. In this country we are especially rich in text-books, and many of them so good and excellent that it is difficult to choose between them. It would not be possible to enumerate them all here; we cannot attempt anything like a complete catalogue; but we may indicate some of those which are best known and in most frequent use. There may be some of equal excellence which we have failed to name, and we may have mentioned some which few students have time or opportunity to read. We would urge especially upon the student not to be discursive in his reading; but, having made his choice, to adhere to his text-book and study it carefully. It is far better to know one book well than to try to absorb a smattering of many. Occasionally he may find it necessary for the sake of elucidation to refer to some larger treatise, which will probably be found in his school library; and he will do well to make a careful note of the point which has puzzled him, and not to be satisfied until he understands it. For it is of great importance that he should be master of what he has read. Many make the mistake of getting through so many pages in so much time, vainly imagining that the amount of reading represents so much knowledge acquired. Few fallacies are greater than this. The acquisition of real knowledge is a slow and laborious process, and the student must not shrink from repetitions, until he really feels secure of the facts he has gleaned. His reading, then, must be slow and steady, and the reverse of spasmodic; he should take his intellectual food as regularly as his meals. All men are not born students, but all can, if they will—and it is a duty they owe to themselves—do their utmost to study in a methodical and uninterrupted manner. There ought to be no break in the continuity of their labours, but they must go on acquiring knowledge bit by bit, and thus lay the foundations of that which is to be their life-pursuit.

We will now proceed to our enumeration of authors, placing those first who have written the more elementary works. The books of reference, &c., are named afterwards.

Chemistry.—Barff, Roscoe; Williamson, Attfield, Fownes; Miller, Roscoe and Schorlemmer. Of these Professor Barff's "Introduction" is suitable to the beginner, but its scope is too limited for the requirements of any of the medical examining boards. Roscoe's "Elementary Chemistry" travels over the whole range of the subject, and will, if thoroughly mastered, prove more than sufficient. The like is true of Fownes's well-known work, which has been brought up to the modern standpoint by recent editors. For a compact but clearly-reasoned book, the student cannot do wrong if he prefer Professor Williamson's work; and those who have time at their disposal, or are ambitious of university honours, the work of Professor Miller, or the last-named on the above list, may be consulted or read. Miller's book has a volume devoted to the subject of Physics.

Practical Chemistry.—Odling, Bowman, Attfield. These books are each of them useful to the student who has not the advantage of personal supervision of his work at the hands of the teacher, or their perusal may profitably be undertaken in conjunction with the practical study of the subject.

Natural Philosophy.—Newth, Ganot; Deschanel, Thomson and Tait; Balfour Stewart, Tyndall. In this subject, which is required for the "preliminary scientific" examinations, but does not enter into the ordinary curriculum, some of the pleasantest books to read are Ganot's Physics and the works on Heat, Sound, and Electricity by Prof. Tyndall,—these latter being books that may be read in hours of comparative leisure, for they are penned by one of the clearest expounders of scientific truths extant. Similar subjects are dealt with in Deschanel's treatise, which may be obtained in separate parts; and Balfour Stewart's work on Heat is widely recognised as one of the best in the language. The large "Natural Philosophy" of Thomson and Tait can only be regarded as a work of reference for most students.

Botany.—Cooke, Silver, Oliver; Balfour, Bentley, Sachs. *Atlas:* Bentley and Trimen. Several works are to be had of an elementary character; that of Mr. Cooke on "Structural Botany" or the little "Outlines" of Dr. Silver are good. Oliver's "Elementary Botany" has met with well-deserved success, and recently translations of some foreign works have appeared. Balfour's work has long been a favourite, and Bentley's is also much read. Messrs. Churchill have recently completed the publication of an excellent Atlas of "Medicinal Plants," under the joint authorship of Professor Bentley and Mr. Trimen—a work which should find a place in the library of every medical school.

Zoology and Comparative Anatomy.—Bradley, Ord; Nicholson, Huxley, Rymer Jones, Gegenbaur; Flower, Rolleston, Huxley and Martin. For practical work in this subject no better guide could be mentioned than the last-named, and of a severer class is Prof. Rolleston's "Forms of Animal Life." In systematic zoology the various works of Prof. Nicholson have been very popular. They have replaced the well-known text-book of Rymer Jones; and those who wish to go deeper into the subject should not fail to read Prof. Huxley's "Vertebrata" and "Invertebrata"; the same author's "Introduction" being, we believe, now out of print. The recent translation of Gegenbaur's manual serves to complete a list of writings on a subject upon which ten years ago English literature was very defective, and candidates for University degrees could not do better than make this their text-book. For clear and concise summaries, Mr. Bradley's and Dr. Ord's smaller works may be recommended. Prof. Flower's "Osteology of Mammalia" is the only work of its kind, and its study would add much interest to the dry details of human osteology.

Anatomy.—*Systematic:* Quain, Gray. *Practical:* Ellis, Holden, Heath, Ledwich, Hensman. *Osteology:* Ward, Holden, Norton, Wagstaff. *Arthrology:* Morris. *Regional Anatomy:* Holden, Smith and Walsham. *Plates:* Ellis, Godlee, Braune, Sibson.—In this subject, which occupies so much of the student's time in the first two years, there are very numerous works, some of which are better consulted in the study, and others are written for constant use in the dissecting-room. For the latter purpose the most complete and trustworthy is Professor Ellis's Demonstrations in Anatomy, which has stood the test of quite a generation of students, and is apparently as much appreciated as ever. Similar excellent guides are the smaller works of Heath, Holden, and Ledwich. For the systematic study of the subject Gray's Anatomy has long been a favourite, and holds a well-deserved place in the estimation of students; whilst the book which has obtained a wide-world reputation is Quain's Anatomy, the representative work of English anatomical science. Several books have been written upon osteology alone, the subject which faces the student at the outset of his career; of them the most exhaustive and best is undoubtedly Ward's; but Holden's work is perhaps much more widely read, and it is very excellent. The only work specially devoted to the anatomy of the joints is that by Mr. Henry Morris, which may be consulted with advantage. Valuable for the assistance they afford in recalling the parts dissected, and very useful therefore when the student cannot be engaged in his practical pursuits, are the excellent "Plates" of Ellis and those in the Atlas (just completed) of Mr. Rickman Godlee. To those who wish to better impress the memory with the facts they observe, the "Outlines" of Mr. Hensman may be filled in by the pencil with the dissected part before the eyes. In the department of regional anatomy there are the plates of Professor Braune, with English text by Mr. Bellamy, and Sibson's work on medical anatomy; whilst smaller works dealing with "Landmarks" are those of Holden, Smith, and Walsham.

Physiology.—Huxley; Kirkes, McKendrick; Marshall, Foster, Hermann, Carpenter, Flint. To those who come to a medical school without any previous knowledge of the subject, no better book to begin with can be recommended than Professor Huxley's elementary work. But this, of course, will not suffice for the whole education of the medical student in this most important subject. The well-known text-book of Kirkes is, of all the works on this subject, by far the most popular. It has run through many editions, and a new one is announced to appear this session. Almost as popular, but less attractive to the general student, is the text-book by Michael Foster, which it is incumbent upon the aspirant for higher diplomas to read. Of the same scope as Kirkes may be mentioned the manuals by McKend-

rick, Marshall, and Küss; whilst Carpenter's large work has always maintained an excellent position, although it has been somewhat superseded by newer and less cumbersome books. The works of Hermann and of Flint have also obtained a well-deserved position in this country. Upon *Physiological Chemistry* the student will find a useful guide in Dr. Ralfe's little book.

Histology.—Quain's *Anatomy*, vol. i.; Gray's *Anatomy*, Introductory Chapter; Schäfer, Rutherford; Stricker; Klein and Smith's *Atlas*. A fairly exhaustive account of histology is to be found in some of the books mentioned in the last section, but for the most complete treatise on the subject Quain's *Anatomy* continues to hold the first place, the large work by Stricker (Syd. Soc. Ed.) being necessarily too exhaustive for the ordinary student. Prof. Schäfer's little work is the most thorough guide on the subject of practical histology, and Rutherford's "Outlines" are also excellent.

Practical Physiology.—Power and Kidd, Foster and Langley, Sanderson. For laboratory guides the two first-named are sufficient, and the larger "Handbook" edited by Dr. Sanderson should be referred to for further details.

Materia Medica and Therapeutics.—Brunton, Thorowgood, Milne, Farquharson, Garrod, Scoresby-Jackson; Wood, Phillips, Ringer, Waring, and Fothergill. In *Materia Medica* Dr. Garrod's and Scoresby-Jackson's works are good, and of smaller size are the compendia of Thorowgood, Royle, Farquharson, and Milne, whilst the "Tables" of Brunton are intended to facilitate the student's labour in this somewhat arid subject. Wood's and Phillips' works are both of them of a high class, the best, perhaps, in the language; they deal largely with the physiological action of drugs. Upon the more interesting subject of practical therapeutics, that which has been most widely read is Dr. Ringer's handbook; and the works of Dr. Waring and of Milner Fothergill also abound in useful hints and suggestions.

Medical Jurisprudence.—Guy, Taylor; Tidy and Woodman. In this subject the books most suitable for students are Taylor's *Manual* and Guy's "Forensic Medicine," which embrace all branches of the subject; but Taylor's "On Poisons," and his larger work on "Medical Jurisprudence," may profitably be referred to; as also may be the rather unwieldy book published two years ago from the pens of Drs. Tidy and Woodman.

Medicine.—General: Tanner, Roberts, Bristowe; Aitken, Niemeyer, Flint, Watson; Reynolds, Trousseau. *Nervous Diseases*: Wilks, Charcot, Althaus, Hammond, Bastian, Rosenthal, Gowers. *Diseases of the Heart*: Walshe, Balfour, Fothergill, Hayden. *Diseases of the Lungs*: Walshe, D. Powell. *Diseases of the Kidney*: Roberts, Dickinson, Stewart, Johnson and Beale. *Diseases of the Liver*: Murchison, Habershon. This long list by no means includes all the works which may be selected from, but it will be seen that we by no means wish to imply that the student should have to consult one-fourth even of the above. It will be necessary for him to procure one text-book, and the following brief hints may guide him in his selection:—Each has its own peculiarities. That of Dr. Tanner may be mentioned the first, because it has been longest in the field, and also because it is fully sufficient for most purposes; it is eminently practical. The handbook of Dr. F. T. Roberts is, however, perhaps the most useful, and abounds in information supplied in a thoroughly systematic manner, although, from the very extensive range travelled over, the subject is necessarily condensed, and the book, therefore, no light reading. It is pre-eminently a student's book. The work of Dr. Bristowe is more original, and is valuable especially in its pathological portions, and in the admirable account given of diseases of the nervous system. Dr. Aitken's "Outlines" are also good. But for a work which is both pleasant in the reading and valuable for its suggestiveness, the text-book of Professor Niemeyer takes the front rank. Certainly no candidate for the higher examinations should fail to read this book, and to carefully study it, for although in some sections it hardly comes up to the standard of some English authorities, yet, as a whole, there is no work like it. Nor should Dr. Watson's famous book on the "Principles and Practice of Physic" be omitted, for many an hour may be passed both profitably and with pleasure in the perusal of these classical lectures. Those who intend taking high degrees, such as the M.D., should read much of the "System of Medicine" edited by Dr. Reynolds, and the time would not be wasted in the perusal also of several of Trousseau's admirable lectures on Clinical Medicine, translated by the Sydenham Society. Such candidates also would do well to

read the monographs of Dr. Murchison on Diseases of the Liver, or those on Diseases of the Kidney by Drs. W. Roberts, Grainger Stewart, or Dickinson; and also to consult Dr. Walshe's works on Diseases of the Lungs and Diseases of the Heart, or the lectures of Dr. Balfour on the last-named subject. On Continued Fevers, there is no work comparable to Dr. Murchison's treatise. On diseases of the nervous system there are the larger works of Rosenthal and Hammond; but the lectures of Dr. Wilks, and those of Charcot, some of which have been translated by the Sydenham Society, may profitably be read. Dr. Bastian's lectures on Brain Diseases and Dr. Gowers' lectures on Diseases of the Spinal Cord should prove of great use to the clinical student, for whose needs we may now mention some works that have been specially written for aid in bedside observation:—

Clinical Medicine: Finlayson, Fenwick, Tanner, Gee, Barclay, Da Costa. *Urine Analysis*: Legg, Tyson. *Ophthalmoscopy*: Browne, Jackson, Gowers, Clifford Allbutt. The handbook edited by Dr. Finlayson is very complete of its kind; Fenwick's work is smaller, but has been much in use, whilst the subject of "physical signs" in chest disease is admirably treated of in Gee's little manual of Auscultation and Percussion. As aids in the analysis of urine, Dr. Legg's and Dr. Tyson's works are excellent. We have added four works on Ophthalmology; the first is a guide to the use of the ophthalmoscope, which the beginner will find of great service; but the senior student will be repaid by studying the excellent work, which includes an atlas, by Dr. Gowers, or the book by Clifford Allbutt on the same subject. For reference: Liebreich's plates, or those of Jaeger, may be consulted.

Pathology.—Green, Payne, Wilks and Moxon, Rindfleisch, Cornil and Ranvier, Rokitsansky, Billroth, Paget, Virchow. The best to serve as an introduction to the subject is Dr. Green's little book, which has run through many editions. The second edition of Jones and Sieveking's "Pathological Anatomy," edited by Dr. Payne, might be read, although there is much matter in it hardly consonant with present advances in the subject. The text-book of Drs. Wilks and Moxon is valuable as a companion to the museum and dead-house; whilst for Pathological Histology, for more advanced students, the work of Rindfleisch (Syd. Soc.), and to those who read French, that of MM. Cornil and Ranvier, may be recommended. An American translation of this work has recently appeared, and has been carefully edited by Mr. Shakespeare. Billroth's *Surgical Pathology* is well worthy of study, and those who can afford the time will be repaid by reading Sir James Paget's well-known work on *Surgical Pathology*. Virchow's little *Guide to Post-mortem Examinations* is of use as giving full directions for the careful pursuit of this part of pathology. The excellent analysis of the contents of St. Bartholomew's Hospital Museum, published by Mr. Walsham under the title of a "Manual of Surgical Pathology," contains in a concise form the leading facts of this subject; and it might profitably be used as a companion in other museums than the one for which it is especially intended.

Surgery.—Druitt, Bryant, Holmes; Erichsen, Gross, Holmes's System. *Practical*: Hill, Heath, Stimson, Bell and Maunder; Fergusson, Spence, Pirrie, Syme. The two text-books by Mr. Bryant and Mr. Holmes respectively are perhaps now the most widely read. Druitt's "Vademecum" is now less sought after; still, by some it may be preferred to either Bryant or Holmes. Of larger works Erichsen's "Science and Art of Surgery," or Gross' surgery, need only to be mentioned. Their merits are well and widely known. And the same may be said of Holmes's System of Surgery. Practical Surgery has been treated by Sir W. Fergusson, Mr. Spence, Dr. Pirrie, and Mr. Syme, in books which have obtained a deserved repute. The works of Bell, Maunder and Stimson, on Operative Surgery, and Mr. Heath's *Atlas*, are all excellent. Mr. Hill's book on Bandaging and Mr. Heath's on Minor Surgery are of great use to the student in his career as dresser or house-surgeon.

Midwifery.—Swayne, Meadows, Lloyd Roberts; Playfair, Leishman, Barnes, Clay. *Diseases of Women*: Lombe Atthill, Galabin, Barnes, Graily Hewitt, Thomas. In the department of *Midwifery* the best works are those of Playfair and Leishman, and Dr. Robert Barnes' or Mr. Clay's works on "Obstetric Operations." With these the student preparing for University degrees would be well armed; whilst for emergencies Dr. Swayne's "Obstetric Aphorisms for Students" is excellent, and may be used in conjunction with the lectures attended by the student. In *Gynaecology*

the small book of Dr. Lombe Atthill is deservedly popular. Of like scope is the handbook by Dr. Galabin. More extensive information may be found in the larger works of Drs. Barnes, Graily Hewitt, and Thomas.

Dermatology.—Liveing's Diagnosis, Fox's Epitome, Duh-ring, Malcolm Morris; Tilbury Fox, Neumann (Pillar's translation.) *Atlases:* Tilbury Fox, Duhring. The student will find ample information within a small compass in the first-named works. Duhring's book is not so well known in this country as it deserves to be, and Neumann's is especially rich in cutaneous pathology.

Diseases of the Eye.—Nettleship, Lawson, Macnamara, Soelberg Wells. The most useful for the student are the two first named.

Diseases of the Ear.—Allen, Dalby, Keene, Field, Hinton, Woakes.

Dental Anatomy and Surgery.—C. Tomes, J. Tomes, Salter, Harris.

Medical Electricity.—De Watteville, Reynolds, Poore.

Hygiene.—Wilson, Parkes, De Chaumont, Teale.

We need but enumerate the authors in the above subjects; and we have only to add one subject which is still included in the University of London curriculum for candidates for the M.D. degree:

Logic and Moral Philosophy.—Bain and Jevons are the authors most generally read; but those who can make the acquaintance of Mill, Lewes, and Spencer will not regret it.

PRELIMINARY EDUCATION.

To the Editor of THE LANCET.

SIR,—After carefully reading your article in THE LANCET of August 28th, dealing with Dr. Karl Hillebrand's view on the advantages to be derived from a classical education by the medical student, and having mentally given my complete acquiescence to the views therein contained, I was not a little surprised, as well as rather amused, to find a letter by Dr. J. Niven in the same journal a few pages farther on, inasmuch as I found it to contain views so utterly and diametrically opposed to those I had just been perusing.

Now, I certainly am of opinion that it would be advisable for the intending medical student to have some sort of *practical* acquaintance with chemistry, physiology, and botany prior to the commencement of his professional studies; indeed, I think these subjects should be included in the scheme of the preliminary examinations, *but not rendered compulsory*, and for the reason asserted by Dr. Hillebrand, that there is such a tendency in the present age to learn too many facts, to read too many books. For a knowledge of a profession holding such a position as that of medicine, it is essential that a large mass of facts and details should be committed to memory; but do we not, in the first place, require a mind capable of appreciating those facts—a mind which, from its previous training and the culture thence derived, has been rendered capable of suitably marshalling those facts, of appreciating them duly, and of distinguishing between such as are useful and such as are comparatively useless for the purpose in hand? Now, Dr. Niven admits the study of the French and German languages to be useful, not as a mental training in the first place—no, he utterly ignores that very great advantage derived from the study of a language,—but to enable a man to read foreign authors and glean from them more facts. It is well known, and few, I think, would be rash enough to gainsay the statement nowadays, that as a means of mental training, as a means tending above measure to refine a man's manner and elevate his intellectual faculties, a good classical substratum is of the highest benefit and importance. With regard to so many medical and scientific terms being derived from the languages of ancient Greece and Rome, I think I need make no remark.

Call the acquirement of the classics, as some do with a sneer, a "mere accomplishment" even, but let us bear this in mind, that medicine owes its position as a learned profession to the accomplishments of those who adorn its ranks, and it is as well to bear in mind this little piece of history, to wit, the fact that Linnæus was not only the first founder of a College of Medicine, but the first who gave lectures in Greek at Oxford and Cambridge, and that great and renowned scholar Erasmus asserted that the best scholars of

his age—a golden age of classical scholarship—were the physicians of England.

The unravelling the particular meaning connoted by a particular word used in a particular sentence, the comparison of its meaning as employed there with that of its meaning as employed elsewhere, the investigation of the laws governing the construction of some abstruse grammatical sentence, the inquiry into the subtlety of meaning of the Greek particles, in a word, the logical skill, the nicety thus acquired will, in my opinion, prove of the very greatest benefit to the medical man, who has nearly every day to call these qualities into action.

A man entering upon the study of medicine should certainly avoid the "useless toil" (for useless toil *this* most assuredly is) of acquiring "a smattering of Latin and Greek," to quote Dr. Niven's own words, and I would call to his attention that *even in the syntax* of any good Latin grammar, abounding as it does in quotations from the "auctores classici," "elegance of address and refinements of speech and thought" (*sic*) cannot but "entangle themselves." Again, why should the intending medical student necessarily read the *Anabasis* of Xenophon? Would it not be more beneficial for him to peruse the second book of the history of Thucydides, or some one of the philosophical works of Plato?

But what a great benefit is to be derived from the classical languages in enabling us to more clearly understand our own—to appreciate Milton, for example—and that this is a *sine quâ non* to a medical man who can deny? The study of the classics has always been acknowledged to be *γενναίου ἀνδρός*, enabling men to express their thoughts clearly and accurately, and giving them the power of methodising and illustrating. Is it to be imagined that these great men "on fame's eternal bead-roll worthy to be filed," were ignorant of the language in which were couched those elegant compliments on their respective merits, when in the Senate House at Cambridge the other day they were invested with the honorary degree of LL.D.? I fancy not.

"Ordinis hæc virtus erit et venus, aut ego fallor,
Ut jam nunc dicat, jam debentia dici,
Pleraque differat et præsens in tempus omittat."

The gift of saying at the right time and the right place, and of doing at the right opportunity, that which should be said and done may be learned from the study of the ancient classics. It is by those, too, who have had a good substratum of Greek and Latin scholarship that the *modern languages* are more easily acquired, and this is, I think, admitted by most people of the present time. In conclusion I would ask these two questions, appending the answers:—
Q. In what language did Hippocrates write? A. In the purest Ionic Greek.

Q. Who was Hippocrates? A. The father of physio.

The conclusion is obvious.

I am, Sir, yours obediently,
WILLIAM A. GORDON LAING, M.B., C.M., &c.

SESSION 1880-81.

GENERAL COUNCIL OF MEDICAL EDUCATION AND REGISTRATION OF THE UNITED KINGDOM.

Registration of Medical Students.—The following regulations have been adopted by the General Medical Council in reference to the registration of students in medicine:—Every medical student shall be registered in the manner prescribed by the General Medical Council. No medical student shall be registered until he has passed a preliminary examination as required by the General Medical Council, and has produced evidence that he has commenced medical study. The commencement of the course of professional study recognised by any of the qualifying bodies shall not be reckoned as dating earlier than fifteen days before the date of registration. The registration of medical students shall be placed under the charge of the branch registrars. Each of the branch registrars shall keep a register of medical students according to a prescribed form, wherein is set forth the name, the preliminary examination and date thereof, the date of registration, and the place and date of commencement of medical study, as certified by a master or a teacher, or an official in a medical school or hospital. Every person

desirous of being registered as a medical student shall apply to the branch registrar of the division of the United Kingdom in which he is residing; and shall produce or forward to the branch registrar a certificate of his having passed a preliminary examination as required by the General Medical Council, and evidence that he has commenced medical study. The branch registrar shall enter the applicant's name and other particulars in the Students' Register, and shall give him a certificate of such registration. Each of the branch registrars shall supply to the several qualifying bodies, medical schools, and hospitals, in that part of the United Kingdom of which he is registrar, a sufficient number of blank forms of application for the registration of medical students. The several Branch Councils have power to admit special exceptions to the foregoing regulations as to registration, for reasons which shall appear to them satisfactory. A copy of the Register of Medical Students, prepared by each of the branch registrars, shall be transmitted on or before Dec. 31st, in each year, to the registrar of the General Council, who shall, as soon as possible thereafter, prepare and print, under the direction of the Executive Committee, an alphabetical list of all students registered in the preceding year, and supply copies of such authorised list to each of the bodies enumerated in Schedule A to the Medical Acts, and through the branch registrars to the several medical schools and hospitals. The several qualifying bodies are recommended not to admit to the final examination for a qualification under the Medical Acts any candidate (not exempted from registration) whose name has not been entered in the Medical Students' Register at least forty-five months previously. In the case of candidates from other than schools of the United Kingdom, the Branch Councils have power to admit exceptions to this recommendation.

Pursuant to a resolution passed by the General Council at its meeting on July 14th, 1880, the changes made by the Council in its Regulations for Preliminary General Education, will from January 1st, 1882, be as follows:—On and after the first day of January, 1882, no person shall be allowed to be registered as a medical student unless he shall have previously passed a Preliminary Examination in the subjects of General Education as specified in the following list:—(1) English Language, including Grammar and Composition;¹ (2) English History; (3) Modern Geography; (4) Latin, including Translation from the original and Grammar; (5) Elements of Mathematics, comprising (a) Arithmetic, including Vulgar and Decimal Fractions; (b) Algebra, including simple Equations; (c) Geometry, including the first two books of Euclid or the subjects thereof; (6) Elementary Mechanics of Solids and Fluids, comprising the Elements of Statics, Dynamics, and Hydrostatics;² (7) One of the following optional subjects:—(a) Greek; (b) French; (c) German; (d) Italian; (e) any other Modern Language; (f) Logic; (g) Botany; (h) Elementary Chemistry.

Communications relating to the Medical Students' Register, or to the registration of medical students, should be sent to the registrars as follows:—W. J. C. Miller, B.A., Registrar of the General Council, 315, Oxford-street, London, W.—Archibald Inglis, M.D., Registrar of the Branch Council for Scotland, 33, Albany-street, Edinburgh.—W. E. Steele, M.D., Registrar of the Branch Council for Ireland, 35, Dawson-street, Dublin.

REGULATIONS OF THE MEDICAL EXAMINING BOARDS IN THE UNITED KINGDOM.

UNIVERSITY OF OXFORD.

Every student must reside in one or other of the Colleges or Halls, or in licensed lodgings, for three years, passing at least two examinations in Arts, and one in either Mathematics, Natural Science, Law, Modern History, or Theology,

¹ The General Medical Council will not consider any Examination in the English Language sufficient that does not fully test the ability of the candidate:—(1) To write sentences in correct English on a given theme, attention being paid to spelling and punctuation as well as to composition; (2) to write correctly from dictation; (3) to explain the grammatical construction of sentences; (4) to point out the grammatical errors in sentences ungrammatically composed, and to explain their nature; and (5) to give the derivation and definition of English words in common use.

² This subject may be passed either as Preliminary, or before, or at the first Professional Examination.

when, if he obtain a first, second, or third class, he can take his B.A. degree; if he do not gain such honour, he has to pass a third examination in *Literis Humanioribus*.

A student desiring to graduate in Medicine must pass the requisite examinations for the degree of B.A. He must afterwards spend two years in study³ prior to the first or scientific examination for the degree of Bachelor of Medicine, and two years more, after passing the first, prior to the final or practical examination for the same degree. Evidence must be brought to show that he has studied the practical parts of his profession in a first-class hospital.

There is an examination in State Medicine and Public Health, to which Bachelors of Medicine of the University are admissible. Copies of the examination-papers in the several examinations may be obtained through any bookseller.

A dissertation has to be publicly read, three years after obtaining the M.B., before being eligible for the M.D.

The study of Natural Science is carried on at the Museum, in which are extensive opportunities for the study of Physics, Chemistry, General, Comparative, and Human Anatomy, Histology, and other departments of Natural Science, together with courses of lectures and of practical instruction by the several professors. Collections illustrate the various subjects. There is in the medical department a pathological series, including the collection of Schroeder Van der Kolk, and a sanitary laboratory, conducted by the public analyst. The Radcliffe Library, containing above 25,000 scientific volumes, is open to all students daily from 10 till 4, and on certain evenings during term. There are lectures and practical instruction in Botany at the Botanical Gardens, and clinical instruction at the Infirmary.

The medical examinations take place this year in the Michaelmas term; after which, in the Trinity (summer) term, scholarships of about the value of £75 are obtainable at Christ Church, Magdalen, and other colleges, by competitive examination in Natural Science. Every year a Radcliffe Travelling Fellowship is competed for by any who, having taken a first class in any of the schools, or having obtained a University prize or scholarship, propose to study Medicine. The Travelling Fellows receive £200 a year for three years, half this period being spent in study abroad.

More detailed information may be obtained from the University Calendar; from the Student's Handbook to the University; from the Regius Professor of Medicine; from the Professors in the several departments; from E. Chapman, Esq., M.A., Frewin Hall; and from the Sub-Librarian in the Radcliffe Library at the Museum.

Regius Professor of Medicine—H. W. Acland, M.D., LL.D., F.R.S.
Professor of Geometry—H. S. Smith, M.A., F.R.S.
Professor of Natural Philosophy—Rev. B. Price, M.A., F.R.S.
Professor of Experimental Physics—S. Clifton, M.A., F.R.S.
Linacre Professor of Physiology—G. Rolleston, M.D., F.R.S.
Professor of Chemistry—W. Odling, M.A., F.R.S.
Professor of Zoology—J. O. Westwood, M.A., F.R.S.
Professor of Geology—J. Prestwich, M.A., F.R.S.
Professor of Botany—M. Lawson, M.A.
Professor of Mineralogy—N. S. Maskelyne, M.A., F.R.S.
Lee's Reader in Anatomy—J. B. Thompson, B.A.
Lee's Reader in Physics, Christ Ch.—R. E. Baynes, M.A.
Lee's Reader in Chemistry, Christ Ch.—A. G. V. Harcourt, M.A.
Lecturer in Natural Science, Exeter Coll.—W. L. Morgan, B.A.
Lecturer in Natural Science, Balliol—W. W. Fisher, M.A.
Millard Lecturer in Physics, Trinity—A. Macdonell, B.A.
Lecturers in Natural Science, Magdalen—E. Chapman, M.A., and C. J. F. Yule, M.A.
Lecturer in Natural Science, St. John's—W. H. Jackson, M.A.
Lecturer in Physical Science, Jesus—E. Chapman, M.A.
Lecturer in Natural Science, Keble—E. B. Poulton, M.A.
Demonstrator in Anatomy—Charles Robertson, Esq.
Demonstrator in Chemistry—W. W. Fisher, M.A.
Public Analyst in Sanitary Laboratory—W. F. Donkin, M.A.

UNIVERSITY OF CAMBRIDGE.

The student must enter at one of the Colleges, or as a non-collegiate student, and keep terms for three years by residence in the University. He must pass the Previous Examination in Classics and Mathematics, which may be done, and should if possible be done, in the first or second term of residence, or, through the Oxford and Cambridge Schools Examination Board or the Local Examinations, before commencing residence. He may then devote himself to medical study in the University, attending the hospital and the medical lectures, dissecting, &c. Or he may proceed to take a degree in Arts, either continuing mathematical and

³ If he have taken the higher honours in the Natural Science School he may go in for the first M.B. examination on the first opportunity, and so have a longer period of practical study before the second M.B. examination.

classical study, and passing the ordinary examinations for B.A., or going out in one of the Honour Triposes. The Natural Science Tripos is preferred by most medical students, some of the subjects for this Tripos examination (Chemistry, Botany, Human and Comparative Anatomy, and Physiology) forming part of the series of medical study.

The expenses of residence, lectures, &c., at a college are about £150 per annum; but these are in many cases lessened by scholarships, ranging in value from £20 to £80 a year, which are very numerous, and obtainable by most students of industry and ability. They are chiefly given for mathematical and classical proficiency. Some may be obtained at once, even before entering; and notices of the examinations for these are given from time to time under the head of "University Intelligence" in *The Times* and other newspapers. Scholarships are given for Natural Science in Trinity, St. John's, St. Peter's, Clare, Christ's, Sydney, Pembroke, Caius, and Downing Colleges; the examinations being at Easter, also in June and October.⁴

Non-collegiate students can reside at less expense (£80 or £90 a year) than those who enter a College. They are allowed to attend certain of the College lectures and all the professors' lectures, and have the same University status and privileges as the other students. They are under the superintendence of the Rev. R. B. Somerset, Oxford House, Cambridge, from whom further information may be obtained. Cavendish College has been recently founded, to afford special facilities for obtaining a degree at a moderate cost, and at the earliest practicable age. Information may be obtained from J. Cox, Esq., warden of the College.

For the degree of *Bachelor in Medicine* five years of medical study are required, except in the case of medical students who have graduated with honours as Bachelors of Arts, four years being then sufficient. This time may be spent in Cambridge or elsewhere. The earlier portion of it is usually spent in Cambridge, the student remaining in the University till he has passed the examination for the Natural Sciences Tripos and the first and second examinations for M.B.

There are three examinations for M.B. The *first* in Chemistry and other branches of Physics, and Botany. The *second* in Anatomy and Physiology (Human and Comparative), and Pharmacology. The *third* (at the conclusion of medical study) in Medicine, Surgery, Midwifery, and Medical Jurisprudence. The examinations are partly in writing and partly oral, in the hospital, in the dissecting-room, and in the laboratories. They take place twice annually (in June and December).

An Act has to be kept, which consists in reading an original thesis and passing a *viva voce* examination on the subject of the thesis and on other subjects.

Previously to the first examination, lectures must have been attended on Chemistry (with manipulations) and Botany. Previously to the second examination, the student must have attended lectures on Human Anatomy and Physiology, Comparative Anatomy, *Materia Medica* and Pharmacy, and Pathology; have Dissected one season; and attended Hospital Practice one year. Previously to the third examination, lectures must have been attended on Pathological Anatomy, the Principles and Practice of Physic, Clinical Medicine, Clinical Surgery, Midwifery (with ten cases), and Medical Jurisprudence; also Hospital Practice for three years. The candidate must also have been a clinical clerk, or have had special charge of patients in a hospital, dispensary, or parochial union for six months.

The degree of *Doctor in Medicine* may be taken three years after M.B. An Act has to be kept, with *viva voce* examination; and an extempore essay has to be written on some subject relating to Physiology, Pathology, the Practice of Medicine, or State Medicine. A Master of Arts proceeding to M.D. is required to produce the same certificates and pass the same examinations as for M.B.

For the degree of *Master in Surgery* the candidate must have passed the three examinations for M.B., and have attended lectures on Human Anatomy (a second course), on the Principles and Practice of Surgery, Clinical Surgery; he must have dissected a second season, have attended the Surgical Practice at a recognised hospital for three years, and have held a house-surgeoncy or dressership for six months. He is then required to pass an examination in

Surgical Anatomy, Pathology, and the Principles and Practice of Surgery, and Clinical Surgery.

The next examination in Sanitary Science by the University of Cambridge will begin on Oct. 5th. Candidates (whose names must be on the Medical Register of the United Kingdom) should send their names to Professor Living, Cambridge, before Sept. 25th.

The following is a summary of the course which a student (commencing at the University, say, in October, 1880) may follow:—He enters at any one of the colleges, or as a non-collegiate student, and passes the Previous Examination (in Classics and Mathematics), in October, 1880, or in April, 1881, unless he has already passed the equivalent examination under the Oxford and Cambridge Schools Examination Board. He is then registered as a student of medicine. Medical study in the University for two years. Natural Sciences Tripos examination (in Human and Comparative Anatomy, Chemistry, and Botany), in June, 1883; this admits to B.A. degree in June, 1883. Second examination for M.B. (in Human Anatomy and Physiology, and *Materia Medica*), December, 1883, or May, 1884. Third examination for M.B. (in Medicine, Surgery, Midwifery, and Medical Jurisprudence), November, 1885; Examination for M.C. (in Surgical Anatomy, Pathology, and Surgery), November, 1885. Degree of M.B. or M.C., November, 1884. Part of the period of medical study is thus spent in Cambridge, and part (say after the second examination) in London or elsewhere.

Attendance at the hospital and on the lectures on Anatomy, Chemistry, &c., is recognised by the Universities of Cambridge and London, and by the College of Surgeons.

The students should remain in Cambridge during part of the long vacation (July and August) and part of the Christmas vacation, as well as during the terms.

UNIVERSITY OF LONDON.

The *Matriculation Examinations* take place on January 14th, and June 21st, 1881. The fee for the examination is £2. Provincial examinations are appointed by the Senate from time to time at specified centres. Several scholarships, exhibitions, and prizes are associated with these examinations.

The *Preliminary Scientific (M.B.) Examination* takes place once in each year, and commences on the third Monday in July.⁵ No candidate will be admitted to this examination until he shall have completed his seventeenth year, and shall have either passed the Matriculation Examination or taken a degree in Arts in one of the Universities of Sydney, Melbourne, Calcutta, or Madras (provided that Latin was one of the subjects in which he passed); nor unless he have given notice of his intention to the registrar at least fourteen days before the commencement of the examination. Fee for this examination £5.

Candidates are examined on the following subjects:—Inorganic Chemistry, Experimental Physics, Botany, and Vegetable Physiology, and Zoology. The examiners will publish a list of the candidates who have passed, arranged in two divisions, each in alphabetical order. And a pass certificate signed by the registrar will be delivered to each candidate who shall apply for it, after the report of the examiners shall have been approved by the Senate.

Any candidate who has passed the Preliminary Scientific (M.B.) Examination may be examined at the Honours Examination next following the Preliminary Scientific Examination at which he has passed for honours in (1) Experimental Physics, (2) Chemistry, (3) Botany, (4) Zoology, unless he have previously obtained an exhibition in any one of these subjects at the First B.Sc. Examination, in which case he shall not be admissible to the examination for honours in that subject.

Bachelor of Medicine.—Every candidate for the degree of Bachelor of Medicine will be required—1. To have passed the Matriculation Examination in this University (unless he has taken a degree in Arts in one of the Universities of Sydney, Melbourne, Calcutta, or Madras, and Latin was one of the subjects in which he passed). 2. To have passed the Preliminary Scientific Examination. 3. To have been engaged in

⁴ For an account of these Scholarships see THE LANCET of April 12th, 1882; and for an account of the Scholarships for Natural Sciences see *Nature* in the early part of each year. Further information may be obtained from the *Student's Handbook to the University*, published by Messrs. Deighton, Cambridge, price 1s. 6d.

⁵ Candidates for the Degree of M.B. are strongly recommended by the Senate to pass the Preliminary Scientific Examination before commencing their regular medical studies, and to devote a preliminary year to preparation for it according to the following programme:—Winter Session: Experimental Physics, Chemistry (especially Inorganic), Zoology. Summer Session: Practical Chemistry (Inorganic), Botany.

his professional studies during four years subsequently to matriculation or graduation in Arts at one or more of the medical institutions or schools recognised by this University, one year at least of the four to have been spent in one or more of the recognised institutions or schools in the United Kingdom. 4. To pass two examinations in Medicine.

First M.B. Examination.—The First M.B. Examination takes place once in each year, and commences on the last Monday in July. No candidate shall be admitted to this examination unless he have passed the Preliminary Scientific Examination at least one year previously, and have produced certificates to the following effect:—1. Of having completed his nineteenth year. 2. Of having, subsequently to having passed the Matriculation Examination, or taken a degree in Arts in one of the before-named universities, been a student during two years at one or more of the medical institutions or schools recognised by this University, and of having attended a course of lectures on each of three of the subjects in the following list:—Descriptive and Surgical Anatomy, Histology and Physiology, Pathological Anatomy, Materia Medica and Pharmacy, General Pathology, General Therapeutics, Forensic Medicine, Hygiene, Obstetric Medicine and Diseases peculiar to Women and Infants, Surgery, Medicine. 3. Of having, subsequently to having passed the Matriculation Examination, or taken a degree in Arts, Dissected during two winter sessions. 4. Of having, subsequently to having passed the Matriculation Examination or taken a degree in Arts, attended a course of Practical Chemistry, comprehending practical exercises in conducting the more important processes of General and Pharmaceutical Chemistry; in applying tests for discovering the adulteration of articles of the Materia Medica, and the presence and nature of poisons; and in the examination of mineral waters, animal secretions, urinary deposits, calculi, &c. 5. Of having attended to Practical Pharmacy, and of having acquired a practical knowledge of the preparation of medicines. These certificates (as is the case also with all the certificates hereinafter mentioned) must be transmitted to the registrar at least fourteen days before the commencement of examination. Fee for this examination, £5.

Candidates will be examined in the following subjects: Anatomy, Histology and Physiology, Materia Medica and Pharmaceutical Chemistry, Organic Chemistry. Candidates will not be approved by the examiners unless they have shown a competent knowledge in all these subjects.

Any candidate who has passed the First M.B. Examination may be examined, at the Honours Examination next following the First M.B. Examination at which he passed, for Honours in (1) Anatomy, (2) Materia Medica and Pharmaceutical Chemistry, (3) Physiology and Histology, and (4) Organic Chemistry. The examinations take place in the week following that in which the Pass Examination commenced. They are conducted by means of printed papers and practical work.

If, in the opinion of the examiners, sufficient merit be evinced, the candidate who shall distinguish himself the most in Anatomy, and the candidate who shall distinguish himself the most in Histology and Physiology, will each receive an exhibition of £40 per annum for the next two years; the candidate who shall distinguish himself the most in Organic Chemistry, and the candidate who shall distinguish himself the most in Materia Medica and Pharmaceutical Chemistry, will each receive an exhibition of £30 per annum for the next two years. On receiving each quarterly instalment he must declare his intention of presenting himself at the Second M.B. Examination within three academical years from the time of his passing the First M.B. Examination. Under the same circumstances, the first and second candidates in Anatomy and in Histology and Physiology, and the first candidate in Organic Chemistry and in Materia Medica and Pharmaceutical Chemistry, will each receive a gold medal of the value of £5.

*Second M.B. Examination.*⁶—The Second M.B. Examination takes place once in each year, and commences on the first Monday in November. Each candidate, after two academical years passing the First Examination, must produce certificates to the following effect:—1. Of having

passed the First M.B. Examination. 2. Of having, subsequently to having passed the First M.B. Examination, attended a course of lectures on each of two of the subjects enumerated in section 2 of the regulations for that examination, and for which the candidate had not on that occasion presented certificates. 3. Of having conducted at least twenty labours. Certificates on this subject will be received from any legally qualified practitioner in medicine. 4. Of having attended the Surgical Practice of a recognised hospital or hospitals during two years, with clinical instruction and lectures on Clinical Surgery. 5. Of having attended the Medical Practice of a recognised hospital or hospitals during two years, with clinical instruction and lectures on Clinical Medicine. 6. Of having, after having attended Surgical and Medical Hospital Practice for at least twelve months subsequently to passing the First M.B. Examination, attended to Practical Medicine, Surgery, or Obstetric Medicine, with special charge of patients, in a hospital, infirmary, dispensary, or parochial union, during six months, such attendance not to be counted as part of either the Surgical or the Medical Hospital Practice prescribed in Clauses 4 and 5. 7. Of having acquired proficiency in Vaccination. Certificates on this subject will be received only from the authorised vaccinators appointed by the Privy Council. The candidate must also produce a certificate of moral character from a teacher in the last school or institution at which he has studied, as far as the teacher's opportunity of knowledge has extended. The fee for this examination is £5.

Candidates will be examined in the following subjects:—General Pathology, General Therapeutics and Hygiene, Surgery, Medicine, Obstetric Medicine, Forensic Medicine. The examinations will include questions in Surgical and Medical Anatomy, Pathological Anatomy, and Pathological Chemistry. Candidates will not be approved by the examiners unless they have shown a competent knowledge in all the subjects of examination.

Any candidate who has passed the Second M.B. Examination may be examined at the Honours Examination next following the Second M.B. Examination at which he has passed, for Honours in (1) Medicine, (2) Obstetric Medicine, and (3) Forensic Medicine. The examinations commence in the week following that in which the Pass Examination terminated. Except in the case of Forensic Medicine they are conducted by means of printed papers, but the examiners will not be precluded from putting *viva voce* questions upon the written answers of the candidates when they appear to require explanation.

If, in the opinion of the examiners, sufficient merit be evinced, the candidate who shall distinguish himself the most in Medicine will receive £50 per annum for the next two years, with the style of University Scholar in Medicine. Under the same circumstances the candidate who shall distinguish himself the most in Obstetric Medicine will receive £30 per annum for the next two years, with the style of University Scholar in Obstetric Medicine. Under the same circumstances, the candidate who shall distinguish himself the most in Forensic Medicine will receive £30 per annum for the next two years, with the style of University Scholar in Forensic Medicine. Under the same circumstances the first and second candidates in each of the preceding subjects will each receive a gold medal of the value of £5.

Bachelor of Surgery.—The examination for the degree of Bachelor of Surgery takes place once in each year, and commences on the Tuesday following the fourth Monday in November. Candidates must produce certificates to the following effect:—1. Of having passed the Second Examination for the degree of Bachelor of Medicine in this University. 2. Of having attended a course of instruction in Operative Surgery, and of having operated on the dead subject. Fee for this examination, £5.

Any candidate who has passed the B.S. Examination may be examined at the Honours Examination next following the B.S. Examination at which he has passed, for Honours in Surgery. The examination takes place on Tuesday in the week following the Pass Examination, and is conducted by means of printed papers. If in the opinion of the examiners sufficient merit be evinced, the candidate who shall distinguish himself the most will receive £50 per annum for the next two years, with the style of University Scholar in Surgery. Under the same circumstances, the first and second candidates will each receive a gold medal of the value of £5.

Master in Surgery.—The examination for the degree of

⁶ Any candidate for the Second M.B. Examination who has passed the First M.B. Examination under the former regulations, will be required to have also passed the examination in Physiology at some previous First M.B. Examination carried on under the present regulations, at which examination he shall not be allowed to compete for Honours.

Master in Surgery takes place once in each year, and commences on the fourth Monday in November.

Candidates must produce certificates to the following effect:—1. Of having taken the degree of Bachelor of Surgery in this University. (Candidates who have obtained the degree of Bachelor of Medicine previously to 1866 will be admitted to the examination for the degree of Master in Surgery without having taken the degree of Bachelor of Surgery; and in the case of such candidates the attendance on surgical practice required by regulation 2 may commence from the date of the M.B. degree.) 2. Of having attended, subsequently to having taken the degree of Bachelor of Surgery in this University. (a) To Clinical or Practical Surgery during two years in a hospital or medical institution recognised by this University. (b) Or to Clinical or Practical Surgery during one year in a hospital or medical institution recognised by this University, and of having been engaged during three years in the practice of his profession. (c) Or of having been engaged during five years in the practice of his profession, either before or after taking the degree of Bachelor of Surgery in this University. One year of attendance on Clinical or Practical Surgery, or two years of practice, will be dispensed with in the case of those candidates who at the B.S. Examination have been placed in the first division. 3. Of moral character, signed by two persons of respectability. Fee for this degree, £5. The examination is conducted by means of printed papers and *viva voce* interrogation.

Candidates will be examined in Logic and Psychology, and Surgery, and will not be approved unless they have shown a competent knowledge in both the subjects of examination.

If sufficient merit be evinced, the candidate who shall distinguish himself the most in Surgery at this examination will receive a gold medal of the value of £20.

Doctor of Medicine.—The examination for this degree takes place once in each year, and commences on the fourth Monday in November.

Candidates must produce certificates to the following effect:—1. Of having passed the Second Examination for the degree of Bachelor of Medicine in this University. 2. Of having attended, subsequently to having taken the degree of Bachelor of Medicine in this University, (a) to Clinical or Practical Medicine during two years in a hospital or medical institution recognised by this University; or (b) to Clinical or Practical Medicine during one year in a hospital or medical institution recognised by this University, and of having been engaged during three years in the practice of his profession. (c) Or of having been engaged during five years in the practice of his profession, either before or after taking the degree of Bachelor of Medicine in this University. One year of attendance on Clinical or Practical Medicine or two years of practice will be dispensed with in the case of those candidates who at the Second M.B. Examination have been placed in the first division. 3. Of moral character, signed by two persons of respectability. The fee for this degree is £5. The examination is conducted by means of printed papers and *viva voce* interrogation.

Candidates will be examined in Logic and Psychology, and Medicine, and will not be approved unless they have shown a competent knowledge in both the subjects of examination. If sufficient merit be evinced, the candidate who shall distinguish himself the most in Medicine at the examination for the M.D. degree will receive a gold medal of the value of £20.

Public Health.—A Special Examination will be held once in every year in subjects relating to Public Health, to commence on the Second Monday in December. Candidates must have passed the Second Examination for the B.M. degree in this University at least one year previously; and must give notice of their intention to the Registrar at least *two calendar months* before the commencement of the examination. The fee for this examination is £5. Candidates will be examined in Chemistry and Microscopy, Meteorology, Geology, Physics and Sanitary Apparatus, Vital Statistics, Hygiene, and Sanitary Law. The examination will be both written and practical, and will extend over four days. Candidates will not be approved unless they have shown a competent knowledge in all the principal subjects of the examination. If sufficient merit be evinced, the candidate who shall distinguish himself the most shall receive a gold medal of the value of £5.

A certificate under the seal of the University, and signed by the Chancellor, will be delivered at the public presentation for degrees to each candidate who has passed.

UNIVERSITY OF DURHAM.

There are two licences and three degrees conferred—viz., a licence in Medicine and a licence in Surgery; and the degrees of Bachelor of Medicine, Master in Surgery, and Doctor of Medicine. A certificate of proficiency in Sanitary Science is also awarded.

For the degree of *Bachelor in Medicine* there are two professional examinations; the first being held twice yearly—viz., in October (in 1880 commencing on the 4th) and April (in 1881 commencing on the 25th); the second twice yearly—viz., in December (in 1880 commencing on the 6th) and in June (in 1881 commencing on the 13th).

The subjects for the first examination are—Anatomy, Physiology, Chemistry, and Botany. Candidates must produce the following certificates:—(1) Of registration as a medical student. (2) Of having passed one of the following examinations in Arts: (a) the examination for graduation in Arts at one of the following universities—Oxford, Cambridge, Durham, Dublin, London, Queen's (Ireland), Edinburgh, Glasgow, St. Andrews, Aberdeen, Calcutta, Madras, Bombay, McGill College (Montreal), and Queen's College (Kingston); or (b) the Preliminary or Extra-professional examination for graduation in Medicine at one of the following universities—London, Edinburgh, Glasgow, St. Andrews, Aberdeen, and Queen's (Ireland); or (c) the Preliminary Examination in Arts qualifying for the membership of the Royal College of Physicians of London or for the fellowship of the Royal College of Surgeons of England. Candidates who, at the commencement of their professional education, passed the Arts examination for registration only, may pass in the extra subjects required for the M.B. Durham either before or after presenting themselves for the first examination for the degree, but must do so before presenting themselves for the final examination. (3) Of attendance on two courses of Anatomy, on one of Physiology, on one of Theoretical and one of Practical Chemistry, and on one of Botany; of twelve months' dissection; and of attendance on a course of Practical Physiology of not less than thirty lessons.

The subjects for the Second Examination are Medicine, Surgery, and Public Health, Pathology, Materia Medica, Therapeutics, Midwifery and Diseases of Women and Children, and Medical Jurisprudence. For it candidates must produce the following certificates—viz., (1) of being not less than twenty-one years of age; (2) of good moral character; and (3) of attendance on the remainder of the course of medical and surgical study as prescribed by the Royal College of Surgeons of England, together with the following additional subjects—viz., one course of lectures on Medicine, one on Therapeutics, one on Public Health, and one on Botany and on Medical Hospital Practice, with Clinical Lectures during one winter and one summer session. There must be proof that the whole course of professional study has occupied at least four years.

N.B.—It is required that one of the four years of professional education shall be spent in attendance at the College of Medicine, Newcastle-upon-Tyne. During the year so spent the candidate must attend at least two courses of lectures in the winter session and two in the summer session, together with the class and test examinations held in connexion with those classes, and must also attend hospital practice and clinical lectures at the infirmary during the same period. Candidates may fulfil this portion of the curriculum at any period before they present themselves for the Final Examination for the degree, but are strongly recommended to do so previously to the First Examination. They are not required to reside at Durham. The other three years of the curriculum may be spent either at Newcastle-upon-Tyne or at one or more of the schools recognised by the licensing bodies named in Schedule A of the Medical Act, 1858. Candidates who are already qualified by other of the licensing bodies are required to attend for one winter and one summer session at the College of Medicine, Newcastle-upon-Tyne, in the manner indicated in the preceding paragraph.

For the degree of *Master in Surgery* the candidate must have passed the Examination for the Degree of Bachelor in Medicine and must have attended one course of lectures on Operative Surgery. Each candidate will have an additional

paper on Surgery, and will have to perform operations on the dead body and to explain the use of instruments.

For the degree of *Doctor of Medicine* candidates must be not less than twenty-four years of age, must have obtained the degree of M.B. at least two years previously, and in the interim have been engaged in medical or surgical practice. Each candidate will be required to write an essay on some medical subject selected by himself and approved by the Professor of Medicine, and to pass an examination thereon, and must be prepared to answer questions on the other subjects of his curriculum in so far as they are related to the subject of his essay.

Candidates for any of the above degrees must give at least twenty-eight days' notice to the Registrar of the College, sending at the same time the fee and the necessary certificates.

The Degree of Doctor of Medicine, for Medical Practitioners of fifteen years' standing, without residence.—The Warden and Senate of the University of Durham, with the view of affording to practitioners of fifteen years' standing an opportunity of obtaining the degree of Doctor of Medicine, have instituted a Special Examination, under the following regulations:—1. That the candidate shall be registered by the General Council of Medical Education and Registration of the United Kingdom. 2. That the candidate shall have been in the active practice of his profession for fifteen years as a qualified practitioner. 3. That the candidate shall not be under forty years of age. 4. That the candidate shall produce a certificate of moral character from three registered members of the medical profession. 5. That if the candidate shall not have passed, previous to his Professional Examination (in virtue of which he has been placed on the Register), an examination in Arts, he shall be required to pass an examination in Classics and Mathematics. The subjects for this examination shall be as follows: (1) An English Essay (a short essay on some subject to be specified at the time of the examination). (2) Arithmetic. (3) Euclid—books i. and ii. (4) Latin—Translation from Virgil, *Æneid*, books i. and ii., together with grammatical questions. (5) One of the following subjects: *a*, Greek—Translation from Xenophon's *Memorabilia*, books i. and ii., with grammatical questions; *b*, French—Translation from Voltaire's *Charles XII.*, with grammatical questions; *c*, German—Translation from Goethe's *Dichtung und Wahrheit*, book i., with grammatical questions; *d*, Elements of Mechanics, Pneumatics, and Hydrostatics; *e*, some Treatise on Moral, Political, or Metaphysical Philosophy. 6. That if the candidate shall have passed, previous to his Professional Examination (in virtue of which he has been placed on the Register), a preliminary examination, he shall be required to translate into English passages in any of the parts specified below of any one of the Latin authors mentioned: *Cæsar*—*De Bello Gallico*, first three books; *Virgil*—first three books of the *Æneid*; *Celsus*—first three books. (The candidate may choose for himself any one of these three authors on whose works he is to be examined.) The candidate shall have an opportunity of showing proficiency in Greek, Moral Philosophy, or some modern language. 7. That the candidate shall pass an examination in the following subjects: *a*, Principles and Practice of Medicine, including Psychological Medicine, and Hygiene; *b*, Principles and Practice of Surgery; *c*, Midwifery and Diseases peculiar to Women and Children; *d*, Pathology, Medical and Surgical; *e*, Anatomy, Medical and Surgical; *f*, Medical Jurisprudence and Toxicology; *g*, Therapeutics. 8. That the fee shall be 50 guineas. 9. That if the candidate shall fail to satisfy the examiners, the sum of 20 guineas shall be retained; but that, if he shall again offer himself for the examination, the sum of 40 guineas only shall then be required.

Examinations in accordance with the above regulations will commence on Dec. 6th, 1880, and June 13th, 1881, in the College of Medicine, Newcastle-on-Tyne. Gentlemen intending to offer themselves as candidates are requested to forward their names to Dr. Luke Armstrong, registrar of the University of Durham College of Medicine, Newcastle-on-Tyne, on or before Nov. 1st, 1880, or May 1st, 1881, together with the fee and the before-mentioned certificates.

Certificate of Proficiency in Sanitary Science.—Candidates for this certificate must be registered medical practitioners and have attended one course of lectures on Public Health, at the College of Medicine, Newcastle-on-Tyne, extending over one winter session. They shall be required to pass an examination on the following subjects:—Physics: Laws of light, heat, hydro-dynamics, and pneumatics. Chemistry:

As applied to the detection of noxious gases, and atmospheric impurities, analysis of air and water. Sanitary Legislation: Knowledge of the Acts of Parliament in force for the preservation and protection of health. Vital Statistics: Rates of births, deaths, and marriages; methods of calculation, classification, and tabulation, of returns of sickness and mortality; data and conclusions deducible therefrom. Meteorology; Climatology, and Geographical Distribution of Diseases in the United Kingdom. Sanitary Medicine, more especially in relation to epidemic, endemic, epizootic, and communicable diseases; diseases attributable to heat, cold, or damp; insufficiency or impurity of air, food, or drink; habitation, occupation, over-exertion, intemperance, heredity. Preventive Measures: Vaccination, isolation, disinfection; the regulation of noxious and offensive manufactures and trades; the removal of nuisances. Practical Hygiene, in reference to site, materials, construction, lighting, ventilation, warmth, dryness, water-supply, and refuse disposal of dwellings, schools, hospitals, and other buildings of public and private resort; action with respect to nuisances and outbreaks of disease; other duties of a Medical Officer of Health.—The examination will be by written papers, practical and *viva voce*, and will commence on October 4th, 1880, and on April 25th, 1881. In the practical examination, the candidate will be required:—To report upon the condition of some actual locality, to analyse liquids and gases, to explain the construction and use of instruments employed in meteorology, and to make microscopic examinations. The fee is £5 5s.

Candidates for the Certificate of Proficiency in Sanitary Science, who shall have been Medical Officers of Health of five years' standing, and members of the profession who have obtained a registrable qualification before January 1st, 1878, must be registered medical practitioners, and be not under thirty years of age. They will be required to pass the same examination as before mentioned, write an essay upon some practical sanitary subject, and will be examined upon the essay, and upon other sanitary questions. The fee is £10 10s. During the ensuing year two examinations will be held, commencing the one on October 4th, 1880, the other on April 25th, 1881.

UNIVERSITY OF EDINBURGH.

The session 1880–81 will be opened on October 26th.

Three medical degrees are conferred by the University of Edinburgh—namely, Bachelor of Medicine (M.B.), Master in Surgery (C.M.), and Doctor of Medicine (M.D.). The degree of Master in Surgery is not conferred on any person who does not also at the same time obtain the degree of Bachelor of Medicine. All candidates for these degrees must give evidence of having obtained a satisfactory general education.

1. The preliminary branches of extra-professional education are English, Latin, Arithmetic, the Elements of Mathematics, and the Elements of Mechanics; and the proficiency of students in these branches is ascertained by examination prior to the commencement of their medical study.

2. No candidate is admitted to a professional examination who has not passed a satisfactory examination on at least two of the following subjects (in addition to the subjects mentioned above):—Greek, French, German, Higher Mathematics, Natural Philosophy, Logic, Moral Philosophy; and the examination on these latter subjects also takes place before the candidate has entered on his medical curriculum.

3. A degree in Arts (not being an honorary degree) in any one of the universities of England, Scotland, or Ireland, or in any foreign or colonial university specially recognised for this purpose by the University Court, exempts from all preliminary examination; and an examination in Arts by any corporate body, whose examination has been recognised as qualifying for entrance on medical study by resolution of the General Medical Council of the United Kingdom, provided the said examination by the said corporate body shall also be approved by the University Court, shall exempt *pro tanto* from preliminary examination in Arts, on the subjects comprised in the examination of the said corporate body.

4. No one is admitted to the degree of Bachelor of Medicine or Master in Surgery who has not been engaged in medical and surgical study for four years—the medical session of each year, or *annus medicus*, being constituted by at least two courses of not less than one hundred lectures each, or by one such course and two courses of not less than fifty lectures each; with the exception of the clinical courses,

in which lectures are to be given at least twice a week during the prescribed periods.

5. Every candidate for the degrees of M.B. and C.M. must give sufficient evidence by certificates—1. That he has studied each of the following departments of medical science—namely, Anatomy, Chemistry, Materia Medica, Institutes of Medicine or Physiology, Practice of Medicine, Surgery, Midwifery and the Diseases peculiar to Women and Children, and General Pathology, each during courses including not less than one hundred lectures; Practical Anatomy, a course of the same duration as those of not less than one hundred lectures; Practical Chemistry, three months; Practical Midwifery, three months at a midwifery hospital, or a certificate of attendance on six cases from a registered medical practitioner; Clinical Medicine, Clinical Surgery,⁷ courses of the same duration as those of not less than one hundred lectures, or two courses of three months' lectures, being given at least twice a week; Medical Jurisprudence, Botany, Natural History (including Zoology), during courses including not less than fifty lectures. 2. That he has attended, for at least two years, the medical and surgical practice of a general hospital which accommodates not fewer than eighty patients, and possesses a distinct staff of physicians and surgeons. 3. That he has been engaged, for at least three months, by apprenticeship or otherwise, in compounding and dispensing drugs at the laboratory of a hospital, dispensary, member of a surgical college or faculty. Licentiate of the London or Dublin Society of Apothecaries, or member of the Pharmaceutical Society of Great Britain. 4. That he has attended, for at least six months, by apprenticeship or otherwise, the out-practice of a hospital, or the practice of a dispensary, physician, surgeon, or member of the London or Dublin Society of Apothecaries.

6. Students of Medicine in the London schools, and in the school of the College of Surgeons in Dublin, can obtain three *anni medici* out of the four required for the Edinburgh degrees in Medicine. One *annus medicus* may be constituted by attendance on Practical Anatomy and Hospital Practice during the winter session. Another *annus medicus* by attending either (a) full winter courses on any two of the following subjects:—Anatomy, Physiology, Chemistry, Pathology, Surgery, Medicine, Clinical Surgery, Clinical Medicine; or (b) on one such course and three months' courses on any two of the following subjects:—Botany, Practical Chemistry, Natural History, Medical Jurisprudence. If the student selects the arrangement prescribed in (a), certificates of attendance on either a third winter course, or a third three months' course, will also be accepted by this University. The other subjects, and the additional courses, not given in London or Dublin, required for the degrees of the University, will have to be attended at this University. In provincial schools, where there are no lecturers recognised by the University Court, a candidate can only have one *annus medicus*, and this is constituted by attendance on a qualified hospital along with a course of Practical Anatomy. All candidates not students of the University; availing themselves of the permission to attend the lectures of extra-academical teachers in Edinburgh must, at the commencement of each year of such attendance, enrol their names in a book to be kept by the University for that purpose, paying a fee of the same amount as the matriculation fee paid by students of the University, and having, in respect of such payment, a right to the use of the library of the University. The fee for attendance on the lectures of an extra-academical teacher in Edinburgh, with a view to graduation, must be of the same amount as that exigible by medical professors in the University. No teacher is recognised who is at the same time a teacher of more than one of the prescribed branches of study, except in those cases where professors in the University are at liberty to teach two branches. It is not necessary for any teacher, attendance on whose lectures is now recognised for the purpose of graduation in the University, to obtain a new recognition from the University Court; and attendance on the lectures of every such teacher will continue to be recognised as heretofore. It is in the power of the University Court, if they shall see cause, at any time to withdraw or suspend the recognition of any teacher or teachers.

7. Every candidate must deliver, before the 31st day of March of the year in which he proposes to graduate, to the Dean of the Faculty of Medicine, a declaration, in his own

handwriting, that he has completed his twenty-first year, or that he will have done so on or before the day of graduation, and that he will not be, on the day of graduation, under articles of apprenticeship to any surgeon or other master; together with a statement of his studies, as well in Literature and Philosophy as in Medicine, accompanied with proper certificates.

8. Each candidate is examined, both in writing and orally, on Chemistry, Botany, and Natural History; on Anatomy, Institutes of Medicine, Materia Medica (including Practical Pharmacy), and Pathology; on Surgery, Practice of Medicine, Midwifery, and Medical Jurisprudence; clinically on Medicine and on Surgery in a hospital. The examinations on Anatomy, Chemistry, Institutes of Medicine, Botany, Natural History, Materia Medica, and Pathology are conducted, as far as possible, by demonstrations of objects placed before the candidates.

9. Students who profess themselves ready to submit to an examination on the first division of these subjects, at the end of their second year, may be admitted to examination at that time. Provided always that students who commence their medical studies in the summer session, and who profess themselves ready to submit to an examination on the first division of these subjects at the beginning of their second winter session may be admitted to examination at that time on condition that they produce certificates of attendance on at least two classes during each of two summer sessions and one winter session; and on the further condition that they shall not be admitted to a degree in Medicine unless their course of study, subsequent to the completion of the summer session in which they commence their medical studies, shall not be less than the minimum course of four years prescribed in Section 4 hereof.

10. Students who have passed their examination on the first division of these subjects may be admitted to examination on the second division at the end of their third year.

11. The examination on the third and fourth divisions cannot take place until the candidate has completed his fourth *annus medicus*.

12. Candidates may, if they choose, be admitted to examination on the first two of these divisions at the end of their third year, or to the four examinations at the end of their fourth year.

13. If any candidate at these examinations be found unqualified, he cannot be again admitted to examination unless he has studied during another year two of the prescribed subjects, either in the University or in some other school of medicine.

14. After the candidate has satisfied the medical examiners, the Dean will lay the proceedings before the Senatus Academicus, by whose authority the candidate will be admitted on the first day of August, or if that day be Sunday, then on the following day, to the degree of M.B., or to the degrees of M.B. and of C.M.

15. The degree of Doctor of Medicine may be conferred on any candidate who has obtained the degree of Bachelor of Medicine, and who is of the age of twenty-four years, and produced a certificate of having been engaged, subsequently to his having received the degree of M.B. for at least two years in attendance on a hospital, or in the military or naval medical services, or in medical and surgical practice; provided always that the degree of M.D. shall not be conferred on any person, unless he be a graduate in Arts of one of the universities of England, Scotland, or Ireland, or of such other universities as are above specified, or unless he shall, before or at the time of his obtaining the degree of M.B., or thereafter, have passed a satisfactory examination on three of the subjects mentioned in Section II. of the statutes relative to preliminary examination. Two of these must be Greek, and Logic or Moral Philosophy, and the third is to be one of the following subjects, at the option of the candidate—namely, French, German, higher Mathematics, and Natural Philosophy, and provided also that the candidate for the degree of M.D. shall submit to the Medical Faculty a thesis, certified by him to have been composed by himself, and which shall be approved by the Faculty on any branch of knowledge comprised in the professional examinations for the degree of M.B., which he may have made a subject of study after having received that degree. The candidate must lodge his thesis with the Dean on or before 30th April of the year in which he proposes to graduate. No thesis will be approved by the Medical Faculty which does not contain either the results of original observations

⁷ The Medical Faculty recommend that medical students should not attend Clinical Surgery during their first six months' attendance on Clinical Medicine.

in practical medicine, surgery, midwifery, or in some of the sciences embraced in the curriculum for the Bachelor's degree; or else a full digest and critical exposition of the opinions and researches of others on the subject selected by the candidate, accompanied by precise references to the publications quoted, so that due verification may be facilitated.

16. Persons who began their medical studies before the 4th of February, 1861, are entitled to graduate under the system in force before or after that date, according as they may comply with the regulations in force in the University before or after that date.

The Preliminary Examinations in General Education are held in the Upper Library Hall, and students matriculated for the academic year are admitted on presenting their matriculation tickets at the door. Students matriculated for the summer only and non-matriculated students pay a fee of 10s. each, and are admitted on showing their receipts. Those who pay the fee in March will be admitted to the examination in October without further payment. Payment in October does not exempt from payment in March. The academic year is reckoned from 1st of November to 1st of November. Examinations on the preliminary branches of extra-professional education will take place on the 5th, 6th, 7th, and 8th October, 1880; and on the 15th, 16th, 17th, and 18th March, 1881.

The fees for M.B. £15 15s. Total fees and stamp for graduating as M.D. only, by regulations for students commencing before February, 1861, £25. The fees for examination must be paid at the secretary's office ten days before the dates thereof, and the fees for the degrees of C.M. and M.D., and the stamp-duty for the latter, must be paid on or before the 15th day of July in the year of graduation. In the event of the candidate not passing any one of the professional examinations, the fee is not returned; but he may appear at one subsequent examination without paying an extra fee, and at any future examination on paying one-half the fee.

The new buildings for the accommodation of the classes in the Medical Faculty of the University have made such progress during the past twelve months that the portion intended for the department of Anatomy will be ready for occupation at the commencement of the ensuing winter session. The departments of Pathology, Physiology, Practice of Physic, Midwifery, and Chemistry are nearly completed, and the remaining portions are in a forward state of preparation.

UNIVERSITY OF GLASGOW.

Three degrees in Medicine are granted—viz., Bachelor of Medicine, Master in Surgery, and Doctor of Medicine. The curricula of study and the examinations for the several degrees conferred are nearly the same as in the University of Edinburgh. The annual term for conferring medical and surgical degrees is the 1st of August. The Preliminary Examinations of medical students in branches of general education take place on the 6th of October, 1880, and on the 31st of March, 1881.

The fees for the degrees are the same as in the University of Edinburgh.

The regulations under which the above degrees are granted and the notices of the subjects of examination may be obtained by application to the assistant clerk of Senate of the University.

Bursaries tenable by Medical Students.—Two James Ferguson Bursaries, value £70 per annum each, tenable for two years by medical students who have attended certain prescribed courses in the Arts Faculty. The Brisbane Bursary, of £50 yearly, held for four years by a student of medicine who is a Master of Arts. The Walton Bursary, of £36 yearly, held by a medical student (a native of England being preferred) for four years. The Logan Bursary, of £16 yearly, tenable by a medical student for four years. Two Rainy Bursaries, value £20 per annum each, open to medical students who have just completed the second year of professional study, and tenable for two years. The Armagh Bursaries, three in number, amounting each to £25 yearly, for three years, open to students of Divinity, Law, and Medicine, who have taken the degree of M.A. The Macfarlane Bursary, value £40 per annum, and tenable for three years, open to students who have attended the first session of their professional study in the University of Glasgow, and who have passed in all the seven subjects of the Preliminary Examination for M.B. The Marshall Bursary,

value £17 per annum, and tenable for four years, open to students entering the Medical Faculty, and awarded by competition on the subjects of the Preliminary Examination. The Lorimer Bursary, value £50 per annum, tenable by a medical student for three years.

UNIVERSITY OF ABERDEEN.

The curricula for the several degrees conferred are nearly the same as in the University of Edinburgh.

Professional Examinations will be held twice in each year—namely, in April and July, directly after the close of the winter and summer sessions.

The fees for graduation are the same as in the University of Edinburgh. Matriculation fee, including all dues, for the winter and summer sessions, £1; summer session alone, 10s.

Candidates who commenced their medical studies before November, 1861, are entitled to appear for examination for the degree of M.D. after four years' study, one of which must have been in the University of Aberdeen.

Besides the Royal Infirmary, students who have the opportunity of attending the following institutions:—General Dispensary, and Lying-in and Vaccine Institutions, daily; Royal Lunatic Asylum; Eye Institution, in which is given clinical instruction on the Diseases of the Eye, and on the Application of the Ophthalmoscope for their diagnosis.

Application for further information should be addressed to Professor Brazier, Secretary to the Medical Faculty.

UNIVERSITY OF ST. ANDREWS.

Three degrees in Medicine are granted—namely, Bachelor of Medicine (M.B.), Master in Surgery (C.M.), and Doctor of Medicine (M.D.). The curricula for these degrees, and the regulations under which they are conferred, differ from those of the University of Edinburgh only in the particulars noticed below.

The degree of *Doctor of Medicine* may be conferred by the University of St. Andrews on any registered medical practitioner above the age of forty years whose professional position and experience are such as, in the estimation of the University, to entitle him to that degree, and who shall, on examination, satisfy the medical examiners of the sufficiency of his professional knowledge; provided always that degrees will not be conferred, under this section, to a greater number than ten in any one year. The examinations are held yearly, towards the end of April. Candidates must lodge with the Dean of the Medical Faculty the following certificates, along with application for admission to examination:—1. A certificate of age, being a baptismal certificate or an affidavit of age. 2. Holograph certificates from at least three medical men of acknowledged reputation in the medical profession or in the medical schools, recommending the candidate to the Senatus for the degree, and testifying to his professional skill and position. As only ten can graduate yearly, candidates will be selected whose service and certificates seem to the Medical Faculty to present the highest professional claims, and where these seem equal preference will be given to age and priority of application. 3. Candidates, when notified for examination, shall remit a portion of the graduation fee (viz., £10 10s.) This sum shall be forfeited should the candidate fail to appear, or to graduate, at the time appointed. 4. A satisfactory examination, written and *visd voce*, must be passed in the following departments—viz., *Materia Medica* and *General Therapeutics*, *Medical Jurisprudence*, *Practice of Medicine* and *Pathology*, *Surgery*, *Midwifery* and *Diseases of Women and Children*.

No one will be received as a candidate for the degree of *Bachelor of Medicine* or *Master in Surgery* unless two years at least of his four years of medical and surgical study shall have been in one or more of the following universities or colleges—viz., the Universities of St. Andrews, Glasgow, Aberdeen, Edinburgh, Oxford, and Cambridge; Trinity College, Dublin; Queen's College, Belfast; Queen's College, Cork; and Queen's College, Galway.

Subject always to the condition here specified, the studies for candidates for the degrees of Bachelor of Medicine and Master in Surgery will be under the following regulations: The remaining years of medical and surgical study may be either in one or more of the universities and colleges above specified, or in the hospital schools of London, or in the school of the College of Surgeons of Dublin, or under such private teachers of medicine as may from time to time receive recognition from the University Court. Attendance

during at least six winter months on the medical or surgical practice of a general hospital which accommodates at least eighty patients, and during the same period on a course of Practical Anatomy may be reckoned as one of such remaining years. Attendance on the lectures of any private teacher in Edinburgh, Glasgow, or Aberdeen will not be reckoned for graduation in St. Andrews, if the fee for such lectures be of less amount than is charged for the like course of lectures in the University of Edinburgh, of Glasgow, or of Aberdeen, according as the teacher lectures in those places respectively.

Every candidate for examination for the degrees of M.B. and C.M. is required to lodge a declaration of age, a statement of his course of study, his inaugural dissertation, and all his certificates, with the Dean of the Medical Faculty, on or before the 25th of March in each year.

No candidate offering himself for examination on the first two divisions of the subjects specified in Clause 12 of the regulations will be considered to have passed in the second if he fails in the first; and no candidate offering himself for examination on the three divisions shall be considered to have passed in the third if he fails either in the first or second division. Every candidate who fails to pass in any of the divisions will, for a first failure in any and each of the divisions, forfeit the sum of £2 2s., and £1 1s. for every subsequent failure in each.

UNIVERSITY OF DUBLIN (TRINITY COLLEGE).

Matriculation.—All students in the School of Physic intending to practise Physic must be matriculated, for which a fee of 5s. is payable. No student can be admitted for the winter course after Nov. 25th.

Previous Medical Examination.—Candidates for degrees and licences in Medicine and Surgery are required to pass a previous examination in Physics, Chemistry, Botany, Materia Medica and Pharmacy, and Descriptive Anatomy, and Institutes of Medicine (Practical Histology and Physiology) previous to their degree examination.

Bachelor in Medicine.—A candidate for this degree must be a graduate in Arts, and may obtain the degree of Bachelor in Medicine at the same commencement as that at which he receives his degree of B.A., or at any subsequent commencement. The medical education of a Bachelor in Medicine is of four years' duration, and comprises attendance on a single course of each of the following lectures:—Anatomy, Practical Anatomy, Surgery, Chemistry, Materia Medica and Pharmacy, Institutes of Medicine, Practice of Medicine, Midwifery, Botany, Medical Jurisprudence, Heat, Electricity, Magnetism, Comparative Anatomy. Three courses of nine months' attendance on the clinical lectures of Sir Patrick Dun's or other metropolitan hospital recognised by the Board of Trinity College. Six months' instruction in Practical Midwifery, including Clinical Lectures. A certificate of personal attendance on Fever cases, with names and dates of cases. Six months' dissections are required. Three months' laboratory instruction in Chemistry is required. Any of the above-named courses may be attended at any medical school in Dublin recognised by the Provost and senior Fellows. Fee for the *Licent ad Examinandum*, £5; for the M.B. degree £11.

Doctor in Medicine.—A Doctor in Medicine must be M.B. of at least three years' standing, or have been qualified to take the degree of M.B. for three years, and must perform exercises for the degree before the Regius Professor of Physic, in accordance with the rules and statutes of the University. Total amount of fees for this degree, £13.

Bachelor in Surgery.—A Bachelor in Surgery must be a Bachelor in Arts and in Medicine, and have spent four years in the study of Surgery and Anatomy. He must also pass a public examination in the Hall before the Professors of the School of Physic, having previously completed the prescribed curriculum of study.⁸ Candidates are required to perform surgical operations on the dead subject. Fee for the *Licent ad Examinandum*, £5; for the degree of Bachelor in Surgery, £5.

Master in Surgery.⁹—A Master in Surgery must be a Bachelor in Surgery of three years' standing, or have been qualified to take the degree of Bachelor in Surgery for three

years; and must read a thesis publicly before the Regius Professor of Surgery, or undergo an examination before the Regius Professor, according to regulations to be approved by the Provost and senior Fellows. Fee for the degree of Master in Surgery, £11.

University Licences.—Candidates for the Licences in Medicine or Surgery must be matriculated in Medicine, and must have completed two years in Arts and four years in medical studies.

Licentiate in Medicine.—The medical course and examination necessary for the Licence in Medicine are the same as for the degree of M.B. A Licentiate in Medicine, on completing his course in Arts, and proceeding to the degree of B.A., may become a Bachelor in Medicine, on paying the degree fees, without further examination in Medicine. Fee for the *Licent ad Examinandum*, £5; for the Licence in Medicine, £5.

Licentiate in Surgery.—The surgical course and examination necessary for the Licence in Surgery are the same as for the degree of Bachelor in Surgery. Fee for the *Licent ad Examinandum*, £5; for the Licence in Surgery, £5.

Medical Scholarships.—Two Medical Scholarships will be given annually, tenable for two years, with a salary of £20 per annum, on the conditions stated in the University Calendar.

Qualification in State Medicine.—Doctors in Medicine or graduates in Medicine and Surgery of Dublin, Oxford, or Cambridge, who wish to obtain from the University a Certificate of Qualification in State Medicine, can do so on passing an examination in a limited course of the following subjects:—1. Law, comprehending sanitary legislation, and the laws relating to the conduct and duties of medical men. 2. Engineering in its sanitary aspects. 3. Pathology, including the laws of epidemics, vaccination, insanity, &c. 4. Vital and sanitary statistics. 5. Chemistry in relation to air, water, gaseous poisons, deodorisation, and disinfection. 6. Meteorology. 7. Medical Jurisprudence.

The total cost of the education and first degrees in Medicine and Surgery is as follows, in addition to the fees for education in Arts and B.A. degree (£83 4s.); Medical and Surgical Lectures, £59 1s.; Hospitals, £42 2s.; Medical and Surgical Examinations and Degrees, £31.

THE QUEEN'S UNIVERSITY IN IRELAND.

Students who wish to obtain the degree of M.D., or of M.Ch., in the Queen's University must be matriculated students of one of the Queen's Colleges—Belfast, Cork, and Galway—and must pursue the courses of study prescribed by the Senate of the University.

Medical students may matriculate either at the General Matriculation Examination on October 19th, 1880, or at the Supplementary Examination held in the second or third week of November.

Each candidate for the degree of *Doctor in Medicine* or *Master in Surgery* is required (1) to have passed in one of the Colleges of the Queen's University the Entrance Examination in Arts, and to have been admitted a matriculated student of the University; (2) to have attended in one of the Queen's Colleges lectures on one modern continental language for six months, and lectures on Natural Philosophy for six months; (3) to have also attended, in some one of the Queen's Colleges, at least two of the courses of lectures marked with an asterisk. For the remainder of the courses authenticated certificates will be received from the professors or lecturers in universities, colleges, or schools recognised by the Senate of the Queen's University in Ireland; (4) to pass three University Examinations—the First University Examination, the Second University Examination, and the Degree Examination.

The curriculum extends over at least four years, and is divided into periods of at least two years each. Candidates are recommended to pass the Matriculation Examination prior to entering on the second period. It is recommended that the first period shall comprise attendance on the following courses of medical lectures: *Chemistry; *Botany, with herborisations for practical study, and Zoology; *Anatomy and Physiology; *Practical Anatomy; *Materia Medica and Pharmacy. And that the second period shall comprise attendance on the following courses of medical lectures: Anatomy and Physiology (second course); Practical Anatomy (second course); *Theory and Practice of Surgery; *Midwifery; *Theory and Practice of Medicine; *Medical Jurisprudence. In addition to the above courses of lectures candidates shall have

⁸ Students in the School of Physic who matriculated before June 22nd, 1872, may obtain the degree of Master in Surgery according to the regulations in force previous to the creation of the degree of Bachelor in Surgery.

⁹ Masters in Surgery must be of the standing of Masters of Arts.

attended, during either the first or second period: A Modern Continental Language (in one of the Colleges of the University; Experimental Physics (in one of the Colleges of the University). Also, during the first period: Practical Chemistry (in a recognised laboratory); Medico-Chirurgical Hospital (recognised by the Senate) containing at least sixty beds, together with the Clinical Lectures therein delivered, at least two each week—a winter session of six months. And during the second period: Practical Midwifery—a certificate of having attended at a recognised midwifery hospital, with the Clinical Lectures therein delivered, for a period of three months, or of having attended a midwifery dispensary for the same period, or of having attended ten cases of labour under the superintendence of the medical officer of any hospital or dispensary where cases of labour are treated; Medico-Chirurgical Hospital (recognised by the Senate) containing at least sixty beds, together with the Clinical Lectures therein delivered, eighteen months—including either three winter sessions of six months each, or two winter sessions of six months each and two summer sessions of three months each.

Medical examinations are held in June, and in September and October. The June examinations are Pass Examinations. Those held in September and October include both Honour and Pass Examinations. Each candidate for examination in June must forward to the Secretary, on or before the 20th of May, notice of his intention to offer himself as a candidate, along with his certificates; and each candidate for examination in September and October must forward similar notice, along with his certificates, before the 20th of August.

A candidate who has been rejected at the examination for the degree of M.D., will not be allowed to present himself for re-examination within six months, unless by special grace of the Senate.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

The licence of this College is a qualification to practise Medicine, Surgery, and Midwifery, and is recognised by the Poor-law Board as a qualification in Surgery as well as in Medicine.

Licentiate.—Every candidate for the College licence (except when otherwise provided by the bye-laws) is required to produce satisfactory evidence to the following effect:—Of having attained the age of twenty-one years. Of moral character. Of having passed before the commencement of professional study, an examination in the subjects of general education recognised by the General Medical Council. Of having been registered as a medical student in the manner prescribed by the General Medical Council. "Every candidate (not exempted from registration) is required to have been registered at least forty-five months previously to admission to the Final Examination." Of having been engaged in professional studies during at least forty-five months, of which at least three winter sessions and two summer sessions shall have been passed at a recognised medical school or schools, and one winter session and two summer sessions in one or other of the following ways:—

1. Attending the practice of a hospital or other institution recognised by the College for that purpose.
2. Receiving instruction as the pupil of a legally qualified practitioner having opportunities of imparting a practical knowledge of Medicine, Surgery, or Midwifery.
3. Attending lectures on any of the required subjects of professional study at a recognised place of instruction. Professional studies commenced before Registration, except in the subjects of the First Examination, will not be recognised by the College. Of having attended, during three winter sessions and two summer sessions, the medical and surgical practice at a recognised hospital or hospitals;¹⁰ of having discharged the duties of a medical clinical clerk during six months; and of surgical dresser during other months; and of having been engaged during six months in the clinical study of Diseases peculiar to Women. Of having received instruction in Chemistry, Practical Chemistry, Materia Medica, Botany, and Practical Pharmacy. Of having attended a course of lectures on the following subjects:—Anatomy (with Dissections), during twelve months; Physiology; a practical course of General Anatomy during a winter or a summer

session, consisting of not less than thirty meetings of the class; Pathological Anatomy; Principles and Practice of Medicine; Principles and Practice of Surgery; Midwifery and the Diseases peculiar to Women; Forensic Medicine. Of having attended Clinical Lectures on Medicine during nine months, and also Clinical Lectures on Surgery during nine months, and of having been engaged during a period of three months in the Clinical Study of Diseases peculiar to Women. Of having passed the professional examinations.

Any candidate who shall produce satisfactory evidence of having passed an examination on Anatomy and Physiology, conducted by a university in the United Kingdom, in India, or in a British colony, or by the College of Surgeons in England, Scotland or Ireland, or the Faculty of Physicians and Surgeons of Glasgow, shall be exempt from re-examination on those subjects. Any candidate who shall produce satisfactory evidence of having passed an examination on Chemistry and Materia Medica, required for a degree in Medicine at a university in the United Kingdom, in India, or in a British colony, will be exempted from re-examination on those subjects. Any candidate who shall have obtained a degree in Surgery at a university in the United Kingdom, after a course of study and an examination satisfactory to the College, shall be exempt from re-examination on Surgical Anatomy, and on the Principles and Practice of Surgery. Any candidate who shall have passed the examination on Surgery conducted by the Royal College of Surgeons of England, or the Royal College of Surgeons of Edinburgh, or the Royal College of Surgeons in Ireland, or the Faculty of Physicians and Surgeons of Glasgow, after a course of study and an examination satisfactory to the College, shall be exempt from re-examination on Surgical Anatomy, and on the Principles and Practice of Surgery. Any candidate, being a "registered medical practitioner," whose qualification or qualifications shall have been obtained before the first day of January, 1861, having been with the consent of the College admitted a candidate for the licence, will be examined on the Principles and Practice of Medicine, Surgery, and Midwifery; but he will be exempted from such other parts of the professional examinations as his qualifications may seem to the examiners to render in his case unnecessary. Any candidate who shall have obtained a foreign qualification which entitles him to practise Medicine or Surgery in the country where such qualification has been conferred, after a course of study and an examination equivalent to those required by the regulations of the College, shall, on production of satisfactory evidence as to age, moral character, and proficiency in vaccination, be admissible to the Pass Examination, and shall be exempt from re-examination on such subjects as shall in each case be considered by the Censors' Board to be unnecessary.

Examinations will take place in the months of February, April, July, October, and December.

Members.—The members of the College, present and future, shall be alone eligible to the fellowship. Every candidate (except such as are admissible under special provisions relating to practitioners) must produce proof of his having been engaged in professional studies during a period of five years, of which four years at least shall have been passed at a medical school or schools recognised by the College. Every candidate shall produce evidence, satisfactory to the Censors' Board, of his having studied the following subjects: Anatomy (with Dissections), during two winter sessions; Physiology, two winter sessions; Chemistry, six months; Practical Chemistry, three months; Materia Medica, three months; Practical Pharmacy, three months; Botany, three months; Morbid Anatomy, six months; Principles and Practice of Medicine, two winter sessions; Principles and Practice of Surgery, two winter sessions; Clinical Medicine, three winter and three summer sessions; Clinical Surgery, two winter and two summer sessions; Midwifery and the Diseases peculiar to Women, three months; Forensic Medicine, three months. He shall also give satisfactory proof of having attended diligently during three winter and three summer sessions the medical practice, and during three winter and two summer sessions the surgical practice, of a hospital containing at least a hundred beds; of having been engaged during six months in the clinical study of Diseases peculiar to Women; and of having served the office of clinical clerk in the medical wards during at least six months. If the Censors' Board doubt the sufficiency of the certificates produced by any candidate, or his fitness in any respect for admission to examination, they may submit the

¹⁰ A three months' course of clinical instruction in the wards of a recognised lunatic hospital or asylum may be substituted for the same period of attendance in the medical wards of a general hospital.

case to a general meeting of the fellows. No candidate shall be admitted to examination who is engaged in trade; or who dispenses medicine, or makes any engagement with a chemist or any other person for the supply of medicines; or who practises medicine or surgery, in partnership, by deed or otherwise, so long as that partnership continues. No candidate shall be admitted to examination who refuses to make known, when required by the president and censors, the nature and composition of any remedy he uses. Every candidate must give proof of his acquirements by written answers to questions placed before him, and shall be examined *vivâ voce* at three separate examinations, and shall be approved by the president and censors, or by the major part of them. Any candidate who shall produce satisfactory evidence of having passed an examination on Chemistry and Materia Medica, required for a degree in medicine at a university in the United Kingdom, in India, or in a British colony, will be exempted from re-examination on those subjects. Any candidate who has already obtained the degree of Doctor or Bachelor of Medicine at a university in the United Kingdom, in India, or in a British colony, or who shall have obtained a foreign qualification entitling him to practise medicine or surgery in the country where such qualification has been conferred, wherein the courses of study and the examinations to be undergone previous to graduation shall have been adjudged by the Censors' Board to be satisfactory, shall be exempt (if the censors shall think fit) from all or any parts of the examinations hereinbefore described, except such as relate to the Third or Pass Examination. The nature and extent of this examination shall, in the case of each candidate, be determined by the Censors' Board. Every candidate for the membership will, however, be required to translate into English a passage from a Latin author, and he will have the opportunity of showing a knowledge of Greek or of one or more of the modern European languages. Any candidate who shall produce satisfactory evidence of having passed an examination on Anatomy and Physiology, conducted by any of the bodies named in Schedule A to the Medical Act and recognised by the College as requiring a course of study and an examination satisfactory to the College, will be exempt from re-examination on the subjects of the Primary Examinations. Any candidate who shall have obtained a degree in Surgery, at a university in the United Kingdom, after a course of study and an examination satisfactory to the College, will be exempt from re-examination on Surgical Anatomy and the Principles and Practice of Surgery. Any candidate who shall have passed the examination on Surgery conducted by the Royal College of Surgeons of England, or the Royal College of Surgeons of Edinburgh, or the Royal College of Surgeons in Ireland, or the Faculty of Physicians and Surgeons of Glasgow, after a course of Study and an examination satisfactory to the College, will be exempt from re-examination on Surgical Anatomy and on the Principles and Practice of Surgery. Every candidate approved by the Censors' Board shall be proposed at the next general meeting of fellows, as qualified to become a member of the College; and if the majority of the fellows present shall consent, he shall, on complying with the regulations prescribed by the by-laws, be admitted a member of the College.

Examinations for the Membership will take place in the months of January, April, July, and October.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

REGULATIONS RESPECTING THE EDUCATION AND EXAMINATION OF CANDIDATES FOR THE DIPLOMA OF MEMBER.

Preliminary General Education and Examination.—Candidates who commenced their professional education on or after 1st January, 1861, will be required to produce one or other of the certificates of proficiency granted by the educational bodies specified in the recommendations of the General Medical Council. Candidates who shall not be able to produce one or other of those certificates will be required to pass an examination in English Classics, and Mathematics, conducted by the Board of Examiners of the Royal College of Preceptors, under the direction and supervision of this College.

N.B.—Each candidate, who has not at a previous examination paid the amount, is required to pay a fee of £2 on the morning of the first day of the examination prior to his admission thereto. Examinations are held in March

and September. Particulars respecting the examination will be duly advertised in the journals. Candidates are required to apply for the prescribed form of application a month before the date of the examination, and to send the same to the College not less than three weeks before its commencement.

Professional Education.—Professional Studies prior to the date at which the Candidate shall have passed an Examination in General Knowledge in conformity with the Regulation in the preceding Section are not recognised. The following will be considered as the commencement of Professional Education:—

(1) Attendance on the Practice of a Hospital, or other Public Institution recognised by this College for that purpose.

(2) Instruction as the Pupil of a legally qualified Surgeon, holding the appointment of Surgeon to a Hospital, General Dispensary, or Union Workhouse, or where such opportunities of practical instruction are afforded as shall be satisfactory to the Council.

(3) Attendance on Lectures on Anatomy, Physiology, or Chemistry, by Lecturers recognised by this College.

Candidates, prior to their admission to the First or Primary Examination on Anatomy and Physiology, will be required to produce the following certificates, viz.:—Of having passed, prior to the commencement of professional study, a recognised Preliminary Examination. Of having attended lectures on Anatomy during two winter sessions. Of having performed Dissections during not less than two winter sessions. Of having attended lectures on General Anatomy and Physiology during one winter session. Of having attended a Practical Course¹¹ of General Anatomy and Physiology during another winter or a summer session, consisting of not less than thirty meetings of the class. The Certificates of attendance on the several courses of lectures must include evidence that the Student has attended the Practical Instructions and Examinations of his teacher in each course.

Candidates, prior to their admission to the Second or Pass Examination on Surgical Anatomy and the Principles and Practice of Surgery and Medicine, will be required to produce the following certificates, viz.:—Of being twenty-one years of age. Of having been engaged, subsequently to the date of passing the Preliminary Examination, during four years, or during a period extending over not less than four winter and four summer sessions, in the acquirement of professional knowledge. Of having attended lectures on Surgery during one winter session. Of having attended a course of Practical Surgery¹² during a period occupying not less than six months prior or subsequent to the course required by the preceding clause. Of having attended one course of lectures on each of the following subjects—Chemistry,¹³ Materia Medica, Medicine, Forensic Medicine, Midwifery (with practical instruction, and a certificate of having personally conducted not less than ten labours), Pathological Anatomy during not less than three months. Of having studied Practical Pharmacy during three months. Of having attended a three months' course of Practical Chemistry (with manipulations) in its application to medical study. Of instruction and proficiency in the practice of Vaccination. Of having attended at a recognised hospital or hospitals the Practice of Surgery during three winter¹⁴ and two summer¹⁵ sessions. Of having been individually engaged, at least twice in each week, in the observation and examination of patients at a recognised hospital or hospitals, under the direction of a recognised

¹¹ By the Practical Course is meant that the learners themselves shall, individually, be engaged in the necessary experiments, manipulations, &c.; but it is not hereby intended that the learners shall perform vivisections.

¹² The course of Practical Surgery is intended to embrace instruction in which each pupil shall be exercised in practical details, such as in the application of anatomical facts to surgery, on the living person, or on the dead body. The methods of proceeding and the manipulations necessary in order to detect the effects of diseases and accidents, on the living person, or on the dead body. The performance, where practicable, of the operations of surgery on the dead body. The use of surgical apparatus. The examination of diseased structures, as illustrated in the contents of a museum of Morbid Anatomy and otherwise.

¹³ The course of lectures on Chemistry included will not be required in the case of a Candidate who shall have passed a satisfactory Examination in this subject in his Preliminary Examination.

¹⁴ The winter session comprises a period of six months, and, in England, commences on the 1st of October and terminates on the 31st of March.

¹⁵ The summer session comprises a period of three months, and, in England, commences on the 1st of May and terminates on the 31st of July.

teacher, during not less than three months. Of having, subsequently to the first winter session of attendance on Surgical Hospital Practice, attended, at a recognised hospital or hospitals, Clinical Lectures on Surgery, during two winter and two summer sessions. Of having been a Dresser at a recognised hospital, or of having, subsequently to the completion of one year's professional education, taken charge of patients under the superintendence of a surgeon during not less than six months, at a hospital, general dispensary, or parochial or union infirmary recognised for this purpose, or in such other similar manner as, in the opinion of the Council, shall afford sufficient opportunity for the acquirement of Practical Surgery. Of having attended, during the whole period of attendance on Surgical Hospital Practice, demonstrations in the post-mortem rooms of a recognised hospital. Of having attended at a recognised hospital or hospitals, the Practice of Medicine, and Clinical Lectures on Medicine, during one winter and one summer session.

Certificates will not be received on more than one branch of science from one and the same lecturer; but Anatomy and Dissections will be considered as one branch of science.

Certificates will not be recognised from any hospital or school of surgery in the United Kingdom unless the surgeons or teachers thereof be members of one of the legally constituted Colleges of Surgeons in the United Kingdom; nor from any School of Anatomy and Physiology or Midwifery, unless the teachers in such school be members of some legally constituted College of Physicians or Surgeons in the United Kingdom.

No metropolitan hospital will be recognised by this College which contains less than 150, and no provincial or colonial hospital which contains less than 100 patient. The recognition of colonial hospitals and schools is governed by the same regulations with respect to number of patients and to courses of lectures as apply to the recognition of provincial hospitals and schools in England.

Certificates of attendance upon the practice of a recognised provincial or colonial hospital unconnected with, or not in convenient proximity to, a recognised medical school, will not be received for more than one winter and one summer session of the hospital attendance required by the regulations of this College; and in such cases clinical lectures will not be necessary, but a certificate of having acted as dresser for at least six months will be required.

Those candidates who shall have pursued the whole of their studies in Scotland or Ireland will be admitted to examination upon the production of the several certificates required respectively by the College of Surgeons of Edinburgh, the Faculty of Physicians and Surgeons of Glasgow, and the College of Surgeons in Ireland, from candidates for their diploma, together with a certificate of instruction and proficiency in the practice of Vaccination, and satisfactory evidence of having been occupied, subsequently to the date of passing the Preliminary Examination, at least four years, or during a period extending over four winter and four summer sessions, in the acquirement of professional knowledge; and, in the case of candidates who shall have pursued the whole of their studies at recognised foreign or colonial universities, upon the production of the several certificates required for their degree by the authorities of such universities, together with a certificate of instruction and proficiency in the practice of Vaccination, and satisfactory evidence of having been occupied, subsequently to the date of passing the Preliminary Examination, at least four years, or during a period extending over four winter and four summer sessions, in the acquirement of professional knowledge.

Members or licentiates of any legally-constituted College of Surgeons in the United Kingdom, and graduates in Surgery of any university recognised for this purpose by this College, will be admitted to examination on producing their diploma, licence, or degree, together with proof of being twenty-one years of age, a certificate of instruction and proficiency in the practice of Vaccination, and satisfactory evidence of having been occupied, subsequently to the date of passing the Preliminary Examination, at least four years, or during a period extending over four winter and four summer sessions, in the acquirement of professional knowledge.

Graduates in Medicine of any legally-constituted college or university, recognised for this purpose by this College, will be admitted to examination on adducing, together with their diploma or degree, proof of being twenty-one years of age, a certificate of instruction and proficiency in the practice of Vaccination, and satisfactory evidence of having been occupied, subsequently to the date of passing the

Preliminary Examination, at least four years, or during a period extending over four winter and four summer sessions, in the acquirement of professional knowledge.

Professional Examination.—This examination is divided into two parts. The First or Primary Examination, on Anatomy and Physiology, is partly written and partly demonstrative on the recently dissected subject, and on prepared parts of the human body. The Second or Pass Examination, on Surgical Anatomy and the Principles and Practice of Surgery and Medicine,¹⁶ is partly written, partly oral, and partly on the practical use of surgical apparatus and the practical examination of patients. The Primary Examinations are held in the months of January, April, May, July, and November, and the Pass Examinations generally in the ensuing week respectively.

Candidates will not be admitted to the Primary Examination until after the termination of the second winter session of their attendance at a recognised school or schools, nor to the Pass or Surgical Examination until after the termination of the fourth year of their professional education.

The fee of £5 5s., paid prior to the first admission to the Primary Examination, is retained whether the candidates pass or fail to pass the examination, but is allowed as part of the whole fee of £22¹⁷ payable for the diploma. A candidate, after failure at any primary examination is required, on admission to any subsequent primary examination, to pay a further fee of £3 3s., which is retained, whether he pass or fail to pass the examination, and which further fee is not allowed as part of the whole fee of £22 for the diploma. The fee of £16 15s. is payable prior to each admission to the Pass Examination; but on each occasion of failure the balance of £11 10s. is returned to the candidate. A candidate having entered his name for either the Primary or Pass Examination, who shall fail to attend the meeting of the Court, for which he shall have received a card, will not be allowed to present himself for examination within the period of three months from the date at which he shall have so failed to attend. A candidate referred on the Primary Examination is required, prior to his admission to re-examination, to produce a certificate of the performance of dissections during not less than three months subsequently to the date of his reference. A candidate referred upon the Primary Examination who shall not obtain more than half of the total minimum number of marks is not readmitted to examination until after the elapse of six months, and is then required to produce, in conformity with the foregoing paragraph, a certificate of the performance of dissections during not less than three months subsequently to the date of his reference. A candidate referred on the Pass Examination is required, prior to his admission to re-examination, to produce a certificate of at least six months' further attendance on the Surgical Practice of a recognised Hospital, together with lectures on Clinical Surgery, subsequently to the date of his reference.

The required certificates, whether for the Primary or Pass Examination, must be forwarded through the post not less than ten clear days prior to the date of each examination; except in the case of a referred candidate whose term of additional study will not expire until the date of the examination, in which case a written application must be sent by him in lieu of the certificates, such certificates to be produced the day before the examination.

A special notice (to be found in our last number, p. 398) has been issued for the information of candidates for the Membership as to the payment of fees for the Primary and Pass Examinations.

ROYAL COLLEGE OF PHYSICIANS, EDINBURGH.

The Licence.—No one can obtain the licence of the College until he has completed the age of twenty-one years.

Every applicant for the licence must produce a certificate that he has studied Vaccination under a recognised teacher.

¹⁶ Candidates can claim exemption from examination in Medicine under the following conditions—viz. 1. The production by the candidate of a degree, diploma, or licence in Medicine entitling him to register under the Medical Act of 1858; or a degree, diploma, or licence in Medicine of a colonial or foreign university approved by the Council of the College. 2. A declaration by the candidate, prior to his admission to the Final Examination for Membership or Fellowship, that it is his intention to obtain either of the medical qualifications mentioned in the foregoing paragraph, in which case the diploma of the College will not be issued to him until he shall produce either the said medical qualification or proof of having passed the several examinations entitling him to receive the same.

¹⁷ This sum of £22 is exclusive of the fee of £2 paid for the Preliminary Examination.

The Preliminary Examination in General Education prescribed by the General Medical Council must have been passed by each applicant, and his name inscribed in the Register of Medical Students, previous to the commencement of his medical studies. Masters and Bachelors of Arts of any British or foreign university, whose course of study may from time to time be approved by the College, will be exempted from the Preliminary Examination; also those who have passed the examination of the national educational bodies, or of any recognised licensing board.

The Professional Examination will be divided into two parts, according to the following arrangement of subjects:—1. Anatomy, Physiology, Chemistry. 2. *Materia Medica* and Pharmacy, Pathology and Pathological Anatomy, Practice of Medicine, Surgery, Midwifery, Medical Jurisprudence, Clinical Medicine. No candidate will be admitted to the first examination until the end of his second winter session, or to the second until he has completed four years of professional study. The examinations will be partly oral, partly in writing.

Candidates for the licence of the College who have passed the First Professional Examination before a qualifying body (provided it be as extensive as that required by this College) will be at once admitted to the second part of the examination.

Meetings for the examination of candidates who already possess a qualification from a recognised licensing body will be held on the first Wednesday of every month (except September and October), and, if necessary, on the following days. Candidates are required to communicate with the secretary of the College not less than eight days before the date of the examination at which they propose to appear.

No candidate is admissible to examination who has been rejected by any licensing board within three months previous to his examination.

The fee payable by a licentiate is £15 15s. In the event of a candidate being unsuccessful at his examination, the sum of £4 4s. will be detained to defray expenses.

Candidates may be admitted to special examination, on other days than those appointed above, on bringing forward reasons satisfactory to the Council, and on paying an extra fee of £5 5s. Should the candidate be unsuccessful, the sum of £11 11s. will be returned to him.

The Membership.—Any licentiate of a College of Physicians, or graduate of a British or Irish University, with whose knowledge of medical and general science the College may be satisfied, may be admitted to the membership provided he shall have attained the age of twenty-four years.

The Fellowship.—No one can be elected a fellow of the College until he has been at least one year a member thereof, and has attained the age of twenty-five years.

The fee to be paid by a member is £31 10s. When a licentiate is raised to the rank of a member, he pays £21. When a member is raised to the rank of a fellow, the fee is £31 10s., exclusive of stamp duty, which amounts to £25. All candidates for fellowship or membership must lodge their fees, and the amount of stamp duty payable at the time to Government, with the treasurer, previously to presenting their petitions.

Qualification in Public Health.—The College now confers certificates of competency in Public Health. Examinations are held in April and October. Fee for certificate, £10 10s.

ROYAL COLLEGE OF SURGEONS, EDINBURGH.

Every candidate for a surgical diploma must have followed his course of study in a university or in an established school of medicine, or in a provincial school specially recognised by the College of Surgeons of that division of the United Kingdom in which it is situate.

Preliminary Examination.—All students who intend becoming candidates for the diploma of the College must have passed the complete examination in general education as prescribed by the General Medical Council, and have had their names inscribed in the Register of Medical Students at the commencement of their professional studies. Examinations will be held on October 16th and 18th, 1880; April 12th and 13th, 1881; July 9th and 11th, 1881. Testimonials of proficiency granted by educational bodies recognised by the Medical Council exempt students from the Preliminary Examination.

Professional Education.—Candidates commencing professional study after Sept. 16th, 1866, must have been engaged during forty-five months after the examination in general education, in professional study, which shall include not less

than four winter sessions', or three winter and two summer sessions' attendance at a recognised medical school.

Professional Examination.—Candidates are subjected to two Professional Examinations, conducted at separate sittings, partly in writing and partly orally.

The First Examination embraces Anatomy, Physiology, and Chemistry. Examinations will be held October 19th, 1880; Jan. 25th, March 29th, April 19th, July 19th, 1881.

Candidates who desire to pass the First Professional Examination must apply to the Secretary on or before the Friday preceding the day of examination, and must produce certificates of attendance in regard to all those courses of study which have reference to the subjects of that examination. They must also produce evidence of having passed the Preliminary Examination. The sum of £6 6s. must be paid to the treasurer of the College for this examination not later than 9 A.M. of the Saturday preceding it. This sum will be considered as paid to account of the entire fee of £15 15s. payable for the diploma.

The Second Examination embraces Surgery and Surgical Anatomy; also Medicine, Midwifery, *Materia Medica*, and Medical Jurisprudence; and does not take place before the termination of the winter session of the last year of study; in the case of candidates who began their course of study after 16th of September, 1866, it will not take place till forty-five months after the examination in general education.

Application for examination must be made to the secretary not later than the Monday previous to the day of the examination.

Every candidate must produce to the secretary—1. Satisfactory evidence of his having attained the age of twenty-one years, and of having been duly registered. 2. The certificates of his classes. 3. The certificate of his having passed the First Professional Examination. And 4. A tabular statement (for which a printed form will be furnished) exhibiting the full amount of his professional education, and distinguishing the classes, hospitals, dispensaries, and schools attended during each session of his studies. If he have been an apprentice, he must also insert the name of his master, the date of his indenture, and the length of time for which he is bound. This statement, accurately filled up, must be attested by his signature, and afterwards delivered by the candidate to the officer of the College, to be preserved by the College. If the candidate have been an apprentice to a Fellow of the College, he must also produce his discharged indenture. The secretary will then give the candidate a letter authorising the examiners to admit him to examination.

The remaining fee payable to the College (being £9 9s.), together with the receipt for the fee paid for the First Professional Examination, must be lodged, not later than 9 A.M. of the Tuesday preceding the examination day, in the hands of the treasurer. £5 5s. will be returned to unsuccessful candidates.

Candidates who have passed the First Examination in Anatomy, Physiology, and Chemistry, at any of the licensing boards recognised by the Medical Act, will be admissible to the Second Professional Examination on producing certificates of the whole course of study, of having passed their Preliminary and First Professional Examinations, and of having been registered. If any of the three subjects of the first examination have been omitted, such candidates will have to undergo the first examination on the omitted subjects; and none of the subjects set down will be omitted at the second examination, even if some of them should have formed part of the first examination by another board. The fee is £15 15s. Unsuccessful candidates under this regulation receive back £11 11s.

In order to test more effectually the practical knowledge of candidates, recent dissections, anatomical specimens, and articles of the *materia medica* will be employed during the examinations; and all candidates will be required to write out formulæ of prescriptions. They will also be subjected to a practical clinical examination in the surgical hospital, including the application of surgical apparatus, &c.

No candidate will be admissible to examination who has been rejected by any other licensing board within the three months preceding his application to be examined.

Those candidates who have passed the First Professional Examination before the 31st December, 1877, will be required to pay, as under the old regulation, a fee of £6 for the second examination, provided they appear for that examination prior to 1st January, 1880; and in the event of being unsuccessful £2 will be retained.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS, EDINBURGH.

The Royal College of Physicians of Edinburgh, and the Royal College of Surgeons of Edinburgh, while they still continue to give their diplomas separately, under separate regulations, have made arrangements by which, after one series of examinations, the student may obtain the diplomas of both Colleges. The general principle of this joint examination is, that it shall be conducted by a board in which each body is represented in those branches which are common to both medicine and surgery; but that the College of Physicians shall take exclusive charge of the examination in Medicine, and the College of Surgeons of the examination in Surgery. The object of the joint examination is to give to students facilities for obtaining from two separate bodies, and at less expense, a qualification in Medicine and a qualification in Surgery. Students passing that examination successfully will be enabled to register two qualifications under the Medical Act—Licentiate of the Royal College of Physicians of Edinburgh, and Licentiate of the Royal College of Surgeons of Edinburgh. The arrangement for thus conferring a double qualification by the co-operation of the two Colleges is in conformity with Section 19 of the Medical Act, and has received the special sanction of the General Council of Medical Education and Registration.

FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.

Preliminary Examinations in General Literature, in accordance with the regulations of the General Council, will be held in the Faculty Hall during the session 1880-81 on the following Fridays, commencing at 11 o'clock—namely, October 22nd, 1880, April 15th, July 8th, and September 9th, 1880; and on each occasion the examination will be continued on the succeeding day. Those who are unsuccessful may appear at one subsequent examination without paying a second fee. The fee for the examination and certificate is 10s.

The course of study for the diploma and the regulations generally correspond with those required by the Royal College of Surgeons of Edinburgh.

The Professional Examinations are held at four periods in 1880—in January, April, July, and October. The following are the dates at which the first examination will begin in 1880-81: Oct. 12th, 1880; Jan. 11th, April 5th, July 19th, 1881. The second examination will commence on Oct. 14th, 1880; Jan. 13th, April 8th, and July 21st, 1881. Candidates will not be admitted to the final examination until the expiry of forty-five months from the date of registration, which period must embrace at least three winter and two summer sessions, or four winter sessions, of study at a medical school.

The regulations regarding examinations are nearly similar to those of the Royal College of Surgeons of Edinburgh.

The fee for the diploma is fifteen guineas—six guineas for the first and nine guineas for the second examination. Candidates not already qualified in Medicine are examined in that subject orally and clinically, as well as by written papers.

REGULATIONS REGARDING THE DOUBLE QUALIFICATION.

The Faculty of Physicians and Surgeons of Glasgow and the Royal College of Physicians, Edinburgh, grant their diplomas conjointly before a board of examiners in which each body is represented, the object being to give to students facilities for obtaining from two separate bodies, and at less expense, a double qualification in Medicine and Surgery. Students passing this examination successfully will be enabled to register two qualifications under the Medical Act—namely, Licentiate of the Faculty of Physicians and Surgeons of Glasgow, and Licentiate of the Royal College of Physicians of Edinburgh. The curriculum of study embraces a course of Medicine, in addition to the subjects required for a diploma of the Faculty. The fee for the first examination is eight guineas; for the second twelve guineas.

The examination for the Double Qualification will begin in the Faculty Hall, Glasgow, at the following periods—namely, first examination, October 12th, 1880; January 11th, April 5th, July 19th, 1881. The second examination will begin on October 19th, 1880; January 17th, April 11th, and July 25th, 1881.

Applications to be admitted to either the first or second

examination must be made to the Secretary of the Faculty not later than one week preceding the examination.

Candidates are required to subscribe a declaration that they have not been rejected by any examining board within three months before the examination.

The other regulations are nearly the same as those for the diploma of the Faculty.

KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.

Examinations for the licences of the College in Medicine and Midwifery are held in the week following the first Friday in each month, except August and September. Every candidate for a licence must return his name to the Registrar of the College, and lodge with him his certificates, bank receipt of fees, and his schedule, at least four days before the first Friday in each month. Special examinations will be held at such times as the President may appoint.

Licence in Medicine.—Every candidate for the licence of the College to practise Medicine must produce satisfactory evidence—1. Of character, from a Fellow of the College, or from two registered practitioners. 2. Of having passed an examination in general education, held by some one of the examining bodies recognised by the General Medical Council. 3. Of having been engaged during a period of four years in the study of Medicine. 4. Of having attended courses of lectures on the following subjects, at schools recognised by the College: Practical Anatomy, two courses; Physiology or Institutes of Medicine, Chemistry, Practical Chemistry, Materia Medica, Medical Jurisprudence, Practice of Medicine and Pathology, Surgery, and Midwifery—each one course. 5. Of having attended for twenty-seven months a recognised Medico-Chirurgical Hospital, in which clinical lectures and clinical instruction in Medicine are given, the attendance not to be for more than nine months in any one year—viz., six winter, and three summer months—for not less than three months. 6. Of having studied Fever in a recognised clinical hospital, containing fever wards, and recorded from daily personal observation at least five cases of fever, to the satisfaction of the attending clinical physician, as attested by his signature. 7. Of having attended Practical Midwifery and Diseases of Women for six months at a Lying-in Hospital or Maternity recognised by the College; or, where such hospital attendance cannot have been obtained during the course of study, of having been engaged in Practical Midwifery under the supervision of a registered practitioner holding public appointments; in either case, not less than twenty labour cases must have been actually attended. 8. Of having lodged the admission fee in the Bank of Ireland to the credit of the College.

The professional examination is divided into two parts: 1. Anatomy, Physiology, Chemistry, and Materia Medica. 2. Practice of Medicine, Clinical Medicine, Pathology, Medical Jurisprudence, Midwifery, Hygiene, and Therapeutics. Candidates may be examined in the subjects of the first part at the termination of the second year of study, on producing the certificates in these subjects, or in all the subjects of their education, on the completion of their medical studies. No candidate can be examined in all the subjects of the first and second parts in the same month.

Candidates qualified as follows are required to undergo the second part only of the professional examination, viz.:—(1) Graduates in Medicine of any University in the United Kingdom, or of any Foreign University approved by the College; (2) Fellows, Members, or Licentiates of the Royal College of Physicians of London or Edinburgh; (3) Graduates or Licentiates in Surgery; (4) Candidates who, having completed the curriculum laid down above, shall have passed the previous professional examination or examinations of any of the licensing medical authorities in the United Kingdom. Candidates thus qualified, as specified in Sections 1, 2, and 3, must fill up a schedule and present their registration certificate (or their medical or surgical qualification), as well as certificates of character, of practical midwifery, and of attendance on a clinical hospital which receives cases of fever. Candidates who case is met by Section 4 must produce, in addition to the certificates required from candidates for the licence, a certificate from the licensing medical authority to the effect that such previous professional examination has been successfully passed.

Registered practitioners of five years' standing are admitted to examination for the licence in medicine on producing their certificate of registration with satisfactory

reference, and are exempted from the examination by printed questions.

Candidates who have passed the examinations for the licence in medicine must attend at the College on the Friday following, to subscribe the declaration, and to sign the roll of licentiates in medicine.

Unsuccessful candidates may be admitted to re-examination after not less than two months.

Licence in Midwifery.—Candidates for the licence in midwifery, who are not licentiates in medicine, may be admitted to examination on the following qualifications: (1) The degree or licence in medicine or surgery from any University or College of Physicians or Surgeons in the United Kingdom; (2) Testimonials as to character; (3) Certificates of having attended (a) a course of lectures on midwifery in a school recognised by the College; (b) practical midwifery and diseases of women, as in Section 6 of the regulations for the Licence in Medicine.

Candidates who are licentiates in medicine of the College, or who have passed the examination for such licence, may be admitted to examination for the licence in midwifery on lodging their fees and signifying their wish to the registrar a week at least before such examination.

The fees are: For the licence to practise medicine, £15 15s., which may be divided as follows—viz., examination at the termination of the first period of study, £5 5s.; final examination, £10 10s. Examination for the licence to practise midwifery, £3 3s. Examination for the licences in medicine and midwifery, if obtained within a month, to be lodged in one sum,¹⁸ £16 16s. Special examination for the licence to practise medicine, £21; for the licence to practise midwifery, £5 5s. The admission fee, less the sum paid to the examiners, is returned to any candidate rejected at any of the College examinations.

The Membership.—Members of the College alone are eligible to the Fellowship. Every candidate for the membership is required to produce satisfactory evidence—1. Of having attained the age of twenty-five years. 2. Of being a licentiate of this College for three years at least; or a licentiate of one year's standing, who shall be a graduate of Arts of a university in the United Kingdom at the time of his obtaining the licence; or, a licentiate of one year's standing, who shall be a registered practitioner of seven years' standing at the time of his obtaining the licence. 3. Of professional conduct and moral character, as testified by a fellow or member of the College, or by a fellow of the Royal College of Physicians of London or of Edinburgh. 4. That he is not engaged in trade; and that he does not directly or indirectly vend medicines or drugs; and that he does not dispense or compound medicines for anyone—even his own private patients—(except in cases of extreme urgency); nor practise medicine or surgery in partnership, by deed or otherwise. 5. Of having attended courses of practical instruction in Ophthalmology and Histology. 6. Of having held, during, at least, six months, the office of resident physician, or resident medical pupil, in a hospital recognised by the College; or of having acted for the same period as clinical clerk in the medical wards of such hospital; or of having been in medical charge, for at least twelve months, of any public institution for the treatment of the sick. 7. Of having lodged the admission fee of twenty guineas in the Royal Bank of Ireland to the credit of the College.

Every candidate shall be required to pass an examination in Medical Anatomy, Pathology, Histology, Medical Chemistry, Forensic Medicine, Principles of Public Health, including Climatology and Meteorology, Psychology, and Clinical Medicine. He shall also be required to translate into English a passage from a Latin author, or to show that he possesses a knowledge of Greek, or French, or German.

ROYAL COLLEGE OF SURGEONS IN IRELAND.

Registered pupils who pay a fee of five guineas are admitted to the Preliminary Examination of the College without further fee, and may study each week-day in the Museum from 11 o'clock A.M. to 3 o'clock P.M., and read in the Library from 10 o'clock A.M. to 6 o'clock P.M. They are also permitted to attend the lectures on Comparative Anatomy, and to obtain a certificate for such attendance without payment of any fee. These privileges are open to the students of any school recognised by the Council who may have enrolled themselves as registered pupils of the College.

Students who are not registered pupils (whilst expected to register previous to the commencement of their professional studies) may present themselves for the Preliminary Examination at any period previous to the commencement of professional studies upon payment of £1 1s. as matriculation fee.

The following are the subjects for the Preliminary Examination:—The English language (Grammar and Composition), Arithmetic (Vulgar and Decimal Fractions), Algebra (Simple Equations), Geometry (first two books of Euclid), Greek and Latin (Translation and Grammar); in Greek, the Gospel of St. John, or the first book of Xenophon's Anabasis, or the Dialogue of Lucian entitled "Menippus or the Necromancy"; in Latin the *Æneid* of Virgil, books 1 and 2, or the Jugurthine War of Sallust, or the Third Book of Livy. These examinations are held quarterly—viz., on the third Wednesday in January, April, July, and October in each year. Fee, free to registered pupils; for non-registered pupils, £1 1s. Candidates are required to enter their names, and to pay their fees to the registrar, at least six days previous to the day of examination. N.B.—Students who have passed any of the Preliminary Examination Boards recognised by the General Medical Council, into the curriculum of which the Greek language enters as a compulsory subject, are exempt from further preliminary examination, and are entitled to become registered pupils.

Every registered pupil is admitted, upon payment of a special fee of five guineas, to a special examination for letters testimonial. He must pay a sum of twenty guineas, fifteen guineas of which will be returned if rejected.

Stated examinations are held in April, July, and November, commencing on dates of which due notice will be given beforehand by the Council of the College, and to which candidates cannot be admitted unless they be registered pupils, and at which they will be divided into two classes—junior and senior. The junior class will be examined in Anatomy, Histology, Physiology, Materia Medica, and Chemistry. The fee for this examination is five guineas, in addition to the registration fee of five guineas; but to be allowed the candidate in case he presents himself a second time for examination. The senior class must produce certificates of having attended three courses of lectures on the Theory and Practice of Surgery, one course of lectures on the Practice of Medicine, and one course of lectures on Midwifery; also certificates of attendance on a recognised hospital for three winter and three summer sessions. This class will be examined in Surgery, Operative Surgery and Surgical Appliances, Practice of Medicine, Medical Jurisprudence and Prescriptions. No candidate for letters testimonial will be admitted to examination without producing a certificate of attendance for one month at the Cow-Pock Institution, or some other institution to be approved of by this Council, under the instruction of a public vaccinator specially recognised by this College for the purpose, and that he is practically acquainted with vaccination. The fee for this examination is fifteen guineas; returnable to the candidate in case of rejection. In addition to the foregoing fees a fee of one guinea is to be paid to the registrar.

The Fellowship.—Every registered pupil or licentiate may be admitted to examination for the Fellowship if he shall have lodged in the Bank of Ireland, for the use of the College if he be a licentiate, the sum of twenty guineas, or thirty-five in case he be only a registered pupil; provided in either case he intends to reside beyond ten miles from Dublin, or, if he reside in Dublin, or within ten miles thereof, he must lodge thirty guineas, or if he be only a registered pupil, forty-five guineas. He must be twenty-five years of age, and be a Bachelor of Arts of some university, or show that he has obtained a liberal preliminary education. He must, moreover, produce a certificate of general good conduct and certificates of attendance on the several courses of lectures required to be attended by candidates for letters testimonial, together with one course of lectures on Comparative Anatomy, and one course of lectures on Natural Philosophy. A thesis on some medical subject, or clinical reports, with observations, of six or more medical or surgical cases taken by himself will also be required, and certificates of having been engaged in the acquisition of professional knowledge for a period of not less than six years, three of which must have been spent in one or more of the schools and hospitals recognised by the Council. Licentiates of the College who may not be able to show that they have followed the course of study specified in the preceding regulations, may, at the expiration of ten years from the date of their diploma, be

¹⁸ Any candidate rejected at the Examination for the Licence in Medicine must pay the full fee of £3 3s. for the Licence in Midwifery.

admitted to the examination required for the Fellowship, provided they produce such evidence as shall be satisfactory to the Council that they have conducted themselves honourably in the practice of their profession.

Examination of Candidates for Letters Testimonial, special and stated, will be held in April, July, and November, upon such days as the Council may direct.

Junior classes will be examined in Dissections, Anatomy, Physiology, Histology, Materia Medica, and Chemistry, written and *visû voce*. The senior class will be examined in Surgery, Practice of Medicine, Medical Jurisprudence, and Prescriptions, written and *visû voce*, and in Clinical Examination and Operative Surgery.

The fees to be paid by candidates for letters testimonial are:—Registration fee, £5 5s.; Junior Class Examination fee, £5 5s.; Senior Class Examination fee, £15 15s.; total, £26 5s. In addition to the foregoing, a fee of £1 1s. is to be paid to the registrar on handing each licentiate his diploma.

Examinations for the Fellowship will be held from time to time as the Council may direct. The subjects of the First Examination will be Anatomy and Physiology (human and comparative); those of the second, Pathology, Therapeutics, the Theory and Practice of Medicine and Surgery, and Clinical Surgery. In cases of licentiates of ten years' standing, the examinations will be mainly clinical and practical. In addition to the oral examinations, candidates will be required to give written answers to either written or printed questions, and to perform Dissections and Operations.

THE SOCIETY OF APOTHECARIES, LONDON.

Every candidate for a Certificate of Qualification to practise as an Apothecary will be required to produce testimonials—Of having passed a Preliminary Examination in Arts as a test of general education. (This examination must be passed before the commencement of medical studies. Medical studies commenced before the candidates shall have passed an examination on the subject of general education will not be recognised.) Of having attained the full age of twenty-one years. Of good moral conduct. A certificate of three months' Practical Pharmacy from some recognised hospital or dispensary, or from a qualified medical practitioner. And of having pursued a course of medical study in conformity with the regulations of the Court.

The course of medical study required for a licence must occupy at least four years, of which not less than three winter and two summer sessions must be passed at a recognised school or hospital. The following will be recognised and considered equivalent to eighteen months' study, in addition to the two years and a half above mentioned: (a) attendance on the practice of a hospital or other public institution recognised by this Hall for that purpose; (b) instruction as the pupil or assistant of a registered practitioner, physician or surgeon to a hospital, general dispensary, or union workhouse, or where such opportunities of practical instruction are afforded as may be deemed satisfactory.

Course of Study.—Every candidate must attend the following lectures and medical practice: each winter session to consist of not less than six months, to commence on the 1st and not later than the 15th of October; each summer session to commence on the 1st and not later than the 15th of May.

First Year.—Winter Session: Chemistry, Anatomy, and Physiology (including Dissections and Demonstrations). Summer Session: Botany, Materia Medica and Therapeutics, Practical Chemistry.

Second Year.—Winter Session: Anatomy and Physiology (including Dissections and Demonstrations), Principles and Practices of Medicine, Clinical Medical Practice. Summer Session: Midwifery and Diseases of Women and Children. Forensic Medicine and Toxicology, Clinical Medical Practice.

Third Year.—Winter Session: Principles and Practice of Medicine, Clinical Medical Lectures, Morbid Anatomy, Pathology and Clinical Medical Practice. Summer Session: Practical Midwifery and Vaccination, Morbid Anatomy, Clinical Medical Practice.

No certificates of lectures or of anatomical instructions delivered in private to particular students apart from the ordinary classes of recognised public medical schools, can be received by the Court of Examiners.

Examination in Arts.—This examination will be held at

the Hall of the Society on Friday and Saturday, January 23rd and 24th, April 23rd and 24th, September 17th and 18th. The examination will be conducted by means of printed papers. Candidates will be examined in the following branches; and no candidate will be approved unless he show a competent knowledge of each branch of the examination:—1, the English Language; 2, the Latin Language; 3, Mathematics; 4, one of the following subjects, at the option of the candidate—Greek, French, German, Natural Philosophy. Testimonials of proficiency in general education will be received from any of the licensing bodies, and also from recognised national, colonial, and foreign educational bodies—viz., a degree in Arts of any university of the United Kingdom, or of the colonies, or of such other universities as may be specially recognised from time to time by the Medical Council.¹⁹ The fee for the examination is one guinea. If a candidate fail to pass the examination, the fee will not be returned to him, but he will be admissible to either, or to both, of the two next following examinations without payment of an additional fee, upon giving at least one week's notice.

Prizes are annually offered for proficiency in the knowledge of Materia Medica and Pharmaceutical Chemistry.

Professional Examinations.—The Court of Examiners meet in the Hall every Wednesday and Thursday, where candidates are required to attend at 4.30 P.M. Every candidate intending to offer himself for examination must give seven days' notice previous to the day of examination, and must at the same time deposit all the required certificates with the fee, at the office of the beadle, where attendance is given daily from 10 till 4 o'clock; Saturdays, 10 till 2. Certificates in arts granted by any of the bodies whose certificate is recognised by the Medical Council, will be accepted from candidates who present themselves at the Professional Examination at the Hall, as equivalent to their having passed the above examination.

The examination of candidates is divided into two parts, and is conducted partly in writing and partly *visû voce*.

The First Examination, which may be passed after the second winter session, embraces the following subjects:—Physicians' Prescriptions and Pharmacy; Anatomy and Physiology; General and Practical Chemistry; Materia Medica and Botany; Histology. Testimonials are required of candidates for the First Examination of having passed an examination in arts recognised by the Medical Council; of having completed the curriculum of study to the close of the second winter session; of having attended three months' Practical Pharmacy; and of good moral conduct. (Any candidate who presents himself for the First Examination and is rejected, may be admitted to re-examination at the expiration of three calendar months.)

The Second Examination, at the termination of the medical studies, embraces Principles and Practice of Medicine; Pathology and Therapeutics; Midwifery, including the diseases of Women and Children; Forensic Medicine and Toxicology; Microscopical Pathology.

Certificates are required of candidates for the Second or Pass Examination, of having completed four years' medical study, including the period spent at the hospital; of being twenty-one years of age; and of good moral conduct. Of having passed the First Examination. Of having completed the prescribed curriculum of study according to the schedule, including a personal attendance of twenty cases of midwifery; and of having received instruction in Practical Vaccination, and vaccinated not less than twenty cases. Of having served the office of clinical clerk at a recognised hospital during the period of six weeks, at least. Of having been examined at the class examinations instituted by the various lecturers and professors of their respective medical schools and colleges.

¹⁹ The following is a syllabus of subjects for examination in 1881.—1. *The English Language*: The leading features of its history, its structure and grammar. English Composition. 2. *The Latin Language*: Livy, book i. caps. 1. to xli. Horace, Odes, book iv. Re-translation of easy sentences. Grammatical questions will be introduced into the Latin paper, and each candidate will be expected to give satisfactory answers to these. 3. *Mathematics*: The ordinary rules of Arithmetic. Vulgar and Decimal Fractions. Addition, Subtraction, Multiplication, and Division of Algebraical Quantities. Simple Equations. The first two books of Euclid. 4. (a) *Greek*: Homer, Iliad, book i. Grammatical questions. (b) *French*: Voltaire, Histoire de Charles XII. Grammatical questions. (c) *German*: Lessing, Mina von Barnhelm. Translation from English into German. Grammatical questions. (d) *Natural Philosophy*: Mechanics. Hydrostatics and Pneumatics. (The books recommended for study in this subject are Smith's "Statics," and Smith's "Hydrostatics," or Newth's "Natural Philosophy.")

Modified Examination.—Graduates in Medicine of British Universities will be admitted to a Clinical and Practical Examination in the Practice of Medicine, Pathology, and Midwifery.

No rejected candidate for the licence can be re-examined until the expiration of six calendar months.

Fees.—For a Certificate of Qualification to Practise, six guineas, half of which is retained in case of rejection, to be accounted for at a subsequent examination. For the First Examination, three guineas, which sum is retained in case of rejection and accounted for subsequently. For the Second Examination, three guineas. For an Assistant's Certificate two guineas, which sum is retained in case of rejection and accounted for subsequently. N.B.—After two rejections a second fee of three guineas will be required, or one guinea in the case of an Assistant.

APOTHECARIES' HALL OF IRELAND.

The *Arts Examination* will be held at the Hall four times in the year—viz., the third Thursday in January, April, July, and October, at 12 o'clock.

Professional Education.—Every candidate for the licence to practise Medicine and Pharmacy must produce certificates to the following effect:—Of having passed an examination in Arts previously to entering on professional study. Of registration as a medical student from the Registrar of the Medical Council.²⁰ Of being at least twenty-one years of age, and of good moral character. Of pupillage to a qualified apothecary, or of having been otherwise engaged at *practical* Pharmacy for a period of twelve months subsequent to having passed the examination in Arts. Of having spent four years in professional study. Of having attended the following courses—namely: Chemistry, during one winter session; Anatomy and Physiology, during one winter session; Demonstrations and Dissections, during two winter sessions; Botany and Natural History, during one summer session; Practical Chemistry (by daily instruction in a recognised laboratory), during three months; *Materia Medica*, during three months; Principles and Practice of Medicine, during one winter session; Midwifery and Diseases of Women and Children, during six months; Practical Midwifery at a recognised hospital (attendance upon twenty cases); Surgery, during one winter session; Forensic Medicine, during one summer session; instruction in the practice of Vaccination. Of having attended at a recognised hospital or hospitals the Practice of Medicine and Clinical Lectures on Medicine, during two winter and two summer sessions; also the Practice of Surgery and Clinical Lectures on Surgery, during one winter and one summer session. Of practical study, with care of patients, as apprentice, pupil, assistant, clinical clerk, or dresser, in hospital, dispensary, or with a registered practitioner, who can supply the necessary means of instruction. Of having performed Vaccination successfully under a vaccinator recognised by the Local Government Board.

The *Examination for the Licence* is divided into two parts. The first part comprehends Chemistry, including Physics, Botany, Anatomy, Physiology, *Materia Medica*, and Pharmacy; the second, Medicine, Surgery, Pathology, Therapeutics, Midwifery, Forensic Medicine, and Hygiene.

Candidates at the examination on Anatomy are liable to be called on to perform dissections; and at the examination on Surgery, to perform operations on the dead subject.

The *Professional Examinations* will be held quarterly, and will commence on the first and second Monday in January, April, July, and October. They will be carried on as follows:—The first part, on the first Monday, at eleven o'clock A.M.; and on the Tuesday and Wednesday succeeding, at the same hour. Subjects: Chemistry, including Chemical Physics, and Botany, Monday; Anatomy and Physiology, Tuesday; *Materia Medica* and Pharmacy, Wednesday. The second part, or final examination, on the second Monday, at eleven o'clock A.M.; and on the Tuesday and Wednesday succeeding, at the same hour; on Thursday Clinical Examination. Subjects: Medicine and Surgery, including Pathology and Therapeutics, Monday; Midwifery and Diseases of Women and Children, Tuesday; Forensic Medicine and Hygiene, Wednesday; Clinical Examination, Thursday.

²⁰ A person, having first passed an examination in Arts, may be registered as a "medical student" who has commenced the study of the profession either at a medical school, hospital, or as an apprentice or pupil to a registered practitioner.

ARMY MEDICAL DEPARTMENT.

6, Whitehall-yard, S.W.

Appointments in the Army Medical Department are obtained by competitive examination, held in London twice a year—in February and August. A candidate must be twenty-one years of age, and not over twenty-eight, in good health, and physically fit for service, and both his parents of unmixed European blood. He must possess diplomas or licences to practise Medicine and Surgery recognised by the General Medical Council, and must be registered under the Medical Act; and he must furnish satisfactory certificates that he is of regular and steady habits, and likely in every respect to prove creditable to the department. The subjects of examination, and the marks which may be gained for each, are as follows:—*Compulsory subjects*: Anatomy and Physiology, 1000; Surgery, partly Practical, 1000; Medicine, including Therapeutics, the Diseases of Women and Children, 1000; Chemistry and Pharmacy, and a practical knowledge of Drugs, 1000. *Voluntary subjects*: French and German (150 each), 300; Natural Sciences, 300.

After passing the competitive examination, the candidates are sent to Netley, where they are required to attend a four months' course of practical instruction in Hygiene, Clinical and Military Medicine, Clinical and Military Surgery, Pathology of Diseases and Injuries incident to Military Service. During this course they will be provided with quarters, receive 8s. a day pay, and have the relative rank of lieutenant in the army. The Secretary of State for War has power to nominate, without a competitive examination, on the recommendation of the governing bodies of public schools of medicine in the United Kingdom or the colonies, a number of probationers, not exceeding half the vacancies in the Department, but this power has never yet been exercised.

The following table of the rates of pay, half-pay, and gratuity may probably prove interesting to students who think of entering the service:—

Rank.	Rates of Pay.	Half-pay & Gratuities.	Relative Military Rank.
	Daily.		
Surgeon on probation ..	£0 8 0 ..	—	Lieutenant
	Annual.		
Surgeon ..	200 0 0 ..	—	Captain
" aft. 5 years' service	250 0 0 ..	—	
	Daily.	Gratuity.	
Surgeon-Major ..	0 15 0 ..	£1250 ..	
" aft. 15 years' service	1 0 0 ..	—	Major
" aft. 18 ..	1 2 6 ..	£1800 ..	
" ..	—	£2500 ..	
	Half-pay.		
" 20 ..	1 5 0 ..	£1 0 0 ..	Lieut.-Col.
" 25 ..	1 7 6 ..	1 2 6 ..	
" 30 ..	—	1 5 0 ..	
Brigade-Surgeon ..	1 10 0 ..	—	
" aft. 5 years in rank	1 13 0 ..	—	
" aft. 20 years' service	—	1 7 6 ..	
" 30 ..	—	1 10 0 ..	
Deputy Surgeon-General ..	2 0 0 ..	1 15 0 ..	Colonel
Surgeon-General ..	2 15 0 ..	2 0 0 ..	Maj.-General

Surgeons are promoted to be Surgeons-Major on completing twelve years' full-pay service, of which three must have been abroad. Surgeons-Major are promoted to Brigade Surgeons by selection for ability and merit, but must have had eight years' foreign service; and Brigade Surgeons, to be eligible for selection as Deputy Surgeons-General, must have served abroad at least ten years, of which three must have been in India. All officers under the rank of Deputy Surgeon-General are placed on the retired list at the age of fifty-five, and those of that rank and Surgeons-General at the age of sixty.

Medical officers, on the recommendation of a Board, are allowed six months' sick leave on full pay; and this may be extended for a further period of six months on the recommendation of the Director-General. Medical officers on full pay are entitled to quarters and a soldier servant, or a money allowance in lieu thereof; and those having the relative rank of field officer, to forage allowance for one or more horses according to rank.

All applications for information respecting the examinations, and for schedules to be filled up by intending candidates, should be made to the Director-General, Army Medical Department, 6, Whitehall-yard, S.W.

ARMY MEDICAL SCHOOL.

Royal Victoria Hospital, Netley.

All gentlemen who have been successful in the competitive examinations, held twice a year (February and August), in London, for appointments in the medical services of the

Army (British and Indian) and of the Navy, attend subsequently, at the Royal Victoria Hospital, a course of practical instruction in the duties they will have to perform in the public services. The course lasts four months; at the end of the session an examination is held to ascertain the progress made by the candidates, who are afterwards gazetted as surgeons. The Indian and Naval candidates take their seniority according to the aggregate number of marks then gained at both the London and the Netley examinations. The recent Army Medical Warrant has ordained that there shall be no longer any competitive examination at the end of the Netley Course, as heretofore, for the "probationers" of that department; but merely a qualifying or pass examination, empowering the professors of the School to say of each "probationer" that he is either "fit" or "unfit." If "fit" he goes out of Netley with the same marks as he gained at the London examination. He gains no marks from his work at Netley, as heretofore, and as the candidates for the other services do. Competition for the Herbert prize, the Martin Memorial medal, and the Parkes Memorial medal, continues open to the probationers of the Army Medical Department and to the candidates for the Indian and Naval Medical Services. The lectures on Military Surgery include gunshot and other wounds; arrangements for the transport of wounded; duties of army surgeons in the field, during sieges, on transports, &c.; and other special subjects. Those on Military Medicine refer to the tropical and other diseases of the British possessions and colonies, and to the losses by disease in peace and war, at home and abroad. The lectures on Hygiene comprise the examination of water and air, of food, clothing, &c., of the soldier, his duties and exercise, and the circumstances affecting his health; the subjects of meteorology, statistics, and the prevention of the different diseases met with in the army, on home or foreign service. The lectures on Pathology have reference chiefly to Morbid Anatomy and the scientific examination of tropical diseases, and of other complaints which the army surgeon is especially called on to investigate. The candidates also attend the wards of the hospital to study the diseases of invalids under the Professors of Medicine and Surgery, the system of recruiting, and the modes of keeping the army medical returns and records. They are also called on to make post-mortem examinations, to operate on the dead body, and pass through courses of practical instruction in the laboratory on the modes of analysing water and air and of recognising the qualities and adulterations of food, and in the microscope-room on the modes of microscopic examination of morbid tissues and of adulterations of food, &c. Visits are also paid at stated intervals to the lunatic hospital attached to the Royal Victoria Hospital, and instruction is given on the subject of insanity by the surgeon-major in charge.

Candidates for commissions in each branch of the public service, while at Netley, wear uniform, take their meals the Army Medical Department mess, and receive from the Government an allowance towards cost of maintenance.

INDIAN MEDICAL SERVICE.

India Office, St. James's-park, S.W.

All natural-born subjects of Her Majesty, between twenty-two and twenty-eight years of age at the date of examination, and of sound bodily health, may be candidates. They may be married or unmarried. They must possess a diploma in Surgery, or a licence to practise it, as well as a degree in Medicine, or a licence to practise it, in Great Britain or Ireland. They must subscribe and send in to the Military Secretary, India Office, so as to reach that address at least a fortnight before the date fixed for the examination, a declaration containing an attestation that they are ready to proceed on duty immediately on being gazetted, that they labour under no mental or physical disability, and that they possess a recognised degree or licence to practise both Medicine and Surgery. This declaration must be accompanied by proof of age, either by extract from a register of births, or, when such is unattainable, by the candidate's own declaration, form of which can be obtained at the India Office, a certificate of moral character from a magistrate or a minister of the religious denomination to which the candidate belongs, who has personally known him for at least the two years preceding the date of his application; and a certificate of registration, in accordance with the Medical Act of 1858, of the degrees, diplomas and licences possessed by the candidate. The physical fitness of candidates will

be determined by a Medical Board previous to the competitive examination. On producing the foregoing qualifications, the candidate will be examined in the following compulsory subjects:—Anatomy and Physiology, Surgery, Medicine (including Therapeutics and Diseases of Women and Children), Chemistry and Pharmacy, and a practical knowledge of Drugs. The eligibility of each candidate for the Indian Medical Service will be determined by the result of the examinations in these subjects only. Candidates, who desire it, will be examined in French, German, and Hindustani, Comparative Anatomy, Zoology, Natural Philosophy, Physical Geography, and Botany with special reference to *Materia Medica*.

After passing the Preliminary Examination, candidates will be required to attend one entire course of Practical Instruction at the Army Medical School, before being admitted to examination for a commission, on Hygiene, Clinical and Military Medicine, Clinical and Military Surgery, Pathology of Diseases and Injuries incident to Military Service. These courses are to be of not less than four months' duration; but candidates who have already gone through a course at Netley as candidates for the Army or Navy Medical Service may, if thought desirable, be exempted from attending the school a second time. At the conclusion of the course, candidates will be required to pass an examination on the subjects taught in the School. The examination will be conducted by the professors of the School. The position of the candidates on the list of surgeons will be determined by the combined results of the preliminary and of the final examinations, and, so far as the requirements of the service will permit, they will have the choice of Presidency in India, according to their position in that list.

Pay at the rate of 10s. a day will be allowed from date of passing final examination at the Army medical School, until date of embarkation, when a passage is provided, or for a period of two months, when the surgeon is permitted to make his own arrangements for passage. An advance of two months' pay will also be made on embarkation.

N.B.—The examinations for admission to the Indian Medical Service usually take place in February and August.

NAVAL MEDICAL SERVICE.

Admiralty, 9, New-street, Spring-gardens, S.W.

Every candidate desirous of presenting himself for admission to the Naval Medical Service must not be under twenty-one nor over twenty-eight years of age. He must produce a certificate from the district registrar, in which the date of birth is stated; or, if this cannot be obtained, an affidavit from one of the parents or other near relative, who can attest the date of birth will be accepted. He must also produce a certificate of moral character signed by a clergyman or a magistrate, to whom he has been for some years personally known, or by the president or senior professor of the college at which he was educated. The candidate must make a declaration that he labours under no mental or constitutional disease, nor any imperfection or disability that can interfere with the most efficient discharge of the duties of a medical officer in any climate. He must also attest his readiness to engage for general service, and to proceed on foreign service when required to do so. The candidate must be registered under the Medical Act in force at the time of his appointment as licensed to practise medicine and Surgery in Great Britain or Ireland.

Candidates will be examined by the Examining Board in the following subjects:—Anatomy and Physiology; Surgery; Medicine (including Therapeutics and the Diseases of Women and Children); Chemistry and Pharmacy, and a practical knowledge of drugs. (The examination in Medicine and Surgery will be in part practical, and will include operations on the dead body, the application of surgical apparatus, and the examination of medical and surgical patients at the bedside.) Eligibility will be determined by the result of the examinations in these subjects only.

Candidates who desire it will be examined in Comparative Anatomy, Zoology, Natural Philosophy, Physical Geology, and Botany with special reference to *Materia Medica*, also in French and German; and the number of marks gained in these subjects will be added to the total number obtained in the obligatory part of the examination by candidates who shall have been found qualified for admission, and whose position on the list of successful competitors will thus be improved in proportion to the knowledge of these branches of science.

The Medical Student's Class Guide.

TABULAR LIST OF THE CLASSES, LECTURERS, FEES, AND DAYS OF OPERATIONS AT THE LONDON HOSPITALS AND MEDICAL SCHOOLS FOR THE SESSION 1880-81.

LECTURES, ETC.	ST. BARTHOLOMEW'S HOSP. & COL.					CHARING-CROSS HOSP. & COLL.					ST. GEORGE'S HOSPITAL.				
	LECTURERS.	Days and Hours.	FEES.			LECTURERS.	Days and Hours.	FEES.			LECTURERS.	Days and Hours.	FEES.		
			One Course.	Two Courses.	Perpetual.			One Session.	Two Sessions.				One Course.	Two Courses.	Perpetual.
WINTER SESSION.			£ s.	£ s.	£ s.			£ s.	£ s.				£ s.	£ s.	£ s.
ANATOMY AND PHYSIOLOGY	Mr. M. Baker Dr. Klein	M. Tu. Th. 2½	9 9	...	13 2	Dr. Silver	M. Tu. W.	4 4	6 6		Mr. Stirling	Tu. Th. 3 F. 11	7 7	...	8 18*
ANATOMY, DESCRIPTIVE & SURGICAL	Mr. T. Smith Mr. Langton	Tu. W. F. 9	7 7	...	13 2	Mr. Bellamy	M. W. F. 9 Th. 4	4 4	6 6		Mr. Pick	M. W. F. 3	7 7	...	8 18
ANATOMICAL DEMONSTRATIONS	Mr. Cumberbatch Mr. Walsham	Daily, 10½ to 4	...	...	...	Mr. Cantlie	Daily	3 3	5 5		Mr. Margerison	Daily	...	...	...
CHEMISTRY	Dr. Russell	M. W. F. 9	6 16	...	9 9	Mr. Heaton	M. W. Th. 11	5 5	...		Mr. Donkin	T. Th. S. 11½	7 7	...	8 18
MEDICINE	Dr. Andrew Dr. Gee	M. Tu. Th. 3½	6 16	...	9 9	Dr. Pollock	M. W. F. 4	4 4	6 6		Dr. Barclay	Tu. Th. S. 9	7 7	...	8 18
SURGERY	Mr. Savory Mr. Willett	W. F. 2½ S. 9½	6 16	...	9 9	Mr. Barwell	Tu. Th. S. 9	4 4	6 6		Dr. Dickinson Mr. Holmes Mr. Rouse	M. W. F. 9	7 7	...	8 18
HOSPITAL PRACTICE:	Dr. Andrew Dr. Southey Dr. Church Dr. Gee	Tu. Th. S. 6 mths M. Tu. Th. 15 15 M. Tu. Th. 23 12	6 mths	24 mths	Perpet.	Dr. Pollock Dr. Silver Dr. Green	Daily, 1	6 mths	12 mths		Mr. Carter, Oph. Dr. Barclay Dr. Wadham Dr. Dickinson Dr. Whipham	F. 3 Daily, 1	6 mths	2 years	Perpet.
PHYSICIANS	Dr. M. Duncan & Dr. Godson (Obstet.)	F. S. Th. 1½ S. 9	...	...	...	Dr. Bruce Dr. Irvine Dr. Houghton	Tu. F. M. Th. W. S. 1.30	...	...		Dr. Cavafy Dr. Watney	...	...	...	...
ASSISTANT-PHYSICIANS	Dr. Duckworth Dr. Hensley Dr. Brunton Dr. Legg	T. F. 11 W. S. 11 M. Th. 11	...	...	...	Mr. Hird Mr. Barwell Mr. Bellamy	Daily, 1.30	6 mths	12 mths		Mr. Holmes Mr. Rouse Mr. Pick	Daily, 1	6 mths	2 years	Perpet.
SURGEONS	Mr. Holden Mr. Savory Mr. Willett	M. Th. F. S. 19 19	6 mths	12 mths	Perpet.	Mr. Bloxam Mr. Cantlie Mr. Amphlett	M. Th. Tu. F. W. S. 1.30	...	...		Mr. Haward Mr. Bennett Mr. Deut	...	...	...	...
ASSISTANT-SURGEONS	Mr. T. Smith Messrs. Langton, M. Baker Marsh, & Butlin	Daily W. S. 12 M. Th. 12 Tu. F. 12	...	...	...						Ophth. Surg.: Mr. B. Carter	...	...	...	...
CLINICAL MEDICINE	Dr. M. Duncan Mr. Coleman Mrs. Andrew, Southey, Church, and Gee	...	...	...	...	The Physicians and Assistant-Physicians	Weekly	...	...		Dr. Wadham Dr. Dickinson Dr. Barclay (in Summer)	M. 2	...	...	...
CLINICAL SURGERY	Messrs. Holden, Savory, T. Smith, & Willett	Times of Clinical Lectures arranged in accordance with other work	...	...	...	Mr. Hird Mr. Barwell Mr. Bellamy	Weekly	...	...		Mr. Rouse Mr. Pick Mr. Holmes (in Summer)	Tu. 2	...	...	...
CLINICAL MIDWIFERY, &c.	Dr. M. Duncan	...	...	...	...	Dr. Black	T. F. 1.30	...	...		Dr. Barnes	F. 2	...	...	...
DENTAL SURGERY	Mr. Coleman	S. 10	...	...	...	Mr. Fairbank	M. W. F. 9.30 Operations Th. at 2	...	...		Mr. Winterbottom	Tu. 10	...	...	...
SUMMER SESSION.															
MATERIA MEDICA, &c.	Dr. Brunton	Tu. Th. S. 10, W. 11½	6 16	...	7 17	Dr. Bruce	T. Th. S. 9	3 3	...		Dr. Watney	M. W. F. 3	4 14	...	5 15
MIDWIFERY, &c.	Dr. M. Duncan	T. W. F. S. 8½	5 5	...	6 6	Dr. Black	M. 4	3 3	...		Dr. Barnes	M. W. F. 9	4 13	...	5 15
BOTANY	Rev G. Henslow	M. F. 10	4 4	...	5 5	Dr. Houghton	T. Th. W. F. 3	3 3	...		Dr. Owen	T. Th. 3, F. 9	4 13	...	4 14
MEDICAL JURISPRUDENCE	Dr. Southey	M. Tu. S. 9	4 4	...	5 5	Dr. Irvine	M. W. F. 9	3 3	...		Dr. Wadham	Tu. Th. S. 9	4 14	...	5 15
PATHOLOGICAL ANATOMY	Dr. Gee	W. 9½	2 12	...	4 4	Dr. Irvine	M. W. F. 9	...	...		Dr. Owen	...	...	...	...
PRACTICAL CHEMISTRY	Dr. Russell	M. Tu. F. 11 to 1	3 3	...	3 3	Mr. Heaton	M. W. 10 to 1	4 4	...		Mr. Donkin	Daily, 10	4 4	...	...
COMPARATIVE ANATOMY...	Dr. Moore	M. Th. 11	2 12	...	4 4	Mr. Broadbent	...	...	...		Dr. Brailey	M. F. 4	4 4	...	...
PATHOLOGY & MORB. ANAT.	Dr. Legg, Moore & Surg. Regs.	W. 10 12, 2½	...	...	...	Dr. T. H. Green	M. Th. 3 W. 4	3 3	...		Dr. Whipham (in Winter)	Th. 3	3 3	...	...
OPHTHALMIC SURGERY	Mr. Power Mr. Vernon In Winter	Tu. W. 12½ M. 2	2 12	...	4 4	R. W. O. H. Public Health: Mr. Heaton, Dr. Irvine, & Mr. Eassie	...	...	...		Mr. B. Carter	Fr. 3	...	...	...
PSYCHOLOGY	Dr. Clay Shaw	...	2 12	...	4 4	Dr. Winslow	M. ...	...	...		Pract. Med.: Dr. Whipham	T. Th. S. 9 in Summer	4 4	...	...
DENTAL SURGERY	Mr. Coleman	...	2 12	...	4 4	Mr. Fairbank	...	...	...		Dr. Blandford	Tu. 3	...	...	...
PRACTICAL SURGERY	Mr. Butlin (and in Winter)	...	...	...	...	Mr. Bloxam Mr. Cantlie Mr. Amphlett	...	...	...		Mr. Winterbottom Mr. Haward	M. W. F. 3	4 4	...	...
PRACTICAL PHYSIOLOGY	Dr. Harris (and in Winter)	...	7 7	...	...	Dr. Silver Dr. Colquhoun Dr. Smith	...	2 2	...		Mr. Bennett (in Winter)	Tu. Th. S. 10	3 3	...	...
PRACTICAL PHARMACY	Apoth. Depart.	...	...	...	...	Mr. Sandall	Daily	...	...		Mr. Bennett	M. W. F. 3 in Summer	3 3	...	...
OPERATIVE SURG. (DEMONSTR.)	Mr. Cumberbatch Mr. Walsham	...	5 5	...	...	Mr. Bloxam	...	...	...		Mr. Dalby	W. 2	...	...	...
DISEASES OF THE EAR	Mr. Langton	F. 2½	...	...	...	Dr. Sangster	M. Th. 1.30	...	...		Dr. Cavafy	Th. 1	...	...	...
DISEASES OF THE SKIN	Mr. M. Baker	F. 1½	...	...	...	...	...	...	...		Mr. Bennett	...	...	...	...
ORTHOPÆDIC SURGERY	Mr. Marsh	F. 12½	...	...	...	...	...	...	...		[Dis. Throat: Dr. Whipham]	Th. 2	...	...	...
Fee for all Lectures and Hosp. Med. and Surg. Practice	...	...	...	...	131 5	...	...	...	...	£91 7	...	...	...	...	125 0

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PHYSIOLOGY	Dr. Pye-Smith	M. W. F. 4½	7 7	...	...	Dr. Gerald Yeo	Daily, 12½	8 8	...	11 11	
ANATOMY, DESCRIPTIVE & SURGICAL	Mr. Howse	Tu. W. Th. F. 9	7 7	...	...	Dr. Curnow	Daily, 9	9 9	...	12 12	
ANATOMICAL DEMONSTRATIONS... ..	Mr. Davies-Colley	Daily, 9 to 4	7 7	...	...	Dr. Curnow (Prac. Anat. only)	Daily	6 6	...	9 9	
CHEMISTRY	Dr. Carrington	Tu. Th. S. 11	7 7	...	...	Mr. Bloxam	M. W. Th. 10½	8 8	...	11 11	
	Dr. Horrocks					Mr. Thompson					
	Dr. Debus					Dr. Beale	M. Th. 4, W. 6	8 8	...	9 9	
	Dr. Stevenson					Mr. H. Smith	Tu. W. Th. 4	8 8	...	9 9	
MEDICINE	Dr. Wilks	M. W. F. 3	7 7	...	...	Mr. H. Smith	...	3 3	...	5 5	
SURGERY	Mr. Bryant	Tu. Th. 3½	7 7	...	...	Dr. G. Johnson	M. Th. 2	6 mths	12 mths	Perpet.	
PRACTICAL SURGERY... ..	Mr. A. E. Durham	S. 2½	4 4	...	...	Dr. Beale	Tu. F. 2	9 9	12 12	31 10	
	Mr. Lucas	...	3 mths	10 10	...	Dr. Duffin	W. S. 2				
HOSPITAL PRACTICE:	Dr. Owen Rees (cons.)					Dr. Playfair (acc.)	Tu. Th. S. 1½				
Physicians... ..	Drs. Habershon, Wilks, Pavy, and Moxon	M. Th. S. } 1½	6 mths	15 15	...	Dr. Burney Yeo	M. Th. 1½				
	Dr. Hicks (obst.)	M. Th. F. }	1 year	24 3	...	Dr. Hayes (accou.)	M. W. F. 1½				
ASSISTANT-PHYSICIANS'	Drs. Fagge, Pye-Smith, Goodhart, F. Taylor, & Galabin (obst.)	M. Th. S. } Out-patients at 12	Perp.	31 10	...	Drs. Ferrier, Curnow, & Baxter	Tu. F. 1 W. S. 1				
	Messrs. Cock, Birkett (cons.), Forster, Bryant, Durham, & Howse	M. Th. S. } 1½	3 mths	10 10	...	Mr. Wood	Tu. Th. S. 1½	6 mths	12 mths	Perpet.	
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	Mr. Higgins (asst.)	Tu. F. }	6 mths	15 15	...	Mr. Bell	Tu. F. 1				
	Mr. Moon (dent.)	Tu. Th. F. }	1 year	24 3	...	Mr. S.H. Cartwright (surg.-dentist)	Tu. F. 10				
ASSISTANT-SURGEONS	Mr. Davies-Colley	Tu. F. }	Perp.	31 10	...	Mr. Soelberg Wells (ophthalmic)	Tu. Th. S. 1				
	Mr. Lucas	W. Th. }	...	...	...	Mr. Rose	W. S. 1				
	Mr. Golding-Bird	M. S. }	...	...	...	Mr. Cheyne	M. Th. 1				
	Mr. Jacobson	S. 1½	...	...	...						
CLINICAL MEDICINE	In Summer: Drs. Fagge, Pye-Smith, F. Taylor, & Goodhart	W. 1½	...	...	...	Dr. Duffin	Alt. F. 3				
	Mr. Forster	W. 1½	...	...	...	Dr. G. Johnson	Alt. M. 3				
	Mr. Bryant					Dr. Beale	Alt. Tu. 3				
CLINICAL SURGERY	In Summer: Mr. Davies-Colley	F. 1½	...	...	...	Mr. Wood	Tu. Th. 3				
	Mr. Lucas					Mr. Lister	M. F. 1½				
	Mr. Golding-Bird										
	Mr. Jacobson										
CLINICAL MIDWIFERY	Dr. Hicks	W. 1½	...	...	...	Dr. Playfair	Alt. Th. 3				
	Dr. Galabin	Operations Tu. F. at 1½ On the Eye, M. F. 1½	...	...	...		Operations W. 1½ Sat. at 1½				
SUMMER SESSION.											
MATERIA MEDICA & THERAPEUTICS	Dr. Moxon	Tu. Th. F. 3	5 5	...	...	Dr. Baxter	Tu. W. Th. F. 9	5 5	...	6 6	
MIDWIFERY, &c.	Dr. Hicks	Tu. W. Th. F. 9 A.M.	7 7	...	...	Dr. Playfair	Tu. W. Th. F. 9	5 5	...	6 6	
BOTANY	Mr. Bettany	Tu. Th. S. 11½	5 5	...	...	Mr. Bentley	M. Tu. Th. F. 12½	4 4	...	6 6	
MEDICAL JURISPRUDENCE	Dr. Stevenson	Tu. Th. S. 10	5 5	...	...	Dr. Ferrier	M. Tu. W. F. 4	5 5	...	6 6	
DISEASES OF WOMEN	Dr. Galabin	M. 3	...	...	...	Mr. C. L. Bloxam	M. W. Th. 10½	6 6	...	8 8	
PRACTICAL CHEMISTRY	Dr. Debus	M. W. F.									

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PHYSIOLOGY	Mr. McCarthy	M. Th. S. 9 A.M.	4	4	... 6	Mr. Pye	M. W. F. 12	4	4		Mr. Lowne	M. W. F. 9	6	6	... 8			
EXPERIMENTAL PHYSIOL.	"	"	"	"	"	Dr. Shepherd	Tu.W.F.10	4	4		Mr. Lowne (in Summer)	M. W. Th. 9	4	4	... 5			
PHYSIOL. & MORBID ANAT.	"	"	"	"	"	Dr. Cheadle	M. Th. 2½	4	4		Dr. Coupland	M. Th. 4½	"	"	"			
ANATOMY, DESCRIPTIVE & SURGICAL.	Mr. Rivington	M. 3, Tu. W.F. 9, 10	5	5	... 8	Mr. Edm. Owen	M. Tu. Th. F. 9	7	17		Mr. H. Morris	M. Tu. Th. F. 4 or 4½	8	8	... 12			
ANATOMICAL DEMONSTRATIONS.	[Privat. Anat.] Mr. F. Treves	Daily, 10 to 4 (exc S. aft.)	5	5	... 8	Mr. Juler & Mr. Spicer (asst demonstr.)	M. Tu. Th. M. W. Th.	"	"		Mr. Hensman Mr. Sutton	Daily 9 till 4	6	6	... 8			
CHEMISTRY	Dr. Tidy	M. W. F. 10	7	7		Dr. Wright	S. 9 A.M.	6	16		Mr. W. Foster	M. W. Th. F. 3 or 3½	6	6	... 8			
MEDICINE	Dr. Stephen Mackenzie	M. W. F. 4	5	5	... 6	Dr. Broadbent	M. W. T. 4	"	"		Dr. Cayley	Tu. Th. S. 9	6	6	... 8			
OBSTETRICS	Mr. Adams	Tu. Th. 4 S. 10 A.M.	5	5	... 6	Mr. J. R. Lane	Tu. F. 4	5	5		Mr. Hulke	M. W. Th. 3½	6	6	... 8			
PRACTICAL SURGERY...	Mr. Reeves	Tu. S.	"	"	"	Mr. Norton Mr. Page	M. Th. 11	"	"		Mr. Lawson Mr. A. Clark	M. W. 3 or 3½	6	6				
HOSPITAL PRACTICE:	Dr. A. Clark	Daily, 2	6	12	Un-	Dr. H. Jones	M. Th. 1½	6	12	Per-	Dr. W. Cayley	Daily, 1½	3	12	Perp.			
PHYSICIANS	Dr. Down	"	10	10	mths	Dr. Sieveking	Tu. F. 1½	9	9	mths	Dr. R. King	Daily, 1½	5	8	for			
	Dr. Sutton	Daily, 2	"	"	"	Dr. Broadbent	W. S. 1½	9	15	26	Dr. Coupland	"	"	"	Med.&			
	Dr. Fenwick	"	"	"	"	Dr. A. Meadows	Tu. F. 9½	"	"	"	Dr. J. H. Davis	Tu. F. 1½	"	"	Surg.			
	Dr. Palfrey	M. Th. 1½	"	"	"	(obst.)	"	"	"	"	Dr. Edis	W. S. 1	"	"	Prac.			
	Dr. S. Mackenzie	"	"	"	"	Dr. Cheadle,	Tu. F. 1	"	"	"	Dr. D. Powell	M. W. 9	"	"	"			
ASSISTANT-PHYSICIANS...	Dr. A. E. Sansom	"	"	"	"	Shepherd, David Lees, & Wiltshire (obs.)	W. S. 1 M. Th. 1 Tu. F. 1½	"	"	"	Dr. D. Pinalay	Tu. 3½ F. 9 Th. 9	"	"	"			
	Dr. G. Smith	"	"	"	"	"	"	"	"	"	Dr. Fowler	S. 8½	"	"	"			
	Dr. F. Warner	"	"	"	"	"	"	"	"	"	Mr. Hulke	M. Th. 1½	3	12	Perp.			
	Dr. Baile	Daily, 2	6	18	3	Mr. H. Walton	M. Th. 1½	6	"	Per-	Mr. G. Lawson	M. Th. 1½	mths	mths	et.			
	Mr. Hutchinson	"	10	15	26	Mr. J. R. Lane	W. S. 1½	11	11	38	Mr. Morris	Tu. F. 1½	5	8	25			
	Mr. Couper	"	"	"	"	Mr. Norton	Tu. F. 1½	"	"	"	Mr. Turner	Daily	"	"	"			
	Mr. Rivington	"	"	"	"	Mr. H. Walton	M. Th. 1½	"	"	"	(dental)	9.30 A.M.	"	"	"			
	Mr. J. E. Adams	"	"	"	"	Mr. Field (aur.)	Tu. F. 2	"	"	"	Mr. Critchett	W. S.	"	"	"			
	Mr. W. Tay	Daily, 1½	"	"	"	Mr. Hayward	W. S. 9½	"	"	"	(ophthal.)	8.30	"	"	"			
	Mr. McCarthy	"	"	"	"	"	"	"	"	"	"	"	"	"	"			
	Mr. Barrett, dent	Tu. 9	"	"	"	"	"	"	"	"	"	"	"	"	"			
ASSISTANT-SURGEOONS	Mr. Reeves	Dail y, 1½	"	"	"	Mr. Edm. Owen	Tu. F. 1	"	"	"	Mr. And. Clark	M. Th. 1	"	"	"			
	Mr. F. Treves	"	"	"	"	Mr. Page	M. Th. 1	"	"	"	Mr. R. Lyell	Tu. F. 1	"	"	"			
	"	"	"	"	"	Mr. Pye	W. S. 10	"	"	"	"	"	"	"	"			
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PRACTICAL PHYSIOLOGY AND HISTOLOGY	Dr. T. C. Charles	Tu. W. F. 12½			Daily, 12	6 8	...	Dr. Murrell (& in Summer)	Tu. W. F. 1 to 3	7 7 ...	
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	Mr. Rainey	Daily, 10 to 4									
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CHEMISTRY ...	Dr. A. J. Bernays	T. Th. F. 10				Dr. Ringer	Daily, (ex. M. & S.) 9	9 9 11 11	Dr. Fincham	M. W. Th. 3	5 5 7 7
MEDICINE ...	Dr. Bristowe	M. Th. F. 9				Mr. Marshall	Tu. W. F. 4	7 7 8 8	Dr. Sturges	Tu. Th. 4	5 5 7 7
SURGERY ...	Mr. S. Jones	M. or Tu. Th. F. 5		Mr. Foster	W. F. 6	6 6	Mr. Cowell	Tu. Th. 4	5 5 7 7		
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	Mr. Croft	...		Dr. Williams (obst.)	...	...	Dr. Hall	Tu. F. 11	...		
	Mr. Mac Cormac	...		Mr. R. Quain	Daily, 1 & 2	...	Mr. Cowell	M. Th. 11	12		
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		...		Mr. T. W. Jones	...	...	W. S. 9½	...	21 0		
		...		Mr. Streetfield (ophth.)	...	...	[Ophth. Prac.]	M. Th. 3	...		
		...		Mr. Ibbetson (dent.)	...	...	[Orthopaedic]	F. 2½	...		
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	The Physicians	After visits		Mr. Barker	...	...	[Skin: Mr Bond]	M. Th. 11	...		
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CLINICAL MIDWIFERY, &c. ...	Dr. Gervis	Tu. 4 Operations, W. S. 1½			By the Surgeons	...	Dr. Fincham	...	...		
	[Vac. Dr. Cory, W. 11½.]	oph. F. 2			Dr. G. Hewitt	...	Dr. Sturges	Weekly	...		
					Dr. Williams	...	Dr. Allchin	...	...		
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MIDWIFERY, &c. ...	Dr. Gervis	M. Tu. Th. F. 4		Dr. Hewitt	Daily, (ex. M. Th.) 9	6 6 7 7	Dr. Potter	F. 3	...		
BOTANY ...	Mr. A. W. Bennett	Tu. W. S. 10		Prof. Oliver	Daily, (ex. S.) 8	3 13 5 5	Dr. Hebb	P. mort. exam. 2	...		
MEDICAL JURISPRUDENCE ...	Dr. Payne	Tu. Th. S. 9		Dr. Maudsley	Tu. W. Th. F. 10	5 5 6 6	[Minor Surg. & Bandaging by Mr. Gould, in Summer]	Operations, Tu. at 2	...		
PRACTICAL CHEMISTRY ...	Dr. Cory	M. Th. F. 10 to 12		Dr. Williamson	Daily, (ex. M.						

[illegible]

LECTURES, ETC.

LECTURES, ETC.			DURHAM UNIVERSITY COLLEGE OF MEDICINE, NEWCASTLE-ON-TYNE.				LIVERPOOL ROYAL INFIRMARY SCHOOL OF MEDICINE.				OWENS COLLEGE (MANCHESTER ROY.) SCHOOL OF MEDICINE.				SHEFFIELD SCHOOL OF MEDICINE.			
			Lecturers.	Days and Hours.	FEES.		Lecturers.	Days and Hours.	FEES.		Lecturers.	Days and Hours.	FEES.		Lecturers.	Days and Hours.	FEES.	
					One Course.	—											One Course.	
WINTER SESSION.			PHYSIOLOGY	...	...	...	Dr. Drummond	M. Th. F. 3	£ s. 4 4	...	Dr. Caton	Tu. Th. S. 9½	£ s. 4 4	...	{ Dr. Dryon Mr. James }	M. W. 12½ W. Th. 4	£ s. 3 3	
			PRACTICAL PHYSIOLOGY	...	...	...	Dr. Oliver (in Summer)	Tu. W. Th. 2½	4 4	...	Mr. Paul (Demonstrator)	W. 2, F. 9½	5 5	...	Dr. Gwynne	...	3 3	
			ANATOMY, DESCRIPTIVE & SURGICAL...	...	...	...	Mr. J. Russell	M. W. F. S. 8½ A.M.	4 4	...	Mr. Banks	Daily, 11	4 4	...	Mr. E. Skimer	M. W. F. 6	4 4	
			ANATOMICAL DEMONSTRATIONS	...	...	...	Mr. Mears	Daily, from 10 to 4	4 4	...	Mr. Briggs	...	3 3	...	Mr. R. J. P. Smith	Tu. Th. 5	2 2	
			CHEMISTRY	...	...	...	Prof. Marreco	M. Tu. F. 12-5	5 5	...	Dr. Brown	M. Tu. Th. F. 3	5 5	...	Dr. Davison	M. W. F. 4	4 4	
			MEDICINE	...	...	...	Prof. Philipson	M. W. F. 5	4 4	...	Dr. Waters	M. W. F. 9½	4 4	...	Mr. Allen	M. W. F. 11½	2 2	
			SURGERY	...	...	...	Dr. Heath	M. W. F. 6	4 4	...	Mr. Parker	M. W. Th. 3	4 4	...	Drs. Bartolomé, Barham & Thomas	M. W. F. 5	4 4	
			PRACTICAL SURGERY	...	...	...	Dr. Heath	...	4 4	...	...	M. Th. 4	4 4	...	Mr. W. F. F. 8 A.M.	M. W. F. 4	4 4	
			PATHOLOGY	...	...	...	...	...	...	...	Dr. Davidson	Tu. 4	3 3	...	Dr. House-Surg. at the Infirmary	...	...	
			PUBLIC HEALTH	...	...	...	Mr. Armstrong	T. 3	4 4	...	Dr. Dreschfeld	Tu. 4	3 3	...	Dr. Drew	...	...	
SUMMER SESSION.			HOSPITAL PRACTICE:	...	...	...	NEWCASTLE INFIRMARY.	...	...	...	LIVERPOOL ROYAL INFIRMARY.	...	...	GEN. INFIRMARY.	...	...		
			PHYSICIANS	...	...	...	{ Dr. Philipson Dr. Drummond Dr. Oliver }	Each twice weekly, 11	6 months, £7 7	...	Dr. Waters	12 to 2½	6 mon. 5 5	...	Dr. Bartolomé	T. Th. S. 11	£10 10	
			SURGEONS	...	...	...	{ Dr. Heath Dr. Armstrong Dr. Hume }	Each twice weekly, 10	5 5	...	Dr. Glynn	12 to 2½	6 6	...	Dr. Law	M. W. S. 11	£16 16	
			ASSISTANT-SURGEONS	...	...	...	Dr. Page	Once weekly, 11	...	...	Mr. Bickersteth	12 to 2½	6 mon. 6 6	...	Dr. Banham	S. 11½	£6 6	
				...	...	...	Mr. T. A. Dodd	...	...	...	Mr. Banks	...	8 8	...	Messrs. Barber, Favell & A. Jackson	...	...	
				...	...	...	[Therapeutics: Dr. Barron]	...	...	...	Mr. Parker	...	...	...	Pub. Hosp. & Disp.	...	...	
			MATERIA MEDICA	...	...	...	Mr. McBean	M. W. 3	4 4	...	Dr. Carter	Tu. Th. S. 9 A.M.	4 4	...	Dr. Young	M. W. F. 8 A.M.	3 3	
			MIDWIFERY, &c.	...	...	...	Dr. Neahan	Daily, 9 A.M.	4 4	...	Dr. Wallacet	M. Tu. Th. F. 11	4 4	...	Dr. Hine	M. W. F. 8 P.M.	3 3	
			GYNÆCOLOGY	...	...	...	Dr. Gibson	Tu. Th. F. 4	4 4	...	Dr. Gee (Gaid. d. d.)	M. W. F. 3	3 3	...	Mr. Birks	Tu. Th. 8	3 3	
			MEDICAL JURISPRUDENCE	...	...	...	Dr. Murphy	Tu. Th. F. 3	4 4	...	Dr. Shewart	M. W. F. 3	3 3	...	Mr. Harrison	Tu. Th. 5	3 3	
			PRACTICAL CHEMISTRY	...	...	...	Prof. Marreco	Daily, 10 to 6	4 4	...	Dr. Brown	M. Tu. Th. 10	3 3	...	Mr. Bell	M. W. F. 11	3 3	
			COMPARATIVE ANATOMY	...	...	...	Dr. Brady	T. F. 4½	4 4	...	Dr. Dickinson	Twice wky.	3 3	...	Mr. Allen	...	...	
			PATHOLOGY & MORBID ANATOMY	...	...	...	Dr. Gibb	W. 10 A.M.	4 4	...	Mr. Paul (Path. Histol.)	Once weekly	1 1	...	The House Surg. at the Infirmary	...	...	
			OPHTHALMIC SURGERY	...	...	...	Mr. Wickham	...	...	...	Mr. Wallcot	W. 4	1 1	...	Mr. Suell	W. 12½	3 3	
			DENTAL SURGERY & MECHANICS	...	...	...	Mr. Stewart	...	...	...	Mr. Shupe	...	...	...	Dr. Merryweather	...	...	
			OPERATIVE SURGERY	...	...	...	Dr. Arms Tong	...	...	...	Mr. P. arker	Thrice wky.	2 2	...	Mr. Favell	Tu. 8 P.M.	3 3	
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WINTER SESSION.	ANATOMY, DEMONSTRATIONS, &c.	Dr. Struthers	11, 9	5 5	Mr. Turner	1, 4	...	9 to 4	Dr. Handyside	9 to 4	Dr. J. Cleland	11, 2	6 6	Dr. A. M. Buchanan	11, 4	4 4			
	CHEMISTRY (PRACTICAL, &c.) ...	Mr. Brazier	3	3 3	Dr. Crum Brown (Adv. Class in Sun.)	10	7 7	10	Dr. S. Macadam, Messrs. King, Macadam, Dr. Cruikwater, & Buchanan	10	Mr. J. Ferguson	10	3 3	Mr. Dittmar	10	2 2			
	PHYSIOLOGY (INST. OF MEDICINE) ...	Dr. Stirling (Pract. in Summer)	2	3 3	Dr. Rutherford	11	4 4	11	Dr. James S.	3 5	Dr. McKendrick	12	3 3	Dr. McVail (Practical S.) (In Infirmary)	5	2 2			
	GENERAL PATHOLOGY, &c. ...	Dr. Rodger	...	2 2	Dr. Sanders	9	4 4	9	Dr. J. Hunter	3 5	Dr. Gairdner	3	3 3	Dr. Gemmell	5	...			
SUMMER SESSION.	COMPARATIVE ANATOMY ...	Dr. Smith-Shand	3	3 3	Dr. Grainger-Stewart	4	4 4	3 5	Dr. J. Wyllie	3 5	Dr. Macleod	11	3 3	Dr. Dunlop	3	2 2			
	PRACTICAL CHEMISTRY ...	Mr. Pirrie	10	3 3	Mr. Spence	10	4 4	10	Dr. P. H. Watson	3 5	Dr. Macleod	1	3 3	[Dental Practice daily, 8 A.M.]	3	2 2			
	DISEASES OF THE EYE ...	Dr. A. D. Davidson	...	1 1	Dr. T. R. Fraser	10	3 3	9 4	Dr. John Duncan	3 5	Dr. Monnet & Craig	12	3 3	Dr. Morton	4	2 2			
	DISEASES OF CHILDREN ...	Dr. Stephenson	4	3 3	Dr. Simpson (Dis. Wom. & Child.)	11	4 4	11	Dr. A. G. Hunter	3 5	Dr. A. Macdonald	3 5	3 3	Dr. J. G. Wilson	3	2 2			
BOTANY	...	...	4	3 3	Dr. Simpson (Dis. Wom. & Child.)	11	4 4	2	Dr. Littlejohn	2	Dr. Simpson	11	3 3	Dr. Alex. Lindsay	4	2 2			
	...	...	4	3 3	Dr. D. Macdonald (in summer only)	11	4 4	3 5	Dr. Husbands	3 5	Dr. Young	9	3 3	In Infirmary	...	...			
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* With Prac. Instruction at an Asylum (Mon. Wed. Fri.), £3 3s.

TABULAR LIST OF THE CLASSES, LECTURERS ETC., AND FEES, AT THE MEDICAL SCHOOLS OF IRELAND, FOR THE SESSION 1880-81.

LECTURES, ETC.	DUBLIN UNIVERSITY.		DUBLIN R. C. OF SURGEONS.		DR. STEEVENS' HOSP. AND MED. COLL., DUBLIN.		DUBLIN CAR-MICHAEL COLL.		DUBLIN CATHOLIC UNIVERSITY.		CORK, QUEEN'S COLLEGE.		BELFAST, QUEEN'S COLLEGE.		GALWAY, QUEEN'S COLLEGE.	
	LECTURERS.	FEES.	LECTURERS.	FEES.	LECTURERS.	FEES.	LECTURERS.	FEES.	LECTURERS.	FEES.	LECTURERS.	FEES.	LECTURERS.	FEES.	LECTURERS.	FEES.
	Days & Hours.	First Course.	Days & Hours.	First Course.	Days & Hours.	First Course.	Days & Hours.	First Course.	Days & Hours.	First Course.	Days & Hours.	First Course.	Days & Hours.	First Course.	Days & Hours.	First Course.
ANATOMY AND PHYSIOLOGY	Dr. Macalister (chirurgery)	3 3	Mr. Hamilton 10	3 3	Dr. R. J. Harvey† daily (ex. S.) 2	Dr. Hayden (ex. S.) 12	Dr. Hayden (ex. S.) 12	Dr. Hayden (ex. S.) 12	Dr. Hayden (ex. S.) 12	Dr. Hayden (ex. S.) 12	Dr. J. J. Charles (ex. S.) 12	Dr. P. Redfern (ex. S.) 2	Dr. P. Redfern (ex. S.) 2	Dr. P. Redfern (ex. S.) 2	Dr. P. Redfern (ex. S.) 2	Dr. P. Redfern (ex. S.) 2
ANATOMY, DESCRIPTIVE & SURGICAL	Mr. Bookey 1	3 3	Mr. Bookey 1	3 3	Dr. Henson, M. W. F.	Dr. Henson, M. W. F.	Dr. Henson, M. W. F.	Dr. Henson, M. W. F.	Dr. Henson, M. W. F.	Dr. Henson, M. W. F.	Dr. Henson, M. W. F.	Dr. Henson, M. W. F.	Dr. Henson, M. W. F.	Dr. Henson, M. W. F.	Dr. Henson, M. W. F.	Dr. Henson, M. W. F.
PRACTICAL ANATOMY AND DISSECTIONS	Dr. Little	5 5	Mr. Bookey 1	5 5	Dr. Stoney daily (ex. S.) 1	Dr. Stoney daily (ex. S.) 1	Dr. Stoney daily (ex. S.) 1	Dr. Stoney daily (ex. S.) 1	Dr. Stoney daily (ex. S.) 1	Dr. Stoney daily (ex. S.) 1	Dr. Stoney daily (ex. S.) 1	Dr. Stoney daily (ex. S.) 1	Dr. Stoney daily (ex. S.) 1	Dr. Stoney daily (ex. S.) 1	Dr. Stoney daily (ex. S.) 1	Dr. Stoney daily (ex. S.) 1
CHEMISTRY	Dr. Reynolds	3 3	Mr. McHugh 12	3 3	Dr. Tichborne Tu. Th. S. 3	Dr. Tichborne Tu. Th. S. 3	Dr. Tichborne Tu. Th. S. 3	Dr. Tichborne Tu. Th. S. 3	Dr. Tichborne Tu. Th. S. 3	Dr. Tichborne Tu. Th. S. 3	Dr. Tichborne Tu. Th. S. 3	Dr. Tichborne Tu. Th. S. 3	Dr. Tichborne Tu. Th. S. 3	Dr. Tichborne Tu. Th. S. 3	Dr. Tichborne Tu. Th. S. 3	Dr. Tichborne Tu. Th. S. 3
PRACTICAL CHEMISTRY	Dr. Reynolds	3 3	Mr. McHugh 12	3 3	Dr. Tichborne Tu. Th. S. 3	Dr. Tichborne Tu. Th. S. 3	Dr. Tichborne Tu. Th. S. 3	Dr. Tichborne Tu. Th. S. 3	Dr. Tichborne Tu. Th. S. 3	Dr. Tichborne Tu. Th. S. 3	Dr. Tichborne Tu. Th. S. 3	Dr. Tichborne Tu. Th. S. 3	Dr. Tichborne Tu. Th. S. 3	Dr. Tichborne Tu. Th. S. 3	Dr. Tichborne Tu. Th. S. 3	Dr. Tichborne Tu. Th. S. 3
MATERIA MEDICA AND PHARMACY	Dr. Aquila Smith	3 3	Dr. Fox 3 3	3 3	Dr. Duffell (in Summer)	Dr. Duffell (in Summer)	Dr. Duffell (in Summer)	Dr. Duffell (in Summer)	Dr. Duffell (in Summer)	Dr. Duffell (in Summer)	Dr. Duffell (in Summer)	Dr. Duffell (in Summer)	Dr. Duffell (in Summer)	Dr. Duffell (in Summer)	Dr. Duffell (in Summer)	Dr. Duffell (in Summer)
BOTANY AND ZOOLOGY	Prof. Wright	3 3	Dr. Penland (in Summer)	3 3	Dr. McNab (in Summer)	Dr. McNab (in Summer)	Dr. McNab (in Summer)	Dr. McNab (in Summer)	Dr. McNab (in Summer)	Dr. McNab (in Summer)	Dr. McNab (in Summer)	Dr. McNab (in Summer)	Dr. McNab (in Summer)	Dr. McNab (in Summer)	Dr. McNab (in Summer)	Dr. McNab (in Summer)
INSTITUTES OF MEDICINE AND PATHOLOGY	Dr. Purser	...	Histology: Dr. Bookey	...	Dr. Woodhouse (in Sum.)	Dr. Woodhouse (in Sum.)	Dr. Woodhouse (in Sum.)	Dr. Woodhouse (in Sum.)	Dr. Woodhouse (in Sum.)	Dr. Woodhouse (in Sum.)	Dr. Woodhouse (in Sum.)	Dr. Woodhouse (in Sum.)	Dr. Woodhouse (in Sum.)	Dr. Woodhouse (in Sum.)	Dr. Woodhouse (in Sum.)	Dr. Woodhouse (in Sum.)
NATURAL PHILOSOPHY	Prof. Leslie	...	Mr. McHugh (in Summer)	...	HOUSE OF IMPRISONMENT, ADELPHI, M. W. F. 3	HOUSE OF IMPRISONMENT, ADELPHI, M. W. F. 3	HOUSE OF IMPRISONMENT, ADELPHI, M. W. F. 3	HOUSE OF IMPRISONMENT, ADELPHI, M. W. F. 3	HOUSE OF IMPRISONMENT, ADELPHI, M. W. F. 3	HOUSE OF IMPRISONMENT, ADELPHI, M. W. F. 3	HOUSE OF IMPRISONMENT, ADELPHI, M. W. F. 3	HOUSE OF IMPRISONMENT, ADELPHI, M. W. F. 3	HOUSE OF IMPRISONMENT, ADELPHI, M. W. F. 3	HOUSE OF IMPRISONMENT, ADELPHI, M. W. F. 3	HOUSE OF IMPRISONMENT, ADELPHI, M. W. F. 3	HOUSE OF IMPRISONMENT, ADELPHI, M. W. F. 3
HOSPITAL PRACTICE	SIR P. DUNN, OR OTHER DUBLIN HOSPITAL.	...	Dr. Little	...	Dr. Little	Dr. Little	Dr. Little	Dr. Little	Dr. Little	Dr. Little	Dr. Little	Dr. Little	Dr. Little	Dr. Little	Dr. Little	Dr. Little
CLINICAL LECTURES	...	...	Dr. Little	...	Dr. Little	Dr. Little	Dr. Little	Dr. Little	Dr. Little	Dr. Little	Dr. Little	Dr. Little	Dr. Little	Dr. Little	Dr. Little	Dr. Little
SURGERY	Dr. E. H. Bennett	3 3	Mr. Colles 11	3 3	Mr. Colles 11	Mr. Colles 11	Mr. Colles 11	Mr. Colles 11	Mr. Colles 11	Mr. Colles 11	Mr. Colles 11	Mr. Colles 11	Mr. Colles 11	Mr. Colles 11	Mr. Colles 11	Mr. Colles 11
MIDWIFERY, &c.	Dr. Sinclair	3 3	Dr. Isdell (thrice weekly)	3 3	Dr. Jennings Tu. Th. S. 12	Dr. Jennings Tu. Th. S. 12	Dr. Jennings Tu. Th. S. 12	Dr. Jennings Tu. Th. S. 12	Dr. Jennings Tu. Th. S. 12	Dr. Jennings Tu. Th. S. 12	Dr. Jennings Tu. Th. S. 12	Dr. Jennings Tu. Th. S. 12	Dr. Jennings Tu. Th. S. 12	Dr. Jennings Tu. Th. S. 12	Dr. Jennings Tu. Th. S. 12	Dr. Jennings Tu. Th. S. 12
MEDICINE	Dr. Moore	3 3	Dr. Grimeshaw 11	3 3	Dr. Moore M. W. F. 3	Dr. Moore M. W. F. 3	Dr. Moore M. W. F. 3	Dr. Moore M. W. F. 3	Dr. Moore M. W. F. 3	Dr. Moore M. W. F. 3	Dr. Moore M. W. F. 3	Dr. Moore M. W. F. 3	Dr. Moore M. W. F. 3	Dr. Moore M. W. F. 3	Dr. Moore M. W. F. 3	Dr. Moore M. W. F. 3
MEDICAL JURISPRUDENCE	Dr. Travers	...	Dr. Tweedy (in Summer)	...	Dr. Auchinleck (in Summer)	Dr. Auchinleck (in Summer)	Dr. Auchinleck (in Summer)	Dr. Auchinleck (in Summer)	Dr. Auchinleck (in Summer)	Dr. Auchinleck (in Summer)	Dr. Auchinleck (in Summer)	Dr. Auchinleck (in Summer)	Dr. Auchinleck (in Summer)	Dr. Auchinleck (in Summer)	Dr. Auchinleck (in Summer)	Dr. Auchinleck (in Summer)
COMPARATIVE ANATOMY	Prof. Alex. Macalister	...	Mr. Hamilton	...	Mr. Hamilton	Mr. Hamilton	Mr. Hamilton	Mr. Hamilton	Mr. Hamilton	Mr. Hamilton	Mr. Hamilton	Mr. Hamilton	Mr. Hamilton	Mr. Hamilton	Mr. Hamilton	Mr. Hamilton
PRACTICAL PHARMACY	...	...	Mr. W. Carthy	...	Mr. W. Carthy	Mr. W. Carthy	Mr. W. Carthy	Mr. W. Carthy	Mr. W. Carthy	Mr. W. Carthy	Mr. W. Carthy	Mr. W. Carthy	Mr. W. Carthy	Mr. W. Carthy	Mr. W. Carthy	Mr. W. Carthy
LOGIC	The College Tutors	...	Mr. B. Ker (ophth. surg.)	...	Mr. B. Ker (ophth. surg.)	Mr. B. Ker (ophth. surg.)	Mr. B. Ker (ophth. surg.)	Mr. B. Ker (ophth. surg.)	Mr. B. Ker (ophth. surg.)	Mr. B. Ker (ophth. surg.)	Mr. B. Ker (ophth. surg.)	Mr. B. Ker (ophth. surg.)	Mr. B. Ker (ophth. surg.)	Mr. B. Ker (ophth. surg.)	Mr. B. Ker (ophth. surg.)	Mr. B. Ker (ophth. surg.)

* Composition fee, £46 17s. 6d. † Free, Phys. in Summer. ‡ In Summer. § Zoology in Winter; Botany in Summer.

METROPOLITAN HOSPITALS AND MEDICAL SCHOOLS.

ST. BARTHOLOMEW'S HOSPITAL AND COLLEGE.—The clinical practice of the hospital comprises a services of 710 beds, of which 676 are in the hospital at Smithfield, and 34 are for convalescent patients at Lauderdale House, Highgate.

Four house-physicians, four house-surgeons, and a mid-wifery assistant are appointed annually, each of them holding office for one year, and provided with rooms by the hospital authorities. The ophthalmic house-surgeon is appointed for six months, and is eligible for re-election for a second term of six months. The assistant chloroformist is appointed annually, and is provided with rooms. No fee is paid for any of these appointments, and each receives a salary of £25. The clinical clerks, the obstetric clerks, the clerks to the medical out-patients, the dressers to the surgical out-patients, and the dressers in the special departments are chosen from the diligent students. Thirty-two ward-dresserships are given annually to the students who pass the best examination in the subjects of study of the first year. Other ward-dresserships may be obtained by payment of the usual fees.

A college is attached to the hospital, in which students can reside, subject to the college regulations.

Foundation and other Prizes.—Open Scholarships in Science of the value of £130 each, tenable for one year, will be competed for September 25th. Candidates must not be more than twenty-five years of age for one, and twenty-one for the other, and must not have entered to the medical or surgical practice of any metropolitan medical school. The subjects of examination are Physics, Chemistry, Botany, and Zoology.—Preliminary Scientific Exhibition (founded 1873). The subjects of examination are identical with those of the Open Scholarship in Science. This Exhibition, of the value of £50, is tenable for one year. The examination is confined to students of the hospital of less than six months' standing, and will be held October 28th. The Jeaffreson Exhibition, of the value of £50, and tenable for two years, is awarded after examination, beginning September 25th, in the subjects of General Education. It is now an Open Exhibition. A Senior Scholarship, £50, in Anatomy, Physiology, and Chemistry. Lawrence Scholarship, and Gold Medal, of the value of forty guineas (founded in 1873 by the family of the late Sir Wm. Lawrence). Two Brackenbury Scholarships in Medicine and Surgery, £30 each. Junior Scholarships in the subjects of study of the first year: 1st, £50; 2nd, £30; 3rd, £20.

CHARING-CROSS HOSPITAL AND COLLEGE.—The fee for matriculation, which involves no examination, is £2 2s., to be paid on entering. Matriculated students pay proportionately lower fees, and are admitted without additional fee to the special courses in Practical Surgery, the lectures on Psychological Medicine, to the Physiological Laboratory for practical instruction in Histology, and to the practice of the Royal Westminster Ophthalmic Hospital. They alone are entitled to compete for the scholarships, medals, and prizes.

Two Entrance Scholarships, of the value of £30 and £20 respectively, tenable for one year, will be awarded annually in October, after a competitive examination in the following subjects:—*Compulsory*, English, Latin, French or German, Mathematics; *Optional* (only one of which may be selected), Chemistry, Mechanics, German or French, the subjects being those of the matriculation examination of the University of London. Candidates must give notice of their intention to compete on or before Wednesday, Sept. 22nd, 1880. Two scholarships are open for competition among the matriculated students: the Llewellyn Scholarship of £25, for students who have just completed their second year; and the Golding Scholarship of £15, for students who have just completed their first year. The Pereira Prize of £5 is open to all matriculated students, and is awarded annually for the best clinical reports.

The various resident appointments are open to all matriculated students without additional fee.

ST. GEORGE'S HOSPITAL.—Perpetual pupils, by payment of £130 in three instalments, or £125 in one sum, are entitled to admission to the medical and surgical practice; to compete for prizes and exhibitions; to hold the appointments of house-physician and house-surgeon, assistant house-

physician, assistant house-surgeon, ophthalmic assistant, and to become clinical clerks for two periods of three months each, and dressers for similar periods. The house-physician and house-surgeon receive their board and lodging free, and no payment is made for the appointment. Gentlemen are admitted to the hospital practice and lectures required by the Colleges of Physicians and Surgeons and the Society of Apothecaries on payment of £45 at the commencement of the first year of study, £45 at the commencement of the second year of study, £20 for the third, and £20 for the fourth year. These payments entitle the pupil to hold the offices of clinical clerk and dresser for three months each, and to become a candidate for the offices of medical and surgical registrar and demonstrator of anatomy and curator of the museum. These are all salaried offices. The obstetric assistant is resident, with a salary of £100.

Prizes.—The William Brown Exhibition of £100 per annum, tenable for two years, open to any perpetual pupil of St. George's who is under twenty-five years of age, and who shall have obtained a diploma or licence entitling him to be registered as a practitioner of medicine or surgery in England, within two years previous to the period fixed for the examination (July). The examination is to test the proficiency of the candidate in Medicine, Midwifery, and Surgery, including Ophthalmic Surgery. The William Brown Exhibition of £40 per annum, tenable for three years, for general fitness for the exercise of the medical profession, and for moral conduct, open to perpetual pupils in their fourth year of study. Sir Charles Clarke's Prize (interest of £200 Consols) for good conduct. The Brackenbury Prize in Medicine, value nearly £40; the Brackenbury Prize in Surgery, value nearly £40; open to all pupils of the hospital.

GUY'S HOSPITAL.—House-physicians and house-surgeons, obstetric residents, dressers, clinical and other clerks, are selected from the students, according to merit, and without payment. The house-physicians, of whom there are three constantly on duty, one as junior and two as seniors, hold office for six months each, the first two months in the former capacity, the other four in the latter. The duty of the junior house-physician is to attend in the medical out-patient room three times a week, in a room adjoining that occupied by the assistant-physician for the day, and prescribe for those patients who are not seen by the assistant-physician. The senior house-physicians are chiefly occupied in the medical wards, and attend to all emergencies that may arise in the absence of the physicians. They have separate rooms in the clinical building, and are boarded at the charge of the hospital. The house-surgeons, of whom there are also three on duty, hold office for six months each. During the first two months the house-surgeon assists in the out-patient department. During the next two months he has the general superintendence of the surgical casualty department, and assists the senior when required; and subsequently, as senior house-surgeon, he lives in the hospital, being boarded free of expense, and in the absence of the surgeons and assistant-surgeons has the care of the patients in the surgical wards. The dressers are selected from those gentlemen who have completed their third winter session, and who have been most diligent in the junior appointments. They hold office for six months each. Three are attached to each surgeon. During their week of special duty they reside in the hospital, and board with the house-surgeons free of expense. Two obstetric residents reside and are boarded in the hospital.

Scholarships, Prizes, &c.—Open Scholarship of the value of £131 5s. in Arts, Latin, Greek, Mathematics, and modern languages. Open Scholarship of £131 5s. in Science. Subjects: Inorganic Chemistry, Zoology, Botany, Physics (these will be competed for on Friday, September 24th). At the end of the summer session: first prize, £50; second prize, £25; third prize, £10 10s. Subjects: Anatomy, Physiology, Chemistry, Materia Medica, and Botany or Comparative Anatomy.—For Students in their second year: First prize, £25; second prize, £10. Subjects: Anatomy, Physiology. The Sands Cox Scholarship of £15 per annum for three years. Subject: Physiology. The Michael Harris Prize, of £10 for Anatomy.—For students in their third year: First prize, £35; second prize, £20. Subjects: Medicine, Surgery, Midwifery, and Medical Jurisprudence.—For Senior Students: The Treasurer's Gold Medal in Medicine; the Treasurer's Gold Medal in Surgery; the Gurney Hoare Prize of £25, for Clinical Medicine and Surgery. The Beane Scholarship, of thirty guineas, for Pathology. The

Physical Society awards the following prizes: Two of £5 each to the members who send in the best essays on selected subjects; prizes of £10 and £5 for the best papers read before the Society; and one of £5 to the member who has most distinguished himself in the debates of the sessions.

The Library is supplied with weekly, monthly, and quarterly journals of medicine, natural history, and philosophy. It is open to the students from 9.30 A.M. to 5.30 P.M.

KING'S COLLEGE.—The physicians' assistants, the physician-accoucheur's assistant, the clinical clerks, and the house-surgeon and dressers, are selected by examination from among those matriculated students of the college who are pupils of the hospital. The College and Hospital fees amount to £125 if paid in one sum on entrance, to £130 if paid in two instalments—viz., £70 on entrance and £60 at the beginning of the second winter session; or to £135 if paid in three instalments—viz., £60 on entrance, £50 at the beginning of the second winter session, and £25 at the beginning of the third. Students are recommended to add to the above the fee for attendance on the Medical Tutors' class for one year—namely, £3 3s. for the first year's subjects, or in the case of those preparing for the Preliminary Scientific Examination of the University of London, £5 5s. All resident students are required to attend the tutor during their first year. Rooms are provided within the walls of the college for the residence of a limited number of matriculated students. Registration fee at hospital 10s. 6d. Rooms and commons are provided at the hospital for the resident officers free of charge.

Scholarships.—Warneford Scholarships: Two of £25 per annum for three years, and one of £25 for two years. Science: One of £50 and one of £25 each for two years. Sambrooke: One of £60 and one of £40 for Science and Literature. College Scholarships: One of £40 per annum, for two years; one of £30, for one year; three of £20 for one year. The Daniell Scholarship of the annual value of £20. Sambrooke Registrarships, of the annual value of £50 each, and tenable for two years, are open to all matriculated students who have filled any one of the higher appointments of the hospital, or who have become Associates. The Leathes Prizes, value £7, and the Warneford Prizes, value £40, are given annually amongst the matriculated medical students. Two medical Clinical Prizes, one of £3 for the winter session, and one of £2 for the summer session, and two Surgical Clinical Prizes, of £3 each, are given. The Todd Medical Clinical Prize consists of a bronze medal and books to the value of £4 4s. The Tanner Prize for Obstetric Medicine, value £10, is given annually in July. All students, occasional as well as matriculated, are admitted to contend for the class prizes.

LONDON HOSPITAL AND COLLEGE.—The Medical School of the London Hospital is under the direction of a College Board, composed of six members of the Hospital Staff, and six of the House Committee. The executive authority is committed to a Warden.

For instruction in Mental Diseases, students can attend, without further fee, the practice of Dr. John Millar, medical superintendent of Bethnal House Asylum, a few minutes' walk from the hospital.

Prizes.—Nine Scholarships to be offered for competition in the winter and summer sessions:—Two Entrance Science Scholarships, awarded at the end of September, of the value of £60 and £40 respectively. Two Scholarships of £30 and £20, to the students who pass in September the best and second-best examinations in the subjects required at the Preliminary Examinations. A Scholarship, value £20, in Human Anatomy, for first-year's students, to be awarded in April, 1879. A Scholarship, value £25, in Anatomy, in Physiology, and Chemistry, for first or second-year's students, to be awarded at the end of the session. Three Hospital Scholarships, value £20 each, for Clinical Medicine and Clinical Surgery, and Clinical Obstetrics. The Duckworth Nelson Prize, value £10, for Practical Medicine and Surgery (biennial). Money prizes to the value of £60 given annually by the House Committee for zeal in dressing outpatients and knowledge of Minor Surgery.

Appointments.—The resident appointments consist of five house-physicians, four house-surgeons, and one accoucheurship. Two dressers and two maternity pupils also reside in the hospital. (N.B. The holders of all the resident offices are provided with rooms and board free of expense.)

There are also three clinical assistants in the out-patient departments, at a salary of £80 each. Medical registrar, salary £100. Surgical registrar, salary £100. There are also numerous appointments for clinical clerks, dressers, maternity pupils, post-mortem clerks, &c.

General fee to lectures and hospital practice, 90 guineas, in one sum, or 100 guineas payable in three instalments of 45, 40, and 15 guineas at the commencement of the first, second, and third years respectively. Special entries can be made to lectures or practice.

ST. MARY'S HOSPITAL.—There are four resident medical officers, three of whom are appointed for twelve months, and one, the obstetric officer, for six months, who board free of expense in the hospital. These appointments are awarded after competition, without additional fee. There is also a resident dressership. A resident registrar is appointed from amongst the students, with a salary of £100 a year and dispensary fees, who resides free of expense in the hospital. In addition to the above a demonstrator of anatomy is appointed annually with a salary of £100 a year; and the medical tutor in like manner, with a salary of £100 a year. Both these officers are eligible for re-election.

All general students are required to perform the duties of clinical clerk and dresser during the last two years of their curriculum. Students of the third year and of subsequent years are also appointed to assist the physicians and surgeons in charge of the out-patients. There is a Hospital Medical Society, which meets regularly during the winter session.

A Maternity Department is attached to the hospital. There are special departments for Diseases of the Eye, the Ear, the Skin, and the Throat, in which clinical demonstrations are constantly given by the physicians and surgeons.

Scholarships, Prizes, &c.—Three Scholarships in Natural Science, each tenable for three years, and of the value of £60 the first year, £40 the second, and £20 the third year, and an Exhibition in Natural Science of the value of £20, tenable for one year. One of the scholarships and the exhibition are awarded, immediately before the commencement of each winter session, by open competitive examination. An extra Scholarship in Natural Science, tenable for three years, of the value of £60 the first year, £25 the second, and £15 the third, will also be awarded by open competition in October, 1880. A Scholarship in Anatomy of the annual value of £20, for students who have completed their second winter session; and a Scholarship in Pathology of £20, for students who have completed their third winter session. Examinations will be held and prizes awarded in the various classes of each year at the termination of both the summer and winter sessions. Two prosectors are annually appointed, who each receive £5 and a certificate for their services.

Fee to the hospital practice and lectures, 107 guineas in instalments, or 101 guineas in one sum; perpetual, 125 guineas in instalments, or 119 guineas in one sum. Fee to the hospital practice and lectures required for the examination in Dental Surgery by the College of Surgeons, 62½ guineas. Special entries can be made to courses of lectures or periods of hospital practice; no fee for registration.

Practitioners in the neighbourhood receive pupils to reside with them; information on this point may be obtained from the Dean.

MIDDLESEX HOSPITAL.—There is a special Cancer Department, affording accommodation for 33 in-patients, whose period of residence in the hospital is unlimited. Classes, open to all the students, are held for practical instruction in the microscopical examination of healthy and diseased tissues, and also in the application of bandages and other surgical apparatus. Students are allowed to take out to read at their own homes the books from the large and carefully selected medical library of the school. Two Entrance Scholarships, of the annual value of £25 and £20, and tenable for two years, are offered for competition at the commencement of the winter session. Two Broderip Scholarships, of the annual value of £30 and £20, tenable for two years, and a clinical prize (value ten guineas) are awarded to those students who pass the best examination at the bedside and the post-mortem room. The Murray medal and Scholarship, founded in connexion with the University of Aberdeen, is awarded every third year to a student of this hospital. The Governors' Prize of twenty guineas is also awarded annually to the student who shall most distinguish himself during his three years' curriculum. Valuable class prizes are also given, and ten resident clinical appointments

are annually awarded, after competitive examination, to students who have completed their education, and complied with the regulations of the school. The officers thus appointed—reside and board in the hospital free of expense. The college tutor assists all general students, especially those who are preparing for examination, free of charge; and his instruction is arranged with a view to avoid the necessity of students obtaining any private tuition apart from that of the Medical School. The fee for attendance on the hospital practice and lectures required by the Colleges of Physicians and Surgeons and by the Society of Apothecaries is £90, which may be paid by instalments.

The clinical clerk and dresser of the physician and surgeon of the week dine at the board-room table, free of charge. A limited number of general students are also allowed to dine at the board-room table. The paid offices of medical registrar, surgical registrar, resident medical officer, and demonstrator of anatomy are open to qualified men as they become vacant. All clinical clerkships and dresserships are awarded without fee.

ST. THOMAS'S HOSPITAL.—*Prizes and Appointments for the year 1880-81.*—For First-year's Students: Two Entrance Scholarships in Natural Science of the value of £100 and £60 respectively, open to all first-year's students, will be awarded during the first week in October, after an examination in Physics, Chemistry, and either Botany or Zoology at the option of the candidate; the William Tite Scholarship, the proceeds of £1000 Consols (£30 per annum), is awarded each year; also prizes of £20 and £10; summer, £15, £10, and £5. For Second-year's Students: The College Scholarship of 40 guineas, and the Musgrove Scholarship of 40 guineas, are awarded biennially to the student who shall take the highest place in the first-class list in the examinations at the end of the second winter session; they are tenable for two years, provided the holder obtains a place in the first class in the subsequent examinations: making the winter prizes, £42, £20, and £10; summer, £15, £10, and £5; with the dresserships and the clinical clerkships. For Third-year's students: Second Tenure of Scholarship £42, and prizes of £20, £15, and £10, and the Prosecutor's Prize of £5. Clinical clerks and dressers are selected according to merit. The Grainger Testimonial Prize of £20, awarded biennially to third- or fourth-year's students, for the best Physiological Essay, to be illustrated by preparations and dissections; the Cheselden Medal, for Surgery and Surgical Anatomy; and the Mead Medal, for Practical Medicine, are awarded annually to fourth-year's students. The Solly Medal, with a prize from 10 to 20 guineas, will be awarded biennially to a student of the third, fourth, fifth, or sixth year, for the best report of Surgical Cases. The Treasurer's Gold Medal, for general proficiency and good conduct, is awarded annually to a fourth-year's student. The house-physicians, house-surgeons, assistant house-physicians and surgeons, and resident accoucheur are chosen, from gentlemen who have obtained their professional diplomas, according to merit, and, with the dressers, are provided with rooms and commons. Two hospital registrars, at £100 per annum each, will be selected from gentlemen distinguished for merit.

The medical and surgical casualty out-patients are seen by the resident assistant-physician, the resident assistant-surgeon, the house-physicians, house-surgeons, and dressers, at from 12 to 1 o'clock daily. The Dissecting-room is open to the students from 9 A.M. to 5 P.M.

The fee to hospital practice and lectures may be paid in several ways:—1st. £125, paid on entrance. 2nd. £130, in two payments—£70 on entrance, and £60 at the beginning of next year. 3rd. Payment by three instalments—viz., of £60 at the beginning of the first year, £50 at the beginning of the second year, and £30 at the beginning of the third year, entitles a student after payment of the third instalment to an unlimited attendance. The fee for attendance on the general subjects required of students in Dental Surgery, is for the two years £55, or by instalments £50 for the first year and £10 for the second year. Regularly qualified medical practitioners are admitted to the hospital practice and to the lectures and library on payment of a fee of £12 10s. for unlimited attendance.

Special classes are held throughout the year for the Matriculation, Preliminary, Scientific, and 1st M.B. examinations of the University of London.

UNIVERSITY COLLEGE, LONDON.—The fees for lectures and hospital practice required by the College of Physicians

and Surgeons and the Society of Apothecaries during the student's entire course amount to 125 guineas if paid in one sum, or 130 guineas if paid by instalments—viz., first year 60 guineas, second year 50 guineas, third year 20 guineas.

Exhibitions, Prizes, &c.—Three Entrance Exhibitions, of the respective values of £100, £60, and £40 per annum, tenable for one year, are annually awarded, upon examination by printed papers, to gentlemen who are about to commence their first winter attendance in a medical school. The subjects of the examinations are—Chemistry, Physics, Botany, and Zoology. The next examination will take place at the College on September 28th and 29th. The Atkinson Morley Surgical Scholarship of £46, tenable for three years, is annually awarded to the student who, upon examination, is found to possess the greatest proficiency in the Theory and Practice of Surgery. The Sharpey Physiological Scholarship of about £70 per annum, tenable for three years, for proficiency in Biological Science. Filliter Exhibition: a prize of £30 is awarded annually, in July, to the most proficient student in the class of Pathological Anatomy. An Atchison Scholarship, value about £55 per annum, tenable for two years. Besides the above, gold and silver medals and other prizes are awarded in each class. The appointments of demonstrators of anatomy, of resident medical officer to the hospital, and of surgical registrar—all of which have emoluments attached to them—are almost invariably conferred upon students of the College. Physicians' assistants, house-surgeons, midwifery assistants, physicians' clerks, surgeons' dressers, ward clerks, and ophthalmic surgeons' assistants are selected from the pupils, without additional fees.

WESTMINSTER HOSPITAL.—The Hospital contains upwards of 200 beds. There are separate departments for Diseases of the Eye, Ear, Skin, Teeth, and Throat, and for Diseases of Women. The Anatomical Museum is constantly open to the students. There are also a Pathological Museum and a Materia Medica Museum.

In addition to the practice of the Hospital, pupils who enter for the whole period of medical education may attend, without further fee, the practice of the Royal Westminster Ophthalmic Hospital and of the Royal Hospital for Paralysis. Instruction in the Physical Examination of the Chest is given by Dr. Doukin, and in the use of the Laryngoscope by Dr. De Havilland Hall. Mr. R. Davy gives demonstrations in Orthopædic subjects.

A Curator of the Museum and Pathologist with a salary of fifty guineas, and a Medical and a Surgical Registrar are appointed annually, each with a salary of £40. A House-Physician, a House-Surgeon, and a Resident Obstetric Assistant are appointed for six months after examination, and are provided with rooms and commons. They each pay a deposit of £20 on appointment; but receive £25 at the expiration of the term if their duties have been performed satisfactorily. An Assistant House-Surgeon is appointed from among the senior students; he is provided with commons at the hospital table. Clinical Assistants to the Physicians and Surgeons, and to the officers in charge of special departments, are appointed from students of the fourth year. Every student must perform the duties of Clinical Clerk and Dresser.

Scholarships and Prizes.—The Fence and Houldsworth Entrance Scholarship, each £50 a year for two years; and two Entrance Scholarships, value £10, tenable for two years. Exhibition in Anatomy, Physiology, and Chemistry, value £10 10s., tenable for one year for first year's men. A Prize of £2 2s. by Mr. A. P. Gould, to the first year's student who is most regular and diligent in the Dissecting Room. Scholarship in Anatomy and Physiology, value £21, to student of second year (to be styled Assistant Demonstrator).—At the end of the third summer, Prizes of £5 each (books or instruments), in Clinical Medicine and Clinical Surgery. Frederick Bird Medal and Prize, value £15, to students who have completed their fourth winter; subjects of examination: Medicine, Midwifery, Diseases of Women and Children, and Pathology. Chadwick Prize for General Proficiency, £21 (books or instruments), to the most meritorious student or students of any year not exceeding the fifth. In most of the classes, Special Prizes are given by the Lecturers; and Certificates of Honour are awarded in each Class. Two Tutors assist and guide the students in their work, and hold Senior and Junior Classes.

WESTMINSTER HOSPITAL SCHOOL OF ANATOMY, PHYSIOLOGY, AND OPERATIVE SURGERY.—The School meets

the requirements of two distinct classes of students—i.e., 1. Advanced students and qualified practitioners, who may wish either to extend their knowledge of the foregoing subjects, or to recall to mind what they once knew and have since forgotten. 2. Beginners entering upon their medical studies by a short term of apprenticeship with a general practitioner. For the former, rapid advanced classes, complete in three months, but still thoroughly practical, will be provided; and for the latter, more elementary classes of six months' duration, also thoroughly practical. The Operations of Surgery are all performed on the dead body by the students.

GREAT NORTHERN HOSPITAL, Caledonian-road.—Consulting Surgeon: Frederick Le Gros Clark. Physicians: Drs. Cholmeley, Cook, Robert Bridges, and Burnet. Obstetric Physician: Dr. Gustavus C. P. Murray. Ophthalmic Surgeon: Mr. R. W. Lyell, F.R.C.S. Surgeons: Messrs. Gay, W. Adams, W. Spencer Watson, W. H. Cripps, J. Macready. Aural Surgeon: Mr. A. E. Cumberbatch. Dental Surgeon: Mr. Charles James Fox. Chloroformist: Mr. George Eastes. House-Surgeon: Mr. A. Wharry.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Consulting Physicians: D. C. J. B. Williams, F.R.S., Dr. W. H. Walshe, Dr. R. Quain, F.R.S. Consulting Surgeon: Professor John Marshall, F.R.S. Physicians: Drs. J. E. Pollock, E. S. Thompson, C. T. Williams, R. D. Powell, J. Tatham, R. Thompson, and J. Fowler. Assistant-Physicians: Drs. B. Yeo, F. Roberts, T. H. Green, J. M. Bruce. Pathologist: Dr. Ewart. Dental Surgeon: Mr. C. J. Noble. Resident Medical Officer: Mr. F. J. Hicks. Secretary: Mr. H. Dobbin.—Three clinical assistants reside in the hospital for a period of six months. Pupils are admitted to the practice of the hospital: terms, £3 3s. for three months; perpetual £5 5s. The medical practice of the hospital is recognised by the University of London, the Apothecaries' Company, and the Army and Navy and India Medical Boards. The hospital contains 192 beds.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City-road, E.C.—Established 1814. 26 beds. Consulting Physicians: Drs. Herbert Davies and Horace Dobell. Physicians: Drs. G. Goddard Rogers, P. J. Hensley, Gilbert Smith, and D. W. Finlay. Assistant-Physicians: Drs. W. Murrell, H. S. Gabbett, and W. H. White. Consulting Surgeon: Mr. Jonathan Hutchinson. Surgeon: Mr. W. J. Walsham. House Physician: Mr. F. M. Pope. In-patients, 251; out-patients cases, 6065. This hospital has recently been enlarged by the addition of a very complete new out-patients' department, and wards for 14 additional in-patients. The office of House-Physician, which is tenable for one year, and for which a sum of £80 is voted in lieu of board, is filled up annually in October.

WEST LONDON HOSPITAL, Hammersmith-road, W.—60 beds. In-patients, 569; out-patients, 21,532. Consulting Physician: Dr. Henry Maudsley. Consulting Physician Accoucheur: Dr. W. O. Priestley. Consulting Surgeons: Messrs. Samuel Armstrong Lane and William Bird. Physicians: Drs. Goddard Rogers and Thorowgood. Physician for Diseases of Women: Dr. Wiltshire. Surgeons: Messrs. William F. Teevan and Alfred Cooper. Surgeon for Diseases of the Eye: Mr. B. J. Vernon. Assistant-Physicians: Drs. Fish, Milner Fothergill, and Donald W. C. Hood. Assistant-Surgeons: Messrs. C. B. Keetley, J. H. Morgan, and Mr. F. S. Edwards. Surgeon-Dentist: Mr. M. A. Smale. The practice of this hospital is open to all students and members of the medical profession. Gentlemen desirous of acting as clinical clerks or dressers can obtain all information on application at the hospital.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, 23, 24, and 25, Queen-square, Bloomsbury.—100 beds; 10 cots for children. The physicians attend every Monday, Tuesday, Wednesday, and Friday, at 2.30 P.M. In- and out-patients' practice and electrical-room treatment at that hour. Physicians: Drs. Ramskill, Radcliffe, Hughlings Jackson, and Buzzard. Physicians for out-patients: Drs. H. Charlton Bastian, W. R. Gowers, and Ferrier. Assistant-Physicians: Drs. Ormerod and Horrocks. Surgeon: W. Adams, F.R.C.S. Resident Medical Officer and Registrar: C. E. Beevor, M.B. Medical practitioners and students will be admitted on showing their cards.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—The hospital, founded in 1804, and considerably enlarged in

1876, now contains 100 beds for patients, which were occupied during last year by 1400 persons. The out-patients are yearly over 20,000. Operations are performed daily from half-past ten to one o'clock, and three surgeons attend on each day: Mr. Streetfield, Mr. Warren Tay, and Mr. Adams, on Monday and Thursday; Mr. Lawson, Mr. Couper, and Mr. Tweedy, on Tuesday and Friday; Mr. Wordsworth, Mr. Hulke, and Mr. Lyell, on Wednesday and Saturday. Students are admitted to the practice. Fees for six months, £3 3s.; perpetual, £5 5s.; with admission to demonstrations and lectures, to be given during the winter. Students of the hospital are eligible for the office of house-surgeon, or may be appointed clinical assistants.

ROYAL ORTHOPÆDIC HOSPITAL, 315, Oxford-street.—Surgeons: Messrs. B. E. Brodhurst, H. A. Reeves, Charles Read, and William E. Baskwill. House-Surgeon: Mr. H. F. Baker. Secretary: Mr. Maskell. Operations on Mondays at 2 P.M. The hospital is open to all legally qualified practitioners. Pupils are admitted to witness the practice of the hospital on the following terms: Six months, £3 3s.; twelve months, £5 5s.; perpetual, £10 10s.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL, King William-street, Charing-cross.—The hospital contains 50 beds; and the patients, who number 10,000 annually, are seen and operations performed daily at 1 o'clock. The following are the days of attendance of the surgeons: Mr. Power, Monday and Friday; Mr. Rouse, Monday and Friday; Mr. Macnamara, Tuesday and Thursday; Mr. Cowell, Wednesday and Saturday. The practice of the hospital is open to students. Fees for six months, £3 3s.; perpetual, £5 5s. Students of the hospital are eligible for the post of house-surgeon. Special Demonstrations and Lectures will be given during the session. Secretary, Mr. George C. Farrant.

NATIONAL DENTAL COLLEGE, Great Portland-street, W.—Consulting Physicians: Drs. B. W. Richardson and W. H. Broadbent. Consulting Surgeons: Messrs. Erichsen, Spencer Wells, and Christopher Heath. Consulting Dental Surgeon: Mr. J. Merryweather. Dental Surgeons: Messrs. F. Henri Weiss, Oakley Coles, G. J. Williams, A. F. Canton, H. T. K. Kempton, and Harry Rose. Assistant Dental Surgeons: Messrs. Willoughby G. Weiss, C. J. Noble, G. A. Williams, Thomas Gaddes, and W. R. Humby. House-Surgeon: R. D. Ashby.

LONDON SCHOOL OF DENTAL SURGERY, Leicester-square.—Lectures are delivered in winter on Mechanical Dentistry, by Dr. Walker, on Wednesdays, at 7 P.M.; on Metallurgy in its application to Dental Purposes, by Mr. Louis, on Tuesdays and Fridays, at 12 o'clock. In summer, Mr. Alfred Coleman, F.R.C.S. (Exam.), L.R.C.P., L.D.S., &c., lectures on Dental Surgery and Pathology; and Mr. C. S. Tomes, M.R.C.S., L.D.S., on Dental Anatomy and Physiology (Human and Comparative). General fee for special lectures required for the curriculum, £15 15s.—**DENTAL HOSPITAL OF LONDON** (in connexion with the above).—Surgeons: Messrs. Fox, Medwin, Gregson, Coleman, Moon, and Hill. Assistant-Surgeons: Messrs. Canton, Bartlett, Hepburn, Gibbings, Woodhouse, and Hutchinson. Dental House-Surgeon: Mr. R. G. Bradshaw. Assistant Dental House-Surgeon: Mr. Rees Price. Secretary: Captain H. B. Scoones. Fee for two years' hospital practice required by the curriculum, £15 15s.

SEAMEN'S HOSPITAL (late Dreadnought), Greenwich, S.E.—This institution is established for the relief of seamen of all nations. Casualties are received at all hours. Apartments are provided in the house of the surgeon for students and others who may be desirous of studying diseases incidental to tropical climates before entering the services or going abroad. Unusually good opportunities also exist for the practice of operative surgery. Honorary Consulting Physician: Dr. George Budd. Visiting Physicians: Dr. John Curnow, F.R.C.P., and Mr. R. C. Carrington, M.R.C.P. Honorary Consulting Surgeon: Mr. Geo. Busk, F.R.S. Visiting Surgeon: Mr. N. Davies-Colley. Surgeon: Mr. W. Johnson Smith. Secretary: Mr. Henry C. Burdett.

THE HOSPITAL FOR SICK CHILDREN, Great Ormond-street, Queen-square, W.C., and Cromwell House, Highgate.—Physicians: Drs. Dickinson, Gee, and W. B. Cheadle. Assistant-Physicians: Drs. R. J. Lee, O. Sturges, Thomas Barlow, D. B. Lees, and Robert Bridges. Surgeons, Mr. T. Smith, Mr. Howard Marsh, Mr. Edmund Owen, and Mr. J. H. Morgan. Surgeon-Dentist: Mr. A. Cartwright. Fee for three months' attendance, £3 3s.; perpetual, £5 5s.

Secretary: S. Whitford. There are now 104 beds in the hospital, Great Ormond-street, and 52 beds at the country branch; total 156. In-patients last year, 1119; out-patients, 12,407. The practice at the hospital has recently been thrown open gratuitously to the pupils of the different hospitals and medical schools of London on conditions which may be ascertained of the Secretary.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL.—Established 1752, for the reception of married and single women, the latter with their first child only. The hospital receives annually upwards of 500 women as in-patients, of whom three-fourths are primiparae, and upwards of 700 out-patients are attended. Of 1350 cases delivered since 1878, there were over 200 obstetric complications at birth or shortly after delivery. Physicians to the in-patients: Dr. Hope and Dr. Grigg. Physician to the out-patients: Dr. Champneys. The physicians attend daily, and give clinical instruction. Medical pupils are received to be trained in Midwifery. Fees: Ten guineas for six weeks, or fifteen guineas for twelve weeks. Monthly nurses and midwives are also received for training. Fees: Twelve guineas and twenty-five guineas respectively.

BRITISH LYING-IN HOSPITAL, Endell-street, St. Giles's, W.C.—Consulting Physician: Dr. Priestley. Consulting Surgeon: Mr. T. Spencer Wells. Physicians: Dr. Heywood Smith, Dr. Arthur Edis, and Dr. S. Fancourt Barnes. Matron: Miss Freeman. Secretary: Mr. Vincent Yardley. This institution receives women only as midwifery pupils. The pupils reside in the hospital, and attend the patients in-doors and within half a mile radius, under the direction of the matron and physicians. A course of lectures is also given by the physicians. The fee for the course of three months is ten guineas. Pupils that prove themselves competent receive a certificate signed by the physicians, enabling them to practise midwifery.

THE ROYAL HOSPITAL FOR CHILDREN AND WOMEN, Waterloo-bridge-road.—Instituted 1816. Consulting Physicians: Dr. Wilks, Dr. John Williams. Consulting Surgeon: Mr. J. Cooper Forster. Physicians: Drs. G. V. Poore, W. Park, G. Roper, and Edwin Burrell. Surgeon: Mr. Edwin Canton. Surgeon Dentist: Mr. W. Whitehouse. Resident Medical Officer: Mr. E. Overman Day. Secretary: Mr. R. G. Kestin. Advanced students in medicine, and such practitioners as may desire it, are permitted to attend the practice of this hospital gratis. If a certificate signifying such attendance be required, the sum of £5 5s. must be paid to the physicians and surgeons in ordinary conjointly.

VICTORIA HOSPITAL FOR CHILDREN, Chelsea, S.W., and Churchfields, Margate.—The Hospital contains 64 beds and 16 at the home at Margate; and has a large out-patient department (over 400 weekly). Physicians: Dr. Julian Evans and Dr. Ridge Jones. Physicians to the out-patients: Drs. Grigg, Pearson Irvine, Allchin, and Albert Venn. Surgeon: Mr. Cowell. Surgeons to the out-patients: Messrs. Churchill and Walter Pye. Dental Surgeon: Mr. Risdon. House-surgeon: Mr. Weyland Chaffey. Registrar: Dr. Beckingsale. Secretary: Captain W. C. Blount, R.N. Out-patients are seen daily as under:—Medical cases: Daily, except Saturday and Sunday, at 9 A.M.; also on Mondays and Thursdays at noon. Surgical cases: Daily, except Monday and Thursday, at 10 A.M. Dental cases: Saturdays at 9.30 A.M.

BELGRAVE HOSPITAL FOR CHILDREN, 79, Gloucester-street, S.W.—Twenty beds. Consulting Physician: Sir Wm. Gull. Consulting Surgeons: Mr. Wood and Mr. Brodhurst. Physicians: Dr. Hope and Dr. Ewart. Surgeons: Mr. Bennett and Mr. Dent. Surgeon Dentist: Mr. Payne. Pupils are admitted to the practice of the hospital upon producing a certificate of being duly registered as medical students.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark-bridge-road, S.E.—Consulting Physician: Dr. W. S. Playfair. Consulting Surgeon: Mr. Prescott Hewett. Physicians: Drs. E. Buchanan Baxter, F. Taylor, N. J. C. Tirard, James Goodhart. Surgeons: Messrs. W. Marrant Baker, H. G. Howse, and R. Clement Lucas. House-Surgeon: Mr. Henry Davy, M.B.

SCHOOL OF PHARMACY OF THE PHARMACEUTICAL SOCIETY OF GREAT BRITAIN.—Chemistry and Pharmacy: Professor Redwood, Ph.D., F.C.S. Lectures are delivered on Monday, Tuesday, and Wednesday mornings at 9 o'clock. The course consists of sixty lectures. Two courses are given annually,

the first commencing on October 4th, 1880; and the second course on March 1st, 1881. The subjects of these lectures are—(1) Physics in relation to Chemistry and Pharmacy. (2) Inorganic Chemistry. (3) Organic Chemistry. Botany and Materia Medica: Professor Bentley, M.R.C.S. Eng., F.L.S. These lectures are delivered on Thursday, Friday, and Saturday mornings, at 9 o'clock. The first course commences on October 2nd, 1880; the second course on March 3rd, 1881. Practical Chemistry, directed by Professor Attfield, Ph.D., F.R.S., F.I.C., F.C.S., assisted by a Demonstrator, Dr. Alfred Senior, F.I.C., F.C.S., and an Assistant-Demonstrator, Mr. R. Dunstan, F.C.S., commences on Friday, October 1st, at 10 A.M. The laboratories are open from ten o'clock in the morning until five o'clock in the afternoon daily, except on Saturdays, when they are closed at two o'clock. Fees for ten months, according to hours of attendance, 12 to 25 guineas; for shorter terms in proportion.

SOUTH LONDON SCHOOL OF PHARMACY, 325, Kennington-road.—Managing Director, Dr. Muter. Daily lectures on Chemistry, Botany, Physics, Materia Medica, Pharmacy, Classics. Accommodation for 120 students. Apply to the Secretary, Mr. W. Baxter, Central Public Laboratory, Kennington-cross, London, S.E.

ENGLISH PROVINCIAL HOSPITALS AND MEDICAL SCHOOLS.

BATH ROYAL UNITED HOSPITAL.—Honorary Consulting Physicians: Drs. Falconer and Davies. Physicians: Drs. Goodridge, Coates, and Cole. Surgeons: Messrs. Gore, Stockwell, and Fowler. Dental Surgeon: Mr. Gaine. Pathological Registrar and Curator: Mr. H. Culliford Hopkins. The hospital contains 120 beds (in-patients last year 1064, out-patients 10,688), and is recognised by the General Medical Council, and licensed for dissection. It has also a good library and an excellent museum, containing a large number of interesting specimens both in pathology, human and comparative anatomy. Fees for attending the hospital practice, both medical and surgical: Six months, £5 5s.; twelve months, £10 10s.

Arrangements are being made by which pupils entering the hospital in October can be instructed in the subjects required for the new examination of the Royal College of Physicians, termed the First Professional Examination for the Licence, whereby they would be enabled to pass the examination during the year spent at the hospital; the subjects being Chemistry and Chemical Physics, Materia Medica and Pharmacy, Medical Botany, and Osteology.

QUEEN'S COLLEGE, BIRMINGHAM.—The Sands Cox Prize, of the value of £20, is given annually in the Medical Department. It is open to students who have completed their curriculum, and is awarded after examination in Medicine, Surgery, and Midwifery. The examination for this prize in 1881 will be held in the third week in March. Two Ingleby Scholarships will be awarded annually after examination in Obstetric Medicine and Surgery, and Diseases of Women and Children. These Scholarships are open to students who have completed the first two years of their curriculum in this College. One or more Sydenham Scholarships will be awarded annually of the value of thirty guineas each. The orphan sons of former students of the Birmingham Medical School shall have priority of election. No Sydenham Scholars shall be elected whose age exceeds twenty-three years on the day of election. The Scholarships shall be held for three years, subject to good behaviour. One or more Queen's Scholarships will be awarded annually of the value of thirty guineas. Medals and certificates of honour are awarded annually in each class after examination. Students of Queen's College are qualified to compete for all Scholarships, gold medals, and other prizes offered by the University of London, the Royal College of Surgeons, and the Apothecaries' Society.

THE GENERAL AND THE QUEEN'S HOSPITALS, BIRMINGHAM.—*The General Hospital.*—Consulting Physician: Dr. Fletcher. Consulting Surgeon: Mr. Crompton. Physicians: Drs. Russell, Wade, Foster, and Rickards. Surgeons: Messrs. Baker, Pemberton, Bartleet, Goodall, and Jolly. Obstetric Officer: Dr. Malins. Assistant-Physicians: Drs. Saundby and Simon. Assistant-Surgeons: Messrs. Archer and Chavasse.—*The Queen's Hospital.* Consulting Obstetric Surgeon: Mr. Berry. Physicians: Drs. Heslop, Sawyer

Carter, and Hunt. Surgeons: Messrs. West, Gamgee, Furneaux Jordan, and Wilders. Obstetric Surgeon: Mr. John Clay. Ophthalmic Surgeon: Mr. Priestley Smith. Dental Surgeon: Mr. Charles Sims.

The practices of these hospitals are amalgamated for the purposes of clinical instruction under the direction of the Birmingham Clinical Board. All students will be required to attend six months alternately at each hospital, excepting those who enter for six months only, who will be allowed to choose either hospital.

BRISTOL SCHOOL OF MEDICINE.—Students of Anatomy or Physiology who do not pay the composition fee of sixty guineas are required to pay a medical tutor's fee of two guineas per annum.

BRISTOL ROYAL INFIRMARY.—264 beds. Physicians: Drs. Spencer, Shingleton Smith, Waldo, and Shaw. Surgeons: Messrs. Board, Dowson, Prichard, Cross, and Greig Smith. Surgeon for the out-patients: Mr. Harsant. Medical Superintendent: Mr. Macintire. House-Physician: Dr. Watson. House-Surgeon: Dr. Lendon. Secretary: W. Trenerry. In-patients last year, 2330; out-patients last year, 22,768. Clinical clerkship, six months, five guineas; one year, eight guineas. Dressership, five guineas for each six months. Obstetric clerkship, three guineas for each three months. Special clinical instruction is given in Diseases of the Eye, Ear, and Throat, also in Diseases of Women. Several prizes, of considerable value, are open to competition among the students.

Fees.—Medical or Surgical Practice, six months, seven guineas; one year, twelve guineas; perpetual, twenty guineas. Medical and Surgical Practice together in one payment, one year, twenty guineas; perpetual, thirty-five guineas. The above fees include Clinical Lectures.

Pupils are entitled to attend the practice not only of their own physician or surgeon, but also that of all the physicians or surgeons. Surgical pupils, on acquiring the requisite experience, are permitted to dress all the out-patients, and also to reside in the house in weekly rotation, where they are in charge of all the casualties under the supervision of the house-surgeon. A Pathological Clerk, who performs all the post-mortem examinations, is appointed for three months from among the senior students. Practical Pharmacy at the laboratory and dispensary. The library contains about 3000 volumes, the museum over 3000 specimens.

BRISTOL GENERAL HOSPITAL.—154 beds. Physicians: Drs. Burder, Markham Skerrett, and Harrison. Physician-Accoucheur: Dr. Lawrence. Surgeons: Messrs. Lansdown, Atchley, Dobson, and Keall. Dentist: Mr. Parson. House-Surgeon: Mr. Pickering. Physician's Assistant: Mr. Bryden. Assistant House-Surgeon: Dr. Guy. Secretary: Lieutenant Fox. Clinical clerkship, six months, five guineas. Dressership, six months, five guineas. Obstetric clerkship, three months, three guineas. Special clinical instruction is given in Diseases of the Skin, Eye, Ear, and Throat, also in Diseases of Women, and in Dental Surgery. Several valuable scholarships are open to competition.

Fees.—Medical or Surgical Practice, six months, £6; twelve months, £10; perpetual, £20. The above fees include Clinical Lectures.

Pupils are entitled to attend the whole medical and surgical practice of the hospital. Dressers reside in the hospital in rotation, and free of expense, and attend all the casualties under the direction of the House-Surgeon. Instruction in Pharmacy is given in the hospital dispensary. There is a good library and also a museum, to both of which the students have access.

ADDENBROOKE'S HOSPITAL, CAMBRIDGE.—Clinical Lectures in Medicine and Surgery in connexion with the Cambridge Medical School are delivered at this hospital twice a week during the academic year; and practical instruction in Medicine and Surgery, in the wards and out-patient rooms, is given by the physicians and surgeons daily, during the vacations as well as term time. Instruction is also given in all the special modes of medical and surgical investigation. Clinical assistants and dressers are selected from students according to merit and without payment.

UNIVERSITY OF DURHAM COLLEGE OF MEDICINE, NEWCASTLE-UPON-TYNE.—*Scholarships, &c.*—A University of Durham Scholarship of the value of £25 a year for four years annually for proficiency in arts awarded to perpetual students in their first year only. The Dickinson Scholarship,

value £15 annually, for Medicine, Surgery, Midwifery, and Pathology. The Tulloch Scholarship, value £20 annually, for Anatomy, Physiology, and Chemistry. The Charlton Scholarship, value £35 annually, for Medicine. The Gibb Scholarship, value £25 annually, for Pathology. At the end of each session a Silver Medal and Certificate of Honour are awarded in each of the regular classes. An Assistant Curator of the Museum is annually appointed from among the senior students, and receives £12 as an honorarium. Two Assistant Demonstrators of Anatomy, two Assistant Physiologists, and two Pathological Assistants are also elected. Four resident dressers are chosen every six months, and are required to pay £10 10s. for board and residence.

Fees for Lectures.—Composition fee for all the lectures, qualifying for the Licence in Medicine and the Mastership in Surgery of the University of Durham, the Licence and Membership of the Royal College of Physicians, the Membership of the College of Surgeons, and the Licence of the Apothecaries' Society, and payable on entering to the first winter session, £52 10s. Separate courses of lectures, each £4 4s. Single course of Chemistry, £5 5s. The composition fee entitles the holder to attend the lectures on Botany, Chemistry, and Materia Medica, and to use the Museum of Materia Medica in the library of the College.

Hospital Practice.—This can be attended at the Newcastle Infirmary, which contains 230 beds. Midwifery, Diseases of the Eye, and Insanity can be specially studied. The Laboratories, Libraries, and Museums are open daily.

Fees for Hospital Practice.—Twelve months, £12 12s.; six months, £8 8s.; three months, £5 5s.; perpetual fee, £26 5s.; or, if paid by three instalments, first year, £12 12s.; second year, £10 10s.; third year, £6 6s. If paid by two instalments, first year, £14 14s.; second year, £12 12s. These fees are payable in advance.

GENERAL KENT AND CANTERBURY HOSPITAL.—Open for the reception of patients April 26th, 1793. 44,690 in-patients, and 76,742 out-patients, have been admitted since the hospital was open. The hospital contains 102 beds. Pupils of the staff are admitted to the practice of the hospital, and have the use of the library of the East Kent and Canterbury Medical Society for £7 7s. Operation day, Thursday, 11 A.M. Physicians: Drs. Alfred Lochee and Henry Alexander Gogarty. Consulting Surgeons: Mr. P. B. Hallows and Mr. James Reid. Surgeons: Messrs. Charles Holtum, Frank Wachter, Thomas Whitehead Reid, and John Greasley. Dentist: Mr. Robert J. Bell. House-Surgeon: Mr. William Shaw. Assistant House-Surgeon: Dr. A. H. Montfort. Secretary: Mr. Thomas Southee.

LEEDS SCHOOL OF MEDICINE.—Attendance at the lectures of this school will confer the same qualifications for examination as are obtained in the medical schools of London. The lectures on Chemistry, by Professor Thorpe, and that on Botany by Professor Miall, are delivered in connexion with Yorkshire College. The Hardwick Clinical Prize, value £10, is conferred annually upon the most deserving student who exhibits a satisfactory proficiency in Clinical Medicine. The Surgeons' Clinical Prizes, value respectively £8, £5, and £3, given by the surgeons to the hospital, are conferred annually on the most deserving students who exhibit proficiency in Clinical Surgery. In addition to the Silver Medal awarded in Medical Jurisprudence, there is a prize of £10 (Thorpe Prize), for which a special examination is annually held. Practical Surgery and Practical Physiology are taught in accordance with the regulations of the Royal College of Surgeons. In the Infirmary there are six clinical clerkships and eight dresserships. Four resident assistants are chosen from the senior students, board and residence free. There is a large Dispensary and a Fever Hospital in the town; both open to students attending the school.

Besides the lectures on Mental Diseases, clinical teaching is given by Dr. Major (the Medical Director), at the West Riding Lunatic Asylum.

The various courses at the Yorkshire College afford facilities for those studying arts and natural sciences.

LIVERPOOL ROYAL INFIRMARY SCHOOL OF MEDICINE.—Three house-surgeons and two house-physicians are elected every six months from pupils of the school who have obtained a qualification. Six dressers and six clinical clerks are elected quarterly; and post-mortem clerks for six weeks. Pupils of the infirmary are admitted to learn Pharmacy in

the dispensing department for six months. Two Scholarships of £21, held for two years. The hospital contains 300 beds; including 40 beds for the treatment of diseases of women. The Lock Hospital adjoining contains 60 beds.

Fees.—For six months' medical practice, five guineas; twelve months, six guineas; surgical, six guineas for six months, eight guineas for twelve months (this includes admission to the practice of the Lock Hospital adjoining the Infirmary); perpetual medical and surgical practice, thirty-two guineas.

LIVERPOOL NORTHERN HOSPITAL.—Physicians: Drs. Dickinson and Caton. Surgeons: Mr. Manifold, Mr. Chauncey Puzey, and Dr. Campbell. Dental Surgeon: Mr. J. B. Lloyd. House-Surgeon: Mr. W. E. L. Batty. House-Physician: Dr. D. M. Fraser. 145 beds. There is a special ward for the treatment of children. Clinical lectures are delivered by the physicians and surgeons during the summer and winter sessions. Clinical clerkships and dresserships are open to all the students without additional fee.

Fees for Hospital Practice and Clinical Lectures.—Perpetual, twenty-five guineas; one year, ten guineas; six months, seven guineas; three months, four guineas. Students can enter to the medical or surgical practice separately on payment of half the above fees. Practical pharmacy, three months fee, two guineas.

Attendance on the practice of this hospital qualifies for all the examining boards.

LIVERPOOL ROYAL SOUTHERN HOSPITAL.—Physicians: Drs. Cameron, Carter, and Williams. Surgeons: Messrs. Hamilton, Little, and Ransford. Senior House-Surgeon: Mr. Davies. Junior House-Surgeons: Mr. Welch and Mr. Chisholm. 200 beds. Clinical lectures are given by the physicians and surgeons during the winter and summer sessions. Clinical clerkships and dresserships open to all students. Special wards for accidents and diseases of children. Rooms for a limited number of resident students.

Fees for Hospital Practice and Clinical Lectures.—Perpetual, twenty-five guineas; one year, ten guineas; six months, seven guineas; three months, four guineas.

The practice of the hospital is recognised by all examining bodies.

NORFOLK AND NORWICH HOSPITAL.—120 beds. One year's attendance recognised by examining boards. *Fees:* For the physicians' practice, five guineas for six months; ten guineas, perpetual. For the surgeons' practice, including dressership, £10 for three months; £15 for six months; £20 for one year; £30 for two years; and £40 perpetual. Pupils, resident and non-resident. Physicians: Dr. Eade, Dr. Bateman, and Dr. Taylor. Surgeons: Mr. Cadge, Mr. Crosse, and Mr. Williams. Assistant-Surgeons: Dr. Beverley and Mr. Robinson. House-Surgeon: Mr. S. H. Burton.

NORTHAMPTON GENERAL INFIRMARY.—Established 1743; rebuilt 1793. In-patients, 1165; out-patients, 7380. Beds, 144. Physician: Dr. Buzzard. Surgeons: Messrs. Kirby Smith and G. H. Percival. House-Surgeon: Mr. A. H. Jones. Resident Medical Officer: Mr. E. J. Morley. Out-pupils are received and have every opportunity of acquiring a practical knowledge of their profession. Instruction is also given in Anatomy and Materia Medica, and Practical Pharmacy. Pupils' fees £25 per annum, or a perpetual fee of £50. The Infirmary is recognised by the examining boards.

OWENS COLLEGE (MANCHESTER ROYAL) SCHOOL OF MEDICINE.—This medical school is located in a large new building, which forms a part of Owens College. It is provided with a very large dissecting-room, physiological laboratory, private laboratories, and work-rooms, besides lecture-rooms, a museum, and a library. The departments of Anatomy, Physiology, and Chemistry are taught by professors who devote the whole of their time to the duties of their respective chairs. The more strictly practical departments of medical study are taught partly in the Medical School and partly in the Royal Infirmary, to which are attached a fever hospital, a lunatic asylum, and a convalescent home. Medical and surgical clinical classes are conducted in the Infirmary by the professors of medicine and surgery, and separate instruction is afforded in the elements of medical and surgical physical diagnosis, in obstetric medicine, ophthalmic surgery, and pathological anatomy, by the different members of the staff of the Medical School and Infirmary. The following scholarships and prizes are open to students of the Medical School:—1. A

Dauntsey Scholarship of the value of about £100 is offered annually for competition at the beginning of October to persons who have not been students in any Medical School in the United Kingdom and whose age does not then exceed twenty-five years. The subjects of examination are—(a) General and Comparative Anatomy; (b) Physiological Botany; (c) Chemistry; (d) Mathematics or Latin. 2. A Scholarship and Prizes are awarded at the end of each academic year to students of the first, second, and third year. 3. A Platt Physiological Scholarship of £50 a year for two years is offered annually to the student who, having studied for one entire session in the physiological laboratory of Owens College, has prosecuted the best original investigation in Physiology and has passed a satisfactory examination in Physiology. 4. Two Platt Exhibitions of the value of £20 each, to be competed for by first and second year's students in the class of Physiology. 5. A Dumville Surgical Prize of £20 is offered annually for proficiency in Clinical Surgery. 6. Medical and Surgical Clinical Prizes, each of the value of six guineas, are open to competition each year for the best reports (with comments) of cases which have occurred in the wards of the Infirmary.

SHEFFIELD SCHOOL OF MEDICINE.—The Infirmary contains 180 beds; a Museum of Pathology, Library, and Post-mortem Theatre, with microscopes and all the appliances for clinical research. Perpetual fee for attendance on all the lectures required by the Royal College of Surgeons and the Apothecaries' Hall, £45. Secretary, Mr. A. Jackson. A tutor's fee of £2 2s. is required from students entering for Anatomy and Physiology.

SHEFFIELD PUBLIC HOSPITAL AND DISPENSARY.—Physicians: Dr. H. J. Branson, Dr. Dyson, and Dr. Thomas. Surgeons: Dr. Keeling, Mr. Thorpe, and Mr. Pye-Smith. House-Surgeons: Messrs. C. C. Claremont, Morgan, and Dales. Number of beds, 105. In- and out-patients yearly about 30,000. A Physician and a Surgeon attend at the hospital daily. G. K. Thorpe, Hon. Secretary to the Staff.

HARTLEY INSTITUTION, Southampton.—In addition to preparations for the Preliminary Examination, instruction is given in Anatomy and Physiology, Zoology, Chemistry, Botany, Practical Chemistry, and in the use of the Microscope. The institution contains a fine collection of anatomical models, and a medical library. The Practice of the Royal Infirmary of Southampton is open to students.

The course of instruction is recognised by the Royal Colleges of Physicians and Surgeons of London for eighteen months of the four years of professional study required.

Fees £6 6s. per term, or £15 per annum, in advance, which entitle the student to twenty-eight hours' instruction per week, supplemented by the teaching in the School of Art Department of General Literature.

NORTH STAFFORDSHIRE INFIRMARY, Hartshill, Stoke-upon-Trent.—The new North Staffordshire Infirmary was opened in 1869, and is built on a new plan. It has accommodation for nearly 220 beds, including detached fever wards and children's hospital. In-patients last year 1587; out-patients, 9618. The Infirmary is recognised by the Court of Examiners of the Royal College of Surgeons of England, and students have great facilities for acquiring a practical knowledge of their profession.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—Medical Officers: Drs. Millington, Totherick, and Joseph Hunt; Messrs. Vincent Jackson, J. O'B. Kough, and F. E. Manby. Honorary Secretary to the Medical Committee: Dr. Joseph Hunt, Darlington Street, Wolverhampton. This Hospital contains 210 beds and a commodious semi-detached out-patient department. To the general wards a clinical-room is attached. Instruction is given in Chemistry, in Natural Philosophy, and in the Anatomy of the Dry Bones, Ligaments, Viscera, and Topographical Anatomy. The course of Practical Surgery includes the use of surgical apparatus, the performance of surgical operations, and the demonstration of Morbid Surgical Anatomy. In the Hospital the pupils are required to attend daily in the casualty-room, in the out-patient department, and in the wards, the instruction afforded being of a practical nature. The art of dispensing, the preparation of drugs and of pharmaceutical compounds, can also be learnt in the Hospital Dispensary and Laboratory. Operations are performed every Thursday at eleven o'clock, and practitioners are admitted. The prac-

tice of the Hospital is recognised by all the examining boards. Lectures are given in Elementary Medicine by Dr. Totherick and by Dr. Hunt, and in Elementary Surgery by Mr. V. Jackson.

Fees for Hospital Practice—For one year, £10 10s.; perpetual, £21. Some members of the honorary staff receive resident pupils.

YORK COUNTY HOSPITAL.—Established 1740; rebuilt 1851. 110 beds. In-patients, 753; out-patients, 4336. Physicians: Drs. G. Shann and W. Matterson. Consulting Surgeon: Mr. W. D. Husband. Surgeons: Messrs. R. Hewetson, W. H. Jalland, and F. Shann. House-Surgeon: Mr. F. H. Weekes. Secretary: Mr. R. Holtby.

SCOTTISH HOSPITALS AND MEDICAL SCHOOLS.

ROYAL INFIRMARY, EDINBURGH.—Beds are set apart for clinical instruction by the professors of the University of Edinburgh. Courses of Clinical Medicine and Surgery are also given by the ordinary physicians and surgeons. Special instruction is given in the medical department on Diseases of Women, Physical Diagnosis, &c., and in the surgical department on Diseases of the Eye. Separate wards are devoted to fever, venereal diseases, diseases of women, diseases of the eye, also to cases of incidental delirium or insanity. Post-mortem examinations are conducted in the Anatomical Theatre by the Pathologist, who also gives practical instruction in Pathological Anatomy and Histology. From and after the commencement of the Winter Session, 1880-81, the fees shall be as follows, viz.:—Perpetual ticket in one payment, £12; annual ticket, £6 6s.; six months, £4 4s.; three months, £2 2s. Separate payments amounting to £12 12s. entitle the student to a perpetual ticket. No fees are payable for any medical or surgical appointment. The appointments are as follows:—1. Resident physicians and surgeons are appointed, and live in the house free of charge. The appointment is for six months, but may be renewed at the end of that period by special recommendation. 2. Non-resident clinical clerks are appointed by the physicians and surgeons for such periods and under such conditions as they deem expedient. 3. Each surgeon appoints from four to nine dressers, the appointment being for six months. 4. Assistants in the Pathological department are appointed by the pathologist.

SCHOOL OF MEDICINE, EDINBURGH.—The lectures qualify for the University of Edinburgh and the other universities, the Royal Colleges of Physicians and Surgeons of Edinburgh, London, and Dublin, and the other medical boards.

In accordance with the statutes of the University of Edinburgh any four of the medical classes required for graduation, or two complete *Anni Medici*, may be attended in this school, each of which *Anni Medici* may be constituted by attendance on two of the six months' courses, or on one of these and two three months' courses. The regulations require that the fee for the class taken for graduation in Edinburgh be the same as that for the corresponding class in the University. The whole education required for graduation at the University of London may be taken in this School.

Fees.—For a first course of lectures, £3 5s.; for a second, £2 4s.; perpetual, £5 5s. To those who have already attended a first course in Edinburgh the perpetual fee is £2 4s. Practical Anatomy (six months' course), £3 3s.; course of demonstrations, £2 2s.; perpetual, £4 4s. Practical Anatomy with course of demonstrations, £4 4s. Practical Chemistry, £3 3s. Analytical Chemistry, £2 a month, £5 for three months, or £10 for six months. Practical Materia Medica, including Practical Pharmacy and Diseases of the Ear, each £2 2s. Vaccination, Diseases of Children, and Diseases of the Skin, each £1 1s. For summer courses of Clinical Surgery and Clinical Medicine, each £2 4s.; Practical Anatomy, including Anatomical Demonstrations, Operative Surgery, and Insanity, each £2 2s. The minimum cost of the education in this School of Medicine for the double qualification of Physician and Surgeon from the Royal Colleges of Physicians and Surgeons, including the fees for the joint examination, is £95; whilst the minimum cost for the single qualification of either Physician or Surgeon, including fee for examination, is £85.

The following order of study is recommended as a guide to the Student, though not enjoined:—First Year: Anatomy,

Practical Anatomy, Chemistry, Practical or Analytical Chemistry, Hospital. Second Year: Anatomy, Practical Anatomy, Physiology, Surgery, Materia Medica (the last either in this or the Third Year), Hospital. Third Year: Practice of Medicine, Clinical Surgery, Practical Anatomy, Practical Pharmacy, Clinical Medicine, Pathological Anatomy, Hospital. Fourth Year: Surgery, or Clinical Surgery, Midwifery and Diseases of Women and Children, Practice of Medicine or Clinical Medicine, Medical Jurisprudence, Practical Midwifery, Operative Surgery, Hospital.

Six Residencies will be completed for in 1881. Three of these, tenable for the following six Winter months, will be completed for in March, and three for the succeeding six Summer months in July, 1881.

EDINBURGH SCHOOL OF PHARMACY AND CHEMISTRY AND SCHOOL OF MEDICINE, Marshall-street, Nicholson-square.—The classes of this School will be resumed for the Winter Session on the 4th of October. Chemistry, Theoretical and Practical, Midwifery and Surgery. From the Dispensary attached to this Institution, Pharmacy, Practical and Theoretical, Practical Midwifery, and out-door Practice. Attendance at this Institution qualifies for the University of Edinburgh, and all other Licensing Boards. Tutorial Classes in all the branches of the Medical Curriculum. The Pharmaceutical Section of this School will open on Oct. 1st. Particulars of R. Urquhart, Secretary.

ANDERSON'S COLLEGE, GLASGOW.—A Dispensary is connected with Anderson's College; the object of which is to give gratuitous advice to the sick poor, and to visit them at their own homes when necessary. On Tuesdays and Thursdays, at 3 P.M., special advice is given on Diseases of Women and Children; on Wednesdays, at 3 P.M., advice is given on Diseases of the Skin; on Thursdays, at 1 P.M., advice is given on Diseases of the Ear; and on Fridays, at 3 P.M., advice is given on Diseases of the Eye. The number of visits paid to the sick poor at their own homes amounted to 6184. The visiting of these patients is entrusted to the students of the College, acting under the supervision of a specially-appointed Medical Officer, who visits along with the students, for the purpose of instructing them in the cases. Students of Anderson's College are admitted, free of charge, to the practice of this Dispensary; they are eligible for the various appointments common in such institutions; and, at the end of the session, they receive tickets of attendance, and certificates of home visitation. Fee for practice at Dental Hospital, required for L.D.S., £10 10s. Dental Anatomy: Mr. J. C. Morison, £2 2s. Dental Surgery: Mr. J. R. Brownlie, £2 2s. Mechanical Dentistry: Mr. W. S. Woodburn, L.D.S., £2 2s.

Medical Scholarships and Prizes.—The following Scholarships and Prizes are awarded:—1. A £12 Medical Scholarship, tenable for two years, and to be competed for in November, 1880, by students entering upon their second winter of medical study. 2. A £10 Medical Scholarship, tenable for two years, and to be competed for in November, 1880, by students entering upon their second winter of medical study. 3. £5 in prizes to students of the Senior Anatomy Class, at the close of the session. 4. £5 in prizes to students of the Physiology Class, at the close of the session. 5. £10 in prizes to students of the Junior Anatomy Class, at the close of the session. 6. £5 in prizes to students of the Chemistry Class, at the close of the session.

GLASGOW ROYAL INFIRMARY SCHOOL OF MEDICINE.—The winter session will open on October 27th. Courses of lectures are given on all the subjects required by the licensing bodies for qualification, and lectures are also given on Practical Physiology, Operative Surgery, Aural Surgery, Dental Surgery, and Diseases of the Eye. During summer, lectures on Insanity are given by Dr. A. Robertson, and the City Asylum under his charge is free to students of this school. Students have unusual facilities for the study of anatomy, the supply of subjects being practically unlimited.

Winter Session: Junior Anatomy, Anatomical Demonstrations, and Practical Anatomy, Mr. H. E. Clark; Physiology, Dr. Fleming; Surgery, Dr. H. C. Cameron; Materia Medica, Dr. John Dougall; Chemistry, John Clark, Ph.D.; Practice of Medicine, Dr. A. Wood-Smith.—Summer Session: Pathology, Dr. D. Foulis; Medical Jurisprudence, Dr. William Macewen; Practical Physiology, Dr. W. J. Fleming; Chemistry, John Clark, Ph.D.; Midwifery, Dr. James Stirton; Operative Surgery, Dr. H. C. Cameron; Aural Surgery, Dr. Johnstone Macfie; Anatomy, Mr. H. E. Clark; Dental Surgery, Dr. J. C. Woodburn;

Diseases of the Eye, Mr. H. E. Clark; Mental Diseases, Dr. Alex. Robertson.

Class Fees.—For each course, first session, £2 2s.; second session, and perpetual, £1 ls. Students who have attended a first course elsewhere can enter on the second course on payment of £1 ls. Anatomy: First winter session, £4 4s.; summer session, £1 ls.; second winter session, £4 4s.; afterwards the fee for lectures and practical anatomy is £1 ls. per session. Lectures on diseases of the ear, £1 ls.; with clinique to those not students of the hospital, £2 2s. Dental Dispensary free to students of the hospital; to others, £5; first year perpetual, £10. Lectures on the eye, £1 ls.

GLASGOW ROYAL INFIRMARY.—Number of beds, 532. In addition to the ordinary medical and surgical wards, there are separate wards for the treatment of venereal diseases and the diseases of women, whilst diseases of the eye, ear, throat, and teeth are specially treated at the dispensary. Courses of clinical medicine and surgery are given by the physicians and surgeons; instruction in pathological anatomy and histology is given by the pathologist.

Appointments.—There are five physicians' and five surgeons' assistants. These appointments can be held for six or twelve months, and are open to students who have passed all their examinations except the last, or to gentlemen who have a qualification in medicine or surgery. Clinical assistants, dressers, dispensary clerks, and pathological assistants are selected from the students without additional fee.

Fees for Hospital Practice and Clinical Lectures.—First year, £10 10s.; second year, £10 10s.; afterwards free. For six months, £6 6s.; three months, £4 4s. Students who have paid twenty guineas at another hospital for its perpetual ticket are admitted six months for £2 2s., or one year for £3 3s. Vaccination certificate, £1 ls.

GLASGOW HOSPITAL AND DISPENSARY FOR THE DISEASES OF THE EAR, 239, and 241, Buchanan-street.—Senior Consulting Physician: Dr. P. Stewart. Senior Consulting Surgeon: Dr. James Morton. Consulting Dental Surgeon: Dr. J. Cowan Woodburn. Consulting Surgeons for Throat Diseases: Dr. David Foulis, Dr. A. K. Irvine, Dr. A. L. Kelly, Dr. J. Gardiner. Aural Surgeon and Lecturer on Aural Surgery: Dr. James Patterson Cassells. Clinical Assistants: Messrs. Robertson and Violette.

This institution is supported by public and voluntary subscription, its object being the advancement of this special department of medical science by lectures and clinical teaching to students, and the gratuitous treatment of poor persons suffering from all forms of ear disease and deafness. Number of cases treated annually 3000.

The hospital, which contains 12 beds for indoor-patients, is always open for urgent cases. Hours of surgeons' visit, 3 p.m. daily; clinical teaching daily. Out-door patients are seen on Tuesdays, Wednesdays, Thursdays, and Fridays at 4 p.m., by Dr. Cassells and assistants, and operations and special demonstrations to students and practitioners on Saturdays from 11 to 1 p.m. during winter and summer sessions. John Mann, C.M., Secretary.

ABERDEEN ROYAL INFIRMARY.—Contains about 300 beds. Consulting Physician: Dr. A. Harvey. Physicians: Drs. J. W. F. Smith-Shand, R. Beveridge, Angus Fraser. Physicians' Assistant: Alfred Ireland. Surgeons: Messrs. W. Pirrie, A. Ogston, J. O. Will, and R. J. Garden. Surgeons' Assistant: John Ramage. Ophthalmic Surgeon: Dr. Alex. D. Davidson. Pathologist: Dr. James Rodger. Chloroformist: Dr. P. Blaikie Smith. Dental Surgeon: Mr. Williamson. Resident Superintendent and Apothecary: Dr. R. Rattray. Pathologist and Curator of Museum: Dr. J. Rodger. Treasurer and Secretary: Mr. W. Carnie.

IRISH HOSPITALS AND MEDICAL SCHOOLS.

QUEEN'S COLLEGE, CORK, SCHOOL OF MEDICINE.—The building is provided with a very large, well-ventilated dissecting-room, with physiological and toxicological laboratories, *materia medica*, anatomical and pathological museums, as well as a room for surgical and obstetrical instruments and appliances. There are well appointed physical and chemical laboratories, and a large natural history museum in the adjoining building; and part of the College ground is laid out as a botanical garden. The plant houses are now completed and well filled with plants, and are open to the students in the class of Botany.

Fees.—For Practical Anatomy, £3; for Practical Chemistry, £3 each course; for Anatomy and Physiology, £3 first course, and £2 for each subsequent course. Other medical classes, £2 first course, and £1 each subsequent course.—Eight scholarships (value about £30 each) as well as several exhibitions and class prizes are awarded every year.

Clinical instruction is given at the North and South Infirmarys, and at the Lying-in Hospital; students can also attend the Mercy General Hospital, the Maternity, the Children's Hospital, and the Eye and Ear Infirmary. Fee for clinical lectures and attendance at either the North or South Infirmary, eight guineas for twelve months; five guineas for six months. Clinical instruction can now be given to the students of Queen's College, Cork, by the resident medical superintendent of the Cork District Lunatic Asylum, which contains about 700 patients.

QUEEN'S COLLEGE, BELFAST.—*Fees:* Anatomy and Physiology, first course, £3; each subsequent course, £2. Anatomical Demonstrations and Practical Anatomy, each course £3. Practical Chemistry, £3. Other medical lectures: first course, £2; each subsequent course, £1.

SIR PATRICK DUN'S HOSPITAL, Dublin (in connexion with the School of Physic).—Consulting Physician: Dr. Alfred Hudson. Consulting Surgeon: Dr. William Colles. Physicians: Drs. John Mallet Purser, William Moore, Aquilla Smith, Edward B. Sinclair (Midwifery Physician). Surgeons: Drs. Benjamin G. McDowell, Edward H. Bennett, Thomas Evelyn Little, Richard G. Butcher (University Lecturer in Operative Surgery). The hospital is visited daily by each of the physicians and surgeons on duty.

The payment of £3 3s. to the hospital entitles any student to attend the clinic of the hospital for twelve months, and to attend the lectures delivered by Dr. R. G. Butcher, University Lecturer in Operative Surgery. Students who have taken out the degrees of Bachelor in Medicine and Master in Surgery in Trinity College are entitled to attend the hospital as perpetual free pupils.

Clinical Lectures are delivered in the hospital theatre, at ten o'clock on Mondays and Tuesdays. In addition to the hospital fee the payment of a fee of £9 9s. is required for the privilege of attending these lectures. Total fees for hospital and lectures for twelve months, £12 12s.

Sir Patrick Dun's Maternity.—Total fees for college students, £3 3s. Total fees for externs, £6 6s.

THE ADELAIDE MEDICAL AND SURGICAL HOSPITALS, Peter-street, Dublin.—Fee for nine months' Hospital attendance, £12 12s. Six months', £8 8s. Summer three months, £5 5s.

Three resident pupils are selected half-yearly. At the termination of the session prizes in Clinical Medicine and Surgery, in Obstetric Medicine, and in Ophthalmic Surgery, will be awarded. The certificates of attendance are recognised by all the Universities, Colleges, and Licensing Bodies in the United Kingdom. Physicians: Drs. Henry H. Head and James Little. Physician and Pathologist: Dr. Walter G. Smith. Surgeons: Dr. John K. Barton, Mr. Benjamin Wills Richardson, University Examiner in Descriptive Anatomy, Trinity College, Dublin, and Dr. Kendal Franks. Obstetric Surgeon: Richard Dancer Purefoy, M.B., F.R.C.S.I. Ophthalmic and Aural Surgeon: H. Rosborough Swanzy, M.A., M.B. Dental Surgeon: Dr. R. Theodore Stack. Consulting Obstetric Surgeon: Dr. Lombe Atthill.

LEDWICH SCHOOL OF SURGERY, Peter-street, Dublin.—This school is in a central situation and in the vicinity of four great medical and surgical hospitals, thus affording to the student the most ample opportunity of acquiring a thorough knowledge of the symptoms and treatment of disease. Demonstrators will be present in the dissecting room at all hours; and at the termination of the session prizes will be awarded to the best answers in each department. Applications to be made to T. P. Mason, 92, Harcourt-street, M. A. Ward, 9, Rathmines-road, joint-secretaries; or F. A. Nixon, 33, Harcourt-street, registrar.

RICHMOND, WHITWORTH, AND HARDWICKE HOSPITALS, North Brunswick-street, Dublin.—Physicians: Drs. J. T. Banks, B. G. McDowell, S. Gordon, and R. D. Lyons. Assistant Physician and Pathologist: Dr. Reuben J. Harvey. Consulting Obstetric Surgeon: Dr. Geo. H. Kidd. Surgeons: Drs. William Stokes, William Thomson, William Thornley Stoker, and Anthony H. Corley. Ophthalmic Surgeon: Dr. Charles E. Fitzgerald. Dental Surgeon: W. B. Pearsall, F.R.C.S.I.

These Hospitals contain 312 beds—110 for Surgical cases, 82 for Medical cases, and 120 for Fever and other epidemic diseases. During the past year 3183 patients were admitted; 19,612 out-patients were also treated; making in all 22,795 cases.

There will be a distinct Course of Lectures and Clinical Instruction in Fevers. Operations are performed on Monday and Wednesday mornings, except in cases of emergency. A Course of Practical Instruction in Ophthalmic Surgery will be given. Fee for the Certificate, three guineas. Practical Pharmacy is taught under the superintendence of the Apothecary of the Hospitals.

A Resident Surgeon is appointed every alternate year, receives a salary, and holds office for two years. Eight Resident Clinical Clerks are appointed each half-year, and provided with furnished apartments, fuel, &c., &c. These appointments are open not only to advanced students as formerly, but also to those who are qualified in Medicine or Surgery. The Dressers are selected from among the best qualified of the pupils, without the payment of additional fee.

THE RICHMOND LUNATIC ASYLUM, containing over 1000 patients, adjoining these Hospitals, affords every facility for the study of mental diseases.

Fees.—For the winter and summer session (nine months), £12 12s.; for the six winter months, £8 8s.; for the three summer months, £5 5s. Resident Clinical Clerks, 20 guineas for the winter session; 15 guineas for the summer term (from May to October, inclusive), including certificate of attendance, furnished apartments, fuel, light, attendance, &c.

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OUR thanks are tendered to those gentlemen who have kindly supplied us with the requisite information given in this Students' Number of THE LANCET relative to the various medical examining bodies, hospitals, and medical schools of the United Kingdom.

In consequence of the present number being exclusively devoted to information especially interesting to students, reference to other subjects is necessarily postponed until next week.

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Clinical Lecture.

ON

LARGE HEADS IN CHILDREN.

Delivered in St. Bartholomew's Hospital, June 4th, 1880,

By SAMUEL GEE, M.D., F.R.C.P. LOND.,

PHYSICIAN TO THE HOSPITAL.

GENTLEMEN,—There are two children in Mary ward who afford a good text for a lecture on big heads. Adults seldom or never consult you on account of the size of their heads, but children are very often brought for an opinion about their heads, which are thought to be too big, and to indicate water on the brain.

Much of what I have to say is taken from a paper on the "Shape of the Head, looked at from a medical point of view," which I published in the Hospital Reports for the year 1871.¹ The length of time which has since passed away gives me the advantage of sitting in judgment upon my own article, of correcting it, and of adding to it the results of a larger experience.

In the first place we must remember the rapid growth of the brain in childhood. During the first year the weight of the brain is more than doubled. "Sömmerring concluded that the brain reached its full size as early as the third year; the Wenzels and Sir W. Hamilton fixed the period about the seventh, and Tiedemann between the seventh and eighth."² This is not far from the truth. Hence the cranium or the brain-pan grows much more quickly than the face and the rest of the body; and hence the skull is often wrongly deemed to be unduly large, even in a perfectly healthy child.

When we are asked for an opinion about a big head, the first thing to do is to study, not its size, but its shape. Here we are helped by the cyrtometer, which will give us an exact outline of the head in any plane. Of the three chief planes of the skull—to wit, the horizontal plane and the two vertical planes (longitudinal and transverse),—the horizontal plane is certainly the least useful, and the longitudinal vertical plane the most useful. The latter plane passes through the tuber occipitale, sagittal suture, and glabella. It is the plane which anthropologists have chosen, as being the most important; so much so that Mr. Huxley deems it a disgrace in any ethnological collection to have a single skull which is not bisected thus.

Our cyrtometric tracing, then, passes from the deepest part of the nape of the neck just below the tuber occipitale, over the top of the head, to the deepest part of the bridge of the nose, a little above the canthus internus of the eyelids. The shape of a natural head, upon this plane, is that of an irregular pentagon with curved sides. Of the five sides of this pentagon, four belong wholly to the cranium, four increase in length as the cranium increases in size. The fifth side belongs partly to the face, and does not grow at the same rate as the other sides or as the cranium. This fifth side may be called the base line, inasmuch as it is a straight line joining the deepest part of the nape of the neck with the deepest part of the bridge of the nose, and corresponds roughly with the base of the skull. This base line, because it is somewhat of a constant, which does not change altogether with cranial changes, is most useful as a standard of comparison.

The greater number of big heads retain the pentagonal shape; some do not. I call the former long heads or dolichocephalæ, and the latter round heads or cyclocephalæ, for reasons which will appear hereafter.

I. Long Heads.—The cranium enlarges, but the base of the skull does not grow in proportion. The cranial sides of the pentagon lengthen, but very much more than the base line. The result is that the proportion between the greatest length of the cranium from before backwards and the base line is changed. I have measured a good many heads of healthy children under three years of age, and I find that the ratio between the greatest length of the cranium

and the base line is as six are to five; in other words, the cranium is about one fifth longer than the base. In these measurements, the greatest antero-posterior diameter must be taken parallel to the base line, an easy thing to do in the cyrtometric tracing. But even in a well-shapen head, the length of the cranium may be greater than the above-mentioned average; yet the ratio of greatest length to base line is seldom or never more than as five are to four—that is to say, that the cranium of a healthy head is never longer than the base line by more than one-fourth of the latter. If the cranium is longer than this, I call it dolichocephalic. This is not the meaning which Retzius, who invented the word, gave to it; nevertheless, I have ventured to change the meaning for medical purposes, and for reasons given in my paper in the Hospital Reports. The increased length of cranium shows itself before or behind, or in both directions. It is observed that the child's forehead is "overbuilt with most impending brows," or that the occiput is very protuberant, or that the head projects both back and front.

Let us now inquire into the state of things within a dolichocephalic skull. In my former paper I declared my belief that "dolichocephalus is always the result of increase in the solid contents of the skull, and not in its liquid contents. In other words, dolichocephalus indicates a big brain, and not water on the brain." I have now to say that this proposition is not universally true; on the contrary, dolichocephalus is only sometimes indicative of a big brain.

1. The big brain, in most cases, is naturally big. It does not afford any signs of disease, either during life by lesion of function, or after death by lesion of structure. The person has a head and brain too great for his body; that is all we have to say of him; but that is saying much, because it is saying that he is not suffering from the incurable disease which is always supposed in such cases.

2. The big brain is sometimes unnaturally big; it is said to be hypertrophous. Its functions during life are much impaired. Yet the naked eye cannot detect any structural changes after death. Some there are who affirm that hypertrophy of the brain is due to "diffuse interstitial hyperplasia of the neuroglia;" it would seem to be more agreeable with our present knowledge neither to affirm nor to deny. For hypertrophy of the brain is an uncommon disease. Few cases are on record, and for this reason I will narrate the following instance.

L. O.—, a boy two years and three-quarters old when seen for the first time. He was never able to walk; he did not cut his first tooth until he was ten months of age. When two years and a half old he became feverish, vomited, and screamed a great deal, and had fits, sometimes two a day, sometimes two a week. His mother's attention being drawn to his head, she noticed for the first time that it was large.

He was highly rickety—head, breast, and limbs all deformed. His head was much enlarged; but I have preserved no tracing of it, because at that time I did not use the cyrtometer. The fontanelle was widely open, not raised. Slight internal squint of right eye; no blindness; pupils equal. He seemed very dull, and cried fretfully. Two days afterwards he was convulsed, and died. Post-mortem appearances: Body not very thin; weight 17½ lb. Skull—fontanelle on a level with bones, about 1½ in. square. Recent black thrombi in posterior half of superior longitudinal sinus and of lateral sinuses. No flattening of convolutions. No excess of intracranial fluid anywhere. Brain weighed 59 oz. (more than one-fifth of the whole weight of the body). To the unaided eye its structure seemed natural; the grey matter was increased as much as the white; the corpora striata were very large. The consistency of the brain was natural, it was not toughened or hardened, and its specific gravity did not seem to be increased. The other organs were natural.

3. But in by far the greater number of dolichocephalæ which I have examined the brain has not been larger than natural. Wherefore, in such cases, the brain does not fill the skull, and the space between them is occupied by serum. The effusion is both external and internal; it seems to be passive, simply filling up what would otherwise be a vacuum. Nor are there any signs of pressure either upon the skull or the brain. In these particulars this kind of hydrocephalus, or water on the brain, differs altogether from the active hydrocephalus I shall have to speak of hereafter, which is ventricular or internal, which dilates the skull by equal pressure in all directions, into a sphere; and which also compresses the brain.

¹ St. Bartholomew's Hospital Reports, vol. vii., 1871.

² Quain's Anatomy, sixth edit., vol. ii., p. 430.

Now most, if not all, of these children are rickety; indeed, this kind of dolichocephalus and hydrocephalus is peculiar to rickets. The earliest writers upon rickets knew this; for details upon this point I may refer you to an article of mine upon rickets in the Hospital Reports for 1868.³ Let us see what explanations have been given of this rickety head. Van Swieten writes thus: "In rickety children the bones are softer, and the membranous spaces between the bones of the skull are wider than in healthy children; hence the whole fabric of the skull more easily yields to the distending encephalon, whence the reason also appears why an increased size of the head in rickety children is enumerated amongst the diagnostic signs of that disease. Now, if it be considered that the quantity and impetuosity of the humours towards the head are augmented from the magnitude of the arteries and jugular veins, it evidently appears why the bulk of the head may be increased on account of these three concurrent causes—the softness of the bones, the membranous state of a considerable part of the skull, and a copious afflux of blood to the part, whilst the rest of the body seems rather to decrease. And thus a disposition to a hydrocephalus arises, which sometimes accompanies the rickets, and sometimes is a consequence thereof."⁴ As who should say, the softened bones yield to the pressure of the blood within. Perhaps there may be a little truth in this explanation. Shaw holds that the cranium of rickets is only relatively big, and seems to be so because the face is actually smaller than natural on account of arrested growth. "In other words, in persons whose growth has been interrupted by rickets the face will appear extraordinarily diminutive, while the cranium will retain about its natural dimensions."⁵ Doubtless there is some truth in this explanation, but not the whole truth. In at least some rickety persons, if not in all, the cranium is extraordinarily big. In my former paper on the shape of the head I gave the measurements of a head which are decisive upon this point.⁶ Moreover, Shaw's explanation does not touch the hydrocephalus; if the cranium be of natural size why should it contain a great excess of serum, seeing that the brain also is of natural size?⁷ I will narrate a case in point. A boy three years old had never walked or talked. He had been very subject to convulsions since he was eight months old. He was very rickety, fontanelle more than an inch square, head very large. The body weighed 20½ lb., the brain 43½ oz., about its natural weight, yet it did not nearly fill the skull; there was much fluid in the arachnoid sac, the pia mater, and the ventricles. The brain seemed natural in all respects. I think we must end where we began, with the simple assertion that the skull in rickets is often enlarged so as to be greater than is necessary for the brain, and the excess of space is occupied by serum.

I will now speak of the manner in which the head is enlarged by inherited syphilis. It does so in two ways. First, the characteristic enlargement is due to extensive growth of the osteophytes described by Parrot.⁸ The cranial bones, especially the frontal and occipital bones, become greatly thickened, it may be as much as two or even three centimetres. The big head, such as it is, is indicative not of a cranial cavity larger than natural, but only of a thickened skull. Wherefore the enlargement of the head from this cause is never great. Secondly, the head of syphilitic children often possesses all the characters which I have just assigned to the rickety head, and I have always deemed these children to be both syphilitic and rickety, and have even gone so far as to believe that syphilis may be looked upon as a cause of rickets. But what shall we say to Parrot's doctrine that syphilis is not only a, but the, cause of rickets, that "syphilis leads of necessity to rickets, and that rickets, thus regarded, is not a pathological entity, but simply a period, a particular state, a form of hereditary syphilis, so much so that rickets can be no longer taken to include these syphilitic lesions of the bones, but, on the contrary, it is syphilis which includes rickets, and rickets thus sinks from the position which it has hitherto held into that of a simple syphilitic affection." If Parrot mean by rickets all that I have been accustomed to include under that name, I cannot accept his doctrine, I must even stoutly deny it. However, this question does not concern us here;

we are not discussing the nature of rickets, but the changes it produces in the size and shape of the skull.

II. *Round Heads.*—In this kind of big head the shape of the skull is fundamentally changed; it ceases to be a pentagon and becomes a segment of a circle. Cyclocephalus is the shape proper to ventricular hydrocephalus, a disease characterised by an active distension of the ventricles of the brain by serum, and a much more serious disease than the passive hydrocephalus I mentioned just now as being present in some rickety dolichocephalæ. Hydrocephalus does not produce a round head after the fontanelles are closed and the sutures well united. Acute ventricular effusion, occurring in tubercular or purulent meningitis, does not produce a round head, even when the fontanelle and sutures are not closed; the pressure, we may suppose, does not last long enough.

Another well-known effect of the active distension of the skull from within by fluid is the peculiar change in the position of the eyeballs with respect to the eyelids; a condition due to excessive obliquity and drawing-upwards of the orbital plates, and never associated with dolichocephalus.

Optic neuritis, going on to atrophy of the discs, is sometimes caused by hydrocephalus; especially when it sets in after the fontanelle has closed. When the head admits of distension, and becomes cyclocephalic, the optic neuritis is often absent.

Lastly, in extreme hydrocephalus, the head is sometimes seen to be translucent in a strong light, such as that of the sun.

Clinical Lecture

ON THE

RESULTS OF ANTISEPTIC OSTEOTOMY

FOR GENU VALGUM, VARUM, AND OTHER OSSEOUS DEFORMITIES OF THE LOWER LIMB.

By WILLIAM MACEWEN,

SURGEON, AND LECTURER ON CLINICAL SURGERY, ROYAL INFIRMARY, GLASGOW.

GENTLEMEN,—Having now operated on 557 limbs, belonging to 330 patients affected with various osseous deformities of the lower extremities, the opportunity is considered favourable for taking a retrospect of the results. Of these, 220 patients were affected with knock-knee, presenting 367 limbs for treatment. There were 64 patients who had 104 bow-legged limbs; 40 patients had 80 limbs affected with anterior or other tibial curves; and 6 patients had osseous ankylosis of joints—1 of hip and 5 of knee. Though 557 limbs were operated on, that does not indicate the number of osteotomies, as in many instances several osteotomies were performed on one limb. This happened in those cases of knock-knee which were complicated by other curves, such as anterior tibial; in such, the tibia and fibula were divided as well as the femur, making three osteotomies on one limb. In tibial curves of old standing, the tibia and fibula had to be divided at times in two places, making four osteotomies on one limb. Bow-leg, when aggravated, often required the tibia and fibula to be divided in two places and the femur in one—thus making five osteotomies on one limb, or ten on each patient. In this way there have been 835 osteotomies performed. Both limbs were operated on at once, and, with few exceptions, all the osseous incisions necessary for the correction of the deformity or deformities were proceeded with at one sitting: as many as ten osteotomies have been performed on one patient at once. The wounds leading to the bone are from three-quarters of an inch to an inch and a half; but even the smallest wound made cannot be looked upon, nor is it in any sense intended, to render the osseous incisions subcutaneous. The wounds enable the instrument to reach the bone; but as they are generally made more or

³ St. Bartholomew's Hospital Reports, vol. iv., p. 73.

⁴ Comment on Aphor. (1487).

⁵ Medico-Chirurgical Transactions, vol. xxvi., p. 348, 1843.

⁶ St. Bartholomew's Hospital Reports, vol. vii., p. 9.

⁷ Ibid., vol. iii., p. 109.

⁸ Pathological Transactions, vol. xxx., p. 348.

less obliquely, while the osteotome, after introduction, is turned transversely to the axis of the limb, there is an aperture on each side of the osteotome, leading from the external air directly to the interior of the bone. In rectifying anterior tibial curves wedges were removed by larger wounds than are required for simple osteotomy, the edges of the wounds being held aside by retractors, the purified air having free access to the interior of the bone during the whole operation. Not only so, but it is often the case, while rectifying the deformity, to hear the air whistling into the space between the divided osseous surfaces. They are therefore not subcutaneous osteotomies, but examples of compound fractures and incisions treated antiseptically. In one or two peculiar cases wedges were found on the opposite side from that on which the wound was made, and after being loosened, the deformity was rectified by displacement without removal of the wedge. In several other cases the curve was so great that the bones were divided in three or four places, the division being at very short distances from one another, thus causing what might be described as a compound comminuted incision and fracture.

After the osteotomy is finished the wounds are examined, and if there be a redundant supply of adipose tissue protruding above the level of the skin, it is carefully removed by a pair of scissors curved on the flat. If this be not attended to, the cellular tissue comes into direct contact with the protective plaster and granulations from above the level of the wound, which take a longer time to heal than the cellular tissue takes to vitalise. If the cellular tissue be removed, so as to form a concavity, the blood-clot fills this up, and a layer of blood-clot is thus formed between the protective plaster and the cellular tissue. When the wound is large, a few catgut stitches are introduced.

All the cases are dressed and put up in splints before removing the patient from the table. The temperature is taken night and morning, and if it be found normal and there is no discharge, no pain or discomfort, the dressings are not touched until the end of a fortnight, when they are removed, and the wounds are found healed. This, as we are aware, is what happens in most cases. The blood-clot between the lips of the wound is seen to be vitalised and covered by a delicate, almost transparent, layer of epithelium, which however quickly becomes opaque by exposure to the light. With the exception of eight cases, all these 557 limbs and 835 osteotomies healed by vitalisation of blood-clot without the production of a drop of pus. In seven of the eight cases which suppurated there was a distinct known cause for the pus production; thus in three instances a bruising and laceration of the soft parts occurred during the operations. In one case a layer of muscle became caught between the cut surfaces of the tibia and was severely rubbed during the adjustment of the bone. The fifth and sixth cases were due to irritation set up by pressure in one and by the splint in another; the seventh may be also attributed to over-pressure of the limb, which became twisted by the patient's own actions. In the eighth case there was no cause which was apparent for the pus production. In each of these cases the temperature indicated the impending mischief, as it was above normal, and put us on our guard. The amount of pus in these cases varied from a few drachms up to a number of ounces, necessitating frequent dressings. But all of them, with one exception, did well; they ultimately recovered perfectly, their convalescence not being much protracted beyond the ordinary time. The exception is the one mentioned as the seventh case—a lad who was affected with bow-leg, who, on the second night, during the nurse's temporary absence, rose from bed and fell, his splints and bandages becoming shifted and his foot twisted. This circumstance was concealed. On the morning following the occurrence the foot and leg were found twisted, the toes were cold and livid, and ultimately became gangrenous. After amputation of the limb the lad gradually recovered, and is now strong and healthy. There is no doubt but that this result was the consequence of his own act, coupled with the subsequent concealment of the fact; attention was only drawn to the mishap ten hours after, when the foot was found twisted. The true cause was only confessed long after.

Of those who have been operated on, three died *after* the operation, but none have died *from* the operation. One died from pneumonia contracted prior to the operation, one from tubercular meningitis, and one from diphtheria.

The first was a patient whose friends stipulated for her that she should be operated on when admitted, as her situa-

tion was only to be kept open for a limited period. This was acceded to. She was seventeen years of age, and when first seen by me she had the aspect of a girl in fair general health. In answer to inquiries regarding her health, she stated that she was well and was prepared and anxious for the operation. She had a slight herpetic eruption on the lips at the right angle of the mouth, which she attributed to cold. The operation was proceeded with. She took chloroform badly, and several times during the operation it had to be temporarily suspended, owing to fits of coughing. On recovering from the anæsthetic, several rusty-coloured sputa were expectorated, and on examining the lungs there was a very slight dulness with a very fine vesicular crepitation detected over the left base posteriorly. It then transpired that she had come from Ireland two days previously, and had remained on deck during the whole of a December night, that next day she had had a feeling of cold and shivering, but being desirous to have the operation performed, and also thinking that the shivering was a trifle in itself, she did not mention it in giving her history on the morning of the operation. The expectoration during the operation day continued to be streaked with blood, the colour deepening as the time advanced; the catching pneumonic cough set in towards the second morning, and the herpetic eruption at the side of the mouth spread. In short, the pneumonia developed and passed through its various stages, the left lung in its middle and lower lobes being involved, and death ensued at the end of two weeks. The wound on the right limb healed by vitalisation of blood-clot. That on the left at first closed, but, probably owing to the movement consequent on the application of poultices to the lung, it afterwards suppurated, but before death it had again almost healed.

It is evident that the operation had been performed just at the outset of what ultimately proved to be severe pneumonia. Had the operation been postponed for twenty-four hours, the symptoms would have manifested themselves, and the operation would not have been performed.

The second case was that of a lad nineteen years of age, who had been subject to periodical attacks of head symptoms since childhood; he, however, had been free from them for about six months prior to the operation. Osteotomy was performed in both limbs; the wounds healed by vitalisation of blood-clot, and the dressings were removed on the tenth day. Up till this time everything had gone well; the wounds were healed, the limbs straight, and he had suffered no pain. On the eleventh day he was somewhat duller than usual, and seemed slightly stupid. At night he was restless, confused, and turned about. On the next day he was a little better, but his pulse at times was very slow, and at others quick, the change occurring from one to the other within a few hours. His temperature remained about normal; once or twice it was subnormal. Vomiting set in early, and was persistent. His pupils were widely dilated, the eyes assuming a wakeful, brilliant appearance; occasionally he squinted. On the third day from the commencement of the symptoms he became slightly delirious, but could be made to answer questions. On the fifteenth day after the operation he died. His parents and friends stated that the symptoms which he exhibited on this occasion were quite similar to those which characterised his former attacks, and so satisfied were they of this that no amount of persuasion could induce them to grant a post-mortem examination. Though no autopsy was obtained, Dr. Foulis, the pathologist, and Dr. Clark, the lecturer on anatomy, examined the external appearances of the body. They saw that the wounds on the limbs were firmly healed, and that there was no abnormal appearance of the limbs.

It is evident that this lad died from a head affection, most likely of a tubercular nature, originating during childhood and continuing to manifest itself up to adolescent life. About the same time a patient fifteen years of age was met with who passed through almost identical attacks prior to any operation having been performed on him. He had had such attacks from early childhood, coming on at intervals of six or nine months. This lad was operated on for double knock-knee. He had no attacks during convalescence, and recovered perfectly. It is now nine months since he was operated on, and he has been in good health ever since.

The third fatal case was that of a girl aged seven years, who had a single osteotomy performed on her. She took diphtheria on the seventh day and died from the diphtheria on the twelfth day. The diphtheritic membrane stretched down the bifurcation of the trachea. Notwithstanding the

high temperature consequent on the diphtheritic pains the wound healed by vitalisation of blood-clot. There was not a drop of pus formed. A post-mortem examination was conducted by Dr. Foulis, and the only post-mortem specimen of an osteotomy was thus obtained. This specimen will again be alluded to, but meantime allow me to point out that the incision in the bone has been made exactly as it is described theoretically.

These are the only three cases of death after osteotomy, and not one of these can be traced to the operation, all of them being attributable to extraneous causes.

In order that you may fully understand the foregoing remarks and appreciate the results, it is necessary to supply the following information regarding the constitutional condition of the patients operated on. In my earlier osteotomies the strong and healthy were selected, with few exceptions. It soon became apparent, however, that if this selection were continued it would exclude many patients, and among them those whose limbs most required straightening and those who would derive most benefit from the results. It was seen that in those who were comparatively healthy the operation was followed by little or no constitutional disturbance. It then became a question whether the state of the system in those persons who were weak and reduced would have such an influence on the wounds as to induce phenomena in them which might reflect on the system and negative the performance of the operation.

The way was at first very carefully felt in this direction, step by step; and the solution arrived at, deduced from abundant data, is that an antiseptic osteotomy can be performed in the weak and enfeebled with impunity; their constitutional state does not suffer from the operation; neither does it affect the healing of the osseous incision, further than by requiring a little longer time for producing firm union. Not only so, but we can go a step further, and state that the result of the operation and straightening of the limbs has been to improve and strengthen the constitution. The patients are able to walk freely about, the physical deformity has been removed, and thereby a load has been lifted from their minds, which in itself conduces to improved health. Thus none were rejected on account of their weakness constitutionally, the only test being the state of the bones. If the period of *ramollissement* had passed and the bones had become firm the operation was proceeded with. On several occasions the patients were so weak that there was considerable hesitation about administering an anæsthetic. Many have been carried to the wards by their friends, as they were unable to walk except by the aid of crutches, and that for a very short distance; they have been operated on, and have gone out on their feet, and have become useful members of society, able to work for their own maintenance.

It is further interesting to note that a number have passed through attacks of acute diseases after the operation had been performed, such as scarlet fever, measles, and diphtheria, and that while these diseases have run their ordinary course, the wounds have not been affected by them: they have healed in the same way as the others did, by vitalization of blood-clot without the production of pus. In a case of scarlet fever the rash appeared on the third day after the operation, the fever ran its usual course, desquamation followed, and a portion of skin from the neighbourhood of the wound shed, taking along with it an almost transparent layer of delicate epithelium from the surface of the blood-clot, leaving, however, the latter covered.

When osteotomy is viewed in relation to other methods proposed for the relief of such deformities of the lower extremities, it is seen to be at least as safe, much more speedy in its action, and a great deal more certain in its results. Besides, most of the other methods are applicable alone to children, their effects for the most part being inappreciable when applied to adolescent life; whereas osteotomy has had excellent results up to thirty-six years of age. As to the time required from the date of the operation till the patient is able to walk without artificial support, this varies, but ten weeks may be taken as the average: six weeks in splints; the next fortnight walking with crutches, and the following one learning to walk without them. This time is for the adult; children are able to go about much sooner. The result which is looked for and obtained is a straight limb with complete movement of the joints.

A surgeon said not long ago that he did not care about such operations, as they were required principally among the poorer classes. This is no doubt true, and the truth of the assertion enhances the value of the operation; for it is among

the working classes that the struggle for existence is keenest, and where such physical malformations are not only looked upon as unseemly, but are actually barriers to many occupations. But though poor in purse, there is no class of patients richer in gratitude. The contrast between the dejected frightened look with which these patients enter the wards, bundling themselves into corners out of view, and the manner in which they walk about on their return from the home with happy faces, betokening the consciousness of having gained a lease of new existence, is indeed a pleasant sight. The patient feels that you have taken away a reproach from him; you have enabled him to earn his bread, and you have placed him on a footing of equality with his fellows; and the man for whom you bring about such things cannot easily forget. But the mere fact that you can take up a deformed fellow, and by a few touches and a little after-care set him straight, ought in itself to be a recompense.

CASES OF RUBEOLA.

By J. L. ERSKINE, M.D.,

BRIGADE-SURGEON, ARMY MEDICAL DEPARTMENT.

IN THE LANCET of March 13th a case of rubeola was published by Dr. Dyce Duckworth, who prefaced his account of it with the remark that, "as doubt still exists in the minds of many experienced practitioners respecting the peculiar and specific nature of rubeola, it seems desirable to place on record all cases that may be met with." Accepting this dictum, and also the remark of Professor Thomas of Leipzig, in Ziemssen's *Encyclopædia of Medicine* (vol. ii., p. 136), that "epidemics of rubeola have not yet been sufficiently studied," I am induced to publish a short account of two cases of rubeola seen by me.

CASE 1.—On April 3rd, at 10 A.M., I was called to see a young gentleman, aged seventeen years, who stated that though he had gone to bed quite well the previous night, he had not slept well, feeling restless and feverish. On examination, I found the face, tonsils, and uvula somewhat swollen, the two latter dusky-coloured, and the cervical glands enlarged. The face, neck, and arms were covered with a pale-red rash, slightly raised above the skin. The spots of eruption were generally round or oval, though some of the patches were irregular in outline, more especially on the neck, where the eruption was thickest. The tongue was clean; bowels regular; no thirst. Eyes suffused, but no lachrymation. A gentle aperient saline mixture was ordered every four hours, and the patient allowed out of bed.

April 4th.—The rash has extended downwards over the trunk and behind as far as the nates. Eyes suffused; face is less swollen, but cervical glands more so; tonsils and uvula much as yesterday; tongue clean; appetite good; bowels opened; urine clear. Temperature 99° 8'. Continue the saline mixture, with an astringent gargle. Evening: The rash has now extended to feet.

5th.—Less swelling of throat and glands of neck. Eyes not so suffused. Temperature 99° 4'. Continue medicine and gargle.

6th.—Eruption fading. Omit medicine, continue gargle.

7th.—Eruption disappeared from face and extremities, but still faintly seen on the body. Temperature yesterday and to-day normal.

8th.—On calling found that my patient, feeling quite well, had gone out to walk.

Remarks.—On first seeing this case I inferred it was a case of measles, the eruption being modified in consequence of the patient having suffered from a severe attack of measles eight months previously; further, the eruption was so dissimilar in appearance to what I had previously seen in a few cases of rubeola seventeen years ago at Malta, and in one case at Aldershot eight years ago, at which periods the eruption more resembled that seen in scarlatina than measles. I was, however, led to believe it was a case of rubeola from the sudden appearance of the eruption in one previously in good health after exposure to contagion, the patient stating that he must have caught the disease from a boy in the school the day prior to his own attack, the boy having been covered with an eruption.

On the second day of the illness Dr. Dunlop, who had seen and described in THE LANCET of Sept. 30th, 1871,

an epidemic of rubeola, saw the patient with me, and again on a subsequent occasion, and agreed that it was undoubtedly a case of rubeola. This view has been since confirmed from three other cases having occurred in the same school, and three more in the practice of an acquaintance at St. Helier's, who described the course and appearance of the disease much as I found it.

Contrary to Dr. Dunlop's experience in the epidemic recorded by him, there were no petechial spots on uvula or tonsils, nor red flushes over the joints. The constitutional disturbance was all throughout very slight, and the appetite so good that the stomach was never deranged from being overloaded, and a purge was ordered on the 7th. I did not examine the urine for albumen. It was clear throughout the illness.

CASE 2.—On April 14th S. N.—, a girl of eleven years of age, got wet during the afternoon; she was then quite well. At 9 P.M., feeling cold, she was sitting near the fire, when her mother observed her face swollen and covered with a red rash. On examination this was observed to cover the whole body. At 11 P.M., the mother said, the girl was very feverish.

April 15th.—I saw the girl at 12 A.M. She was reported to have slept well. The face was swollen, eyes suffused, no lachrymation, cervical glands enlarged, uvula and tonsils slightly swollen, of a dusky red, and covered with petechial spots, but no complaint was made of the throat feeling sore. The face, body, and limbs were covered with a rose-red rash, more resembling scarlatina than measles. There was little fever. Temperature 99.2°. No thirst or headache, tongue slightly furred, urine clear. A purge of compound jalap powder was ordered, and a diuretic saline mixture to be taken every four hours.

16th.—Bowels not relieved, repeated the purge, and continued the mixture. Temperature 99°. Face less swollen, throat, cervical glands, and eruption as yesterday, eyes suffused, no lachrymation. Evening—bowels moved.

17th.—Eruption almost disappeared; throat less swollen; petechial spots fainter in colour; still some swelling of face, with slight suffusion of the eyes; cervical glands less swollen; temperature normal; urine depositing urates on standing. Continue saline mixture thrice daily.

18th.—Eruption gone; no swelling of face; throat only very slightly congested; no petechial spots; slight swelling of cervical glands. Omit medicine.

19th.—Quite well.

Remarks.—This case did not much resemble the other. The eruption was quite different in appearance, being rose red and more diffused, not patchy. According to the mother's statement, it was all over the body when she looked about 9.30 P.M. on the evening of attack; whilst it gradually spread downwards in the first case recorded; the eruption seemed to fade equally generally over the body. Then the petechial spots on the throat were well marked in this, but absent in the first case. There was little constitutional disturbance. No exposure to contagion could be made out.

Jersey.

HUMAN AND ANIMAL VARIOLÆ: A STUDY IN COMPARATIVE PATHOLOGY.

By GEORGE FLEMING, F.R.C.V.S.,
ARMY VETERINARY INSPECTOR.

(Concluded from page 375.)

GOAT-POX.

THE goat has a variola of its own, which possesses as special and distinctive characters as that of the animals I have already described, and is entirely independent of infection from other species. In some countries this *Variola caprina* is apparently unknown, in others it is extremely rare, while in at least one country, Norway, it is a frequent, if not a continuous disorder, amongst the caprine population. I am not aware if it has ever been witnessed in this country, where goats are so few in number; for Germany, Bollinger says it is so infrequent, that in the course of twenty or thirty years scarcely half a dozen cases are recorded. He is of opinion that goats receive the disease either from cattle affected with vaccinia, or sheep suffering from sheep-pox.

But he admits that though now and again the same form of variola is witnessed in cows and goats, yet that the latter, as a rule, remained exempt from the disease when confined in the same stable with infected cows, and that the inoculation of goats generally yielded negative results. In order to prove that goats may be infected with sheep-pox, he gives the following on the authority of Prietzsch: "In a stable in which sheep suffering from sheep-pox were confined, three goats were simultaneously attacked with the disease, the eruption being the same as in the sheep. Upon the udder were numerous pisiform variolæ in the form of hard, flattened papules, with a trifling amount of lymph; papules were also distributed over the body, being more numerous upon the hind extremities than the abdomen. Marked symptoms of fever were also present, with inappetence, swollen lips, and a somewhat profuse muco-purulent discharge from the nostrils. In fourteen days convalescence was established. Two other goats were inoculated on the ear with the virus of sheep-pox; a single pustule formed at the seat of inoculation, and the animals did not afterwards take sheep-pox."

That there is no relationship, so far as origin is concerned, between sheep-pox and goat-pox, nor yet, for that matter, human variola, is evident if we look at a country where the latter is all but unknown, and the former is not seen. From 1864 to 1876 inclusive, sheep-pox has been reported only twice in Norway; in 1865 there were two cases, and in 1868 fifteen cases, all due to foreign importation. According to Hansen, the official veterinary surgeon in central Norway,¹ in 1867-68-69, and 1874 and 1875, extensive outbreaks of goat-pox were observed; and according, also, to the official veterinary statistics in 1865, eleven cases of the so-called "water-pock" (*Variola serosæ*), and in 1868 four cases of common goat-pox were recorded in South Norway. Many cases which escape the notice of the Government veterinary surgeons are supposed to occur. In 1871 Dr. Cæsar Boeck, of Christiana, was on a botanical excursion in South Norway, and in July, in Thelemarken, he saw a drove of cows and goats being driven from the woods into their huts. The cattle were quite healthy, but about forty of the goats were affected with a variolous eruption on the udder and teats, as well as about the mouth. In some there were merely deep dark-coloured sores remaining, in others—the majority—there were seen thick brownish crusts, about the size of a pea, on the mouth, udder, and adjoining parts; while in a few the disease was so recent that, with the crusts, there were also observed pustules from the size of a lentil to that of a pea. From inquiry and examination, Boeck was of opinion that the exanthem had been more or less general over the body, and that there had been fever and resulting emaciation. The milk secretion had been almost diminished, and the fluid itself was drawn with difficulty and pain. None had died, and no other animals had, so far as the shepherdess knew, been in contact with her drove. The cows were fifty in number, and none of them showed the least trace of disease. The cows and goats were milked indiscriminately by three women, whose hands were not washed from the commencement to the end of the operation; so that there was abundant opportunity for transmission of the disease from the goats to the cows, had the latter been susceptible; while the constant association of the two species, particularly in the closely-packed sheds, gave every facility for infection through the atmosphere, if this could have taken place. Experimental inoculation would have been tried, but no good lymph could then be found. The epizooty appeared in the spring, among the four-year-old goats which had been kept during the winter by themselves in small sheds. When they joined the other goats at a later period, the outbreak became general in a short time. Flocks of sheep associated with the goats without any disease resulting in them. Sheep-pox—a very fatal disease—had never been seen in that part of Norway. Boeck, who contributes his observations to the *Deutsche Zeitschrift für Thiermedizin* for December, 1879, alludes to Veterinary Surgeon Hansen's observations with regard to the outbreaks in 1867-68-69, and 1874-75, in *Gudbrandsdalen*. In the first year the malady appeared in August in two different flocks, numbering 170 goats, attacking without exception the males, kids, and those in milk. In the males the eruption was sparse, and limited to some pock pustules on the scrotum. (In the following year, the exan-

¹ Gudbrandsdalen d. h. Gudbrandsthal.

them on the males extended to the inner surface of the thighs.²) Hansen was called in when 13 of the 170 goats had died, and nearly all the others were affected. On examination of two of the carcasses, he found the eruption all over the body, and pustules and ulcerations on the mucous membrane of the stomach and intestines, as is often witnessed in malignant sheep-pox. The origin of the outbreak could not be accounted for, the goats not having been in contact with strange animals, and there was no similar disorder prevailing among other creatures. "I have practised in Gudbrandsdalen," says Hansen, "for twenty years, and I have never seen either cow or sheep-pox." In the goat-sheds were 60 cows and 80 sheep, but these remained healthy.

In June, 1868, in another district of the same parish, Hansen was sent for to see a herd of goats, and of 114 eighty-four had an eruption of pocks on the udder and teats; twenty were severely affected, and, in addition to the pocks on the lacteal apparatus, there were many on the inner side of the thighs and on various parts of the abdomen, some of them having ruptured and left large sores. The pain was so acute during milking that the animals cried and struggled, and had to be held. The milk was rather viscid and mixed with blood. The disease existed in all stages among the animals, from red spots to shedding crusts and the formation of cicatrices. The outbreak had only occurred eight days previously. Thirty animals were yet unaffected, and these were isolated. The neighbouring goat-farms were free from the malady, and Hansen could not account for its presence on this farm; but as it was only distant about half a mile (Norwegian) from the place where it prevailed the previous year, it might have been conveyed from there. In July all the goats on the farm had been infected; at the commencement of August goat-pox had nearly disappeared, and during the entire period of the outbreak the cattle there and in the neighbourhood had continued healthy.

On August 17th of the same year, Hansen was again called to attend upon goats at another place, not far from the last, where there were seventy-four goats, only thirteen of which were free from goat-pox. Twelve were severely affected, and three were so ill that they could not follow the others. The pocks on the udder, teats, and thighs could be studied from the first or inflammatory stage to the crust-forming and cicatrising period, the cicatrices being distinguishable from ordinary scars by their light hue. The diminished secretion of milk and emaciation were very marked, though the malady was not so fatal as in the previous year. On four neighbouring farms the disease also appeared among the goats.

When the disease once appeared in a flock it spread rapidly, and spared neither young nor old, male or female; those goats giving most milk having, however, the mildest attack, and the males having the pock-pustules most developed on the inside of the thighs. The contagium might have been conveyed to these farms by direct contact with the first infected farm, or, as was more probable, through the medium of servants and children. In the following month a number of other farms were visited by the goat-pox. Some of the goats had phlegmonous inflammation of the udder as a consequence of the disease, and had to be killed.

In 1869 two herds of goats were attacked, but timely and careful treatment having been adopted the results were not so serious. The milch goats were the worst attacked, and the mortality was greatest in the largest herds. The total number of cases for this year was 129. In the four succeeding years Hansen did not know of any outbreaks.

In July, 1874, goat-pox broke out in two different districts, one and a-half Norway miles apart, three farms being visited by it—one with 150 goats, another with 120, and the third with 60. All of these were more or less affected. The disease first commenced with slight fever; then followed efflorescence, subsequently the eruption on the udder and teats of small vesicles the size of a pea, and which soon became converted into pustules. Not unfrequently suppurating furunculi formed, and the whole udder was involved.

In some instances pocks appeared on the lips. Towards the end of August, there were reported 580 cases of goat-pox in the two localities. On the neighbouring goat-farms the disease was not seen. There was no evidence that it could

be communicated to mankind, though it appeared not improbable that mankind could convey it from one flock of goats to another. Ten deaths only were reported. In 1875 there were 200 cases. Hansen states that altogether there were 1300 goats attacked, with from 25 to 30 deaths—about 2 per cent. The incubative period appeared to be short, certainly not longer than a week, while the duration of the disease was from two to three weeks in the severer cases. The pock cicatrices were more or less stellate-shaped. Immunity was very rare indeed, nearly every goat exposed to infection taking the disease. The outbreaks always occurred during the summer months, and the epizooty did not extend beyond Hansen's official district. Boeck and others competent to judge had no doubt whatever that the disease was variola. Neither sheep nor cattle, notwithstanding their constant exposure to infection and being crowded with the goats in close sheds, became affected. Human variola was not present in the district during the years when goat-pox prevailed.

I have entered into these details with regard to goat-pox, because they support in the strongest manner the position I have taken up with respect to variola in man and animals, and prove that, inasmuch as we have shown that there is a cow-pox, a horse-pox, and a sheep-pox, there is also a goat-pox, independent of the variolæ of other animals.

SWINE-POX.

Swine-pox is not a very rare disorder, and though I fail to find more than one outbreak recorded as occurring—though outbreaks may be frequent—in this country, yet I have been assured by a very observant and competent veterinary surgeon that he saw a large number of swine suffering from the disorder in Kent. No small-pox or cow-pox was present in the locality. Like the ovine variola, the *Variola suilla* is a general eruptive disease, the symptoms being pretty constant in their development, and resembling those of sheep-pox. After the febrile phenomena, which are often very intense and continue for some days, there appear on the back, abdomen, chest, neck, head, and inner surface of the thighs, petechiæ, which soon become papules. Towards the sixth day there are vesicles, and about the ninth or tenth day pustules; the contents begin to desiccate and form crusts, which are eliminated in a few days, leaving a well-defined cicatrix. The eruption appears discrete and confluent, the disease being benignant or malignant, regular or irregular, according to the form it assumes. Young pigs are most susceptible, and the mortality often reaches twenty or twenty-five per cent. The malady is very contagious, and its course and complications, as well as infectiousness, are very closely analogous to those of sheep-pox. One attack protects from another. Felix (*Recueil de Méd. Vétérinaire*) describes an outbreak which prevailed among swine in the Dordogne department, during four years; and Rueling, Greve, Spinola, Viborg, Eisel, Hering, and other competent veterinary authorities have studied swine-pox at various times. Gerlach has experimentally proved that the disease can be transmitted to sheep, and the sheep-pox to pigs. Cases of accidental transmission from sheep have been recorded. Bollinger mentions that some young swine were attacked after being lodged in a pen where diseased sheep had been located some months previously, and these pigs communicated their malady to others which had not been in the shed in question. But that there is no genetic relationship between swine and sheep-pox is again proved by reference to Denmark, where the latter does not exist, and where, nevertheless, swine-pox is sometimes prevalent, as in 1878, when it appeared in several localities in Jutland, according to the veterinary sanitary reports of that kingdom. The same evidence could be given with respect to other countries. Accidental transmission of human small-pox to pigs has been recorded now and again, and that this transmission may take place I do not deny; but it certainly does not prove that swine-pox is dependent for its origin on small-pox. The former occurs where the latter is not present, as in Denmark, and small-pox may rage for years in districts where pigs are numerous, and the latter show no signs of variola. In the Würtemberg reports for 1877 mention is made of the prevalence of the "wild" or *Wasserpocken* (*Variola serosa*) among suckling swine. These pocks soon burst, and their contents mixing with the milk, were ingested by the young pigs in the act of sucking. These had in a short time a yellowish-brown eruption, first about the eyes and nose, and then over the entire body. When the eruption was noticed early, and

² From this it will be seen that the male goats are as liable to the goat-pox as the females. It is the same with the rams associating with flocks of sheep, and which suffer as much as the ewes; and it would be the same with bulls or bullocks, did they consort with cows affected with cow-pox. Sex makes no difference.

the young pigs were then removed from the sows, the consequences were not so serious; but when the exanthem extended over the entire body, they quickly died. Bathing them in bran water or camomile tea was supposed to have cured a good number. No mention is made of small-pox among people. In 1878, according to the *Veterinary Journal* (vol. vii., p. 210), there was a serious outbreak of swine-pox in many localities in the Hernals and Baden districts. It first appeared among swine of Hungarian origin imported from Odenburg, and from them was communicated to the native herds. The mortality was unusually great. The conditions attending the appearance, course, and termination of the disease were precisely analogous to those which obtain in sheep-pox, and the veterinary sanitary measures in force for the latter were adopted successfully for the swine-pox. No mention is made of sheep-pox, cow-pox, or small-pox prevailing at the time.

DOG-POX.

In the dog, variola has been observed and described by many authorities, and is, in fact, a comparatively well-known disease to veterinarians. It chiefly attacks young dogs, though old ones are not exempted, and one attack affords immunity from others. *Variola canina* commences, as in other animals, with fever, which continues for two or three days, and is then followed by the appearance over a large surface of the body, though rarely on the back or sides, of red points resembling flea-bites, which in a very short time are the seat of papules, and then of vesicles. The contents of these become purulent, and finally dry into a crust, which, being shed, leaves a marked cicatrix. In the dog, as in the sheep, goat, and pig, the disease does not always maintain the same form; it is sometimes epizootic, and is benignant or malignant. Young dogs nearly always succumb, and a necropsy often reveals the presence of variolous pustules on the mucous membrane of the respiratory and digestive organs. The disease does not appear to be very infectious, though it is contagious and inoculable. It appears to be communicable to mankind, for Bösenroth³ saw the disease affecting dogs around the nose, face, eyes, and back, and the attendant became infected. The dog does not appear to be very susceptible to the variolæ of other animals, nor yet to that of man. I cannot find but one instance mentioned in which small-pox was communicated to this creature, notwithstanding its very close association with mankind and consequent exposure to infection. Greve inoculated eight dogs with the matter of human small-pox, and three of them became covered with pustules and died. Vaccination only develops insignificant bullæ containing pus; scarcely any "pit" remains.

I am not aware that variola has ever been observed in the cat.

CAMEL-POX.

The camel has long been known to suffer from variola. Agnelli, in 1850, observed an outbreak among camels in Algeria, the symptoms of which were like those of cow-pox. When the Arabs were inoculated with the lymph they were protected from small-pox. Masson⁴ makes similar remarks with regard to the camel in India.

Hares and rabbits are said to have a form of variola, especially in North Germany, and which sometimes is very malignant.

VARIOLA GALLINARUM, ANSERUM, ETC.

Fowls have also their variola, according to the reports of various observers, published during many years. Bollinger has investigated what was supposed to be variola in a poultry yard at Zurich, but found it to be a contagious epithelioma, chiefly localised upon the head. But what appears to be a true variola has often been studied in fowls, as the loss it caused was very great, and its contagiousness caused it to be wide-spread. In these outbreaks the birds were dull and feverish; the feathers stood erect; the wings and tail were pendulous, and an eruption of pustules appeared on the head, neck, and inner surface of the wings and thighs. In the turkey they appeared as citron-tinted vesicles, surrounded by a red areola. In from twelve to fifteen days after their development these pustules became crusted, the fever disappeared, and health gradually returned. In geese the pustules on the neck not unfrequently increased in size and formed abscesses; the feathers were shed, pieces of skin even became detached, and the resulting lesions were

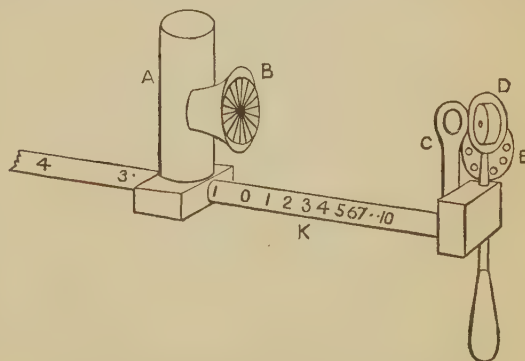
so serious that death was not an unusual termination. The disease was very contagious.

In the official report on the sanitary condition of the domesticated animals in Belgium during 1878, I find that Government Veterinary Surgeon Dejonghe, of Wyngene, describes this variola of poultry. It prevailed as an intense enzooty during the last half of 1878, frequently attacking all the fowls on a farm, and being most prevalent in low damp situations. It was markedly contagious, or rather infectious, and the prevailing winds had apparently some influence in its dissemination. Young birds suffered most severely, and bad food aggravated its severity. The earliest observed symptoms were erect plumage (horripilation), complete indifference, *malaise*, and general prostration, anorexia, great thirst, ardent craving for cold water, and rapid emaciation. There appeared on the skin and visible mucous membranes numerous small nodules, which were soon transformed into pustules. Most frequently these pustules soon after their appearance ruptured, fetid matter escaped, and only superficial sores remained; these generally cicatrised rapidly. Where the skin was thick, cicatrices, often deep, remained. On the respiratory mucous membrane the pustular eruption caused an abundant formation of muco-pus, which sometimes caused death by obstructing the air-passages. Generally, however, a fatal termination seemed to be due to debility, septicæmia, or pyæmia. In birds which survived, complete recovery did not take place for a long time.

NEW INSTRUMENT FOR ESTIMATING ASTIGMATISM.

By TEMPEST ANDERSON, M.D., B.Sc.,
FELLOW OF UNIVERSITY COLLEGE, LONDON.

ASTIGMATISM is that condition of the eye in which the refraction is different in different meridians of the eye, owing to the refractive media not being perfectly symmetrical. An eye with a cornea shaped like the bowl of a spoon, instead of like a portion of a sphere, would be astigmatic. The instrument exhibited by the author at the meeting of the British Association at Swansea has the following advantages. 1. The observations and measurements are made by the observer, and are entirely independent of the patient's sensations. 2. An image thrown on the retina being used as an object, the error arising from the vessels or optic nerve being before or behind the retina is avoided. 3. The refraction and accommodation of the observer does not affect the result. It is only necessary that he should be able to see whether certain lines are sharply defined. A lamp (A, in the engraving) is provided with a



A, Lamp. B, Condensing lens and wires. K, Graduated bar.
C, Convex lens. D, Mirror. E, Disc of lenses.

condensing lens, which has a screen of radiating wires (B) across its front, thus giving a bright field with black lines. This slides on a graduated bar (K), at the other end of which is a convex lens (C). It is better to have two of these of different powers, 4 and 10 dioptres being convenient. Close to the lens, and at an angle of 45° to it, is a plane silvered mirror (D), which reflects the rays at right angles to their

³ Magazin für Thierheilkunde, 1860, p. 341.

⁴ Narrative of a Journey to Khelat, Trans. of Med. and Phys. Soc. of Bombay, 1840, p. 214.

former path. The instrument is held so that this pencil of rays enter the observed eye, and when the screen is at the proper distance an image of it is formed on the retina. The mirror has its centre left unsilvered, and has an ordinary disc of lenses (E) behind it, to render the retina and the image on it visible to the observer by the ordinary direct method. The bar is so graduated that when an image of the whole or part of the screen is sharp on the retina, the figure opposite the screen expresses the refractive error of the meridian by which the image is produced. Hence, if the image of the whole screen is seen to be equally sharp, the eye is known to be not astigmatic, and the graduation gives the number of dioptics by which it is myopic or hypermetropic. If the lines be not all sharp at once, then the most distant point at which any of them is distinct gives the refraction of the meridian of minimum refraction, and the point at which that at right angles to the former is distinct gives that of maximum refraction. The least of these gives the spherical element of the correcting spectacle required, and their difference that of the cylindrical element. The meridian of maximum refraction is that in which the line appears distinct when the screen is at the greatest distance. If the cylindrical lens be convex its axis must be in this meridian; if concave, then at right angles to it. The makers are Cook and Sons, York.

Stonegate, York.

ON THE USE OF OLIVE OIL IN LARGE DOSES FOR SOFTENING AND CAUSING THE EASY EXPULSION OF BILIARY CALCULI.

By RODERICK KENNEDY, M.D.,
QUEEN'S COLLEGE, KINGSTON, CANADA.

It is scarcely a matter of doubt that the means resorted to for solution and expulsion of biliary calculi have hitherto proved slow and uncertain in their operation. Systematic writers, as a rule, do not attach a great deal of weight to the value of the so-called solvents. Not a few incline to the view that remedies of this kind are practically all but inert. Others assert in plain terms that medicines having these powers do not exist. Chloroform alone, or with ether, in the hands of some, is said to have removed these bodies, but this mode does not seem to have come into general use, probably because it requires time, and the proof of success is inferential. A simple medicine, readily available in practice, and having the power of softening and expelling biliary calculi, it will be admitted has hitherto been a desideratum. Such a medicine I have, during the past year, used in a variety of cases, and, I am happy to say, always with complete success. In every instance in which the calculi were proved, or presumed, to have been the cause of periodic suffering, these bodies were promptly and painlessly expelled in larger or smaller numbers by the use of large doses of olive oil. In some instances lately, where the patients did not exhibit symptoms of such acute suffering as are more commonly witnessed, but where obstruction to proper flow of bile was evident, I had recourse to this remedy, and in these cases also have been rewarded with similar surprising and satisfactory results.

A brief notice of a few cases illustrating the effects of the means used may prove to be not without interest.

Robert C—, of Adolphustown, an elderly farmer, had for some years been subject to hepatic disorder, attended with the occasional passing of gall-stones. The intervals between the passing of the bodies had gradually become more brief, and lately the paroxysms, always characterised by intense suffering, had come on at intervals of about a week with great regularity. I found the patient anæmic, sallow, and very much exhausted. The usual remedies for the gradual solution of the stones had been tried, but radical relief not being obtained, mitigation of the intense suffering was what, previous to my being sent for, had been principally aimed at. I ordered six ounces of the oil to be taken at bedtime, to be followed in the morning by a full dose of castor oil. No motion of the bowels was obtained till next evening, after the administration of an enema. Twelve hours after taking the oil, the patient began to com-

plain of a good deal of nausea and faintness, and for several hours there was considerable restlessness, and constant apprehension that the usual paroxysm was about to come on, but no acute pain. In the evening the enema was followed by several copious motions, each containing numbers of softened gall-stones, amounting in all to not fewer than two hundred, varying as to size from a large hickory-nut to a small pea, of a pale yellowish-green colour, semi-transparent, soft, easily broken up, and of a great variety of shapes. The patient had a good night's rest, and expressed himself in the morning as feeling very much better, and enjoyed a light breakfast. After the lapse of two days, the paroxysms threatening to return, I ordered the oil to be repeated two nights in succession. The expulsion of a quantity of slimy bilious-looking matter followed, but no more calculi. The calculi had evidently become dissolved. The patient was left with directions to repeat the use of the oil a few times, at intervals of two or three weeks, and after this as might be indicated by the recurrence of symptoms threatening the return of the paroxysms. I saw the patient five months after my first visit. While there were indications of organic disease of the liver, no more calculi had been passed, and the paroxysms had ceased to return.

Mrs. W. F—, of Ernestown, presented a case very similar to that of C—. She had for some years suffered from fits of intense pain, generally coming on after a hearty meal. She was directed to take full doses of the oil for two consecutive days. She passed about two hundred calculi, varying in size from a grain of wheat to a filbert. The periodic attacks of pain ceased with the removal of the gall-stones.

Gabriel B— and Clinton F—, both of this township, each presented a case of hepatic disease, characterised by obstruction to the flow of bile, accompanied by severe pain. The oil was administered with the effect of removing softened calculi of considerable size, but in smaller numbers than in the preceding cases, the general symptoms being relieved. A number of other cases might be referred to, in all of which the power of the oil to soften and facilitate the expulsion of biliary calculi was shown to be prompt and unequivocal.

The material point which may be deduced from these cases is that olive oil, administered in repeated large doses, seems to have an unquestionable power of so softening and partially dissolving biliary concretions as to render their expulsion comparatively easy.

Another fact I have noticed is, that although the administration of the oil at intervals of a few weeks or months does prevent the re-formation of the concretion for the time, yet the resort to the oil alone does not alter the causes or diathesis upon which the formation of these bodies depends.

A FIFTH CASE OF EXTRA-UTERINE PREGNANCY TREATED BY ABDOMINAL SECTION.

By LAWSON TAIT, F.R.C.S.

E. A—, aged forty, admitted to the hospital early in June. She had been married nineteen years, had five children, the youngest of whom was nine years old. She had been a strong, healthy woman until last November, when she missed a period, and very soon after had an attack of violent pelvic pain, accompanied by great prostration and sickness. She continued in bad health till March last, when she was examined by Dr. Wigglesworth of Liverpool, and declared to be pregnant. She applied to the Birmingham Hospital for Women at the end of May, when the diagnosis of extra-uterine pregnancy was made by Dr. Hickinbotham and myself in consultation, and she was admitted.

On June 30th I opened the abdomen, and found the pregnancy to be seated in the right broad ligament, the Fallopian tube having ruptured at its lower aspect and the ovum escaped into the tissue between the folds, as has been the case in all the instances I have operated upon. I made an opening at the upper and anterior part of the cyst, removed the child, which we had previously been quite certain was dead, cleaned out the cavity, stitched the margin of the

wound in the cyst to the wound in the abdominal wall, and left in a wide glass drainage-tube. All the details were precisely those described at length in the record of my previous cases published by the Royal Medico-Chirurgical Society.

During the next three weeks the placenta came away in pieces, the cavity gradually closed, and she left the hospital on August 16th quite recovered, and is now in perfect health.

Birmingham, Sept. 14th, 1880.

INFANTILE DIARRHŒA IN NEW ZEALAND.

By LEIGHTON KESTIVEN, M.R.C.S. ENG.

THIS affection, which is principally coetaneous with summer heat in this colony, and from its prevalence becomes epidemic in its character, is of a far more serious nature than the ordinary summer diarrhœa met with among infants in the home country, and from which indeed it is almost a distinct affection. The disease here has the same commencement as the ordinary form, consisting of loose slimy motions and cramping pains in the abdomen; but in the severe form which it takes here—I have most frequently noticed as a premonitory symptom a discharge from the rectum (*previous to any loose stools*), small in quantity, and occurring only once, of thick lymph immediately before the diarrhœa has set in. Though I am unable to give any explanation of this, I have invariably noticed that the disease has then assumed the very worst form, and the motions have immediately become watery and mucous. At this stage constant sickness and loss of appetite supervene, rendering the administration of nourishment or medicine a task of great difficulty, and extreme emaciation sets in; the weakly succumbing here, and the stronger ones later on, of exhaustion, or dragging through a long and tedious recovery.

In the severer cases, however, the watery stools are succeeded after two or three days by intense tenesmus and tormina, accompanied by inability to retain the motions, and the complaint then assumes the character of acute dysentery. The stools become bloody, often consisting of little else than bright red blood and slimy shreds, unaccompanied, however, by any purulent matter. The constitutional disturbance is very great; tongue furred; pulse rapid and small, temperature as high as 100° or 101° F., and the respiration accelerated. No delirium. The little patient remains in this state for two or three days, or even less, when exhaustion sets in very suddenly; the temperature drops from 101° to 96° or 97°, and death occurs within twenty-four to forty-eight hours after.

The mortality in both forms which I have described is very great at all ages up to five or six years, after which it diminishes. This, I believe, is the case in all the Australian colonies; where this complaint takes the same form. Why it should assume such a severe character in these colonies it is difficult to give any accurate explanation; but from personal experience and a careful comparison of statistics I am inclined to assert that it is the impurity of the drinking water that is the chief factor in the disease, and that the warmth of our climate, which renders children such ready subjects to the disease, causes its extreme fatality. Thus, in Wellington, where the climate—though warm—has been less so than in other towns in New Zealand, the infant mortality (according to the Registrar-General's returns) has been greater by far from diarrhœa than in any other town in New Zealand, microscopic and analytical examination of its drinking water showing it to be swarming with animal and vegetable life, and loaded with decomposed organic matter in solution; whilst the water in other towns in the colony has been of a far better quality for drinking purposes. Children, too, in New Zealand are greatly infested with intestinal worms; which, though not the necessary factors of this disease, must tend greatly to aggravate the mischief and retard a cure.

Treatment, however, is, I regret to say, of little efficacy, and the only drugs which I have found of the least specific curative use have been the extract of Indian bael in combination with creasote, opium, and bismuth; and the Maori's favourite drug "koromiko," a native indigenous shrub, generally used as an infusion or spirituous decoction. Sul-

phuric acid I have invariably found to greatly aggravate the diarrhœa, whilst I have fancied I have seen in one or two cases a decided improvement under small doses of carbonate of soda and borax. A mixture of minute doses of castor oil I have heard greatly extolled, but I have found it very mischievous even when combined with opium and cardamoms. I have, however, been in the habit of administering a full dose of the oil previous to treatment with other drugs, and I believe it to be necessary or useful in removing any source of irritation to the bowel.

Nourishment, to be of any service, must be little and often, on account of the want of appetite and delicacy of stomach, but it is necessary to exercise very great care in this matter, as the irritability of the intestines is so great. Milk, portwine, and the juice from half-cooked mutton are utilised most easily, whilst strong chicken jelly is a capital change of diet. Brandy should be administered plentifully from the first.

The pathology of these cases has been most indistinct in the few cases I have had the opportunity of making an examination, consisting in patches of more or less extreme congestion here and there in the mucous coat of the intestines throughout their entire length, amounting in the lower bowel to solution of surface continuity, but without any discernible deposit of pus being elicited even by microscopic examination.

Two or three points in this account seem to me worth drawing attention to, as I have neither met with them myself nor read of them, as occurring with this disease, outside of these colonies—viz., the premonitory lymphous discharge, the rapid fatality of the severer cases, the early assumption of the dysenteric character and sudden termination, and the absence of ulceration (true) or sloughing of the bowel which occurs in dysentery.

Climate, of course, modifies many diseases; but the difference between the home climate and ours does not seem to me to be enough to account for the extreme severity and variation of the disease as it occurs here.

Wellington, N. Zealand.

CASE OF CHRONIC GASTRIC ULCER, WITH TOTAL ABSENCE OF SYMPTOMS: PERFORATION; PERITONITIS; DEATH.

By W. G. CRESWELL, L.R.C.P., L.R.C.S. EDIN.,
MEDICAL OFFICER OF HEALTH, SALTLEY.

THE following notes from my case-book will, I think, be of interest, inasmuch as they point out the insidiousness of the above disease even more fully than does Mr. Lacey's case, reported in the issue of THE LANCET of April 24th last:—

E. C—, aged twenty-one, a factory girl, who had *never even complained of any morbid symptoms* since childhood, had on the afternoon of Dec. 27th, 1879, a sudden attack of "shivering," but was otherwise apparently all right. At tea-time, while stooping to toast some bread, she felt "something wrong" in the chest and epigastrium, and immediately went upstairs and to bed, where she vomited at frequent intervals a brownish fluid, and also everything she took. At the same time she complained of great epigastric and abdominal pain. These symptoms continued all night, and at 11 A.M. the next day she died in her brother's arms as he was carrying her by her own desire into the next room. I saw her at 12.30. She was then quite stiff, lying on her back with both hands clenched, and the right arm bent at right angles at the elbow, the hand pointing upwards. The legs were extended.

By the coroner's order I made a post-mortem examination on the afternoon of Dec. 31st, about seventy-eight hours after death. The body was of good physique and well-nourished; a little post-mortem discoloration present. On opening the abdomen, it was found to be full of a muddy milky fluid. At the upper part of the cavity both the peritoneum and the intestines were much congested, and slight adhesions were present in many places. There was but little gas or smell. The stomach was empty, and showed on the posterior surface, near the pylorus, a clean-edged round aperture, the eighth of an inch across. On examination of the inner wall, the ulcer was seen to be funnel-shaped and surrounded by considerable thickening. Other

parts of the gastric wall showed patches of congestion and erosion, but most probably these were not present during life. The heart was of large size, but healthy. The right auricle and large veins were distended with firmly-clotted blood, and this hyperinotic condition was more or less present generally. The hymen was intact, and the ovaries much congested, a menstrual period having been completed only two days before death.

After the most careful questioning, I could gather no account of any gastric symptoms, poor living, intemperance, anæmia, abnormal menstruation, or mental anxiety. The absence of hæmatemesis, or vomiting, was the more remarkable considering the anatomical position of the ulcer, which again, though perforating, was yet attended by the funnel-shaped thickening of a chronic ulcer. The other points of interest were the large size of the opening, and the attack of shivering coming on before the advent of pain. There was also marked absence of hour-glass contraction.

In the presence, however, of all these uncommon conditions, it will be noted that the patient was of the usual sex and age, and that the ulcer was in the usual anatomical site. Saltley.

A Mirror

OF

HOSPITAL PRACTICE,

BRITISH AND FOREIGN.

Nulla enim est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

SAMARITAN FREE HOSPITAL.

CASES OF RUPTURED PERINEUM.

(Under the care of Dr. GRANVILLE BANTOCK.)

CASE 1. *Complete rupture of perineum, with an inch of recto-vaginal septum; immediate operation; imperfect result; operation; cure.*—Mrs. B—, aged twenty-four, was admitted June 15th, 1878. The perineum was ruptured through the sphincter, with about an inch of the septum, in the second confinement, eleven weeks before admission. Some stitches were applied at the time of the accident, but the result was a very thin membranous perineum, and a recto-vaginal fistula large enough to admit a No. 12 catheter, through which flatus and fluid fæces passed into the vagina.

On June 17th the imperfect perineum was cut through, the edges of the fistula were pared, and a triangle of raw surface was formed at each side, the two meeting by their bases in the middle line of the septum; seven sutures of fine silkworm gut were used to bring the rectal edges of mucous membrane together, the ends being cut off short, and four deep sutures were employed for the perineum proper.

No opium was given. The highest temperature, 99.4°, was recorded in the evening after the operation. The bowels were moved on the fifth day by a pill containing colocynth and hyoscyamus. On the seventh day the perineal sutures were removed, and the patient went home on the seventeenth day.

CASE 2. *Complete rupture of perineum, with over half an inch of the septum; operation; cure.*—Mrs. K—, aged thirty-one, admitted Feb. 25th, 1879. The perineum was ruptured in the first confinement, six months before admission, after a labour lasting nineteen hours and terminated by forceps. Nothing was done to the perineum. There was no control whatever over the semi-fluid fæces or flatus.

On February 26th the usual operation was performed. Seven sutures of silkworm gut were inserted in the recto-vaginal septum and three deep perineal sutures.

No opium was given after operation. The bowels were opened on the fifth day by pills of colocynth and hyoscyamus given at intervals of four hours. The perineal sutures were removed on the seventh day, and the patient went home on the seventeenth day.

CASE 3. *Complete rupture of the perineum to the sphincter; retroversion of the uterus with rectocele and cystocele; operation; cure.*—Mrs. E—, aged forty, admitted June 24th, 1879. Four children; last in September, 1875. Treated for prolapsus by a variety of pessaries until she came under

the notice of Dr. Wynn Williams (in the out-patient department), who admitted her for operation.

On June 27th, in addition to the usual double triangle, the denudation was extended about an inch up the septum, ending in a point. The vaginal mucous membranes were brought together by seven fine sutures, and the perineum was secured by five deep sutures.

No opium was given after operation. The bowels were moved on the fifth day, and on the tenth day the perineal sutures were removed. The healing process was so complete that the line of union could not be distinguished.

This patient was not able to leave the hospital till the twenty-third day in consequence of a slight attack of cystitis.

At a later period, some weeks after, Dr. Williams relieved her from the symptoms due to the retroversion by applying a Hodge's pessary.

CASE 4. *Complete rupture of perineum, ten years ago, with part of the septum; immediate operation; failure from excessive constipation; operation six months after; failure; operation; cure.*—Mrs. S—, aged thirty-three, admitted December 10th, 1879. The perineum was torn completely, with part of septum, in the first confinement, after a labour of over twenty-four hours, terminated by forceps. Sutures were at once applied, and the bowels were kept confined for seven days. At that time the perineum appeared sound, but the evacuation was so solid that the whole gave way. After this she had no control over semi-fluid evacuations. Six months later she was operated on, but without any benefit.

On December 13th the usual operation was done. Four sutures in the rectum and five deep perineal sutures were inserted.

No opium was given until the next day, when two doses of fifteen and twenty drops of the tincture of opium were given respectively for pain preceding the menses, which appeared on the third day.

On the fifth day the bowels were freely opened after three pills of colocynth and hyoscyamus, given at intervals of four hours. The perineum was quite sound and absolutely free from irritation. On the ninth day the perineal sutures were removed, and the patient went home on the eighteenth day.

CASE 5. *Complete rupture of perineum and through the sphincter five years ago; operation; cure.*—Mrs. R—, aged thirty-seven, admitted March 11th, 1880. Five years before she was delivered of her sixth child by forceps, and felt unusually sore for some time afterwards. On getting about she found she had lost control over the bowel. Her condition in this respect was confirmed by the difficulty the nurse experienced in giving her an enema. Two years before admission she entered one of the general hospitals, where she was told she was too weak to undergo operation.

On March 15th, at 10 A.M., the usual operation was performed. Six sutures were inserted in the rectum, four in the perineum, and an uninterrupted horsehair suture was inserted in the vagina.

As the patient complained of some pain, twenty drops of tincture of opium were given at 2 P.M., also at 9 P.M., and again at 9 P.M. next day. On the fourth day the bowels were opened by a dose of Janos water, followed by a small enema. On the seventh day the perineal sutures were removed: the wound was quite healed, but the two stitches next the anus had cut the skin a little. The same night the menses appeared, preceded by a great deal of pain. She went to a convalescent home on the fourteenth day.

CASE 6. *Abscess in the recto-vaginal septum, resulting in recto-vaginal fistula and labial sinuses; fistula and sinuses freely laid open, the former by cutting through the perineum; operation subsequently; cure.*—M. D—, aged twenty-nine, single, was sent to hospital by Dr. Edis, and admitted on Jan. 12th, 1880. For several years she had complained of pain on sitting down, but was not aware of anything serious till October last, when she had an abscess, with the usual symptoms, which first broke into the rectum and afterwards at the vulvar orifice. From that time she suffered from repeated "gatherings." On examination an opening was found at the lower end of the right labium, from which thin pus exuded on pressure. A probe passed into it went backwards and inwards towards the middle line, and its point could be felt in the rectum within the sphincter. Another small opening at the bottom of the fossa navicularis led straight through into the rectum behind the sphincter.

On Jan. 19th the fistula was laid open by cutting through the perineum, the sinus from the right labium was freely incised, and a small abscess cavity on the left side, communicating with the fistula, was also laid open. The parts thus exposed were stuffed with lint saturated with equal parts of glycerine and sulphurous acid; after this with a watery solution of the same acid gradually reduced in strength to 1 in 20. After several weeks the patient was sent out, and was readmitted on May 11th with the parts soundly healed, but with a hæmorrhoidal condition of the mucous membrane around the rectal opening.

On May 12th, after due denudation, the rectum was restored by means of six fine sutures, whose ends were cut off short, as usual, and the perineum was brought together with five deep sutures.

No opium was required or given. The bowels were opened by three pills (given as above) on the fifth day; three of the perineal sutures were removed on the ninth day; on the eleventh the menses appeared; the remaining two sutures were removed on the fourteenth day, and the patient went to the seaside on the nineteenth, with the perineum quite sound.

CASE 7. Complete rupture of perineum with part of septum five months ago; operation after four months; failure; operation; cure.—A. W—, aged nineteen, single, a very stout young girl, sent by Dr. Dow of Pembroke-square, was admitted on June 15th, 1880. She was delivered by forceps in Jan. 7th last, and felt very sore afterwards. Nothing was done to the perineum, and she soon found that she had no control over the bowel, and had semi-fluid evacuations. She was operated on a month before at one of the general hospitals, when the quill suture was used. The result was a failure.

On June 16th the usual operation was done; six sutures were inserted in the rectum, and four deep sutures in the perineum. As there was rather more venous oozing from the edge of the vaginal mucous membrane in middle line, a small piece of sponge was left in the vagina just within for a few hours.

No opium was required. The bowels were opened by pills and Hunyadi on the sixth day, on which day, also, the menses came on. For the next three days menstruation was excessive, and some ergot had to be given. On the tenth day sutures were removed, with all healed, and on the nineteenth day she left the hospital.

Remarks by Dr. BANTOCK.—It will be seen that in only one case (No. 5) was any opium required, and then it was doubtful whether the pain was really at the site of the operation. The patient was a weak nervous woman, and appeared to bear pain very badly. The absence of pain after the method adopted in these cases contrasts strongly with what is observed after the old method of using the quill suture, as in Case 7. The patient voluntarily made the contrast, and said that she had suffered very severely for three days in her previous operation. It will be seen also that opium was not given for the purpose of keeping the bowels quiet and constipated. The disastrous effect of such a practice is well exemplified in Case 4. The quietude of the bowels for several days is ensured by their pre-evacuation previous to operation, and by the light diet which suffices for the first three or four days. On the fourth day I usually begin to administer some mild aperient, and for this purpose a pill, consisting of one grain each of the compound colocynth extract and hyoscyamus, given every four hours till the bowels act, is to be preferred. Sometimes the nurse is instructed to examine the rectum, and if hard fæces be found, to throw in from a quarter to half a pint of soapy water. This small quantity excites very little irritation, and may be retained for several hours, during which time it slowly does its work by softening what may be in the rectum. It is better that the evacuation should be slightly formed. Liquid matter is apt to insinuate itself into, and so irritate, the wound. Thus while measures are taken to avoid constipation, and to procure an early evacuation, it is undesirable that the bowels should be moved before forty-eight hours have elapsed. I now always cut off the rectal sutures close to the knot, and they give no trouble as a rule. Twice where the ends have been left about a quarter of an inch long it has been necessary to remove some of them a few weeks after. But with the ends cut off short the knot becomes embedded in the soft tissues, and the suture ultimately disappears by absorption. It is of great importance to get the bowels moved before the sutures are removed, for the sutures strengthen the perineum and anal opening. As the silkworm gut pro-

duces absolutely no irritation, provided the sutures be not drawn too tightly, this result is easily obtained. In no case has any alcoholic stimulant been given, nor has any antiseptic been employed. The raw surfaces should, however, be made very clean, and all bleeding should be stopped before the perineal sutures are drawn together. As a rule, there is very little bleeding, as scissors are chiefly used, and what little bleeding there may be is usually to be controlled by hæmostatic forceps.

So far I have not had a failure, and I attribute this to the simple suture and the silkworm gut. I have also the satisfaction of knowing that others who have adopted my method have been equally successful—notably Mr. Square, jun., of Plymouth, who tells me that he has now no hesitation in attempting the severest case, and with confident anticipation of success.

MANCHESTER ROYAL INFIRMARY.

APPARENT TYPHOID FEVER; CEREBRAL HÆMORRHAGE; DEATH.

FOR the following notes we are indebted to Mr. J. Hodgson, M.R.C.S., house-physician.

J. F. T—, aged forty-four, married, was admitted on June 14th, 1880. He stated that his previous health had been good, and that the present illness began with a fit of shivering one week before admission. Beyond this no history was obtained, owing to the patient's mental condition.

The following signs and symptoms were noticed: A husky voice, very slight cough, and a small amount of rusty sputum; fetid breath, a dry tongue, thickly coated with brown fur, except at the tip and edges, which were red; harsh breathing generally, slight relative dullness at the base of the right lung, accompanied by a few bubbling râles in that region, but no true crepitation or tubular breathing. There was no rash, no tumidity of the abdomen, but a little tenderness on pressure in the right iliac region. There was considerable enlargement of the spleen, as well as slight enlargement of the liver. The pulse was regular, 92, the heart-sounds were normal, the temperature 103° 2' F., and the urine contained abundant albumen. Laryngoscopic examination showed the usual signs of catarrhal laryngitis. A milk diet and small doses of quinine were prescribed.

The next morning there was a slight remission in the temperature, but with this exception during the day the temperature continued between 102° and 103°; the physical signs underwent no alteration, the patient was frequently delirious and suffered from delusions of a religious character.

On the third day after admission, between four and five in the morning, the patient complained that he had lost the use of his right arm, and before long hemiplegia was well developed, the right side of the face and the right arm and leg being affected. Speech was not lost. Ophthalmoscopic examination showed that the discs were normal.

At 1.30 P.M., the bowels not having been moved since admission, a simple enema was given, which was followed by "pea-soup" evacuations. At five o'clock the abdomen was distinctly distended and tympanitic, the skin was exceedingly hot (temperature in the axilla 107° F.), and the patient became comatose, and died.

Necropsy revealed a recent hæmorrhage, occupying a large part of the left cerebral hemisphere. The blood, which had evidently been primarily poured out into the substance of the brain, had found its way into the lateral ventricle of the left side. The right ventricle contained a clot of blood, much less than that in the left. The basal arteries seemed healthy. The lungs were congested and œdematous at the bases, but showed no signs of hepatisation. The valves of the heart were healthy; there were no signs of endocarditis or pericarditis. In the lower part of the ileum a few congested spots existed, about a quarter of an inch in diameter, these were in some instances raised and hard to the feel. One or two of Peyer's patches near the ileo-cæcal valve were congested. The large intestine presented in its whole length numerous congested and raised spots, similar to those seen in the ileum; many of these were distinctly ulcerated. The spleen was considerably enlarged, weighing twenty-one ounces, and contained a large hæmorrhagic infarct, surrounded by several small ones. Abundant "pea-soup" fæces made their escape from the anus as the body was being placed upon the table.

PROFUSE INTRA-CRANIAL HÆMORRHAGE; INTENSE HEAD-ACHE; VOMITING; DELIRIUM; ABSENCE OF HEMIPLEGIA; COMA; GLYCOSURIA; DEATH.

H. N.—, aged thirty-eight, married, was admitted on May 22nd, 1880, at 11.30 P.M. He was very pale, his skin was cold and moist, and his pulse was weak; he was delirious, and complained of intense pain in his head. No trace of hemiplegia could be discovered, the patient walking into the ward with the assistance of his friends. The pupils were normal. He was put to bed, and an ice-bag was applied to his head. Shortly afterwards there was some vomiting.

At half-past one the next morning he became very violent and noisy; at five o'clock he was comatose, and at seven he was dead. Some urine was drawn off by the catheter, and found to contain sugar. It was ascertained from his friends that he appeared to be in perfect health up to the day of his admission; that he had spent that day at some pleasure-gardens, and had had no alcohol beyond three glasses of beer; that he was about to start for home when he suddenly complained of severe pain in his head, and shortly afterwards became temporarily unconscious on his way to the infirmary.

At the necropsy a dark clot was found, filling the lateral, third, and fourth ventricles of the brain; blood was effused over the base of the brain, and had extended upwards over the surface of the hemispheres, filling the sulci. The large ganglia and other important structures at the base of the brain were uninjured. No ruptured vessel or aneurism was discovered. The lungs were emphysematous. The heart, liver, spleen, kidneys, and other organs were healthy. There were no marks of external violence.

Reviews and Notices of Books.

The Utricular Glands of the Uterus, &c. By Prof. ERCOLANI. Translated under the direction of H. O. Marcy, A.M., M.D. Trübner and Co.

THE work of Professor Ercolani has been long known in its main feature to those who have followed the researches which have been recently made into the structure of the placenta; for although the title of the work would scarcely lead one to expect it, yet the main object of the author is to prove a view which he has been led to adopt of the structure and function of the placenta, while the description of the utricular glands of the uterus forms but a part, though a very necessary part, of the evidence which the author produces in support of his theory. This theory is as follows:—"There is produced in the pregnant uterus of mammals, including the human species, a glandular organ of new formation. This organ constitutes one of the two fundamental portions of the placenta, that is to say, the maternal portion, with which the fœtus is brought into intimate contact by the villi of the chorion, which composes the other portion of it, or the fœtal part. The villi of this latter part of the placenta penetrate always and obviously into the glandular organ or maternal part, in order to absorb the fluid which is there secreted, and thus to furnish the fœtus with the materials necessary for its nutrition."

With a view to establish this theory the author gives an account of "the utricular glands in mammalia in the gravid and non-gravid animal," their development and function; he points out their increase of size in the gravid state, and adopts the opinion of Eschricht that these glands, together with the simple follicles, "elaborate, during gestation, a fluid destined to furnish some elements for the nutrition of the fœtus, particularly when the organs which are charged with that office, or the villi of the chorion, are not fully developed." The human decidua, it is said, "may be considered as a product of exudation, due for the most part to the utricular glands, and the numerous openings which perforate it obliquely precisely indicate the mouths of these glands, which remain open in the decidua for the con-

tinual passage of the materials elaborated by the glands." In accordance with this view the author explains the formation of the decidua reflexa. He states: "Now if, according to the preceding observations, the uterine or true decidua is only a product of exudation, due in great measure to the secretion of the uterine glands and to the transudation of organisable fluids from the internal surface of the uterus, it becomes easy to comprehend the formation of the reflected decidua. While the whole internal surface of the uterus is covered with the uterine decidua, the ovum when reaching the uterus is also covered with a similar layer, formed by the same materials, which further serve to fix it at one point of the uterus. At this point the uterine and the reflected decidua are soon mingled together, precisely as will take place later, when the ovum, increasing in size, forces the reflected decidua which surrounds it against the uterine decidua, so that the two decidua blend into one single membrane." The serotina again is described as follows:—"This membrane, produced by the proliferation of the cells of the superficial or submucous connective tissue of the uterus, is the stroma whence originates the glandular organ which supports and envelops the villi of the fœtal placenta in all their subdivisions." The author never tires of emphasising his view that the maternal part of the placenta is a new formation, owing "its origin in the human species to the new formation of special cells, which in the human species has received the name of decidua serotina." It has nothing to do with the glandular structure of the unimpregnated uterus. Indeed, Ercolani maintains that a "primordial destruction, more or less marked, of the uterine mucous membrane, is indispensable for the beginning and completion of the new formative process, from which, in all cases, results the development of the maternal portion of the placenta." Finally, it is held that the nutrition of the fœtus is not maintained by osmotic processes between the blood of the mother and that of the fœtus, but by absorption by the epithelium of the chorion villi of a fluid secreted by the cells of the serotina, which cover the chorion villi, and this is the case, however intimate the union may be between the fœtal and maternal parts of the placenta. It should be stated, further, that the author accepts the view that the placenta contains large sinuses possessing thin walls, and that these thin walls cover the fœtal villi in all their parts, and are closely united to them; that the blood of the mother is passed into these sinuses in its course from the arteries to the veins.

It would be impossible to enter here into the details of the descriptions of the placenta of various animals and of the human species found in this work. We can only notice some of the main conclusions arrived at by the author. With reference to the manner of nutrition of the fœtus by absorption of secreted material rather than by osmosis, our knowledge does not warrant any positive statement. The question is an extremely difficult one. There is great probability that such is the mode before the formation of the placenta; but the evidence brought forward in the work before us fails to prove such to be the case after that period.

The term "mucous membrane" is used in a peculiar sense by the author, for he says, "In woman . . . the simple epithelial layer, which by itself represents all the mucous membranes of the uterus, . . ." Now this use of the term is one not generally accepted, and is, moreover, one which gives to the views promulgated a much more startling character than they really deserve, but for positive statements made by him (and quoted above) with regard to the nature of the decidua and serotina. In the destructive process preceding the process of formation of the placenta it turns out that in the human female it is only the epithelium which is destroyed, and the real question at issue between him

and other observers becomes one of interpretation. With regard to the nature of the decidua reflexa, it has been incontrovertibly proved that it is an upgrowth of the decidua vera around the ovum at the point where the descent of the ovum has been arrested. It has been observed in process of formation, and it presents a structure precisely similar to the vera, including the presence of utricular glands. The serotina again, instead of being a new formation, has been shown to be but the deeper layer of the decidua vera at the insertion of the placenta, while the vera when examined soon after conception, presents all the characters of the mucous membrane of the uterus. The changes in these structures have been traced from month to month, both those in the cellular elements and in the glands. The nature and formation of the peculiar cells of the decidua is a subject upon which we still require further knowledge, and is one upon which there is ground for difference of opinion; but the evidence as to the development of the decidua vera, decidua reflexa, and decidua serotina from the mucosa uteri, remains untouched. The work before us contains the results of great research both in the study and in the dissecting-room. It gives a mass of information with respect to the views which have been hitherto held with regard to the uterine glands and placenta. It moreover brings prominently forward a subject which deserves more attention than it has hitherto received—that is, the part played by the glands of the uterus during pregnancy.

The translation has been made by Messrs. Smead and Jacobs, under the supervision of Dr. Marcy, and is on the whole well done. Some passages are, however, obscure in their meaning; whether this be the fault of the translator or of the author, we cannot say. The work is one not likely to have a large sale, and the publishers for this reason, amongst others, deserve the highest praise for their enterprising spirit.

The Diagnosis of Diseases of the Spinal Cord. An Address delivered to the Medical Society of Wolverhampton, Oct. 9th, 1879. By W. R. GOWERS, M.D., F.R.C.P. London: J. & A. Churchill. 1880.

THE remarkable advances made in the study of nervous disease and nerve-physiology is well illustrated in the history of our knowledge concerning the spinal cord. It would have been impossible ten years ago for so thorough a survey as the present lecture to have been penned; for there is hardly a page that does not contain some new fact, throwing light upon the function of the cord, and aiding in the exacter diagnosis of its morbid condition. The glory of Duchenne was to have definitely separated locomotor ataxy from the heterogeneous group of the paraplegiæ; but it has been left for his posterity to further analyse this group, and complete the differentiation which he set afoot. Nor must it be imagined that there are not obscurities still to be cleared up; and time may show that in some of their interpretations of phenomena the present generation have failed to grasp the whole truth. They have, however, added so much to the store of knowledge that, as compared with the preceding generation, we walk in the light, where they groped in darkness.

Dr. Gowers, so far as the limits of his book allow, deals with the several points worth knowing in spinal diagnosis. After some remarks upon the medical anatomy of the spinal cord, he discusses its physiology in relation to the symptoms of its diseases. It is here—and especially in the department of reflex actions—that most advances have been made. The integrity of the spinal cord can be fairly well deduced from the perfection with which the reflex actions are carried on—under due allowance for age and idiosyncrasy. The interesting fact that the superficial reflexes are lessened or abolished on the paralysed side in cerebral hemiplegia is at first sight

difficult of explanation, especially as the “deep” reflexes (tendon-reflex) are increased in such conditions. Dr. Gowers points out the probable explanation. In the frog the superficial reflexes are controlled by a centre in the optic lobes; in man by one in the corpora quadrigemina. Now it is most likely that this controlling centre in man is itself kept in check by the higher motor centres. If their influence be removed by a lesion in the hemisphere, the controlling centre has full play and the reflex action is restrained. On the other hand, if there be a lesion in the cord itself the reflex action is increased. Of course we have long been familiar with the fact of the control exerted by cerebral centres over the spinal; but the explanation of the difference between cerebral and spinal lesions in their effect on the spinal reflexes has not been so clearly stated. After this, Dr. Gowers treats at some length upon the subject of “tendon-reflexes”; although he points out that the term “tendon” is too limited, and prefers to style them “knee-reflex” and “ankle-reflex.” This is a very interesting inquiry, which has already borne good fruit in giving early indications of the presence of spinal cord disease. There seems no reason why other “deep reflexes” than those already discovered may not be added to the list; but those at present in common use are amply sufficient for practical purposes. Inco-ordination is attributed to impairment of reflex action. Other points in spinal physiology are necessarily dealt with, and in the next section the author proceeds to deal with the Anatomical Diagnosis of lesions. He gives an ingenious diagram and table showing the approximate relation to the spinal nerves of the various motor, sensory, and reflex functions of the spinal cord; and it is remarkable with what accuracy it is now possible to determine the exact level of a lesion. Then comes a section on Pathological Diagnosis, and the features pointing to the probable nature of the morbid change are passed in review. Lastly, some cases are given illustrative of the methods of diagnosis expounded in the book.

Dr. Gowers has throughout the work aimed at simplifying the nomenclature of the spinal cord. Thus, in speaking of its anatomy, he, to our thinking, wisely discards the phrases “columns of Goll,” “of Türck,” “of Burdach,” which only land the reader in hopeless confusion; and prefers to speak of these regions as the “postero-median column,” direct “pyramidal tract,” and “root-zone.” He is not quite so happy in substituting the term “cornual myelitis” for “anterior polio-myelitis;” for the latter, in spite of its uncouthness, is etymologically more correct and free from the charge of hybridity. Medical terminology is, however, so full of hybrid phrases, that this slight criticism may be thought too exacting.

In conclusion, we are thankful to the Wolverhampton Medical Society, at whose invitation Dr. Gowers delivered this lecture, for it has resulted in the production of a handbook which is a credit to our literature.

Archives de Neurologie. No. I. Paris: 1880.

It is singular that France, which has produced so many writers in the field of neuro-pathology and physiology, should be almost the last country to have started a journal specially devoted to this subject. The gap is now filled, and the first number of a new quarterly journal devoted to these topics has just appeared, under the direction of M. Charcot. The editor is M. Bourneville, and the journal is published at the office of the paper which that gentleman also edits—*Le Progrès Médical*. An introduction by M. Charcot explains the reasons for its publication, and indicates the field proposed to be traversed in its pages. Whilst admitting the danger of the present age to multiply specialities, he points out that the wide relations of the nervous system to all parts of the organism render the institution of

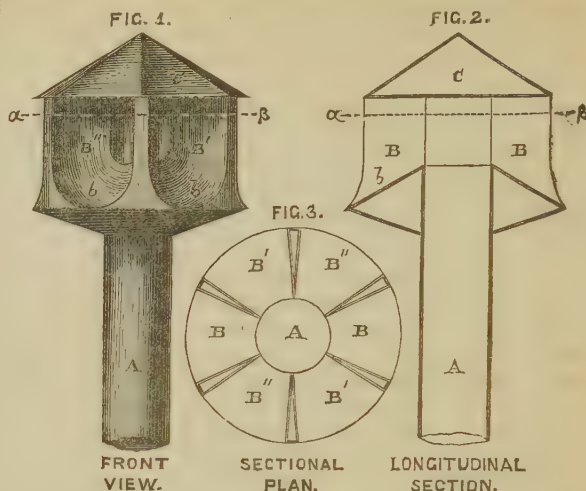
a journal specially devoted to its consideration far less limited in scope than appears at first sight. The *Archives* will deal principally with nosography and records of clinical observation, but will also embrace normal and pathological anatomy and physiology, experimental and therapeutical researches. This first number contains articles bearing upon almost every one of these departments. Thus, under the head of anatomy we have a short paper by Debove and Gombault upon the decussation of sensory fibres in the medulla. The point was settled by the examination of the medulla in a case of lateral amyotrophic sclerosis; and they clearly show that after decussation the sensory filaments mingle intimately with the motor fibres of the pyramids. A short note by M. Debove on the preparation of the spinal cord for microscopical examination follows. He keeps the cord for three weeks or longer in a 4 per cent. solution of bichromate of ammonia, then for three days in a carbolised gum solution, then for three days in alcohol. The sections made and the gum washed out, they are left for twenty-four hours in a saturated solution of picric acid, after which they may be readily stained with carmine. This process has yielded him better results than any other. Under the heading of Experimental Pathological Anatomy there is the first instalment of an investigation by M. Gombault upon the nerve-changes in subacute and parenchymatous neuritis. He has studied these lesions in guinea-pigs slowly poisoned by lead, and describes and figures degeneration and disappearance of the myelin limited to different segments of the nerve-fibre in this condition; and he further illustrates the lesion by changes similarly observed in muscular atrophy and traumatic neuritis in man. Under Pathology there is an article by M. Debove and M. Boudet de Paris upon the Motor Inco-ordination of Ataxies, where they attempt to prove, chiefly by means of the use of the "myophone," that inco-ordination is due to unequal tonicities of the muscles, and that its effects are diminished by their maximum contraction. Under Mental Medicine there is a lengthy and learned article by M. Magnan demonstrating the frequent co-existence of different kinds of delirium in the same insane subject; and the first part of an interesting contribution to the clinical and pathological study of Idiocy by M. Bourneville. The section of Therapeutics is represented by the record of two cases of hemiplegia, in which motor power and sensibility were restored by the use of magnets. This, again, is by M. Debove. A review of present knowledge upon Cephalic Thermometry by M. Boyer follows; and the closing pages of the journal are devoted to abstracts of recent published work in various departments and to a few reviews of books. Altogether the number is full of interesting and readable matter, and if the journal fulfil the promise of its first issue in subsequent numbers, it will, no doubt, be widely read. The second issue is to appear on October 1st, and, like our own publication in the same field, *Brain*, it is to be published quarterly.

New Inventions.

HALL'S PATENT VENTILATOR AND CHIMNEY-COWL.

THE accompanying engravings represent one of various types of the improved ventilator invented by Alfred Hall, M.D., F.R.C.P. London. Its main feature consists in an aggregation of four, six, or any other binary number of tubes or orifices surmounting the soil-pipe or other conduit from which foul air or fetid smells are emitted, and a glance at our illustrations shows that the object aimed at is attained without the use of any mechanical contrivance, or of any very intricate construction like those that form perfect labyrinths in some other ventilating arrangements.

Fig. 1 is a front view of the ventilator, representing the two orifices, B' B", that adjoin one another; Fig. 2 is a longitudinal section, and Fig. 3 a horizontal section taken through the line α - β , Figs. 1 and 2. A is the soil-pipe or



other conduit to be ventilated or disinfected; it is in the present instance surmounted by a system of six orifices, B B, closed up at the top by the helmet, c, and half trumpet-shaped at the bottom, as shown in section at b, Fig. 2. The current of air passes through the orifices B B, B' B', B" B", opposite one another, and a continuous exhaustion of the foul air or noxious vapours is secured by this means.

We have remarked that our illustrations represent but one out of a number of types of the same ventilator, which may equally well be used as a chimney-cowl. Another type is that of an ascending soil-pipe closed up at the top and surmounted simply by a cross of four short horizontal tubes, through which the suction of the fetid air takes place. This ventilator may be made of tinned iron or zinc plate, as well as of copper or terra-cotta. There being no mechanical contrivance or appliance of any kind connected with it, it is not likely to ever get out of order; and, if made of copper, it is practically indestructible.

Analytical Records.

DUROLEUM (HARD OIL).

(FERRIS, BOORNE, & CO., BRISTOL.)

TASTELESS, odourless, and unalterable preparations made from petroleum are rapidly superseding lard in pharmacy. Messrs. Ferris's new ointment-basis is excellent, and, though similar to several already in use, is firmer, which in hot weather, and especially in hot countries, is an advantage. We have received more than a dozen different samples of ointment made with duroleum, all excellent in quality, and certain to keep. The price is exactly the same as for ordinary P. B. ointment.

BARON LIEBIG'S LEGUMINOUS COCOA POWDER.

(P. STEIN, 7, IDOL-LANE.)

In this preparation of cocoa a portion of the fat has been removed and a portion of legumin added. Thus a highly nitrogenous food is obtained, rich in actual proteic or flesh-forming material. Chocolate prepared from this powder is excellent in flavour, and free from the somewhat unpleasant taste often observed in leguminous preparations. We think it a useful addition to the resources of the physician. The addition of sugar will, of course, reduce, in most cases advantageously, the proportion of proteids in the food.

SPARKLING NATURAL MINERAL WATER OF
SCHLOSSBRUNNEN GEROLSTEIN.

(GEROLSTEIN WATER COMPANY, PHILPOT-LANE.)

An excellent table water, soft and pleasant to the taste, and possessing mild alterative properties. Alkaline carbonates and sulphates seem the chief constituents. It is obtained from an artesian well in the district of the volcanic Eifel.

SPARKLING HYGEIA.

(R. MCDougALL, 61, ST. PAUL'S CHURCHYARD.)

This is the result of another praiseworthy and successful attempt to vary the monotony of non-alcoholic drinks. "Sparkling hygeia" is a wholesome and pleasant drink, and is not unlike light champagne.

HARZER WATER.

(HARZER NATURAL MINERAL WATER COMPANY, 135, LONDON-WALL.)

This is a soft and pleasant table water. Whether it is better than some other of the new competitors for public favour is more than we can pretend to decide. Their name is legion.

GLENROSA: PURE HIGHLAND MALT WHISKY.

(T. MERRITT & CO., MARK-LANE.)

A pure and soft spirit of good flavour. It is vastly better than most of the Scotch whiskies sold.

THE NEW ROYAL INFIRMARY AT
EDINBURGH.

(Concluded from page 398.)

ABOVE the head of each bed in the ward is a gas-jet, and there are gas pendants also in the centre of the ward. *Every one of these gas-jets is provided with its proper flue, so that when the gas is lighted the air of the ward is not fouled, and the rate of renewal of the air is probably much quickened.* These gas flues travel to the chimneys of the ward. This arrangement is worthy of all praise, and we trust that Mr. Bryce will succeed in convincing his brother architects that it is as unreasonable to neglect to provide proper flues for the gas as it would be to build fireplaces without chimneys. Although there are gas flues in the wards, they are not found in the ward annexes, but why there has been this falling away from the paths of virtue, and why nurses and others in the kitchens and elsewhere are still to be stifled in the old-fashioned way, is not apparent. The number of gas-jets appears to us to be excessive, and on one surgical pavilion floor we counted in all forty-eight jets, or three jets to each patient. These forty-eight jets are capable of burning (probably) something like a thousand cubic feet of gas in five or six hours (between four o'clock and ten in the winter), and we can only hope that gas does not cost 3s. 9d. per thousand cubic feet in Edinburgh.

The walls of the wards are of Parian cement, painted with oil paints. The floors are of deal stained yellow, with a double pathway of floor-cloth. It is a pity so soft a wood was chosen for the floor material, and we could wish that economy had been practised in other parts of the building, in order to lay parquetté floors, which can be done nowadays at a comparatively small expense. The woodwork throughout the hospital is of soft deal. It is gaping already in many places, and we were struck with the inferiority of the woodwork generally when compared with the excellence of the masonry.

A few words as to the sanitary offices attached to the ward. These are mainly in the turrets, and are entered by swing doors at the ends of the wards. These doors are protected by wooden screens, which, as far as we can see, are of no use whatever. The screen prevents the door being fully opened, seriously interferes with the traffic through the doors, and forms a nasty angle with the wall of the ward, where dust will certainly accumulate. What useful purpose

it serves we do not know. One turret is devoted to a bath-room and lavatory, while the other contains a w.c. (with one seat), urinal, and slop-sink. The arrangement is similar in both turrets. The circular chamber is divided into two unequal halves by a wall, and the smaller half serves as a lobby with cross ventilation, giving access to the lavatory and bath in one turret, and to the sink, urinal, and w.c. in the other. Although we said that the Scotch baronial style lent itself very admirably to sanitary purposes, we do not say that it is advisable to give a circular form to a turret devoted to sanitary purposes, and we think it was a mistake not to have the sanitary turrets of the Royal Infirmary larger, and of a different shape. *All ward offices should be placed in the turrets.* In the Royal Infirmary this has not been done, and although we have one w.c., one urinal, one sink, one bath, and two lavatory basins placed in the turrets at the ward end, and cut off by a cross ventilated lobby, we have a ward-kitchen, one sink, one lavatory basin, and one bath placed in that part of the pavilion floor which forms the ward-approach, and not cut off by any cross ventilation at all. Now all the pipes of the sanitary offices have been carefully concealed by woodwork, stonework, &c., and what becomes of them is a matter of hearsay. The soil-pipes have all three-inch ventilating-pipes going to the top of the turrets. Whether the various waste-pipes are ventilated we did not learn, but none of them have been "cut off" according to the modern fashion, but all proceed direct to the sewer. Thus the ward is placed between two sets of sanitary arrangements, and the probability seems to us very great that air blowing from the corridor past the sanitary offices in the ward-approach and through the door of the ward will occasionally have the opportunity of bringing a puff of sewer gas with it. The possibility of such an occurrence (no matter how remote the probability may appear) should not have been allowed to exist in any modern hospital. The sanitary offices in the ward-approach are, we presume, for the use of the two beds in the private ward, and these two beds, be it observed, have an allowance in these matters equal to that provided for the other fourteen beds. Private wards should not, we think, be placed in close juxtaposition to public wards, but should be arranged altogether in a distinct place, with a sufficient, but not an extravagant, allowance of sanitary offices. If the private wards had been arranged elsewhere, and if the turrets had been larger, a great economy would, we believe, have been effected. A certain number of baths and sinks might have been altogether abolished. An additional w.c. might have been placed in the turret (one is not enough for fourteen patients), and the ward kitchen might have been placed there too. Ward kitchens are almost always too big. All the cooking necessary to be done in the ward might be effected by means of a few Bunsen's burners, and it seems ridiculous in the present day to provide a spacious apartment and a kitchen range for boiling water, heating beef-tea or gruel, or, possibly, cooking an egg. A circle of gas jets, together with a sink for "washing up," and a certain amount of stowage-room and pegs for apparatus and crockery, are all that is necessary. By all means let a ward-kitchen be well thought out and carefully planned. Were we asked to design one we should certainly consult the steward of a Cunarder or a P. and O. boat, who could teach hospital architects very much as to the manner in which compactness is often conducive to cleanliness, tidiness, and convenience. Because several thousand cubic feet of space is given to a patient, it is not therefore necessary to give a proportionate amount of space to his plate, mug, and spoon. If the turrets had been larger and of a different shape access to the turret bath-room would have been easier. As it is, to get from the ward to the bath-room in the turret one has to take a circuitous course to the left, round the screen, then obliquely to the right, through two doors only 2 ft. 10. in. wide, and then to the left again, and all within the space of a few feet. It must be no easy matter to carry a helpless patient to the turret bath-room.

It will be gathered that we consider the private wards should have been placed elsewhere, and that the bath-room, kitchen, and w.c. should have been omitted from the ward-approach. It does not seem to us necessary to provide a separate day-room for every ward, and we think it would have been better to have provided common day-rooms for two or three wards, and more removed from the wards, so that a complete change of air might be enjoyed by the patient.

We are almost afraid to touch upon such a burning question as whether a nurse should live close to her ward or away from it, and whether, while she is on duty, her proper course is to remain like a sentinel in the ward itself, or sit in an adjoining room and look through the window of it into the ward occasionally. Those who take the former view would not provide a sitting-room or a bedroom for a nurse in connexion with the ward. It is evident that a nurse is more likely to enjoy real rest during her hours off duty, and to breathe a purer air at such times, if her living and sleeping accommodation is provided for her at some spot remote from the ward itself. It is still almost the universal practice to build nurses' rooms adjoining the ward itself, but we very much doubt if the practice be a good one. If it is to be continued, however, the bottom panes of the nurse's window commanding the ward ought certainly not to be frosted over and rendered nearly opaque, as is the case in the Edinburgh Infirmary. We hold it to be quite as important that the patients should be able to see the nurse as that the nurse should see the patients, and if a nurse can go into a private room where she can neither see her patients nor be seen by them, and yet be considered to be "on duty," we certainly think that these rooms are an evil and not a benefit.

Of the seven rooms which open on the passage of the ward-approach, we have raised objections either to the existence or the position of six. We have now only to deal with the "doctor's room," which is a big room corresponding to the nurse's sitting-room, and contains a fireplace, &c. We do not properly understand the object of this room. There are at least twice as many of these rooms as there are resident officers, and the living apartments for these gentlemen are in George Watson's house. They are not fitted up as if they were intended for chemical or microscopical work, and it would certainly be undesirable to provide such laboratories close to the ward doors. It is not intended to see casual out-patients in, for there are special rooms for that purpose. There are thirty of these apartments in the hospital, and we are in doubt as to the necessity of devoting such an enormous amount of cubic space to a purpose which, to say the least, is not very clearly defined. It will be seen, therefore, that we consider all the apartments of the ward-approach very seriously open to criticism.

In theory, wards like those in the Edinburgh Infirmary are not intended to be ventilated through the door; in practice they must be, and during the depth of winter it may happen that the doorway will serve as by far the most important inlet for air. As this will inevitably be the case, it seems to us undesirable that the air blowing through a ward door should be allowed to pass along a passage and past the doors of rooms containing patients, sanitary apparatus, unventilated gas-lights, cooking stoves, &c. Such air is not likely to be "fresh" air. From a purely sanitary point of view this arrangement is undesirable, and from an economic point it seems still more so, for not only is the cubic space devoted to the work done in these approaches far in excess of what would be necessary were the arrangements different, but the number of fireplaces, gas-lights, &c., for lighting and warming is excessive also. Too much cubic space where it is not needed (and, mind, we find no fault with the amount in the ward itself) means not only a serious increase in the cost of building, but a serious increase also in the cost of cleaning, lighting, and warming. On each ward floor there are no less than eight fireplaces, and three hot-water coils (one in the approach passage and one in each turret), together with forty-eight gas jets as mentioned above. This is the allowance, be it remembered, for sixteen patients. In the larger medical pavilions there are nine fireplaces, there being four in the ward itself.

We are next going to raise the question as to whether or not it is desirable to unite every part of a "pavilion hospital" with every other part by means of a closed corridor. The corridors of the Royal Infirmary are glazed on both sides, and heated throughout by hot-water coils. There are twelve of these coils in the lower surgical corridor, and there are, we believe, about four miles of steam-pipe throughout the building. This arrangement is very luxurious and very comfortable no doubt, and the corridors will make a charming lounge for convalescents and others; but it is obvious that these horizontal corridors, upon which the vertical lifts and staircases open, completely do away with the grand principle of isolation. We hold that an officer making the round of a pavilion hospital should consider himself in the light of a person walking about a village, and the great aim of the architect should be

to compel every person who passes from one ward to another to go into the *open air*. Of course the corridors should be covered, and there might very well be protection from wind, but to have them completely closed we believe to be an error. Officials would very soon get accustomed in the winter to wear warm out-door clothing when walking about the building, and convalescent patients would do the same, and we believe that it would be conducive to the health of all concerned. In such a building as the Royal Infirmary it would be an easy matter to provide a special warmed and glazed corridor, with a southern aspect, as a recreation-ground for consumptive patients in the winter. The corridors are twelve feet wide, and this appears to us to be an extravagant width. The main surgical corridors enclose over 170,000 cubic feet of space. Had the width been eight feet instead of twelve, a saving of over 50,000 cubic feet of space would have been effected; and be it remembered that the cost of a building is proportioned to the number of cubic feet contained. In order to provide healthy wards for patients, it is not necessary to give every part of the building the proportions of a palace.

The number of staircases seems to us to be excessive. There are eleven of them in the building. By placing the staircases in the pavilions, it is, of course, necessary to have a separate one for each pavilion. We think a much better plan would have been to place the staircases outside the pavilions, so that the air of one pavilion floor could not possibly drift upwards to the next. If the staircases and lifts had been placed (the latter inside the former) midway between the pavilion and communicating with *open* corridors, the isolation of the separate pavilions and of each separate floor would have been *real* instead of only apparent, as is now the case; and we believe that four staircases and four lifts would have then served the building as well as more than twice that number, which is at present necessary, and would have proved sufficient. *Sufficiency* should be the aim of hospital constructors, and we hold that to provide either more or less than a sufficiency is an error. Many of these points are by no means peculiar to the Edinburgh Royal Infirmary, and the only fault we can find with the planners of it is that they have copied what we believe to be the mistakes of their predecessors in hospital construction. At St. Thomas's, at the new Hôtel Dieu, and elsewhere, the idea seems to have been held that a hospital, in order to be wholesome, must be magnificent, even in points where magnificence is of no earthly use to anybody. In the Edinburgh Royal Infirmary the managers have avoided all wasteful ornamentation, but they have fallen into the error of giving magnificent proportions to parts of the building where size only means expense in construction and maintenance, and difficulty in cleansing.

A few words concerning the attic storey of the pavilions. This is reached by a narrow wooden staircase, and the part over the ward-approach is devoted to the sleeping accommodation of the "ward assistants." These sleep partly in cubicles and partly in separate rooms. The roofs of these attics slopes, so that the height varies, and they are heated with hot water. One of these cubicles measured 6 ft. 9 in. by 13 ft. 6 in.; they each contain therefore about 40 square feet of area, and no artificial means, as far as he could see, of renewing the air in it. There is accommodation for a great many more ward assistants than actually exist, and many of these cubicles will probably be never used as sleeping apartments, which may be considered fortunate; but why, it will be asked, was the expense of their construction ever incurred? There is a bath and w.c. in each of these attics. The one we visited was not very clean, and a damp garment was hung over the stairs to dry. It did not impress one as either an attractive or a wholesome region. Over the ward itself there are no cubicles, but merely the foul air extraction pipes and a passage for workmen.

We may now leave the pavilions, and give a brief description of other parts of the hospital. The old building of George Watson's Hospital (shaded dark in the plan) is occupied by the resident students in the eastern wing, and by the nurses in the western wing. Here is also the chapel and the kitchen. The clinical lecture theatres and the big operating theatre (marked C and O)¹ are all first-rate, being well lighted and very well contrived. The operating theatre has skylights to the north and south, and a side light facing the north. (We may have a word to say in another place concerning the operating tables and the special tables for the

¹ For plan, see p. 396.

steam spray.) The two projections from the main building marked x and y in the plan are a student's room and a casualty-room. Running beneath all the corridors and all the pavilions is a subterranean passage, in which are the coal-cellars, and to which all the various shoots and lifts and staircases descend. The hot-water pipes travel along the ceilings of these passages, and the heated air in it has a tendency to ascend into the building. On that account it will be very necessary to attend to the purity of the air in this passage. There is a special passage leading underground to the mortuary and the pathological department, so that the dead, in their transit to the deadhouse, are as little as possible exposed to the gaze of the living. The fixing of the big hot-water pipes in the vaulted summit of this passage has rendered it just not high enough for the safety of the heads of porters of average size who may have to work in it. Beneath the southern ends of the south (medical) pavilions are day-rooms for the patients. We may notice, in passing, the existence of a dry shed for the carriages of the staff while waiting for their owners, and a lawn tennis ground for the residents. In such a huge building, occupying several acres of ground, the means of ready communication are quite necessary, and we believe that it has been arranged to place every part of the building in telephonic communication with the others. There are suitable waggons for the coals, and admirable trucks (designed by Surgeon-Major Fasson, the superintendent of the infirmary) for the dinners. These trucks have a metal lining which is filled with hot water, while the interior is occupied by specially-designed tins, and in point of fact the patients get their dinners as hot as possible, notwithstanding that the distance from kitchen to wards is rather great. The centre building (marked A on the plan) is occupied by an entrance hall, treasurer's office, board-room, &c. Here, also, are some special wards set aside for ovariectomy, and at the top of this building are the female "Lock" wards; while in the clock tower itself, reached by a stone spiral staircase, up or down which no patient could possibly be carried, is a room for examining and operating upon female patients suffering from venereal disease. This last room is an instance (and we are bound to say that such instances are not common in this building) of how matters of internal convenience have occasionally to give way to the external style of a building.

There are no separation wards in the new infirmary for contagious or infectious cases. The infirmary drains into the town sewers, and the managers are under an obligation not to discharge the sewage from infectious patients into their drains. For the present the old infirmary building is used for infectious cases, and when this building is sold some fresh arrangement will have to be made.

Besides the main building, which we have described at, we fear, a tedious length, there are certain subsidiary detached buildings which need to be mentioned. There are two entrance lodges on the north side; a house for the superintendent has been provided on the east side, facing Meadow-walk; while on the north-west side of the ground are the laundry, the boiler-house, the mortuary, and the pathological department. The laundry is not yet complete, and the boilers and heating apparatus are not yet quite out of the hands of the contractors. A huge chimney belching smoke, however, already indicates that scientific institutions are as little able to accomplish a complete combustion of fuel as are the most ignorant of mill-owners. The pathological department is very complete and well appointed. The post-mortem theatre appears to be well planned, and fitted with every convenience. We were particularly struck with the construction of the post-mortem tables. These are of slate, revolving on an iron pivot, the pivot also serving the purpose of a drain. Above each table is a circle of gas-jets for use in winter, and from the centre of this circle comes the flexible tube for the supply of water, a combination of gas-pipe and water-pipe being so arranged that one pipe appears to serve both purposes.

The total cost up to the present time of the buildings, site, and furniture, has been about £340,000. The total number of patients' beds is 570.

In conclusion, we have to acknowledge the great courtesy received from everyone to whom we have applied for information concerning the building which we have been describing. To Mr. Peter Bell, Surgeon-Major Fasson, and Mr. Bryce, the architect (who furnished us with a sketch-plan, and gave us much of his valuable time as well), we are especially indebted. We have, it will be observed, dealt with the subject in a purely critical spirit. Many of

the points to which we have taken exception are not peculiar to the Edinburgh Royal Infirmary, but are common to most "pavilion hospitals" which exist at present. It is because we believe the pavilion hospital to be susceptible of much improvement that we have been at the pains of using the most recent of them as a means of pointing out what we believe to be the shortcomings of this class of buildings. Many of the points we have raised are no doubt fairly arguable. We have raised them in the interest of those who inhabit, build, and work in hospitals. The Edinburgh Royal Infirmary is certainly one of the finest and best hospitals in the country, but it would be a mistake to regard it as perfection, and for future hospital builders to be content with merely imitating it.

LUNACY REPORTS FOR 1879.

THE issue of the Thirty-fourth Annual Report of the English Commissioners in Lunacy affords the best available materials for considering the proportion and distribution of lunacy in England and Wales during 1879. The total recorded number of lunatics, idiots, and persons of unsound mind in England and Wales on Jan. 1st last was 71,191, showing an increase of 1306 upon the registered number on the first day of 1879. Presuming the proportional prevalence of lunacy to be stationary, it is evident that the number of lunatics in a rapidly increasing population, like that of England, would steadily increase. It is impossible, therefore, to judge of the increase or decrease of lunacy without taking into account the proportion of lunatics to population. In the second table of the lunacy report just issued, it appears that the ratio of registered persons of unsound mind has continuously increased from 18·67 per 10,000 in 1859, to 27·94 on the 1st January last. The proportion, which was 18·67 per 10,000 on the first day of 1859, and 23·93 at the beginning of 1869, further rose to 27·77 on January 1st, 1879, while it was, as before stated, 27·94 on the first day of this year. Without attempting now to discuss how far the true increase or decrease of lunacy in England and Wales can be estimated from the recorded numbers of persons certified or returned as of unsound mind by a variety of authorities, it is well to note that the proportion of lunatics and idiots to population showed an average annual increase of 2·8 per cent. in the ten years 1859 to 1869, while in the second decade 1869-79 the annual increase in the proportion did not average more than 1·6 per cent.; the increase per cent. during 1879 did not exceed 0·6 per cent. There is a marked decline, therefore, in the rate of increase of the registered insane, which if maintained must soon turn the increasing to a decreasing rate. If it were possible to make due correction in the returns for the effect of more complete registration and report of cases of lunacy in recent years, owing partly to the tendency of public opinion in the direction of in-door instead of out-door poor-law relief, and partly to the State aid which in recent years has been given towards the cost of lunatics in asylums, it is doubtful whether the apparent increase of lunacy would not disappear. One of the most important considerations with reference to lunacy, regarded as a disease, is its distribution or varying incidence in different localities and populations. The lunacy report, however, does not afford satisfactory materials for the study of this part of the subject. It is true that tables are given showing the registered number of pauper lunatics in each of the counties of England and Wales; the reader, however, is left to calculate for himself the proportion of lunacy to population in the several counties, which is the only true measure of lunacy. It is unfortunately impossible to distribute private lunacy to the different counties, and we are therefore driven to accept the proportions of pauper lunatics as a measure of the prevalence of lunacy. We have noted that the total proportion of lunacy, private and pauper, was equal to 27·9 per 10,000 of the population in England and Wales on 1st January last. If we exclude the private lunatics we find the proportion of pauper

lunacy to be 24.9 per 10,000. We have been at the trouble to calculate this proportion of pauper lunacy in the different counties, and find the usual wide variations. London—that is, registration London—continues to show the largest proportion of lunacy, equal to 36.3 per 10,000. This excess of registered lunacy in the metropolis affords the strongest evidence that liberal provision of asylum accommodation has a marked tendency to promote the registration of lunacy. In no other part of England and Wales is the provision of asylum accommodation so proportionally large as in the metropolis; this is mainly owing to the erection of the asylums for idiots and harmless lunatics at Leavesden, Caterham, and Darenth. In England and Wales, exclusive of the metropolis, the proportion of pauper lunacy did not exceed 23.0 per 10,000, against 36.3 in London. The proportional incidence of pauper lunacy shows marked variations in the several counties; the proportion per 10,000 of the population did not exceed 13.6 and 15.6 in Durham and Stafford, whereas it ranged upwards to 35.0 in Wiltshire, 35.3 in Oxfordshire, and 37.4 in Herefordshire. We may probably return to the discussion of lunacy distribution in England and Wales, but will note in passing that, contrary to most other diseases, lunacy shows the greatest prevalence in agricultural populations, and the smallest prevalence in those counties in which the proportion of urban population is the largest. On the 1st of January last 64.7 per cent. of the pauper lunatics in England and Wales were in asylums, hospitals, and licensed houses; 25.9 per cent. were in workhouses (including the inmates of the asylums at Leavesden, Caterham, and Darenth); and the remainder, or 9.4 per cent., were residing with relatives or others. In 1859, no less than 18.2 per cent. of pauper lunatics were residing with relatives or others; since then this proportion has steadily declined. If the imbeciles at Leavesden, Caterham, and Darenth be included with the inmates of other asylums, the proportion of the insane under treatment in special institutions at the beginning of this year becomes 71.7 per cent., and the proportion retained in workhouses, which was 25.1 per cent. in 1859, is reduced to 18.9. The proportions of pauper lunatics maintained in asylums, in workhouses, and residing with relatives and others in the various counties of England and Wales, show marked variations, which want of space forbids us now to discuss. It may be pointed out, however, that only 55.0 per cent. of the pauper lunatics in Gloucestershire, and 55.9 per cent. in Nottinghamshire, were under treatment in asylums at the beginning of this year, and the proportion of lunatics residing with relatives and others was so large as 17.2 per cent. in Norfolk, 17.6 in Wiltshire, and 21.0 in Herefordshire. We shall defer to another notice a discussion of the rates of mortality prevailing among the insane during last year, but regret to find that the report just issued affords no more satisfactory materials for its discussion than previous reports. The approximate ages of the insane population and of the decedents is absolutely essential, in order to arrive at the true excess rate of mortality due to insanity. For this purpose the ages of the insane admitted to asylums in a single year are comparatively useless. We have on more than one occasion expressed our conviction of the complete futility of the information given in recent reports on so-called causes of insanity. These statements, often little better than mere guesses, are worse than useless as a guide to the scientific study of the true causes of insanity.

From a statistical point of view the Twenty-second Annual Report of the General Board of Commissioners in Lunacy for Scotland is, in many respects, superior to the report recently issued by the Commissioners for England. Not only are the tables more complete and better arranged, but in the report itself the statistics are more thoroughly discussed and turned to account. In one respect, however, we regret that the Scotch figures are as defective as those in the English report. No information is given as to the ages of the registered lunatics, or of the ages of the decedents; and without such information it is impossible to obtain completely satisfactory mortality statistics of the insane population. It may be hoped that the Scotch Commissioners may see their way to give information on this point in future reports. The most complete statistics of lunacy which have come under our notice are those somewhat recently issued by the Metropolitan Asylums Board, relating to the inmates of the asylums at Leavesden, Caterham, and Darenth during 1879. The Commissioners in Lunacy, both for England and Scotland, will do well, when their next reports are under preparation, to incorporate a few of the tables on this branch of

the subject from the Leavesden and Caterham reports. It appears from the Scotch report that on the 1st January last the registered number of lunatics was 9624, showing a further increase of 238 upon the numbers at the beginning of previous years. The number of lunatics to 10,000 of the population was 25.8, against 27.9 in England and Wales. This proportion of registered lunatics has steadily increased year by year from 19.2 in 1858. In one respect the Scotch statistics of lunacy differ materially from those for England and Wales. We have shown that in England the rate of increase of lunacy is a decreasing rate; in Scotland, however, an ascending rate of increase still prevails. The increase during the five years ending 1870, compared with the preceding five years, was equal to 4.8 per cent.; while in the two succeeding quinquennials, ending 1875 and 1880, the increase was respectively 6.5 and 8.7 per cent. The Scotch statistics bearing upon the distribution of lunacy compare most favourable with the meagre materials on this branch of the subject in the report of the Commissioners for England. In the Scotch report is given a complete and well-arranged summary of the proportional amount of pauper lunacy in each of the counties during the twenty years ending 1880. It appears that the annual average of pauper lunatics per 10,000 of the population during the last quinquenniad, 1876–80, ranged in the several counties from 6.9 and 9.6 in Selkirk and Shetland to 25.8 in Bute, 25.9 in Argyll, and 29.9 in Kinross. The difficulties, however, in the way of a useful comparison of the statistics of single counties are very properly urged in the report before us, and the statistics of two groups of counties, Highland and Lowland, are suggested for comparison and consideration. The proportion of the insane of all classes on January 1st, 1879, was equal to 31.6 per 10,000 of the population in the Highland counties, whereas it did not exceed 20.1 in the Lowland counties. This marked excess of lunacy in the Highland and more purely rural population corresponds with the result of similar comparisons in England, where, if we exclude the metropolis, we find a far greater ratio of insanity prevailing in the rural counties than in those counties in which the largest proportions of the population are urban in character. We can only on the present occasion refer to one other branch of the subject as dealt with in the Scotch report, the proportional asylum and other treatment of the pauper insane. On January 1st last, of the 7957 registered pauper lunatics, 4569, or 57.4 per cent., were in Royal and district asylums; 1229, or 15.4 per cent., in parochial asylums; 676, or 8.5 per cent., in workhouse lunatic wards; 1415, or 17.8 per cent., in private dwellings, and 68 in training schools. The main point of difference between these proportions and those prevailing in England consists in the fact that 17.8 per cent. of the pauper lunatics in Scotland were residing with relations and others, and were under no kind of control or efficient supervision, while the proportion similarly conditioned in England did not exceed 9.4 per cent. at the beginning of this year. We shall have occasion again to refer to this subject when we consider the varying results of treatment in asylums and otherwise, with reference to proportional recovery and mortality.

CHARTERHOUSE SCIENCE AND ART SCHOOL AND LITERARY INSTITUTE.—The Winter Session of this, the largest Science School in the United Kingdom, will, under the continued presidency of the Rev. J. J. Rodgers (V.C. of the London School Board), commence on Saturday, the 25th of September. During the late Session about 800 students availed themselves of the privileges afforded by this Institution, and of this number nearly 600 presented themselves for examination and were successful in obtaining no less than 140 Queen's Prizes awarded by the Science and Art Department of South Kensington. At a nominal fee instruction of a practical character is given in most of the sciences, whilst in Art, at an equally low rate, students, under the direction of four competent instructors, can be advanced in their studies. Those who aim at becoming proficient in Chemistry (Organic and Inorganic) have the opportunity of working in a well-fitted laboratory capable of holding sixty students. Aspirants for University honours can, at a small expense, be assisted in their studies. Lessons in Latin, Greek, French, German, and Music are given by well qualified teachers. Full particulars can be had of the Organising Secretary, Mr. C. Smith.

THE LANCET.

LONDON: SATURDAY, SEPTEMBER 18, 1880.

THE present condition of the Medical Service of the Royal Navy requires the immediate and careful consideration of the Admiralty, and we trust that when Lord NORTHBROOK returns from his well-earned holiday he will investigate thoroughly the causes to which its decadence has been due, and by judicious measures endeavour without delay to restore it to a state of efficiency. At the two examinations in 1879 only fifteen candidates came forward to supply somewhere about seventy vacancies, and at those held in the present year only ten presented themselves. That it is the duty of the Government to provide an adequate number of duly qualified medical officers to attend the officers and men of the Navy in sickness and war and to keep a vigilant watch over their health with a view to prevent disease will, we doubt not, be universally admitted. The question, then, is, What are the causes of the unpopularity of the Service? and what means must be adopted to render it more acceptable to the younger members of the profession? Among the principal causes which prevent candidates from coming forward, and which give rise to discontent among the officers in the Service—a discontent which reacts on the medical schools—may be mentioned the lower rates of pay and retirement than those now given in the Army; the loss of time arising from the system of compulsory half-pay when ships are paid off; the practical denial to medical officers of “cabins according to their relative rank,” as laid down in the Orders in Council; and the rule requiring five years’ service in the rank of Deputy before being eligible for promotion to Inspector-General of Hospitals and Fleets. To render the service popular and to attract a good class of medical men to come forward as candidates a thorough reorganisation of the Department seems necessary. The rates of pay and half-pay must be brought up to an equality with those in the Army; the advantages granted by the Orders in Council must be secured to the medical officers, and stringent rules laid down to prevent them, as at present, being evaded. Hitherto an attempt has been made to remedy the evil of compulsory half-pay by allowing four years’ full pay service to count as five towards retirement; but this is at best an unsatisfactory compromise; it does not compensate the unlucky officer who has more than his fair share of half-pay, while it gives an additional boon to the fortunate men who have interest at the Admiralty. The best mode of dealing with this grievance would be to abolish the compulsory half-pay by sending the medical officer, after a reasonable period of leave, to do duty in one of the naval hospitals till his services are again required afloat. We see no reason why this should not answer in the Navy as well as it did in the Army when the regimental system was in operation. When a regiment returned from foreign service, the supernumerary medical officers were not placed on half-pay, but were sent to the General Hospital at Fort Pitt, unless their services were required elsewhere. If,

however, so great an innovation does not find favour in the eyes of the Lords of the Admiralty, some plan should be devised by which the actual half-pay time of each officer might be credited to him, instead of the average of the whole service being divided equally among the lucky and unlucky. Besides these changes, it would only be just to create in the Navy a grade between the Fleet Surgeon and Deputy Inspector-General, corresponding in pay and retirement with the Brigade Surgeon in the Army; and if this were done, the age for the compulsory retirement of Fleet Surgeon and of this new rank might advantageously be made fifty-five instead of sixty, thereby giving more hope of promotion to the juniors. The rule to which we have alluded, of five years’ service as Deputy Inspector-General before being eligible for promotion to the higher rank, should be abolished. It seems very unjust, and the absurdity of it was recently shown in there being no officers eligible to fill several vacancies of Inspectors-General; indeed, it became necessary to promote the present Director-General without his having ever served as an Inspector-General. No such rule exists in the Army, and we can see no reason why it should in the Navy. An officer who has risen through the junior grades, and has been selected as eligible for the appointment of Deputy Inspector-General, must surely be fit to undertake the duties of Inspector-General without going through a five years’ training in the lower rank. We presume it was originally introduced as a means of saving money, but it is a very miserable economy which is effected at the expense of justice, and must naturally give rise to discontent. Lord NORTHBROOK is very capable of taking a large and liberal view of the requirements of the Service, and we have every confidence that he will do so. We would only remind him that the sooner a remedy is applied to so very unsatisfactory a state of matters, the more advantageous it will be to the Service and the more creditable to himself as a statesman.

THE influences which determine the condition of the blood-vessels, their dilatation or contraction, are of extreme importance. Current opinions of the nature of these influences have largely dominated theories of both healthy and morbid action, and every new fact regarding them is of the greatest interest to both the physiologist and the pathologist. A series of investigations by Dr. W. H. GASKELL, which have been carried on in the physiological laboratory at Cambridge, and lately described to the Royal Society, constitute an important addition to our knowledge, and furnished the subject of one of the most interesting demonstrations given at the recent meeting of the British Medical Association. Although their greatest interest is in relation to the peripheral vessels, the observations deal primarily with the states of the heart. Complex as the mechanism of cardiac action is, the apex of the frog’s heart presents much more simple conditions, in that it is, so far as has been ascertained, destitute of nerves or nerve-cells. It thus presents a favourable object for the investigation of certain phenomena of vascular action. It has been hitherto believed that all inhibiting or dilating influences on both heart and vessels depend immediately on the nervous system. In accordance with this view, if the nerveless lower part of the ventricle of the frog is physiologically separated from the

upper part by a ligature, it ceases to beat, even though, by a cannula previously introduced, the frog's own blood is supplied to it. But MERONOWICZ has found that if an artificial blood solution is supplied to it, or it is stimulated by the constant current, this nerveless apex will recommence its rhythmical contractions; and FOSTER has further ascertained that the same effect is produced when the heart is supplied with the frog's own blood, but the pressure of this is increased, as by clamping the aorta. Hence, if the stimulation afforded by a mere increase in the intracardiac pressure will induce rhythmical contractions in a nerveless heart, we must regard the view that the action of the muscular walls of the vascular system depends solely upon nervous influence as at least open to reconsideration.

It has been lately ascertained that a dilute alkaline solution will re-excite contractions in the isolated and quiescent apex. This effect was ascribed to the removal of some obstruction. But the suggestive fact has been ascertained by GASKELL (employing ROY'S tonometer, by which variations in the size of the cavity are recorded) that the contractions so excited are presently arrested by the heart passing into a condition of tonic spasm. The relaxation between successive beats becomes less and less, and the heart apparently stops in systole. It is not a state of tetanus—i.e., of rapidly-recurring contractions,—but apparently one of “idio-muscular” contraction or tone. If a saline solution is passed through the heart, it will frequently remain without beating, and then sometimes the alkaline solution may be observed to cause a gradual tonic contraction without any rhythmical beats. It was next found that a dilute acid solution (of lactic acid) had an action precisely opposite to that of a dilute alkaline solution. The ventricle was quickly brought to a standstill in the position of complete relaxation. The effect of neither acid nor alkali is permanent; in either case artificial blood solution is able, subsequently, to cause contraction differing in no way from the normal. The actions of the acid and alkaline solutions are not merely opposite, they are actually antagonistic. If, by means of an acid solution, the beats have been lowered in force, they are quickly restored to the normal by an alkaline solution, and *vice versa*. Dr. GASKELL has further ascertained that certain poisons act on the heart as does the alkali, while others act as acids. Thus antiarin (the poison of the upas tree) and digitalin act as do alkalies, causing an increased tone, irrespective of contractions—a tone which ultimately renders contractions impossible. Muscarin, on the other hand, acts as the acid. Pilocarpin also acts like the acid, while atropin acts in the same manner as the alkali.

Further investigations have brought out the important fact that alkaline and acid solutions act upon the muscles of the smaller arteries in the same way as upon the cardiac muscle. The observations were made upon the mylo-hyoid muscle of the frog, after pithing, and division of the mylo-hyoid nerve, to eliminate all nervous influence. Solutions were sent through the vessels at a constant pressure, and provision made that the modification in the heart's action should have no effect on the pressure in the vessels. The lactic acid solution produced always an enlargement in the calibre of the arteries, and the flow through them was proportionately more rapid. The alkaline solution caused invariably a diminution in size, usually to absolute closure,

with a corresponding obstruction to the flow through the vessels. Moreover, the same antagonism of the two solutions was found to exist for the vessels as for the heart. Although lactic acid was employed in these experiments, it was ascertained that the effect of acetic acid was exactly the same.

Hitherto, as we have said, the condition of the heart and smaller bloodvessels has been regarded as dependent solely on the influences exerted through the vaso-motor nervous system. These experiments show that local influences, the nature of the fluid surrounding the muscular fibres, also affect their condition. Their tonicity is augmented by the increased alkalinity of the fluid, is diminished by its lessened alkalinity. Functional activity is everywhere attended with vascular dilatation, by the mechanism, it has been hitherto assumed, of the vaso-motor nerves. But if the state of the muscular tissue of the vessels may be modified so largely by the fluid around them, may not the products of the activity of the organ determine, by local action, the dilatation of the vessels? Dr. GASKELL ingeniously argues that it is *a priori* probable that it may be so, from the structure of the vessels, the muscular fibres lying immediately *outside* the impermeable elastic lamina. It is in the highest degree probable that the lymph fluid of muscles is rendered less alkaline by the chemical products which result from muscular action. In the brain and pancreas the same conclusion is also probable from recent researches, and these facts suggest that it is true of all tissues. According to some investigations by KLUG, oxygen strengthens, carbonic acid lowers, the cardiac pulsations, and alkalinity promotes oxidation. It is probable, then, that throughout the whole vascular system normal tone and rhythmical action are dependent in part upon the due oxygenation and alkalinity of the fluid supplied to its muscular tissues, while, on the other hand, the tonicity cannot be maintained or the rhythmical action continued, when that fluid is overcharged with such products of tissue metamorphosis as lactic and carbonic acids.

Besides its visible pulsations, the muscular tissue of the heart varies much in its condition of tone, as these observations demonstrate. If in the normal state the relaxation between the separate contractions is nearly complete, and the cavity closed for a definite time at each contraction, then with a greater tonicity, the period of closure would be longer, the intermediate dilatation would be less complete. With less tone, the cavity would be closed for a shorter time, or incompletely closed at each contraction, and the diastolic relaxation greater. To the latter condition, long recognised theoretically in cardiac pathology, BEAU many years ago gave the inexact term of “*asystolie*.” When the ventricle of the frog is tied, atony is produced; the alkaline blood solution gradually improves its tonicity, as tracings show, until spontaneous pulsation result.

It is unnecessary to point out how immediate and important is the application of these facts to the physiology and pathology of the whole vascular system. It is clear that many phenomena now believed to be produced by the agency of the nervous system may be really independent of it. The vaso-motor nerves exert their influence, profound and extensive, but the tissue elements which they control have also a power of independent action. To determine the relative potency and place of the two modes of vaso-mus-

cular influence, and the relation between their excitants, must be the next steps in the solution of the problems opened up by these researches. The facts already ascertained are of the highest importance and suggestiveness, and, elicited as they are with great care and by a most difficult investigation, their discovery does the highest credit to English physiology.

THE question of bogus degrees admits of facetious treatment, but it is a serious matter. And the United States will do well to take this view of it. We lately remarked with satisfaction on several indications that in America the leaders of medical education are bent on the introduction of reforms both in education and in the examinations by which it is tested. The best schools are forming themselves into an association from which all schools will be excluded which do not insist on a preliminary examination before the commencement of medical education. The period, too, over which medical education is to extend is being lengthened to something more nearly appropriate to the extent of work to be done. This action on the part of the medical teachers in the States cannot be too highly praised or too much encouraged. It is especially necessary in a country whose universities and schools are more or less private institutions, where they spring up like mushrooms, and where a charter is to be had almost for the asking, and once given cannot without much difficulty be withdrawn. There is a large and powerful party in the States who appreciate Protection as a principle. We commend to them a scheme for securing protection to the public against ignorance clothed in the garb of knowledge. Ignorance pure and simple may be left to itself. It is its own cure, and sufficiently repels by its vulgarity and its helplessness. But ignorance put hastily through the schools and diplomatised, and coming forth at the end of a year or two with all the airs of the schools, is a deadly business from which every civilised State should protect its citizens. And this we take to be the lesson which certain of the American medical teachers are trying to impress on the American Legislatures, and, failing that, on the medical profession, which must be its own protector.

The exposure of the system of bogus degrees by the able and energetic action of the proprietor and city editor of the *Philadelphia Record* ought to be of the greatest service to friends of medical education in the States. It is not creditable to the Authorities that this system has been practised for years, and openly advertised, without any effective action on the part of the State whose honour was mainly concerned. To our knowledge, it has been a matter of regret and shame to the able Minister of the United States in this country, and to the many American members of the profession who visit our shores and bring evidence that there are good medical schools and teachers in the States. Not only have degrees in Medicine—and, alas! in Divinity too—been sold, but the enterprising promoters of this trade have bought up the charters of other universities, institutes, colleges, &c., so as to do its disgraceful business on a larger scale. Anyone who doubts this should read the account of this system which is to be found in a book lately published, and containing much information, entitled "Medical Education and Practice," by HERBERT JUNIUS

HARDWICKE, M.D. The following, according to this authority, was the offer of T. B. MILLER, Dean of the Philadelphia University of Medicine and Surgery, to the representatives of the *Record* who applied to him to know how they might become doctors, never having attended lectures, and of course having no diplomas. After stating the cost—100 dollars—and his ability to give a diploma entitling to practise that no man would question, and offering to put the seal of the University of Philadelphia on it, he added:—

"Yes, or you can take your choice of three charters. We have the charter of the Philadelphia Institute of Medicine and Surgery; that was the original charter. Then we have the charter of the Quaker City Business College of Arts and Sciences, which is the best of all. And two weeks ago we bought the charter of the Penn Medical University—that college up on Brown-street, near Thirteenth. They're running yet, but it is without a charter, as they sold it to us."

Taking up a large minute-book, and finding the charter of one of these institutions, and reading Sections 3 and 4, he said:—"That gives us power to confer any degree. We can confer degrees of A.B., A.M., D.D., or anything you want."

Yet, for all this, the State which has been so dishonoured by the traffic in medical degrees and university charters has been either helpless or indifferent, and the criminal has been tracked and brought to light mainly by the efforts of the editor of a Philadelphia journal. It remains now to see whether the legal authorities have the power or the will to deal with one of the greatest and most injurious frauds which can be practised on a community—the sale of degrees in medicine without exaction of guarantees of knowledge, either in the shape of proofs of education or of examination. There is one great branch of this trade, the degrees in Divinity, which if not more injurious to a community is at least more offensive, and which, alas! has had some support from purchasers in this country. One would have thought that as it takes two persons to complete a sale, the sale of degrees in Divinity would have been a scandal which the world might have been spared. The man whose business it is to hold up to admiration "*quæcunque sunt vera*," surely should keep himself from the taint of such a traffic. But even the profession of Divinity has its unworthy members. We must leave them to public judgment, only remarking that there are State reasons for objecting to "doctor factories" which do not apply to institutions for the manufacture of divines, offensive as they are.

A contemporary has treated the capture of the principal criminal in this bogus degree system with a good deal of facetiousness and humour, gently suggesting that there are some analogous processes, not to say trades, even in our country. We will not insult any diploma- or degree-granting body in this country by comparing their too easy grants of degrees and diplomas with what takes place under the system we are now commenting on. We shall, however, take an early opportunity of noticing, as we have noticed before, some parts of our British system of medical qualifications which will certainly deserve the attention of the Lord President or of Mr. MUNDELLA when they come, as we hope they soon will, to complete the work of amending the Medical Acts, which was well begun by the late Ministry.

Annotations.

"No quid nimis."

THE LICENCE OF THE ROYAL COLLEGE OF PHYSICIANS.

STUDENTS who commenced their career after the 25th of March, 1880, should remember that by recent changes in the regulations for the licence of the Royal College of Physicians of London, the examination is now divided into *three* parts. For the first, candidates may present themselves as soon as they are registered according to the requirements of the Medical Council, and can produce evidence of having received instruction on the subjects of that examination. The second examination, on Anatomy and Physiology, takes place after eighteen months of professional study at a recognised medical school; and the third, or final examination, on Medicine, Surgery, and Midwifery, on the completion of four years of professional study. Chemistry and Materia Medica were, until this year, subjects of the final examination; now they are subjects of a separate examination, to be passed early in the student's career, and under circumstances much more favourable to him than heretofore.

HOSPITAL ETIQUETTE AT MANCHESTER.

ONCE again we have our attention drawn, in a letter by Mr. Ewart, printed in another column, to strange doings at the Pendlebury Hospital for Sick Children. This institution, which is so admirably situated and adapted for its purpose, seems to have a Nemesis overshadowing all its work, and bringing its authorities into constant conflict with the sentiments of the profession. This time it is not a member of its own staff that is the aggrieved party, but a member of another hospital staff. The facts may be summed up thus:—A boy, suffering from stone in the bladder, is admitted into St. Mary's Hospital, Manchester, and whilst awaiting operation contracts scarlet fever. By direction of the sanitary authorities, he is transferred to the Pendlebury Hospital—the recognised institution for the reception of children suffering from fever. He is not only cured of his fever there, but also relieved of the ailment for which he had been under surgical care at St. Mary's, and this notwithstanding the assurances given on his transfer that as soon as he had recovered from the fever, he would be sent back whence he came. We need not follow our correspondent through all the stages of this business, of which he has given us a clear account; but we cannot help expressing our surprise that the director of Pendlebury Hospital should not have acted with more circumspection. So far as we can judge, no blame can reasonably be attributed to the surgeon who did operate. We should be sorry to think that any surgeon should be so imbued with the greed of operating as to snatch a chance case, which fell in his way, from a fellow-surgeon's hand, and we do not believe it was so here; for he found the case at his hospital, and it was no business of his to inquire where it came from. Yet there remains behind an unpleasant sense of sharp practice, or convenient forgetfulness, on the part of some one, for how did the Pendlebury surgeon know of the case unless he was invited to take charge of it? As a rule, of course every hospital may claim to treat every case in its entirety, without any restrictions; but, under the circumstances, we must agree with our correspondent that there has been an apparent lack of courtesy in the whole proceeding which should never be allowed to enter into dealings between hospital staffs. Let us hope that the matter has been one of misunderstanding merely, and not of wilful intent to keep a "good case," no matter how, or under what conditions, introduced, into the

hospital wards. Mr. Ewart's letter calls for, and we hope will receive, a frank explanation from the responsible parties at the Pendlebury institution.

SCHOOL-BOARD SCHOOLS AND SCARLET FEVER.

It is impossible to doubt that schools have again and again become sources of contagion for the dissemination of scarlet fever, diphtheria, and other diseases of an infectious character. This undoubted fact suggests the importance of active co-operation between Education and Sanitary authorities, with a view to minimise the unavoidable danger arising from the congregation of increasing numbers of children in our elementary schools. It is to be regretted, however, that assertions are sometimes made which cannot be supported by the inexorable logic of figures. Recently, in reporting upon a local epidemic of scarlet fever, it was asserted, in explanation, that the rate of mortality from scarlet fever in England and Wales had considerably increased since the Education Act of 1870 was passed. There is so much probability of this assertion being accepted as true, that it is worth while to examine carefully the real state of the case. During the ten years 1861–70, preceding the passing of the Education Act, the annual death-rate from scarlet fever in England and Wales averaged 98·8 per 100,000 of the population; whereas in the past nine years of the current decade the rate from this disease has not exceeded 73·1 per 100,000. It is, therefore, beyond doubt that the mortality from scarlet fever in England and Wales since the passing of the Education Act has been 26 per cent. lower than the rate which prevailed in the preceding ten years. As it is thus clear that there has been a marked decrease in the fatality of scarlet fever during the past nine years, the assertion that the supposed increase of scarlet fever mortality is due to the effect of the Education Act of 1870 naturally falls to the ground, and for present purposes it is hardly necessary to discuss the causation of the decline in the death-rate from scarlet fever in England and Wales during the past nine years. Most of the other principal zymotic diseases show a similar decline of fatality, and afford the strongest evidence of improving sanitary condition; and without attempting directly to attribute this result to the Education Act, we may safely claim that Act as a most powerful ally in the struggle for improved public health. Let us resolutely, therefore, beware of any sinister attempt to discredit that Act on account of the administrative difficulties that must inevitably arise from unrestricted school attendance at epidemic periods.

WOMEN AT THE INTERNATIONAL CONGRESS!

As might have been expected, the determination to exclude women from the scientific meetings of the forthcoming Congress has led to hostile criticism abroad. The following semi-satirical comments appear editorially in *Le Progrès Médical* of last week:—

"Decidedly our English *confrères* are not very gallant, nor also very liberal. We can understand their not being upholders of the practice of medicine by women, and we ourselves have plainly avowed that we did not believe in a general way that this was a career for them. But, when a woman at her own risk and peril, for motives of which she is the sole judge, has thought it her duty to follow this profession, when she has gained—on like conditions to man—the title and diploma of doctor, what reasons can be advanced for refusing her the rights and privileges attached to this title and diploma? Doubtless the honourable organisers of the future International Congress of London have good ones, since by a majority of 27 votes to 19 they have closed the doors of the Congress to women doctors. They must certainly have excellent reasons, since they have extended this ostracism even to those who have already taken part in

other International Congresses. But our penetration cannot divine these reasons. Do they fear that the reputed loquacity of these ladies would cause the Congress to waste too much time? Does past experience confirm this dread, and sanction these precautions? Alas! if they wanted to exclude babblers, those inexhaustible debaters who only speak to say nothing, they must have recourse to more radical measures, and perchance the rigors of a new rule would frequently fall upon the bearded orators.

"In France—the *salic land*—we are less timid; the *Société d'Anthropologie* cordially admits women among its members, and does not bind them to silence. The English Committee of the International Congress of London, which Her Majesty the Queen of England and Empress of India has deigned to take under her high patronage, should have been able, without derogation, to show more courtesy towards the sex to which their sovereign belongs."

We have reproduced the above in its entirety, because it conveys pretty well the idea which probably prevails abroad upon the subject; but without wishing to argue the point, we would venture to point out that in England we are not accustomed to see female doctors at our medical societies yet, and—it may be the fault of our climate, or our insularity, or our conservatism—we have no desire to make what, to many of us, would be a most undesirable innovation, tending to limit free and open discussion.

THE STUDY OF OPHTHALMOLOGY AND ITS BEARINGS.

PROFESSOR HIRSCHBERG'S *Centralblatt für Augenheilkunde* for the present year opens with an address on the above subject. After a succinct but telling sketch of the history of Ophthalmology, the author goes on to say:—"Recent and more exact methods of research have placed it beyond doubt that the condition of the eyes presents us with the best clue to an early and certain diagnosis of various affections of important organs, such as the kidneys and the nervous centres, or of the whole system, as in lues and leucæmia. There being now open to us a direct view of the interior of the eye, we are enabled to recognise the existence of diffuse nephritis in cases where, from the slow development of the disease, neither the patient nor the physician suspected the presence of so grave a disorder. In many cases of military tuberculosis, where the indistinctness of the symptoms leaves us in doubt, this is cleared up by the discovery of tubercles in the choroid. Just as the multiplier, as von Graefe has it, reveals the presence of the very weakest electrical current, the optic nerve, passing as it does through the unyielding scleral aperture, shows by the serous engorgement and the oedema of the papilla unmistakably the existence of increased intracranial pressure, owing, for the most part, to the growth of neoplasms within the cavity of the cranium. The geometrical arrangement of the sentient retinal elements, the cones and rods, enables very limited defects of the field of vision to be exactly defined—defects which to the experienced observer foreshadow, months and even years before, the advent of progressive paralysis. The observation of anomalies in the action of ocular muscles is frequently the first means of detecting the presence of a substantive affection of nerves. The mathematical definition of the functions of the visual organ—viz., distinctness of vision and accommodation, the latter, depending almost entirely on the age of life—reveals the very smallest deficiencies; whereas similar anomalies in other domains—as, for example, in the cutaneous or muscular sensibility—are far from being able to be determined with equal accuracy. From these few instances it will be admitted that the study of our modern ophthalmology, quite apart from its practical bearings, is one of very great pedagogic value to the student of medicine, and is well entitled to the place assigned to it in the examination for the licence to practise. As to its practical merits—its

degree, that is, of therapeutic efficiency—every unprejudiced critic will admit that within the last thirty years notable progress has been made. The local treatment of severe conjunctival affections with caustics; the energetic employment of mydriatics in iritis and even keratitis, the administration of the myotic alkaloids, the mercurial treatment of specific affections of the fundus—all this has undoubtedly contributed to an improvement in the statistics of loss of sight. The operation for cataract has, by virtue of improved diagnosis and encheiresis, come to rank among the most successful performances in surgery. Glaucoma, absolutely incurable before, has, through von Graefe's immortal discovery of the powers of iridectomy, in the overwhelming majority of the cases, become curable, and altogether the scope of that operation, itself greatly simplified, has been vastly enlarged. It must, of course, not be thought that in all the cases which are theoretically curable a cure is actually achieved. The number of the blind is still very large in all civilised countries—with us, e.g., fully 1 in 1000; that is to say, there were in 1871 no less than 22,978 persons in Prussia entirely blind. From the exact statistics of the causes we infer that, according to the present potentialities of the healing art, almost 30 per cent. of the cases might have been rescued from their fate. The principal causes why they were not must be sought in the miserable circumstances of life of large masses of the people, and, above all, in the ignorance of a still greater number, in their predilection for quackery, or their supineness in seeking proper medical assistance. Hence, a vast and fruitful field for exertion lies open before the ophthalmological student."

HEALTH OF THE METROPOLITAN POLICE.

THE report of the Chief Medical Officer of Police, Mr. Timothy Holmes, for the year 1879, shows, among a strength of 10,678, 6489 cases of sickness and 59 deaths. The average number of men on the sick list was 286·7. The total number of men injured was 661, of whom 462 were injured "on duty," and 199 "not on duty." In addition, 149 men suffered from sore feet. The "chief diseases of exposure" were rheumatism (chronic and muscular), coryza, bronchitis, and tonsillitis; and from these ailments 3033 of the men suffered, the larger number being affected with coryza. "Twenty-two men," the report states, "were suspended on account of venereal disease during the year. It has been recently found necessary to send some cases of venereal disease to the Lock Hospital for treatment, on account of the want of any proper place for the treatment of young men affected with the severer forms of venereal disease, when living in stations or section houses. It is stipulated that all such men are to be seen by the chief surgeon on their discharge from hospital, in order that those who are affected with constitutional disease, or who from any other cause are judged unfit for the service, may be reported unfit. It is hoped that the necessity for sending such cases to hospital may not often arise. Though apparently unavoidable under our present system of medical attendance, it certainly looks like a provision for obviating the inconveniences which a man has brought on himself by the breach of police regulations, and to some extent neutralises the regulations whereby such men are struck off pay while unfit for duty. It is only, therefore, in the case of men who can neither be sent home nor treated with convenience in the station that a reference to the Lock Hospital should be made." Notwithstanding the liability of the men, in the pursuit of their duties, to incidental exposure to the contagion of small-pox, only 5 cases occurred in the force—an immunity due to the care given to revaccination. Of the causes of death, "consumption and 'disease of the lungs'" stand first in order of frequency, "bronchitis and pleurisy"

and "bronchitis" second and third. Of the causes of resignation and invaliding from ill-health (the "debility" of age and long service being put aside), "rheumatism, rheumatic gout, and sciatica" come first in order, "consumption and disease of the lungs" second, and "bronchitis" third. Of the duration of cases of sickness, 3130 did not exceed a week.

SIR THOMAS D. ACLAND ON HOSPITAL NURSING.

SIR THOMAS ACLAND, in his capacity of president of the Exeter Hospital, has been giving expression to his views on hospital nursing, observing that good nursing was as necessary as good treatment. He said three things were necessary—first, that medical orders be implicitly obeyed; secondly, that nurses should be trained and educated for their duty; thirdly, that there should be cordial co-operation between medical officers and the person or persons selecting and allocating the nurses. We heartily agree with Sir Thomas in these points. Sir Thomas, rebutting statements in the public press as to the element of religious controversy in this nursing question, said "deliberately, after weeks, nay, several months, of most earnest investigation, that currency had been given to most unjustifiable insinuations about the endeavours to introduce sisterhoods, to set nurses up to judge for themselves, and to put the interest of nurses before that of patients." We are not quite so clear that Sir Thomas is right here. He must be a bold man who denies, in the face of facts everywhere to be noticed, that there is a desire to introduce sisterhoods into hospitals, and many signs of an attempt to turn hospitals into ecclesiastical battle-fields—an attempt which cannot be too closely watched or too stoutly resisted.

THE ORDER OF ST. KATHERINE.

THE Queen has been graciously pleased to confer the Order of St. Katherine on one of the nurses at the Royal Victoria Hospital, Netley, and on the recommendation of Sir William Muir and Lady Superintendent Mrs. Deebles, Sister Elizabeth Wheldon has been selected for the honour. The order carries with it a pension of £50 per annum for a limited period, with an embroidered badge worn on the left arm. Sister Wheldon, in addition to long and good service at Netley, was one of the nurses chosen to accompany Mrs. Deebles to South Africa for work in the military hospitals during the Zulu war, and was commended for her zeal and efficiency in nursing and care of the sick and wounded in that campaign.

THE HOMŒOPATHIC CONGRESS.

WHEN every other body of men is having its Congress it would be hard if the Homœopaths were not to have theirs. Accordingly they have been meeting in Leeds, and have been trying to take a hopeful view of their position in the world. To do them justice we must say that the principal speakers spoke with a modesty and a certain vagueness which contrast favourably with the old and intolerant style of the master. The principal object of the President, Dr. Yeldham, in his address, was to magnify the element of certainty in medicine. This is a sentiment so proper that we can all accept it. But the question is, What is certain? The homœopathic doctrine has been so roughly handled lately by leading homœopaths, that we must consider it, to say the least, very uncertain. We have been lately told by the leading homœopathist in London that the principle of cure is sometimes *similia similibus*, and sometimes *contraria contrariis*, whereas the master said that no future experience would qualify the principle of *similia* as the one and only principle of cure. Recent homœo-

pathic practice raises still stronger doubts about the certainty of the other thing that the master insisted on as established—viz., the virtue of infinitesimal doses. Every now and again good, simple homœopaths, of which a few still survive, are shocked by the rebellion of unworthy disciples. Formerly homœopathy had only to contend with the disadvantage of divorce from scientific medicine; now it has to bear the fate of a divided house. At the dinner in the evening Dr. Yeldham tried to speak comfortably to his brethren on the subject of the slow progress of homœopathy. He thought great reforms were always slow; but considering the reasonableness of the age, and the fast rate at which truth and falsehood are exposed, it is certainly becoming a serious argument against homœopathy that eighty years after its promulgation it is as much without scientific recognition as it was two generations back. About the same time that homœopathy was announced Jenner announced the efficacy of vaccination. Let anybody contrast the fate of the two announcements: the one accepted by every civilised country, and by every medical school in the world: the other, without recognition in any European University, even in Germany, the land of its origin.

QUEEN'S COLLEGE, GALWAY.

THE report of the President of this College for the Session 1879–80 proves that its prospects are encouraging, the students attending lectures during that period having amounted to 180, or 13 in excess of those entered in the previous session. In order to estimate justly the condition and progress of the College from the number of students on the rolls, it must not be forgotten that daily attendance is rigidly enforced in all the departments of the Queen's Colleges. In the Queen's College, Galway, besides the daily roll-call, class examinations are frequently held; for example, in the class of Anatomical Demonstrations a daily examination is held, and in Physiology once a week, and no credit is given for attendance when deficient preparation for lecture or deficient study of the subject is shown by the student. So that the class certificate not merely proves the payment of a fee, and the entry of a name on the class-roll, but is a guarantee of continuous study of the subject on the part of the student during the entire session. It appears that there is an urgent necessity for enlarged accommodation in the Anatomical Department of the Medical School, the Lecture Theatre and the Practical Room being inconveniently crowded.

WICKERSHEIMER'S METHOD OF PRESERVING ANATOMICAL PREPARATIONS AND WHOLE BODIES.

DR. HOTZ states in a recent number of the *Chicago Medical Journal* that Dr. Wickersheimer, prosector in the Anatomical Institute at the University of Berlin, has invented a new preserving fluid, by means of which it is possible to preserve any organic bodies, either plants or animals, so perfectly that they retain their original form, colour, and texture. The inventor at first secured a patent for his invention, but in the interest of science he relinquished it. The fluid in question is thus prepared: 100 grains of alum, 25 grains of cooking salt, 12 grains of saltpetre, 60 grains of potash, and 10 grains of arsenious acid, are dissolved in 3000 parts of boiling water. The solution is cooled and filtered. To every 10 litres of this neutral colourless and odourless fluid there are added 4 litres of glycerine and 1 litre of methyl-alcohol. For dry preservation the preparations are immersed in the fluid from six to twelve days, according to their size, and then dried in the air. Organs like the lungs and intestines are filled with the fluid before immersion, and blown up before drying. Small animals and portions of bodies which are to be preserved in their natural colours are

simply kept immersed in the fluid. For embalming, the body is injected and laid in the fluid for several days. It is then taken out, rubbed off, and dried and wrapped in linen or oil-cloth saturated with the fluid, and encased in air-tight receptacles. If bodies are to be temporarily embalmed for scientific purposes, the injection of $1\frac{1}{2}$ litres (for children) to 5 litres (for adults) is sufficient. Even after years the cut surface of the muscles shows the appearance of those of a fresh corpse. Bodies treated in this way have not the least odour.

IRISH UNIVERSITY EDUCATION.

AT the approaching meeting of Convocation of the Queen's University in Ireland, a motion will be brought forward to the effect that without reference to demands for endowed sectarian universities or colleges, Dublin University should occupy in relation to any university the same position as the Queen's University. Also, that existing non-sectarian colleges—namely, Trinity College, Dublin, and the three Queen's Colleges—should be affiliated colleges in a non-sectarian teaching university; that by additional endowments they should have similar advantages as regards professorships, residences, fellowships, and exhibitions; and that a deputation be appointed to submit the views of Convocation to the Prime Minister and Chief Secretary for Ireland.

THE MIGRATION OF OVULES.

MM. DUVAL and WIET have investigated the mechanism by which the ovules pass from the ovary to the Fallopian tube, in order to ascertain whether ciliary action does not play a part in the phenomenon. They have found that in female frogs, during the sexual period, the peritoneum is covered by an epithelium furnished with vibratile cilia, in active movement. The cilia are absent at other times, and in the male frog. A similar epithelium was found on the peritoneum of cats during the rutting period. M. Sinéty has found vibratile cilia on tumours removed from the pelvis of women immediately after the catamenial period; and therefore it may be assumed that a similar mechanism is also in operation in the human species.

"THE PEOPLE'S DISPENSARY."

THERE is great danger of the people being victimised by dispensaries of one sort or another. We put them on their guard. Wherever medicine and attendance are offered at very low charges let them consider whether they are likely to get anything worth having. At Liverpool police-court the stipendiary magistrate has just committed for trial John Oldenham, of the "People's Dispensary," for falsely pretending to be a duly qualified medical practitioner, and for giving false certificates of death. It was urged for the defence that the defendant acted under a qualified practitioner; but the practitioner in question denied the statement.

CYSTICERCAL EMBRYOS.

M. POINCARÉ lately described some curious parasites in beef, and he has recently found similar organisms accompanying cysticerci in measly pork. They are extremely numerous, and their number is in inverse proportion to the cysticerci, which suggests that the two are really successive stages of the same individuals. They are of an ovoid form, and consist of a sac containing only a mass of granular protoplasm. This sac is capable of spontaneous movements, by which its form may be considerably modified. Most of them are furnished with vibratile cilia, which are more numerous and longer towards the extremities. Some were free, others were contained within muscular fibres. Regarding them as phases of development of cysticerci, M. Poincaré believes that they

may also give rise to tapeworms, but has not yet proved this by experiment.

INQUIRY AT CORK FEVER HOSPITAL.

A PUBLIC INQUIRY has just closed in Cork Fever Hospital in reference to a case of scarlet fever in a pay ward of the hospital, in the treatment of which the use of a small dose of pilocarpin subcutaneously was adopted. The case appears to be exciting considerable interest amongst the profession in Ireland. We reserve a fuller notice of the case, which we have received from our Cork correspondent, until the decision of the committee is made known, and the statements and explanations of the medical men concerned shall be in our possession.

CABUL.

PRIOR to the complete evacuation of Cabul by Sir Donald Stewart's army, the sick of the force, European and native, were encamped in the Balla Hissar on the 26th July, and were inspected by the General the same evening. The convoy, which consisted of 414 Europeans, 445 Sepoys, and 129 native followers, started for India on the 27th, and was under the command of Major Kingsley, 67th Regt. Surgeons Kirkpatrick and Langridge accompanied the party.

CONSIDERABLE difference of opinion appears to exist in the minds of those interested in the prosperity of the Hastings and St. Leonards Infirmary as to the desirability of changing the site of the building. A general committee appointed by the governors to consider the report of the Site Committee had endorsed the recommendation by the latter body that negotiations should be entered into for the purchase of what would seem to be an eligible plot of ground called St. John's Villa, the cost of which was stated to be £10,000. At the half-yearly meeting of the governors of the infirmary, held on the 7th inst., a resolution was carried in harmony with this recommendation.

AMONGST several liberal legacies to medical and other charities, Mrs. Sally Halls Bradshaw, the widow of Dr. William Woods Bradshaw, F.R.C.S. Eng., late Mayor of Reading, has bequeathed to the Royal College of Physicians the sum of £1000, and a similar amount to the Royal College of Surgeons of England, both described as "for a special purpose;" to the Royal Berkshire Hospital, £1000; to the Winchester County Hospital, £1000; to the Westminster Hospital, £1000; to the Reading Dispensary, £500; to the Royal Hospital for Incurables, £1000. The will is sworn under £35,000.

DR. G. E. NICHOLAS, of Church-row, Wandsworth, whose second son was unfortunately drowned at Ipswich on the 28th ult., was, we learn, last week nearly experiencing another bereavement of a similar kind. Dr. Nicholas's third daughter fell into the river Wandle, which runs at the bottom of his garden, and but for the generous bravery of his next-door neighbour, Mr. Cooke, chemist, who unhesitatingly jumped into the stream, and succeeded in bringing her to the shore, the young lady must have suffered the melancholy fate of her brother.

FRANCESCO RIZZOLI, Professor of Surgery at the University of Bologna, who died recently, has bequeathed his vast wealth, estimated at nearly 6,000,000 francs, to the Municipality of Bologna, with the stipulation that it should be devoted to the completion and maintenance of the Model Orthopædic Hospital on his estate at San Michele, in Bosco, an institution on which he had, during his lifetime, expended a sum of 2,000,000 francs.

WE regret to learn that cholera, in a severe form, has broken out at Fort Abizai, near Peshawur. The native regiment in garrison there reported thirty cases the second week in August. We trust the epidemic will be confined to the Fort, and not spread generally in the Peshawur Valley, through which our troops are now marching on their return from Cabul to India.

WE have been asked to announce that the engagement of foreign medical officers for the Netherland Indian Military Service is discontinued.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Jarrow (estimated population 22,500.) Mr. John Spears' report on the health of Jarrow during the year 1879 contains, perhaps, the most important and assuring information which has yet been published by a medical officer of health on the efficacy of the action which may be taken for preventing the spread of disease by a sanitary authority who have obtained power for the compulsory notification of infectious diseases in their district, even when they do not possess a hospital. This is the case with the Jarrow sanitary authority. They possess a local Act of Parliament giving them exceptional powers for securing information regarding the existence of, and for dealing with, infectious sickness, but, curiously (putting the cart before the horse, so to speak), have no infectious-disease hospital. Nevertheless, Mr. Spears shows that the power for the compulsory notification of disease may be turned to excellent account, though what ought to be a primary condition of granting such power is wanting. Mr. Spears' observations on this subject and on a remarkable outbreak of true typhus which occurred in Jarrow last year, we shall follow in great part textually.

Compulsory registration of disease, he remarks, is a measure which of necessity must form the groundwork of all satisfactory provision for the stamping out of such disease, and has been in operation in Jarrow during the year. "In its practical application it has been found, it may truly be said, perfect, and has left really nothing to be desired. If one tried hard to find fault one might say that in a few cases the certificates have not come in at quite so early a date in the course of the case reported upon as was desirable; but on the other hand, much more frequently it has happened that I have received unofficial notice of doubtful cases before a certain diagnosis in regard to them could be arrived at. In one solitary case only, and I have watched for such occurrences, could the suspicion arise that the patient's friends had not sent for medical aid through fear of the case being reported, and in this one case it was merely a suspicion, denied by the parties concerned. So far, again, from this provision bringing the medical officer of health, and the medical practitioners into conflict, as had been predicted by some, it has assisted in the formation of a close and pleasant intimacy between us, and a mutual confidence, which was freely illustrated during the year, when, on the occurrence of many cases presenting unusual and somewhat contradictory clinical features, I was permitted without a single objection to visit such cases, and take clinical observations, often twice a day, and for days continuously. The medical practitioners of the town are in one accord as to the efficacy and practicability of the measure, and most of them are now its warm supporters, whilst from private individuals I have not heard one single objection, unless a slight demur, only expressed privately, to an unusually late visit I paid on one occasion to a house for the first time, could be called such. The smoothness of its working, and the practicability of this measure are, in short, established by the experience of Jarrow; provided, as has been pointed out to me by my professional brethren, the medical officer of health is not engaged in private practice, and is reasonably conciliatory

in his dealings. Then, as to its usefulness. On this point I can speak with greatest decision in respect of the behaviour of a recent typhus fever outbreak. It may be said that typhoid fever has diminished, that the epidemic of scarlet fever, when we came to be informed of every case as it arose, soon disappeared, whilst in neighbouring districts it continued almost unabated; but this I pass over, it may be due to other causes, while the experience with regard to typhus fever is, I take it, decisive."

The infection of this last-named disease had existed in the district, in no inconsiderable degree, throughout the year, and yet there was nothing approaching an epidemic outburst. "Could we," writes Mr. Spears, "have in a district where typhus fever has not appeared for years, and amongst a low-class, closely packed, often under-fed population, always throughout a whole year, five or six different centres of typhus infection, and yet no outburst, unless it were for the prompt precautionary measures that were applied? It is at least most unlikely. In all human probability the infection would have assumed, under such conditions, its usual form of an ill-defined epidemic wave, difficult to trace in its individual progress, and not have remained, as I shall presently show it did, a mere dribbling stream, kept within a very narrow and always perfectly obvious channel. Moreover, the efficacy of prompt precautionary measures was demonstrated in numerous individual cases almost with the accuracy of a scientific experiment. I will mention one instance of many. For seven weeks the typhus infection existed in the house of one J—, in Shakespeare-street. With one exception, the family all suffered, the sufferers being at last removed by the parish authorities. During this time all but one neighbour was rigidly excluded. That neighbour, and that one only, took the disease, and subsequently her husband and all her husband's family suffered.¹ Had it not been for our strict supervision (I visited the house myself almost always twice a day, and the inspector only a little less often) many neighbours would have been constantly passing to and fro, each with a more than equal chance, for other precautions would have been likewise neglected, of infection. Such was throughout the experience. When persons insisted on seeing a sick or dying relative, or upon attending a funeral party in an infected house, they caught the disease; when a lover visited surreptitiously his sick mistress (four such instances occurred) he paid a like penalty; when a neighbour was allowed to nurse a patient, or lay out a corpse, she suffered; whenever such and similar indiscretions were allowed, and it was very difficult, sometimes impossible, to prevent them, the disease spread; when they were prevented it disappeared. In short, throughout, it may be said, we retained an effectual grasp upon the disease; when even a finger was relaxed, we could see, as it were by its effects, the infection oozing away; when the grasp tightened, it was stayed.

"The question will here naturally suggest itself to a stranger, and it may be noticed parenthetically, why was not a hospital provided, and the dozen or so sufferers, since you never appear to have had more than that number at one time, removed, and all this trouble and waste of life put a stop to? The question may well be asked.

"But could we have done what we did, and, without actually stamping it out (we had not the necessary machinery for that), have kept the disease so completely under control, without our system of registration of disease? Assuredly, no! The disease would almost certainly have become epidemic; we should only have been dealing with one centre of infection, whilst others unknown to us were arising. And for this reason I think I may justly say that if our Private Act were destroyed at this moment the benefits that have already accrued from it are such that the ratepayers would have been more than repaid the cost of obtaining and administering it.

"Typhus fever, a disease that for years had been absent from this district, made its appearance in February of the year under report. Its origin is left in uncertainty, although to discover it no pains were spared. The grandfather of the first infected family had lately come to the house from Sunderland, from a part where the disease had to a moderate extent prevailed, and this was the most likely source of the contagion that could be suggested. This part of the investigation was rendered somewhat more difficult by the fact that, especially in the early cases, the clinical features of the

¹ One of the sufferers, however, went to stay a night at the house of a friend, owing to a quarrel at home, before complete recovery, and infected persons there.

disease were so equivocal that at first it was looked upon as typhoid fever, but this feature of the epidemic, together with other technical points of much interest, may more properly be left for a scientific paper. What most concerns the sanitary authority to know is that the disease spread, it could clearly and unmistakably be proved, in almost every case, by contagion from person to person, or, in a few cases only, by infected clothing; and, also, that ill-ventilated and crowded houses suffered far beyond all proportion of what may be termed the balance of probability of their infection. Persons living in crowded rooms appear to have been peculiarly susceptible to the reception of the fever poison; and, when the disease appeared in a crowded house, not only did all, or nearly all, the inmates invariably suffer, but such houses formed centres of infection from which it was almost impossible to prevent the disease from spreading. Both these facts, of so much significance to the authority—the mode of spread of this disease, and the peculiar facility which overcrowded dwellings offer to its propagation—constitute no new experience, but have been observed before in nearly every epidemic of typhus fever. Still, they are, as I have said, of so much practical importance, that it is well to insist upon them."

These points are brought out in a table annexed to the report, in the form of a chronological diagram, and from which one example may be given. The disease started in an overcrowded house in High-street, nine persons in this house suffered, and from it seven others, or twenty-seven persons, were directly infected. From only one of these houses did the disease spread to any extent, and this was likewise an overcrowded house situated in Pearson-place, in which most of the family suffered; from it certainly nine, probably ten, families were infected, and eighteen persons. One only of these houses was overcrowded, and here again all the family suffered, and the disease spread. Such throughout was the experience, as the table shows.

"The information conveyed in this diagram," Dr. Spears observes, "may be looked upon as reliable. Where any reasonable doubt existed as to the source of the infection, such cases have not, of course, been included; but, as I have said, we had great and unusual facilities for watching the progress of the disease, and, indeed, we often knew before the disease broke out in a family that it was likely to appear there, and the source whence it would come. The sanitary authority had, in fact, provided us with most effectual means, by the system of compulsory registration of disease, of watching the ravages of infection, but unfortunately they had not provided us with the means of staying its progress. I must confess I sometimes felt in the position of an observer, watching the carrying out of painful pathological experiments, as useless as preventable, on living animals. We were, as the table will show, generally successful as regards most of the centres of infection, in stopping the progress of the disease by such precautionary measures as we could enforce in the sufferers' houses, and certainly there was no relaxation in our efforts in that direction; but the one thing needed to put an effectual end to all the disease and death and misery that we were coolly watching—hospital accommodation—the sanitary authority could not, or would not, provide. That question was still, as it had been for five years, *under consideration*."

THE BELFAST WORKHOUSE.

Dr. McCabe's report on the State of the Belfast Workhouse has been issued as a Parliamentary paper. The Local Government Board (Ireland), when formed, prided itself in following the administrative example in sanitary matters of its bigger brother, the English Board. It would appear that the Irish Board, when in its larval state of existence, had qualified itself much as the English Board had done. Neither had seen anything incongruous in undertaking the public health administration of a kingdom, after having proved itself unqualified to manage the somewhat simpler duty of properly supervising the sanitary administration of a workhouse. The Belfast workhouse, according to Dr. McCabe's report, shows that Local Government officials in Ireland have quite equalled the Local Government officials here in the sanitary mal-administration of workhouses, and no doubt they feel highly gratified in having emulated so successfully in this branch of their administrative duties their English brother. The Belfast workhouse would have been worthy of a place in THE LANCET'S first report on Workhouses.

SANITARY CONDITION OF CLONAKILTY.

This town appears to be in a bad condition in reference to sanitary matters and the absence of a proper supply of water. The Town Commissioners last week unanimously adopted a resolution that a memorial should be forwarded to the Local Government Board, requesting that the sanitary authority be transferred from the Board of Guardians to the Commissioners, as the Guardians were neglecting their duties.

At a recent meeting of the Hackney Board of Guardians some amusement was excited by a drug account. The clerk was called upon to read it, but he asked to be exempted from the task, on the ground that whilst the list kept to Latin, he could manage to decipher it, but when it went off, as was the case at intervals, into his native tongue, he was completely at fault. Further amusement was caused by Dr. Millar discovering in the list an item of a gallon of brandy sandwiched between 28lb. of zinc ointment and some tincture of squills.

A case of proceedings for adulteration is reported from the Wolverhampton police-court, in which the stipendiary magistrate decided that it must be dismissed, because the county analyst, certifying to the quality of the asserted adulterated article, coffee, had described it as consisting "practically" of chicory. It was objected to this certificate that it did not state the quantity of chicory, and the magistrate held that it was not sufficient evidence of adulteration.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

35th week.—Notwithstanding the recent high temperature, the rate of urban mortality and of diarrhoea fatality showed a slight decline in the week ending Sept. 4th. In twenty of the largest English towns, estimated to contain in the middle of this year seven and a half millions of persons, or nearly one-third of the entire population of England and Wales, 4984 births and 3534 deaths were registered. The births were 201 below, whilst the deaths exceeded by 259, the average weekly numbers during 1879. The deaths showed a decline of 71 from the steadily increasing numbers in recent weeks, and were equal to an annual rate of 24·6 per 1000; in the nine preceding weeks the rate rose from 18·9 to 25·1. The lowest death-rates in the twenty towns in the week under notice were 19·4 in Oldham, 19·5 in Plymouth, 20·8 in London, and 21·7 in Bristol. The rates in the other towns ranged upwards to 34·4 in Liverpool, 34·6 in Nottingham, 35·1 in Salford, 35·3 in Norwich, 37·6 in Sunderland, and 38·2 in Leicester.

The deaths referred to the seven principal zymotic diseases in the twenty towns, which had steadily increased in the twelve preceding weeks (under the influence of summer diarrhoea) from 406 to 1239, declined to 1120 in the week ending Sept. 4th. Of these, 853 resulted from diarrhoea, 93 from scarlet fever, 70 from whooping-cough, and 51 from fever, principally enteric. The annual death-rate from these seven diseases averaged 7·8 per 1000 in the twenty towns, and ranged upwards from 4·2 and 4·9 in Plymouth and Brighton, to 17·4 and 19·3 in Salford and Leicester. Scarlet fever showed the largest proportional fatality in Norwich and Sunderland, and diphtheria caused 2 deaths both in Portsmouth and Birmingham, and 10 in London. The deaths referred to enteric fever showed a marked excess in Portsmouth and Plymouth. Small-pox caused 5 more deaths in London, but not one in any of the nineteen large provincial towns.

The fatal cases of diarrhoea in the twenty towns, which had steadily increased in the eleven preceding weeks from 51 to 958, declined to 853. The annual death-rate from diarrhoea averaged 5·9 per 1000 in the twenty towns; it did not exceed 3·3 in London, whereas it was equal to 8·5 in the nineteen provincial towns. Among the twenty towns the death-rate from diarrhoea in the week ending September 4th ranged from 2·1 and 2·9 in Plymouth and Brighton to 13·9 in Hull, 14·1 in Salford, and 18·1 in Leicester.

The deaths referred to diseases of the respiratory organs in London, which had been 167 and 124 in the two preceding weeks, rose again to 152, and exceeded the corrected weekly average by 6; these included 79 from bronchitis and 43 from pneumonia. The annual death-rate from diseases of

this class was equal to 2·2 in London and to 3·5 in Liverpool.

36th week.—The recent high temperature caused an increase in the rate of urban mortality, which was higher last week than it has been since the middle of February last. In twenty of the largest English towns, 4962 births and 3643 deaths were registered last week. The births were 223 below, whereas the deaths exceeded by no less than 368, the average weekly numbers during 1879. The deaths showed an increase of 109 upon those returned in the previous week, and were equal to an annual rate of 25·4 per 1000, against 25·1 and 24·6 in the two preceding weeks. During the ten weeks ending the 11th inst. the death-rate in these twenty towns averaged 23·1 per 1000, against 24·7 and 18·1 in the corresponding periods of 1878 and 1879. The lowest death-rates in the twenty towns last week were 19·6 in Bristol, 19·8 in London, 23·5 in Birmingham, and 23·7 in Plymouth. The rates in the other towns ranged upwards to 35·8 in Sunderland, 38·5 in Wolverhampton, 38·6 in Liverpool, 38·6 in Leicester, and the highest rate was 39·0 in Salford. The zymotic death-rate (mainly the result of infantile diarrhoea), showed a marked excess in each of the five last-mentioned towns.

The deaths referred to the seven principal zymotic diseases in the twenty towns, which had been 1239 and 1120 in the two preceding weeks, rose again to 1190 last week. Of these, 917 resulted from diarrhoea, 111 from scarlet fever, and 67 from other forms of fever, principally enteric or typhoid. The annual death-rate from these seven diseases averaged 8·3 per 1000 in the twenty towns, and ranged upwards from 4·8 and 6·4 in London and Bristol, to 21·7 and 22·7 in Leicester and Salford. Scarlet fever, the deaths from which were more numerous than in recent weeks, showed the largest proportional fatality in Norwich, Salford, and Sunderland. The deaths referred to fever, principally enteric, in the twenty towns, which had been 40, 49, and 51 in the three preceding weeks, further rose to 67 last week, a higher number than in any previous week this year; only 18 occurred in London, whereas 49 were returned in the nineteen provincial towns, having an aggregate population only slightly larger than that of the metropolis. The fatality of fever showed the largest proportional excess last week in Plymouth, Portsmouth, and Sheffield. Small-pox caused 5 more deaths in London, but not one in any of the nineteen large provincial towns. The number of small-pox patients in the Metropolitan Asylum Hospitals have steadily declined from 200 to 104 during the eight weeks ending last Saturday; 13 new cases of small-pox were admitted to these hospitals during last week, against 26 and 7 in the two previous weeks. The Highgate Small-Pox Hospital contained 9 patients on Saturday last.

The fatal cases of diarrhoea in the twenty towns, which had been 958 and 853 in the two previous weeks, rose again to 917 last week, and were equal to an annual rate of 6·4 per 1000; in London it did not exceed 3·2, while it averaged 9·4 in the nineteen provincial towns. Among the twenty towns the death-rate from diarrhoea last week ranged from 3·2 and 3·9 in London and Bristol, to 18·5 and 19·7 in Salford and Leicester. During the four weeks ending last Saturday diarrhoea fatality in Leicester was unprecedentedly great, even for that town, and was equal to an annual rate of 18·9 per 1000.

The deaths referred to diseases of the respiratory organs in London, which had been 124 and 152 in the two preceding weeks, declined again to 124 last week, and were 18 below the corrected weekly average; 68 resulted from bronchitis, and 38 from pneumonia. The annual death-rate from lung diseases was equal to 1·8 per 1000 in London, to 5·7 in Liverpool, and 2·8 in Salford.

HEALTH OF SCOTCH TOWNS.

In eight of the largest Scotch towns, having an estimated population of rather more than a million and a quarter persons, the annual death-rate last week averaged 18·2 per 1000, against 18·4 and 19·3 in the two preceding weeks; this rate was no less than 7·2 per 1000 below the average rate in the twenty large English towns. The rates in the eight Scotch towns ranged from 13·4 and 13·6 in Dundee and Aberdeen, to 23·3 and 33·8 in Paisley and Leith. The fatal cases of the seven principal zymotic diseases in the eight towns was 129, against 123 and 130 in the two preceding weeks; they included 63 from diarrhoea, 18 from scarlet fever, 16 from diphtheria, 15 from fever, 13 from whooping-cough, 4 from measles, and not one from small-

pox. The annual death-rate from those seven diseases averaged 5·2 per 1000 in the eight towns, against 8·3 in the large English towns; the excess in the English towns was mainly due to the far greater fatality of infantile diarrhoea. The zymotic death-rate in the Scotch towns ranged last week from 0·0 and 3·4 in Perth and Dundee, to 6·8 and 8·8 in Edinburgh and Leith. The fatal cases of diarrhoea in the eight towns, which had been 63 and 65 in the two previous weeks, were again 63 last week, and were equal to an annual rate of but 2·5 per 1000, while in the twenty English towns the diarrhoea death-rate averaged no less than 6·4. The largest proportional fatality of diarrhoea in the Scotch towns occurred in Aberdeen, where however the rate did not exceed 3·5 per 1000. It is stated that for the purpose of these Scotch weekly returns deaths from "enteritis and other bowel diseases are grouped under the heading diarrhoea"; this deliberate misclassification is to be regretted. It is also noted that "croup, laryngismus stridulus, and certain cases of disease of the windpipe" are returned under the heading of diphtheria. Such irregularities of classification detract much from the value of the Scotch weekly returns for comparative purposes. During last week, for instance, 16 fatal cases of diphtheria are reported in the eight Scotch towns, against 15 in the twenty English towns, with a population six times as numerous. If any large proportion of these so-called fatal cases of diphtheria were really due to croup, or laryngismus stridulus, the return conveys a mischievously false impression. The 15 deaths referred to fever showed an increase upon recent weekly numbers, and included 7 in Glasgow, and 4 in Edinburgh. Of the 18 fatal cases of scarlet fever 8 were returned in Edinburgh, 4 in Leith, and 5 in Glasgow. The deaths attributed to acute diseases of the lungs (bronchitis, pneumonia, and pleurisy) were 60 last week in the eight Scotch towns, against 55 and 65 in the two preceding weeks; the annual death-rate from these diseases was equal to 2·4 per 1000 against 1·5 in London.

HEALTH OF DUBLIN.

The death-rate in Dublin continues excessive. The annual death-rate in the city, which had been equal to 37·8 and 35·5 in the two preceding weeks, showed but a slight further decline last week to 34·7. During the first ten weeks of the current quarter the death-rate in the city has averaged no less than 33·6 per 1000, against 21·7 in London, and 18·3 in Edinburgh. The 209 deaths in Dublin last week included 61, or more than 29 per cent., which were referred to the seven principal zymotic diseases, exceeding by one the number in the previous week; 32 resulted from diarrhoea, 8 from scarlet fever, 8 from whooping-cough, 7 from fever, 5 from measles, 1 from diphtheria, and not one from small-pox. The annual death-rate from these seven diseases was equal to 10·1 per 1000 in Dublin, while it did not exceed 4·8 in London, and 6·8 in Edinburgh. The fatal cases of diarrhoea in Dublin, which had been 36 and 29 in the two previous weeks, rose again to 32 last week, and were equal to an annual rate of 5·3 per 1000, against 3·2 in London. The deaths from scarlet fever showed a decline of 7 from those in the previous week, whereas the number of those referred to measles and whooping-cough varied but slightly. The 7 fatal cases of fever exceeded the number returned in any of the six preceding weeks. Infant mortality was greater in Dublin last week than in any previous week this year.

HEALTH MATTERS GENERALLY AT HOME AND ABROAD.

THE METROPOLITAN COMMON LODGING-HOUSES.

The report of the Chief Commissioner of the Metropolitan Police for the year 1879 supplies the following particulars as to the lodging-houses under the supervision of that force, and the occurrence of infectious and contagious diseases in them during the year. At the close of the year there were open within the metropolitan area 1220 registered common lodging-houses, accommodating 24,296 lodgers. The number of cases of infectious and contagious sickness which occurred in them was only 27, as compared with 55 in the previous year—namely, 10 of small-pox, 1 of typhus fever, 2 of scarlet fever, 4 of enteric fever, 1 of typhoid fever, 4 of "fever," and 5 of measles. Twelve cases of itch were also reported.

The deaths taking place in the lodging-houses numbered

74. In every instance an inquest was held, the result showing, as in former years, that the deaths were caused by "privation, exposure, &c." The Chief Commissioner, with regard to cases of sickness requiring removal, remarks on the prompt attention shown by the parish authorities "as heretofore," and observes that "the police had experienced the same kind and courteous attention at the hands of the medical officers as had previously been shown." He expresses also his approval of the systematic and satisfactory way in which the police have maintained their supervision over the houses. It appears that a common lodging-house is in course of erection at Poplar, to provide accommodation for 428 lodgers, and which is being built expressly for the purpose, and will give very superior accommodation, including hot and cold water-supply to the lavatory. No lodging-house has hitherto been constructed or arranged for so large a number of inmates; and none before, it would seem, has sought to emulate in any form the artisan's "model dwellings." The Chief Commissioner anticipates that the new lodging-house will prove a great boon to the working population of Poplar.

BUREAU OF PUBLIC HEALTH IN CANADA.

At the first annual meeting of the newly-elected Medical Council of Ontario, held on July 13th, 1880, Dr. Grant proposed "That, in order to keep pace with the scientific progress of the age, and give greater evidence of an earnest desire to promote sanitary measures, this Council is of opinion that a Central Bureau of Health should be established at the capital under the control of the Federal Government." The motion, along with other resolutions setting forth the importance of public health, was carried unanimously. Thus onward moves the world.

CHOLERA IN RUSSIA.

A short time ago we referred to a reported outbreak of cholera on the Volga, at Saratoff. As the news then reached us it appeared as if a series of cases of accidental poisoning were in question, but fuller information described the malady as having broken out widely among the troops in camp near the town, and afterwards having spread to the inhabitants of the town. Further news describes also a considerable outbreak of choleraic disease among troops encamped in Orel, in Central Russia, as many as 700 soldiers having been struck down with the malady. There the outbreak was assigned to the intense heat of the weather and to the badness of the water in use in the camp. We must wait for clearer information before the nature of this reported cholera can be described and the circumstances which gave rise to it.

According to the annual report of the Commissioner of Police of the Metropolis, the increase of the metropolis during 1879 comprised 21,589 new houses, forming 401 new streets and two new squares, of a total length of 71 miles and 758 yards. This makes the length of new streets added to the metropolis and handed over to the police protection during the last ten years 383 miles and 758 yards.

The *Isle of Man Times* contradicts a rumour that "black fever" has been prevalent in the island, which, our contemporary states, was never in a more healthy condition than it is at present.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE following special notice to candidates as to the payment of fees for the first and second professional examinations for the Fellowship has been issued:—

"All candidates presenting themselves for the first time, whether at the first or at the second Professional Examination for the diploma of Fellow, will be subject to the payment of fees, in accordance with the provisions of the following bye-law of the College, and all candidates who shall hereafter be rejected at either of these examinations will also be subject to the conditions of the said bye-law.

"Every candidate for the diploma of Fellow shall pay the following fees—that is to say, prior to his first and every subsequent admission to the first or Anatomical and Phy-

siological Examination: (a) If a Member, a fee of five guineas, which shall be retained in either case, whether he pass or fail to pass his examination. (b) If not a Member, a fee of ten guineas, which shall be retained if he pass, and of which five guineas shall be returned if he fail to pass his examination. Prior to his first and every subsequent admission to the second Professional Examination—(c) If a Member, a fee of ten guineas over and above all charges for stamps. Such fee shall be retained whether he pass or fail to pass such examination; but the charges for stamps shall be returned if he fail to pass his examination. (d) If not a Member, a fee of twenty guineas over and above all charges for stamps. Such fee and the charges for stamps shall be retained if he pass; but ten guineas, part of such fee and the said charges for stamps, shall be returned if he fail to pass his examination. Provided always that no candidate for the diploma of Fellow shall be required before admission to examination or otherwise to pay altogether more than thirty guineas over and above the charges for stamps, and that the moneys paid by each candidate and retained as aforesaid shall be treated as the fee payable and paid by such candidate on admittance to the diploma of Fellow."

THE SERVICES.

MEDICAL OFFICERS AT KANDAHAR.

The following officers of the Army Medical Department were on duty at Kandahar, and with General Burrows' force prior to the disaster at Khushi Nakhud:—

At Kandahar: Deputy Surgeon-General J. O'Nial, Principal Medical Officer; Surgeon-Major B. T. Giraud in charge 2-7th Fusiliers; Surgeon-Majors J. F. Beattie, W. R. G. Hinds, and Surgeon G. MacNeece, with the Base General Hospital; Surgeon-Major H. Waghorn, and Surgeon J. Findlay, with the Field Hospital; Surgeon J. Macnamara, in charge C-2nd R.A.; Surgeon E. W. Kelsall, in charge 5-11th R.A.

With General Burrows: Surgeon-Major C. H. Harvey, in charge E-B R.H.A. (reported at Kandahar); Surgeon-Major J. D. Edge and Surgeon E. A. H. Rose, with the Field Hospital (missing—not yet reported); Surgeon-Major A. F. Preston, in charge 66th Regiment (reached Kandahar severely wounded).

At Khelat-i-Ghilzai: Surgeon-Major J. W. Jackson, in charge Field Hospital.

Medical officers of the Indian Medical Department:—

At Kandahar: Surgeon-Major J. Arnott, 19th N.I.; Surgeon A. K. Stewart, Poonah Horse; Surgeon R. Mason, and G. H. Earle, Base Native Hospital (Dr. Earle reported to have reached Kandahar); Surgeon E. Tully, Civil Surgeon.

With General Burrows: Surgeon H. Dane, 1st N.I.; Surgeon G. E. E. Burroughs, 3rd Scinde Horse; Surgeon A. F. Strut, 3rd Light Cavalry; Surgeon W. R. Kirtaker, 30th N.I. (Drs. Dane and Burroughs have been reported safe at Kandahar).

At Khelat-i-Ghilzai: Surgeon-Major E. Morton.

MEDICAL OFFICERS FOR THE BOMBAY BRIGADE ORDERED TO AFGHANISTAN.

The following medical officers of the Indian army have been ordered for service with the Bombay Brigade detailed for Afghanistan:—Surgeon-Majors Beatty and Davidson, Surgeons Macrury, Clarkson, Parker, Chanmer, Hatch, Monks, Damania, and Faulkner. Surgeons Ward and Dempsey are ordered from Ruk and Sehwan to Kandahar for duty.

Deputy Surgeon-General R. H. Perkins, Indian Medical Department, has been appointed principal medical officer 1st Division Northern Afghanistan Field Force, *vice* Deputy Surgeon-General H. B. Hassard, invalided to India.

Surgeon Williamson was appointed to the staff of General Sir Frederick Roberts at Cabul prior to the departure of the division for Kandahar, *vice* Surgeon Owen, transferred to the staff of Sir Donald Stewart.

ADMIRALTY.—The following appointments have been made:—Staff-Surgeon R. G. Bird and Surgeon G. J. Fogerty to the *Carysfort*; Surgeon M. O'C. McSwiney to the *Revenge*; Surgeon W. J. Vollatti to the *Rambler*, when

commissioned; Surgeon William Brown to Plymouth Hospital; Surgeon William Pearson, M.D., to the Royal Marine Artillery.

Correspondence.

"Audi alteram partem."

THE IMMEDIATE TREATMENT OF STRICTURE OF THE URETHRA.

To the Editor of THE LANCET.

SIR,—Absence from England prevented my attending the meeting of the British Medical Association at Cambridge, or I should have availed myself of the opportunity of taking part in the discussion on Sir Henry Thompson's paper on stricture, and could have given such testimony in favour of the immediate treatment as would have satisfied the most sceptical of the value of the operation, and of its security and success.

I never have replied to Mr. Teevan's criticisms, and I never intend to do so, simply from the fact that his experience of the operation being limited (as he informed me in a letter some time since) to four cases, I consider he is perfectly incompetent to form any opinion as to the value of the operation or its results. Mr. Wood, however, stated that he had seen several fatal cases, and I therefore, on my return to London, wrote to that gentleman asking for the number and the particulars of the cases he alluded to. Mr. Wood, in his reply, informed me that the deaths, two in number, occurred in the practice of his colleagues at King's College Hospital, and so far as he could remember they were both operated upon by the late Mr. Partridge. In one Mr. Wood could not recollect any particulars, but in the other he remembers that the patient was the subject of albuminous urine, and correctly adds, "This, of course, was hardly a proper case for any operation of the kind."

I therefore venture to affirm that, considering the large number of operations that have been, and continue to be, performed by surgeons at home and abroad, the fact of only two deaths having occurred, one of which, it is quite clear, should never have been operated upon, speaks volumes in favour of the immediate plan and its eminently satisfactory results. In conclusion I may add, that I am as strongly in favour of the operation as I ever was, and that I have this day operated with the most perfect success on an unpromising and difficult case; at the same time I warn those who are deficient in the manipulative skill required for the passage of the dilator to refrain from using an instrument with which they are practically unacquainted.

Very faithfully yours,

Savile-row, Sept. 14th, 1880.

BARNARD HOLT.

"NEW INSTRUMENT FOR CLEFT PALATE."

To the Editor of THE LANCET.

SIR,—Would you favour me with a small space in your journal to make a few remarks concerning the instrument referred to by Messrs. O'Neill and Thompson, in their note of the 7th August?

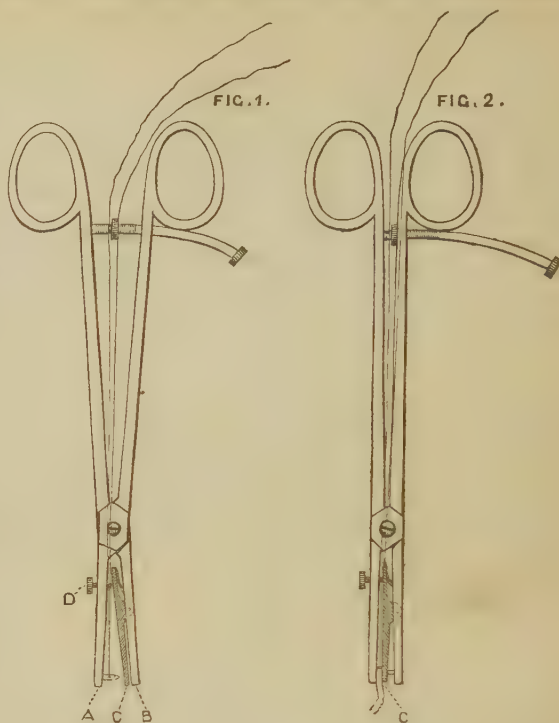
As stated therein, they constructed an instrument for me more than three years ago for the same purpose and on the same principle as that described by Dr. Woakes, but the invention dates back still further. I have yet in my possession a similar instrument that I roughly constructed myself in 1872, about the time the idea first occurred to me.

I do not accuse Dr. Woakes of having had any knowledge of my invention previous to his introducing his instrument to the profession—first, because there is no published account of mine, although one of them was exhibited in the Museum at the annual meeting of the British Medical Association in 1877; and, secondly, because I feel convinced his would have been divested of some of its present imperfections had he previously had a glimpse at mine.

The woodcuts give a fair idea of the general appearance of

the instrument; and a brief description will at once show the identity of principle in both, and the advantages of the older arrangement.

As seen in the figures, it is a dressing, or scissors-shaped, forceps I have used; and I think it will be at once admitted



that this form gives the operator much more command over the instrument than he could obtain with a spring forceps. The blades, A and B, Fig. 1, are slit up, so that each forms a needle-holder. The needle may be of any length, according to the part to be operated on, but has its eye near the centre, and has a small notch near its point. In Fig. 1, the instrument is seen ready for operation; on closing it, the notch in the needle allows the blade, B, to grasp it firmly, and on again disconnecting the handle the needle is released from A, or, in other words, it has passed from one blade to the other.

The advantages I claim for my instrument are:—First, the shape already adverted to; secondly, the needle is held in both blades by spring pressure, thereby obviating the necessity for a needle perforated or tubular at the base, which of course implies extra thickness; thirdly, by far the most important feature in my instrument is a very simple appliance to cause the tissue operated on to be well passed up on the needle before its point enters the catch on the opposite blade.

If Dr. Woakes has tried his instrument, I am sure he has not unfrequently found that a portion of the tissue is sometimes caught in the second blade of the forceps, as well as the needle; indeed, I have found it to obtain even where extra trouble was taken to have the needle thoroughly sharp.

To prevent such an unpleasant complication, I have introduced a sort of miniature blade between the other two, which somewhat resembles a flute key; as the instrument is closed the thumbscrew, D, impinges on the upper extremity of this blade, and tilts up the other extremity, which has a perforation sufficiently large to admit of the needle and thread passing freely through. Its action will be better understood by a reference to Fig. 2.

I am, Sir, faithfully yours,

N. FURLONG, M.R.I.A., &c.

Lymington, Enniscorthy, Sept. 7th, 1880.

** It is but justice to Mr. Furlong to state that a communication of similar purport to the above, but which was unfortunately mislaid, was received from him soon after the appearance in our columns of Dr. Woakes's paper.—ED. L.

HOSPITAL ETIQUETTE.

To the Editor of THE LANCET.

SIR,—On the 27th of May, 1880, a little boy was admitted into St. Mary's Hospital, Manchester, under Dr. Lloyd Roberts, suffering from stone in the bladder, and was transferred to me for operation. On the 2nd June symptoms of scarlet fever showed themselves. Information was at once sent to the Municipal Sanitary Authorities, by whose order the child was removed on the following day to the fever wards of the Children's Hospital at Pendlebury, the place appointed for the reception of those children suffering from infectious fevers who have to be accommodated at the public expense. When Dr. Mackenzie, the out-door medical officer at the Pendlebury Hospital, called at St. Mary's, to arrange for the boy's removal, he was informed by the house-surgeon, Dr. Walter, that upon his recovery he expected the boy to be returned to St. Mary's for operation; moreover, Dr. Walter called upon Dr. Ashby, the physician under whose care the boy was placed at Pendlebury, to tell him about the case, and to ask that it might be returned in due course. As a result of these interviews, Dr. Walter was satisfied that the boy would be returned, and so expressed himself to me. In order, however, that there might be no mistake, Dr. Lloyd Roberts made it his business on two separate occasions to see Dr. Ashby personally in reference to this matter, and he too received assurances that the patient would be sent back. You may judge of my surprise when I learnt last week that Mr. Thomas Jones (until the last few days surgeon to the Pendlebury Hospital) had operated on the boy a fortnight before, and of my indignation when I learnt that from the first the Pendlebury staff never meant the boy to return to St. Mary's—"at least not with the stone in his bladder."

Dr. Borchardt, the senior physician, admits, although informed of the request to have the case returned, that he said the case must be accepted without any restrictions, but adds that he was unaware that the child was sent in by order of the Corporation, otherwise he should have been returned. Dr. Borchardt, however, did not see that this decision was communicated to St. Mary's, neither did he take the trouble to ascertain through what channel the child was sent in, though it was not likely that a scarlet fever case from St. Mary's would come through any other source than the Corporation. I must own, too, that I cannot see how this question in any way affects the ethics of the case. Dr. Ashby admits, I believe, that he did not protest against Dr. Borchardt's decision, and certainly he did not inform Dr. Lloyd Roberts of it, but, on the contrary, gave him further assurance that the case would be returned, and now defends himself by saying that the operation was performed without his knowledge, during his absence of a week from Manchester, and before he calculated upon its being done.

Mr. Thomas Jones says he knew nothing about any request from St. Mary's that the case might be returned, although he admits that he knew the boy went into St. Mary's to be operated upon, and that only the accident of catching scarlet fever accounted for his being in the Pendlebury Hospital at all, and Mr. Jones contends that he was quite justified in operating upon the case.

Such conduct as this on the part of a hospital staff, which I can only designate as ungenerous, discourteous, and fatal to all inter-hospital good feeling, ought, I think, to be brought before the notice of the profession.

I remain, Sir, yours faithfully,

J. H. EWART,

Manchester, Sept. 8th, 1880.

Surgeon to St. Mary's Hospital.

WESTMINSTER HOSPITAL: A CORRECTION.

To the Editor of THE LANCET.

SIR,—In your last impression you refer to a "Westminster Hospital School of Anatomy, Physiology, and Operative Surgery." Allow me to state that the only school connected with the Westminster Hospital is the Westminster Hospital Medical School.—I am, Sir, your obedient servant,

A. PEARCE GOULD,

Sub-Dean of Westminster Hospital Medical School.

Sept. 13th, 1880.

MEDICAL NOTES IN PARLIAMENT.

IN the House of Commons, on the 3rd inst., Mr. O'Connor Power gave notice of a question for Monday, referring to an article in a medical journal on the administration of the law relating to public health in Ireland, and inquiring what measures the Government propose to take for enforcing the Public Health (Ireland) Act; but on Monday the House did not sit, and on Tuesday the question was not upon the paper.

On the 4th inst., petitions for redress of grievances were received from the following officers of the East Indian army medical department:—Surgeon-Major William Henry Kirtton, Surgeon-Major Thomas Miller, Surgeon-Major George Alder Watson, Surgeon-Major Alfred Eteson, and Surgeon-Major James Howard Thornton.

On the 8th inst., just previous to the prorogation, Sir H. D. Wolff asked the Marquis of Hartington what decision had been come to with regard to the chargeability upon the rates of London, Portsmouth, and other towns of military and other lunatics brought home from India. Lord Hartington replied that the correspondence with the Indian Government on the subject was concluded. The decision of the India Office was that the matter was one which rather affected the War Office. However, he should be glad if the hon. member would see the correspondence, and before next Session he would consider whether it could be laid upon the table of the House.

Obituary.

WILLIAM O'CONNOR, M.D. &c.

WE have to record the death of Dr. William O'Connor, senior physician to the Royal Free Hospital, which took place on the 3rd inst., at his residence in Upper Montagu-street, Montagu-square, W. He had been in practice in this metropolis for close upon forty years, during twenty-five years of which he was an active member of the staff of the institution above mentioned. He was known principally for his treatment of stomach and neuralgic affections, and for his success in the management of the diseases of children.

Dr. O'Connor was descended from an ancient Kerry family, remarkable for the great number of members whom it has afforded to our profession, including several of his brothers, one of whom, Dr. Maurice J. O'Connor, is still in practice in London. The deceased was a direct lineal descendant of the celebrated Bernard O'Connor, M.D., who died in 1698, and who is historically noted for his treatise "Evangelium Medici," and his accurate diagnosis in the case of the Duchess of Bedzevil, sister of the King of Poland, to whom he was physician.

Of the three surviving sons of the deceased, one, Arthur O'Connor, is M.P. for Queen's County; another occupies an official position; and the third, Bernard O'Connor, M.D., M.R.C.P. Lond., physician to the Westminster General Dispensary in Gerrard-street, Soho, is in consulting practice in Brook-street, Grosvenor-square. It is a curious fact that the only possessors of the name "O'Connor" who have figured on the roll of the Royal College of Physicians during the last three hundred years should bear the same Christian name—the one the last-named son, and the other the physician to the Polish king already referred to.

EDWARD AMPHLETT, M.A., M.B., CANTAB.,
F.R.C.S. ENG.

THE death of Mr. Amphlett, Assistant Surgeon and Pathologist to Charing-cross Hospital, Assistant Surgeon to the Central London Ophthalmic Hospital, and Clinical Assistant at Moorfields, occurred on September 9th, at his residence in Weymouth-street. Mr. Amphlett sprang on his father's side from an old Worcestershire family and was the son of a well-known member of the profession practising in Birmingham, and a nephew of Sir Richard Amphlett, of Wychbold Hall, near Droitwich, late Lord Justice of Appeal; whilst on his mother's side he was nearly related to the late Dr. Male, a name of note in the history of

Medical Jurisprudence. Born in the year 1848, and educated for the sea, he served as a midshipman in the Royal Navy for several years till invalidated out on account of asthma, which was the cause of so much suffering to him throughout his life. Whilst in her Majesty's service Mr. Amphlett saw a great deal of different parts of the world, and throughout his life retained a strong attachment for nautical matters, in which he took a keen scientific interest, as shown by his adhesion as surgeon to the ranks of the Naval Artillery Volunteers, with whom he recently went a cruise on board H.M.S. *Esk*. Nothing indeed ever afforded him greater delight than meeting with an old sea comrade and messmate.

On leaving the Navy he determined to enter the medical profession, and having graduated at Cambridge through the mathematical tripos, he came up to Guy's Hospital, where he held all the posts open to a student, and having taken his Bachelor of Medicine degree at Cambridge and the Fellowship at the College of Surgeons in a brilliant manner, was finally appointed assistant surgeon to Charing-cross Hospital. From this time Mr. Amphlett devoted himself with much assiduity to the practice of his profession, and particularly to eye diseases, for the special study of which he attended the Vienna School for some months; he lectured also to the St. John Ambulance classes, and recently to those of the University Extension Scheme.

His promising career was cut short in a most untoward manner on Thursday morning, Sept. 9th. The deceased had been suffering with unusual severity from asthma, which was aggravated by exceptionally heavy out-patient work and severe mental distress, and after a broken night's rest he was found by his servant to be extremely ill. His neighbour, Dr. Murrell, was instantly with him, followed shortly by Dr. Colcott Fox, and later by some of his colleagues. Mr. Amphlett was found to be under the influence of a large dose of morphia and chloral, and rapidly passed into a state of profound stupor, with contracted pupils and great lividity and coldness of the surface. Every possible remedy was tried, such as emetics, without effect; forcible roussings and cold douchings, with subsequent stimulation of the body surface with brandy, towels, and hot-water bottles, strong enemata of coffee, the interrupted current, and nitrite of amyl. Artificial respiration carried out for about an hour raised for a time false hopes, and the injection of sulphate of atropia (one fortieth of a grain), followed by a second after carefully watching the effect of the first, caused the gradual dilatation of the pupils; but all efforts proved useless, and he died in about two hours. Dr. Murrell found post mortem that the body was generally healthy, excepting that the lungs were markedly emphysematous and loaded with serous fluid, and the right side of the heart dilated.

By Mr. Amphlett's death the profession loses a young member of more than ordinary promise; for, inheriting ability from both sides of his family, he was known amongst his professional brethren and an unusually wide circle of acquaintance to be possessed of considerable intellectual vigour. Harassed by ill health and impatient of delay in his profession, he was often seen under disadvantageous circumstances; but those intimately acquainted with him knew Edward Amphlett to be a warm-hearted and steadfast friend, a man of the strictest honour, and when not depressed by illness a most agreeable and entertaining companion, replete with information on a great variety of subjects, and the possessor of abilities of a high order. Mr. Amphlett was a distinguished Freemason, and the Past-Master of several important lodges.

DEPUTY INSPECTOR-GENERAL JOHN STIRLING,
M.D., M.R.C.P., L.R.C.S. EDIN.

WE much regret to record the death of Deputy-Inspector-General John Stirling. He was born in London in the year 1816. His father before him was a surgeon in the Royal Navy, but he retired early and practised many years in Halifax, Nova Scotia. Dr. John Stirling when a student was distinguished for diligence and devotion to his profession. He was educated at the Royal Infirmary, Edinburgh, and afterwards held for some time the post of house-surgeon. He was then appointed resident medical officer to the Lying-in Hospital, where he studied midwifery and diseases of women, under the late Sir James Simpson. In 1840 he entered the Royal Navy as assistant surgeon, and went out with the Niger Expedition, and in consequence

of his experience in this quarter of the globe he was again sent out in 1845 to the coast of Africa on exploring service. He afterwards served on the Mediterranean Station, and was present at the blockade of the Piræus. In 1850 he was sent to the south-east coast of America, and in 1852 was appointed surgeon to H.M.S. *Fury*. The cholera was then raging at Balpk, and the disease attacked a large fleet of transports. In the emergency Dr. Stirling volunteered his services, and by his devotion and courage won the admiration of both officers and men. During the siege of Sebastopol he served on board the *Queen*. He was subsequently staff surgeon to the Naval Hospital at the Cape of Good Hope, and his last appointment was to the Plymouth Hospital. In 1870 he was raised to the rank of Deputy-Inspector-General of Hospitals and Fleets.

Dr. Stirling was an able surgeon, and his kind and generous nature gained the esteem of all who knew him. He died at Southsea on August 30th, 1880.

J. C. HIRSCHFELD, M.B., A.M., OF BANFF.

THE death of this gentleman, on the 7th inst., took place under peculiarly melancholy circumstances. On the day mentioned Dr. Hirschfeld, accompanied, amongst others, by his little son and a skilled seaman, embarked in his pleasure-boat for a sail along the coast. A pleasant run was made to Portsoy, where the party landed and stayed a few minutes. Soon after putting off again, a squall struck the boat; she capsized and sank, and the doctor, his son, and the seaman were drowned. The following sketch of the deceased's career is from the *Banff Journal* :—

"Dr. Hirschfeld was only thirty-three years of age. A man of remarkable strength and activity, he was an expert swimmer, and, unencumbered, might have kept himself afloat for a long time, or even swam to the shore. Born at Trieste, he was the only son of Mr. Philip Charles Hirschfeld, now of the Isle of Man, and who has become familiar in Banffshire society in recent years through his periodical visits to members of his family resident in the county. Dr. Hirschfeld was educated at Edinburgh High School and University. He graduated M.B., C.M., in 1869, and was also a licentiate of the Royal College of Surgeons. During the course of his medical studies he acted for some time, first as house-surgeon, and afterwards as physician to the Royal Infirmary, Edinburgh. On taking his degree he proceeded to Germany, and as a member of the British Surgical Ambulance took a part in the Franco-Prussian War during 1870-71. He was in service before Metz, and at the investment of Paris, and always volunteered to go to the front. While with the Prussian Army he performed some notable surgical operations. Returning home he found his first professional employment at Banff in the end of 1871, when he was assumed as a partner by Dr. Manson. During the nine years of his residence in Banff, Dr. Hirschfeld gained many friends, and was universally respected. He married, six years ago, Jane Elizabeth, daughter of the late William Chalmers, manager of the Northern Insurance Company, at Aberdeen. They had but one child, the bright boy of three years who was lost along with his father."

A correspondent writes of the late Dr. Hirschfeld :—"He was an ornament to his profession. I knew him intimately, and can say that he was one of the best of men. His skill as an operator was great. His heart was in his work, and he was likely to come to the front rank in the growing combat with disease."

JAMES SIMPSON, M.D. ABERD.

DR. SIMPSON was born in Aberdeen, and educated at Mr. Rattray's, the Grammar School, and King's and Marischal Colleges. He became Demonstrator of Anatomy in the University of Aberdeen, and soon afterwards was elected house-physician to the Royal Infirmary. At the end of his curriculum he graduated M.D. with highest honours, receiving the Murray Gold Medal as the most distinguished student of his year. He was at once appointed Assistant Professor of Anatomy, an office which he held for a year. He then settled in practice in his native town, and conducted private classes for the instruction of medical students. Being desirous of more active life, Dr. Simpson turned his thoughts to the Indian Medical Service, in his examination for which he obtained the highest number of marks amongst fifty-two competitors. It was whilst preparing for this exa-

mination that he was seized with the illness from which he never thoroughly recovered. This was regarded by Sir Joseph Fayrer and Professor Maclean as an acute attack of malarial fever, contracted by exposure all night in an open boat, stranded on a mud-bank in Southampton water. When slightly recovered, he obtained two months' sick leave, though he was under special orders by telegraph to leave for India. Returning to Aberdeen, he was married on the 24th ult. to a daughter of Mr. Smith of Nigg. At Glasgow, on his way south, after his marriage, feeling still unwell, he consulted Dr. Gemmell, in the absence of Professor Gairdner. Before he could comply with the advice given him to return home at once symptoms of embolism of the femoral artery came on. He was, however, able to reach Aberdeen, where he expired on the 10th inst., at the early age of twenty-seven years.

Medical News.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Sept. 2nd:—

Harral, Charles Henry, Kirkgate, Leeds.
Head, Philip Alexander Dewar, Clapton.
Hepburn, William Alexander, Coxhoe, Durham.
Morgan, William Pierce, Dowlais, Glamorganshire.
Smith, John, Commercial-road, E.
Watson, Archibald, Paris.

The following gentlemen also on the same day passed their Primary Professional Examination:—

Ernest Hudson, University College; John Joseph Faraker, Guy's Hospital; Richard Hamilton Cowan, London Hospital.

Passed their examination and received certificates to practise on Sept. 9th:—

Braganza, Bellarmin Moscardi, Bombay.
Ford, Lewis Frederic, Highgate.
Northcott, Arthur, Albert-street, N.W.
Rodway, Edwin Augustus, Taunton, Somerset.

Passed the Primary Professional Examination on the same day:—

Ashley Bird and Thos. Ruell Atkinson, St. Bartholomew's Hospital;
John Henry Robinson, St. Mary's Hospital; Thos. Ricketts Moore, Charing-cross Hospital; Chas. Henry Duff, Herbert Edward Deane, and Edward Davis, Middlesex Hospital; James Prytherch James, St. Thomas's Hospital; George Toussaint Girdler, Westminster Hospital.

THE death, by suicide, is announced of Mr. Robert Hughes, M.R.C.S. Eng., of Woodbridge, Suffolk.

A GRAND BAZAAR, in aid of the funds of the Sick Children's Hospital, Brighton, is to be held in the Dome and the Corn Exchange.

MR. JOSHUA JOSEPH BIRD POPJOY, L.R.C.P. Lond., M.R.C.S. Eng., has been placed on the Commission of the Peace for Accrington.

THE salary of Mr. P. Cowen, M.R.C.S. Eng., medical officer for the Upper Holloway West District of the Islington Union, has been increased from £60 to £80 per annum.

THE LIBRARY of the Royal College of Surgeons, which has been closed for cleansing, will be re-opened on Friday, the 1st of October, and the Museum on the following Monday.

MR. W. H. HAYDEN, M.R.C.S. Eng., who, for the third time, fills the office of Mayor of High Wycombe, Bucks, has been placed on the Commission of the Peace for the borough.

SIR JAMES PAGET, Bart., will take the chair at the annual dinner of the Old Students of St. Bartholomew's Hospital, on Friday, October 1st, in the Grand Hall of the Hospital.

THE Registrar of Killishannig, Mallow (says the *Western Morning News*) reports the death of Cornelius M'C—, at 111 years of age, and says the age is well authenticated, it being well known in the family that he was born in the year in which his father took a lease of a farm, and that was in 1769.

POISONING BY SULPHURIC ACID.—Last week, at Newtownards, a boy aged four years got access to some sulphuric acid, and swallowed about a quarter of a wine-glassful. Medical aid was obtained, but all treatment was unavailing, and the child died the same day.

Dr. FAUSSETT, having resigned from ill-health the appointment of medical officer of the Clontarf and Howth Dispensary District, the dispensary committee have recommended that he should receive the full retiring allowance to which he is entitled after forty-three years' service. The committee have also expressed their regret at the cause assigned for his resignation, and their appreciation of the value of his services during the long period that he has held the position.

PRESENTATION.—Last week Mr. J. B. Brereton, L.K.Q.C.P.I., was presented with a library clock, and a valuable case of instruments, by the members of the "Church of England Mutual Improvement Society," in "grateful acknowledgment, not only of his professional services, but also of the assistance rendered by him in the institution of the Evening Classes of the Society, and in the promotion of other efforts for the intellectual, moral, and spiritual benefit of the parishioners generally."

Medical Appointments.

Intimations for this column must be sent DIRECT to the Office of THE LANCET before 9 o'clock on Thursday Morning, at the latest.

ANNINSON, J., M.D., M.R.C.S.E., has been appointed an Honorary Medical Officer to the Preston and County of Lancaster Royal Infirmary, vice W. B. Anninson, M.D., resigned.

ANNINSON, W. B., M.D., M.R.C.S.E., has been appointed Consulting Honorary Medical Officer to the Preston and County of Lancaster Royal Infirmary.

ARCHER, R. S., A.B., M.B., M.Ch., has been appointed Honorary Visiting Physician to the Netherfield Institution for Infectious Diseases, Liverpool.

BALLANCE, C. A., L.R.C.P., M.R.C.S.E., L.S.A.L., has been appointed House-Surgeon to St. Thomas's Hospital.

BRIIGGS, H., M.B., M.R.C.S.E., has been appointed Senior House-Surgeon to the Stanley Hospital, Liverpool.

BUTLER, H. P., M.R.C.S.E., L.R.C.P., has been appointed House-Physician to St. Thomas's Hospital.

COX, W. A., M.R.C.S.E., L.S.A.L., L.M., has been appointed Medical Officer to the Kensington and Chelsea District Schools at Banstead, Surrey.

DAVIES, J., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for the Tregynon District of the Newtown and Llandiloos Union.

DUNBAR, A., M.B., C.M., has been appointed Honorary Visiting Physician to the Netherfield Institution for Infectious Diseases, Liverpool.

ETHERIDGE, C., M.R.C.S.E. &c., has been appointed Admiralty Surgeon and Agent, vice Williams, retired.

FIRTH, E. H., M.R.C.S.E., L.R.C.P., has been appointed House-Surgeon to the Blackburn and East Lancashire Infirmary, vice Wilkins, resigned.

GREVES, E. H., M.B., has been appointed Demonstrator of Anatomy in the Liverpool Royal Infirmary School of Medicine, vice H. Briggs, M.B., resigned.

HAINES, A. H., M.R.C.S.E., L.S.A.L., has been reappointed, for one year, Medical Officer of Health for the Port of Wisbeach.

HAMMOND, T., L.R.C.P.L., M.R.C.S.E., L.S.A.L., has been appointed House-Surgeon to the Halifax Infirmary, vice R. Scott, M.D., C.M., resigned.

HATTON, G. S., M.B., M.S., M.R.C.S.E., L.S.A.L., has been appointed House-Physician to St. Thomas's Hospital.

HAYWARD, J. W., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for the Whitstable District of the Blean Union.

KER, Miss A. J. S., M.D., L.M., L.K.Q.C.P.I., has been elected Assistant Resident Medical Officer to the Children's Hospital, Birmingham, vice L. A. Middleton, resigned.

LAWFORD, J. B., M.D., M.R.C.S.E., L.R.C.P., has been appointed Assistant House-Physician to St. Thomas's Hospital.

LUNN, J. R., L.R.C.P., M.R.C.S.E., L.S.A.L., has been appointed House-Surgeon to St. Thomas's Hospital.

LYNCH, F. E., L.R.C.S.I., L.K.Q.C.P.I., has been appointed Assistant Medical Officer to the Lambeth Infirmary, vice G. A. Hamerton, M.D., resigned.

MACDONALD, K. H., M.D., has been appointed Surgeon to the Prison, Cupar, Fife.

MACPHERSON, A., M.B., has been appointed Junior House-Surgeon to the Stanley Hospital, Liverpool.

MICKLEY, A. G., M.B., L.R.C.P.L., M.R.C.S.E., has been appointed Resident Medical Officer at the Workhouse of the Islington Union.

MURRAY, W., M.B., C.M., has been appointed Medical Officer to Parkfield Collieries, near Bristol, and District Surgeon to Midland Railway Friendly Society, vice C. M. Heim, resigned.

NEVSHOLME, A., M.R.C.S.E., L.S.A.L., has been appointed Resident Accoucher to St. Thomas's Hospital.

PARETTE, J., L.R.C.P. Ed., L.S.A.L., L.M., L.R.C.S. Ed., F.C., has been appointed Junior Medical Officer to the Exeter Friendly Societies' Medical Association.

PARKER, W. R., B.A., M.B., M.R.C.S.E., has been appointed Resident Medical Officer to the Netherfield Institution for Infectious Diseases, Liverpool.

REID, J., M.D., M.B., C.M., has been appointed Medical Officer to the Fifth District of the Fulham Union, vice M. A. Gleeson, resigned.

RICHARDSON, C. B., M.R.C.S.E., L.R.C.P., has been appointed Assistant House-Surgeon to St. Thomas's Hospital.

ROBINSON, J., M.D., has been appointed Certifying Surgeon for the Turton District, near Bolton. Also Medical Officer for the Turton District of the Bolton Union. Also Medical Officer of Health for the Urban Sanitary District of Turton. In respect of all the offices mentioned, vice J. Robinson, M.R.C.S.E., deceased.
WALKER, H., L.R.C.P.L., M.R.C.S.E., has been appointed Medical Officer to the Third District of the Fulham Union, vice B. E. Sparell, resigned.
WALTERS, F. R., M.R.C.S.E., L.S.A.L., has been appointed Assistant House-Physician to St. Thomas's Hospital.
WEIGHT, R. H., M.D., M.B., C.M., has been appointed Senior House-Surgeon to the Preston and County of Lancaster Royal Infirmary, vice Dr. Langdon, resigned.

Births, Marriages, and Deaths.

BIRTHS.

BERNAYS.—On the 5th inst., at Old Charlton, S.E., the wife of Herbert L. Bernays, M.R.C.S.E. &c., of a son.
FINLAY.—On the 2nd inst., at Montagu-street, Portman-square, the wife of David W. Finlay, M.D., of a daughter.
LEE.—On the 13th inst., at Maddox-street, the wife of Robert J. Lee, M.D., of a daughter.
RAWLINS.—On the 6th inst., at Gordon House, Highgate-road, the wife of William Peter Rawlins, M.D., of a son.
TURNER.—On the 8th inst., at Northumberland House, Green-lanes, N., the wife of T. B. Turner, M.R.C.S.E., of a daughter.
TYLECOTE.—On the 5th inst., at Sandon, Staffordshire, the wife of J. H. Tylecote, M.D., of a son, still-born.

MARRIAGES.

CHITTENDEN—FAWKNER.—On the 15th inst., at St. George's, Hanover-square, W., Charles Chittenden, M.D., late of Her Majesty's Royal Navy, youngest son of John Frank Chittenden, M.D., and grandson of the late John Frank Chittenden, M.D., to Evelyn, eldest daughter of Thomas Fawcner, Esq., of Cornworthy Lee, late of Manchester.
BATT—WAKE.—On the 14th inst., at the Parish Church, Ecclesfield, by the Rev. E. H. Bucknall Estcourt, M.A., Rector of Eckington, assisted by the Rev. Alfred Gatty, D.D., Sub-Dean of York and Vicar of Ecclesfield, and the Rev. Nathan Jackson, M.A., Vicar of Easingwold (brother-in-law of the bridegroom), Charles Dorrington Batt, M.B. Lond., fourth son of the late Edward Augustine Batt, Surgeon, of Witney, Oxon., to Isabel, eldest daughter of Bernard Wake, Esq., of Abbeyfield, Sheffield.
DENNISTON—GUTHRIE.—On the 9th inst., at Withington Presbyterian Church, Manchester, by the Rev. Charles Moinet, M.A., James Denniston, M.D., of Dumoon, Argyllshire, N.B., to Agnes, daughter of Alexander Guthrie, Esq., of Broadoak, Withington, Manchester.
GREENWOOD—STEVENS.—On the 14th inst., at St. John's Church, Chatham, by the Rev. G. W. A. Lawrance, Arthur Greenwood, L.R.C.P.L., M.R.C.S.E., of 178, Cold Harbour-lane, S.E., to Ann Ellen (Annie) Stevens, second daughter of George Stevens, Esq., of 8, Ordnance-terrace, Chatham. No cards.
JOHNSTON—MOORE.—On the 31st ult., at the Abbey Church, Tewkesbury, by the Vicar, the Rev. Hemming Robeson, assisted by the Rev. Thurston Rivington, E. Cocks Johnston, M.R.C.S.E., of Bristol-street, Birmingham, to Edith Mary Moore, eldest daughter of B. T. Moore, J.P., of Tewkesbury.
REID—MUNNS.—On the 2nd inst., at St. Martin's Church, Canterbury, by the Very Rev. the Dean of Canterbury, assisted by the Rev. William Newman and the Rev. T. H. Maitland, Thomas Whitehead Reid, M.R.C.P. Ed., M.R.C.S.E., L.R.C.P.L., to Emily Eliza, third daughter of Colonel Munns, of St. Martin's Priory, Canterbury.

DEATHS.

AMPHLETT.—On the 9th inst., at Weymouth-street, Portland-place, Edward Amphlett, F.R.C.S., younger son of the late S. Holmden Amphlett, in his 32nd year.
BAKER.—On the 9th inst., at his residence, 6, Gambier-terrace, Hope-street, Liverpool, John Copleston Baker, M.D., aged 43.
CAMPBELL.—On the 9th inst., William Campbell, M.D., F.R.C.S.E., of 13, Westbourne-place, Eaton-square, London (drowned at Redcar while saving a boy).
FORBES.—On the 30th ult., at North Silver-street, Aberdeen, Alexander Forbes, M.D., aged 38.
HEWETT.—On the 29th ult., at his residence, The Lodge, Palmer's-green, Southgate, John Dickason Hewett, M.D., only son of the late George Goodman John Hewett, Surgeon, Royal Navy, of Hilton, Hunts, aged 64.
IMRAY.—On the 22nd ult., at Dominica, West Indies, Dr. John Imray, in his 70th year.
MOORE.—On the 4th inst., at 2, Osborne-terrace, South Circular-road, Dublin, Malcolm Henry Moore, M.B., aged 23.
O'CONNOR.—On the 3rd inst., suddenly, at 30, Upper Montagu-street, Montagu-square, William O'Connor, M.D., Senior Physician, Royal Free Hospital, aged 63. R.I.P.
SEYMOUR.—On the 8th inst., Dr. William F. Seymour, Medical Officer of Balinglass Union Workhouse, aged 39.
SIMPSON.—On the 13th ult., at Sibi, South Afghanistan, John Simpson, Surgeon, Bombay Army, aged 33.
SUCHE.—On the 5th inst., at Westin-super-Mare, George Suche, M.D., F.L.S., F.R.G.S., &c., aged 82.
WATSON.—On the 3rd inst., at Oakfield, Reigate, Mary Watson, sister of Sir Thomas Watson, Bart., M.D., in her 86th year.
WILLIAMSON.—On the 3rd ult., at Grahamstown, Cape of Good Hope, John Edwin Williamson, M.D., formerly of Nantwich, Cheshire, aged 45.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

BOOKS ETC. RECEIVED.

CHURCHILL, J. & A., London.

An Atlas of Human Anatomy, with Explanatory Text. By Rickman J. Godlee, M.S., F.R.C.S.
Notes on Diseases of Women. By J. J. Reynolds, M.R.C.S. pp. 86.
The Ocean as a Health Resort. By W. S. Wilson, L.R.C.P. Lond., &c. pp. 260. With a Chart.
Removal of the Entire Tongue by the Whitehead Method. By Edw. Lund, F.R.C.S. pp. 36.
Atrophy of the Stomach. By S. Fenwick, M.D. pp. 187.
Osteotomy. By William Macewen, M.D. pp. 181. With Illustrations.

DAVIS, G. S., Detroit.

Conspectus of Organic Materia Medica and Pharmacal Botany. By E. L. Sayre, Ph.G. pp. 211.

FIELD & TUER.

Luxurious Bathing: a Sketch. By Andrew W. Tuer. Fourth Edition. Eight Etchings. 5s.

GEORGE & CO., Lansing, Michigan.

Seventh Annual Report of the Secretary of the State Board of Health of the State of Michigan. pp. 543.
Eighth Annual Report relating to the Births, Marriages, and Deaths in Michigan. pp. 362.

HARRISON, W. H.

Transcendental Physics: an Account of Experimental Investigations from the Scientific Treatises of Prof. J. C. F. Zöllner. Translated from the German, with Preface and Appendices, by C. C. Massey, Barrister-at-law. pp. 266. With Illustrations.
Psychic Facts. Edited by W. H. Harrison. pp. 152. Illustrated.

LIPPINCOTT & Co., Philadelphia.

Atlas of Skin Diseases. By L. A. Duhring, M.D. Part VII. Four Plates.

LONGMANS, GREEN, & Co., London.

Elements of Astronomy. By R. S. Ball, LL.D., F.R.S. pp. 459. Illustrated.
Handbook of Diseases of the Skin, with especial Reference to Diagnosis and Treatment. By R. Livinge, M.D. Second Edition, enlarged. pp. 349.
Anatomical Outlines. By Arthur Hensman. With Original Drawings by A. E. Fisher. Parts III. & IV.

SMITH & HANNAMAN, Indianapolis.

First Annual Report of the Department of Statistics and Geology of the State of Indiana. pp. 514.

SMITH, ELDER, & Co., London.

A Treatise on the Science and Practice of Midwifery. By W. S. Playfair, M.D., F.R.C.P. Two vols. Third Edition. pp. 403, 414. With illustrations.

THACKER, SPINK, & Co., Calcutta.

Malaria: its Causes and Effects. By E. G. Russell, M.B., B.Sc. Lond. pp. 370.

VAN VOORST, J., London.

Spirit Gravities, with Tables. By Thos. Stevenson, M.D. Lond. pp. 73.

WILLIAMS & NORGATE.

Lectures on Digestion. By Dr. C. A. Ewald. Translated by R. Saundby, M.D. pp. 149.

The Royal London Ophthalmic Hospital Reports. Vol. X., Part I. (Churchills).—Puberty and Adolescence Medico-Psychologically Considered. By T. S. Clouston. (Oliver & Boyd.)—Die ärztliche Gewerbefreiheit im Deutschen Reich. Von Dr. Albert Guttstadt.—Sur l'Emploi de la Térébinthe du Pistacia lentiscus dans le Cancer de l'Utérus. Par le Dr. Oscar Jennings.—Les Systèmes d'Evacuation des Eaux et Immondices d'une Ville. Par le Dr. Van Overbeek de Meijer.—Tuberculosis from a Sanitary and Pathological Point of View. By G. Fleming, F.R.C.V.S. (Baillière, Tindall, & Cox.)—Facts about Fevers. By Dr. D. Page. (MacLachlan and Stewart.)—Peptonized Milk as Food for Infants and Invalids. By Dr. R. J. Nunn. (Wood, New York.)—A Case of Fibroid Disease of the Heart. By Dr. R. P. Howard, Montreal.—On Occipital Headache as a Symptom of Uremia. By Dr. E. C. Seguin.—Contributions to the Structure and History of the Multiple Neuroma. By Dr. Prudden, New York.—Contemporary Review, September.—Fraser's Magazine, September.—The Veterinarian, September.—The Victorian Magazine.—Journal of the Scottish Meteorological Society.—Report of the Medical Commission of the Mansion House Committee. By Drs. Sigerson and Kenny.—Anæsthesia by Ethyl Bromide. By Dr. H. A. Wilson.—Notes on Books Published by Messrs. Longmans.—Ophthalmic Operations. By Dr. A. S. Campbell.—Deutsches Familienblatt.—Rapport Annuel de l'Hospice de Maria Amelia à Funchal.—Practische Beiträge zur Kinderheilkunde. Von Dr. A. Baginsky.—Monthly Review of Dental Surgery, September.—Facts about Fevers. By D. Page, M.D. (MacLachlan & Stewart.)—Rôle Chimique des Ferments Figurés. Par le Dr. Chapuis. (Baillière et Fils.)

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET OFFICE, September 16th, 1880.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radiation in Vacuo	Max. Temp Shade	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Sep. 10	29.75	E.	63	61	111	80	55	..	Overcast
" 11	29.69	S.W.	64	63	86	71	60	..	Cloudy
" 12	29.57	S.W.	63	59	97	69	51	1.50	Cloudy
" 13	29.62	W.	57	56	98	67	54	0.40	Overcast
" 14	29.66	S.	57	56	88	63	50	0.14	Overcast
" 15	29.26	N.W.	56	55	77	59	53	0.85	Overcast
" 16	29.47	N.E.	58	56	76	63	51	0.50	Cloudy

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Local papers containing reports or news-paragraphs should be marked.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET to be addressed "To the Publisher."

AN UNCOURTEOUS LOCUM TENENS.

A CORRESPONDENT sends us a very bad account of his experience of a locum tenens, who, by his discourtesy, swearing, &c., drove patients away, was dissatisfied with four meat meals a day, &c. We can only by giving publicity to such an experience put practitioners on their guard. There cannot be many such gentlemen about. Principals, in engaging a locum tenens, should inquire not only as to their qualifications, but their manners.

Mr. James Worthington.—Galton on the Construction of Hospitals (Macmillan and Co.); Hospital Plans: Five Essays relating to the Construction, Organisation, and Management of Hospitals, contributed for the Use of the Johns Hopkins Hospital of Baltimore (Sampson Low, Marston, and Co.)

L. E. P. can only recover as a surgeon, and for surgical treatment.

THE STATISTICS OF ANTI-VACCINATIONISTS.

To the Editor of THE LANCET.

SIR,—Having occasion to look through some of the back numbers of THE LANCET, my attention was drawn to the figures quoted in one of your leaders for July 17th, 1880, from a letter written to a northern paper by Mr. J. T. Hibbert, M.P., the Parliamentary Secretary of the Local Government Board. I thought these figures looked very extraordinary, and, stimulated by your hint as to the accuracy of the text, I took the trouble of getting at the statistics as given by the Registrar-General (Abstracts for 1874-75). I found the statistics quoted by Mr. Hibbert totally wrong, and it surpasses my comprehension how the figures referred to were obtained. The following were the figures quoted:—"Increase of mortality amongst infants in 1875, 26,000 (all causes); increase from diarrhoea amongst infants from 5143 in 1874 to 15,477 in 1875; increase from bronchitis from 2506 in 1874 to 14,506 in 1875; increase from syphilis from 255 in 1874 to 1554 in 1875; decrease from small-pox from 1074 in 1874 to 142 in 1875."

The real statistics are as follows:—Increase of mortality amongst infants in 1875, 6756; increase from diarrhoea among infants from 13,988 in 1874 to 15,522 in 1875; increase from bronchitis from 12,580 in 1874 to 14,500 in 1875; increase from syphilis from 1484 in 1874 to 1554 in 1875; decrease from small-pox from 306 in 1874 to 90 in 1875.

It seems to me that had Mr. Hibbert taken the trouble to test the accuracy of the statistics presented to him by anti-vaccinators, he would not have given his support to the illogical and hazardous Amendment of the Vaccination Act, which was at one time under Government patronage. If the statistics of the opponents of vaccination are cooked in this fashion, Mr. Hopwood and his supporters may cease from troubling the Government for returns from the Registrar-General, since a useful and convincing table of such facts might be evolved from the inventive brain of one of the vaccination "martyrs," upon whom "multiple" fines have wrought their maddening effects.

I am, Sir, yours &c.,

Putney, Sept. 11th, 1880.

A. WALKER, M.D.

P.S.—I deny that any increase has taken place in the deaths of infants from syphilis since 1870, save what may fairly be ascribed to increase of population.

THE CHINESE AS PATIENTS.

MR. ANDERSON, L.R.C.P., stationed in Formosa as agent of the English Presbyterian Church in connexion with the Edinburgh Medical Missionary Society, writes:—

"The Chinese make, on the whole, very good patients. Occasionally some of them try our patience not a little. One gets a four days' supply of medicine away with him, the recipe bearing on it, 'a spoonful three times daily after each meal.' He comes back next morning for more, thinking to flatter you by stating that he drank the former quantity at one dose! Another has his arm carefully put up in splints, and on his next visit he brings his dressings in a separate parcel. They are great believers in internal administration, and, although he have only a cut finger, it is difficult for a Chinaman to see why he should not get some medicine to 'eat.' They have peculiar palates, many of them, and can drink castor oil *ad nauseam*—a stage which is not so easily reached in their case as it is in ours. Here, as elsewhere, the medical has all along been found to be a valuable auxiliary to the general mission work."

Verbena will get the information he wants by applying to the Charity Organisation Society; or the Secretary of one of the good provident dispensaries for copy of Rules, Report, &c., say Northampton.

INSALUBRITY OF WEST-END DISTRICTS.

To the Editor of THE LANCET.

SIR,—I live in a highly respectable West-end suburb. Immediately adjoining the rear of the house in which I reside is a large open space, which, however, is entirely surrounded by houses. A portion of this space (close to my residence, and in an angle between the street in which it is situated and another street) is occupied by a number of small vegetable gardens, access to which is gained by an as yet unformed road. All along this road for a considerable distance (in the angle between two streets referred to already) are heaps of stable manure and other refuse, brought from I cannot tell where, to be used in fertilising the gardens alluded to. These heaps are there all the year round, being constantly replenished. All through the recent summer they have been there, soaked with rain one day, and sweltering in the sun the next. There is also immediately adjoining the unformed road mentioned a large green pool of stagnant water, which receives all the surface drainage of the extensive patch of vegetable gardens, and is, of course, highly charged with decomposing vegetable matter. During the late very hot weather, when we had some very heavy dews at night, the stench of decomposing vegetable matter—the well-known "cabbage-water" smell—was so strong that I have been more than once awoken from sleep by it, having, as is my usual custom, had my bedroom window open, and this window not immediately overlooking the cabbage-garden, but facing the street. I wrote twice to the sanitary department of the parish in which I live, and after some delay received a note from the health officer, stating that he "had inspected the ground and its surroundings," but "did not see anything to call for the interference of this department, there being nothing which, in my opinion, can be regarded as a nuisance injurious to health."

Will you kindly say in your next issue—1st, if you think the state of things I have described is injurious to health or not; and 2nd, if there be a nuisance, what further steps should I take in the matter.

Your obedient servant,

Sept. 13th, 1880.

AN OLD SUBSCRIBER.

* * We do not understand whether under the title "health officer" our correspondent refers to the inspector of nuisances or medical officer of health. We apprehend the former is intended; for it seems to us incredible that the medical officer of health should not have seen the complainant and heard his own statement, and it indicate curious notions of duties that even the inspector of nuisances should not have seen the individual who experienced the offensiveness complained of. The question is one which the sanitary authority can best deal with, and we should advise our correspondent to seek an interview with the medical officer of health. If this course fails, however, our correspondent should submit his complaint to the justices under sec. 105 of the Public Health Act, 1875. Even market gardeners are not to be permitted to treat individuals living in houses overlooking their gardens as if they were vegetables requiring to be manured from time to time.—ED. L.

Canadian.—It is not our custom to insert letters such as the one forwarded to us. There can be no serious difficulty in obtaining from a consulting physician the information our correspondent requires.

Mr. Spawforth is referred to a general notice in another column.

SUPRAPUBIC PUNCTURE OF THE BLADDER.

To the Editor of THE LANCET.

SIR,—Mr. Treves' letter on the above subject confirms my statement that aspiration is more troublesome and for some reason more dangerous than puncture. This also, according to my experience, applies to the use of very fine trocars and cannulas (Southey's, I think, they are called) for abdominal puncture. How suprapubic puncture can have been allowed to drop out of use I cannot understand. In some cases it is preferable; in others the only justifiable means of relief. What my advocacy failed to do, Mr. Teevan's will probably accomplish.

Kennington-park-road, Sept. 8th, 1880.

W. J. MARSH, M.R.C.S.

*M.D. (Devonport) and A Candidate (Manchester).—*We understand that the result of the half-yearly examination in Arts &c. for the diplomas of Fellow and Member of the College of Surgeons will be made known in a few days. If successful, the son of "M.D." could commence his hospital studies in October next. Registration is abolished at the College.

*Unlucky Watch.—*The licentiate in question is, in the eyes of the law, only a surgeon. Consequently he cannot also call himself a physician.

*Mrs. Browne.—*There are no published statistics on the subject.

THE LATE MISS NEILSON.

To the Editor of THE LANCET.

SIR,—Since January, 1876, the late Miss Neilson was generally under my care when in London, and I saw her immediately before her visit to Paris. In April, 1876, Sir William Gull also saw her in concert with me, and, as his opinion entirely concurred with that which I formed of her case, it may be of interest for me to offer some observations now that Dr. W. E. Johnston's letter to *The Times* has made the medical features of the deceased lady's case matter of public comment, and has placed in some doubt the treatment adopted by Drs. Mounier and Gantillon, as if that treatment had been in some way responsible for this gifted lady's untimely death. Dr. Johnston's letter, as quoted in THE LANCET of August 28th, contains the following statement:—"The post-mortem examination disclosed the extraordinary fact, one of the rarest in the history of medicine, that in her writhings she had ruptured a varicose vein in the left Fallopian tube, and had died from internal hæmorrhage"; and it will be seen that Dr. Johnston assumes that "her fatal attack was evidently one of her usual attacks of gastralgia, which might have been relieved then, as it often had been before, by a free use of morphia."

1. Rupture of a varicose vein in this locality (abdominal hæmatocele) I have seen in my own experience at least ten times, and I have no doubt that the experience of other physicians will bear me out when I say that Dr. Johnston is mistaken in supposing such a case to be "one of the rarest in the history of medicine."

2. What the post-mortem examination disclosed was simply the fact that she had died from this particular form of internal hæmorrhage. It in no way showed that the poor lady's "writhings" had been anything but the usual and necessary consequence of a large and sudden discharge of blood into the peritoneal cavity. I venture to submit also that the history of her death shows that on this vein giving way she was seized with violent pain and collapse, which for some hours arrested further hæmorrhage; that, on reaction commencing, a fresh gush of blood took place from the lacerated vein, and thereupon that a second fatal attack of suffering and collapse occurred; and I venture to add that there is no ground for the suggestion of any attack of gastralgia in the case, nor for the suggestion that the vein burst in consequence of any "writhings," nor for the *ex post facto* suggestion that the hæmorrhage would have been prevented by "a free use of morphia."

3. When Miss Neilson came under my care in January, 1876, she was haunted and depressed by various suggestions which had been made as to disease of heart and of other organs. On one of the first attacks of dyspeptic colic—not "gastralgia,"—for which I was called, I was urgently requested to bring with me the hypodermic syringe and some solution of morphia, which had previously given her relief. I took with me the articles, but urged her to allow me to treat her in my own way, and not to go on with the morphia. To this she consented, and the results were such that she never again asked me for morphia, and I believe that I never once gave her morphia, although I attended her through many such attacks.

Miss Neilson was a most perfectly organised woman, and neither Sir W. Gull nor myself could discover a trace of organic disease about her. She was as graceful and charming in her own house as she was upon the stage, and she would have enjoyed singularly perfect health but for the conditions under which she lived—conditions which no highly organised and sensitive frame could endure. Day after day there were long and sometimes stormy rehearsals; then the dinner, often with a troop of friends; then a long, heavy performance, and then a supper either at her own house or at the house of some friend and with kindred spirits, with whom time passed quickly. The natural result was brain exhaustion; then dyspepsia; then crudity and colic; then strenuous attempts to fulfil her engagements, more than once only by the help of brandy; then collapse, and certificates of inability to perform. More than once she went to her performance only under my promise to be in a box and visit her between the acts. At this point I could again for a time enforce real, simple food, the exclusion of visitors, and, as she returned to the stage, the expenditure of no strength except in a carriage-drive for air, and in the work which she had to get through in her rehearsals and her performances. I taught her maid how to make beef-tea and other simple, suitable foods in her rooms behind the stage, and upon these she worked well and recovered her health; whereas upon the free use of morphia to relieve pain, and upon brandy to keep her going, she had demoralised her digestive organs, and came to a full stop. The Sunday before she last left London she was apparently in charming health, and as gleeful as a bird. What struck me particularly in observing her character and in correspondence which I had with her about her health, when I was not within reach, was her devotion to the stage; her shrewd, womanly knowledge of the world in matters relating to her own profession; her girlish abandon and gleefulness when with friends.

Yours truly,

JAMES EDMUNDS, M.D., M.R.C.P. Lond.

Grafton-street, Piccadilly, Sept. 2nd, 1880.

*A. G. H.—*The licence of the College of Physicians is recognised as a qualification in Medicine and Surgery by the Local Government Board; but an independent Surgical qualification is required for the Army, and we believe also for the Navy.

*Mr. Benj. Baker, M.R.C.S.—*The profession is so obviously on the side of temperance that it can afford to treat with silence the effusions alluded to by our correspondent.

*J. J. P.—*We cannot undertake the comparison desired.

GUY'S HOSPITAL.

To the Editor of THE LANCET.

SIR,—In the *South London Press* of Aug. 21st is a notice of a meeting of the guardians of St. Saviour's, Southwark, in which Dr. Iliff is reported to have said that an investigation was going on the issue of which would no doubt be a great improvement at Guy's Hospital, and that therefore my letter urging a petition to the House of Commons should be simply acknowledged. What Dr. Iliff stated was so exactly opposed to all the information I had received, that I at once, on receipt of a letter from a member of Guy's staff as to this matter and Dr. Iliff's statement, wrote to him. If you think well, will you kindly print the letter.

"Sept. 2nd, 1880.

"DEAR DR. ILIFF,—I was sorry to see your extinguisher clapped over my desire to help, however humbly, my professional brethren at Guy's, who are being sorely snubbed by lay governors, and to help the cause of the sick poor. As chairman of the committee in a like case of the past, in 1862, when I was publicly appointed to that place by the representatives of the South London parishes, I supposed I had a sort of *locus standi* now, and that I should not be considered to be impertinently intruding in urging the parishes to petition the House of Commons. We cannot but be right in our desire that the profession, educated as it now is, should by its highest members have a strong voice in the management of institutions in which they are the chief executive—more so as there can be no safety for the sick in a divided authority. I thought that, at least, every man in our profession would help to right this mischance; hence my sorrow at your position, apparently in opposition. I believe in what you asserted—a present investigation and a more than probable remedy; that you had been altogether misinformed—that is, if the *South London Press*, usually very accurate, gives your meaning. I have written to a member of the staff, and enclosed the slip report of your words. I have answer dated August 31st, 1880, as follows: 'I know nothing of any present full investigation of the mismanagement at Guy's. I think Dr. Iliff must have been referring to the labours of the committee which sat and reported, and whose report gave rise to all the discussions in *The Times*. Seeing that that report ignored the representatives of the staff upon the main questions, it is hardly to be hoped that it will lead to any great improvement; and, as a matter of fact, I think we are more hopelessly at loggerheads with the governing body than ever. Practically the governing body are riding the high horse, and think they can nurse the hospital without the medical officers. I hope, for the sake of the sick poor, that the public will not endorse this view.'

I am, Sir, your obedient servant,

Polperro R.S.O., Cornwall, Sept. 2nd, 1880.

W. RENDLE.

*R. G. M.—*Ellis's or Godlee's plates; Holmes's or Bryant's Surgery; Kirkes's or Foster's Physiology. See article on Books in our last number.

*Mr. Shirley Deakin.—*The papers are under consideration. The letter is, we fear, too long for insertion in its present form.

PAINLESS TOOTH EXTRACTION.

To the Editor of THE LANCET.

SIR,—What is the best application to the gums for the relief of pain during the extraction of teeth? Will any reader reply?

Sept. 4th, 1880.

I remain, Sir, yours &c.,

J. S.

*Dr. Caldwell, (Wakefield, Ontario).—*The worm was evidently a specimen of the *Strongylus gigas*, the passing of which by the urethra is not unprecedented.

PATIENTS' GRATITUDE.

To the Editor of THE LANCET.

SIR,—"A Village Doctor" is quite right. The practice of giving every discharged patient on leaving the hospital a printed paper, reciting that he or she has been "cured" or oftener "benefited," and desires to give thanks to Almighty God for the same, is wrong in principle, and eminently unfair to everybody concerned, and not the least to the parson. My experience is that it is frequently sent in without the personal appearance of the patient at the service at all, in which he is supposed to "return hearty thanks." It really means an advertisement of the hospital named, with a lively sense of favours to come in the shape of church collections and individual subscriptions. My practice is to take no notice of such papers, unless from my personal knowledge of the patient I believe him to be "truly thankful," and even in such cases it is unnecessary to name the hospital, as it would sound, to say the least, odd to give out that John Brown, having ceased to require the services of Messrs. Jones and Robinson, Surgeons, of Puddletown-in-the-Mud, desires &c.

September, 1880.

Yours &c.,

PARSON.

Mr. H. Marsden.—1. Yes, if the circulation were so free as to cause considerable hemorrhage, but this seems to be doubtful.—2. Supposing the child to be very weak, it might do so.—3. In natural breathing, the air-cells are expanded. Artificial respiration does not, as a rule, so quickly distend the cells.

L.R.C.P.—Abstractly the principal is entitled to both fees; but, as a matter of generosity and taste, we think the fees ought to be divided.

Mr. T. Robinson.—Soon.

QUARANTINE AT ST. HELENA. To the Editor of THE LANCET.

SIR,—I shall feel much obliged if you can spare space in your valuable journal for the following notes of my experience of quarantine at St. Helena.

I lately accepted a medical appointment at this island, and, according to terms, left England on May 28th last in the steamship *Grantully Castle*. During the voyage the surgeon of the vessel reported three or four cases of measles. On arriving at our destination the yellow flag was hoisted, and all personal communication with the shore more or less forbidden. Travelling with a wife and young family, I was anxious to know what accommodation would be provided for us. After two or three hours' deliberation of the authorities on shore, we were conveyed on board an old condemned hulk, as there was no proper quarantine station. A ship's boat was lowered, and after receiving great kindness and sympathy from our fellow-passengers, we were taken alongside the hulk. On boarding, it was found to be just the shell of a rotten vessel, too filthy for any human being, and with no protection from wind and rain. A gentleman with us expressed it as a piece of unwarrantable cruelty to attempt to put us there. I refused to go on board; so another hulk was offered us, a shade better, but again not fit for anyone. The captain was blowing his whistle, and becoming furious at the delay of his steamer, so our baggage was passed up, and we were left alone. We huddled together out of the rain as much as possible in what had been a cabin, but was now a tumbling-down collection of beams, spars, old cabin-doors, &c. With these I protected as well as I could the holes in deck to prevent the children from falling through to the bottom of the hulk. The filth was more than an inch deep, consisting of rotting refuse. On this we had to lie down and sleep, and (as far as the authorities on shore were concerned) without food, water, lights, or any accommodation. The next day we were taken with all baggage to a building with one room, situate in a lonely valley to windward of the town. Here we had to live for fourteen days more. As there was no glass in the windows of the room, and a hole in the roof, we all caught bronchitis. Application was made to the Governor to have the windows reglazed, but without effect.

Now, Sir, my object in sending you these particulars is not to enlarge upon my own troubles in coming here, but to make known to any intending visitors who might think of coming here for their health or pleasure what they may expect if they have the misfortune to be put in quarantine. I maintain that when quarantine is to be enforced for even the exanthemata, proper and decent accommodation should be provided.

Yours obediently,

RICHARD CRESSWELL, M.R.C.S., &c.

Jamestown, St. Helena, Aug. 16th, 1880.

Herr Jander.—We must refer our correspondent to the Students' Number (September 11th) of this journal for full information concerning the University of London. The whole curriculum must be passed through.

Dr. W. A. Harris is thanked.

Mr. Irvine.—Yes, on receipt of Post-office order for 2s. 6d.

QUASSIA POISONING. To the Editor of THE LANCET.

SIR,—In reply to Mr. Maples' remarks concerning a case of quassia poisoning, which was reported in your issue of the 14th ult., I must call his attention to the treatment adopted—viz., brandy by the mouth, and brandy with ether and ammonia by the rectum. I can hardly imagine that in alcoholic poisoning (although the symptoms were almost analogous) treatment by brandy would have done any good, but rather have increased the mischief; whereas in this case its administration per rectum seemed to act most quickly and beneficially.

Yours faithfully,

JOHN D. T. RECKITT,
House-Surgeon.

Newark Hospital, Sept. 7th, 1880.

Dr. J. Broom.—We regret we cannot promise the insertion of the communication.

Medicus.—The Manchester Medico-Ethical Society have issued a tariff of charges.

THE DOSE AND VALUE OF CALCIUM SULPHIDE IN ACNE. To the Editor of THE LANCET.

SIR,—Regarding the letter which appeared in your issue of Sept. 4th by Mr. Squire, I may mention that for upwards of two years I have tried the sulphide of calcium in several cases of acne which came under my treatment, and without any beneficial effect. I generally began with one-eighth of a grain three times a day, and gradually increased the dose to one grain. I have also tried sodium hyposulphite and magnesium sulphite with the same result.

Your obedient servant,

Glasgow, Sept. 9th, 1880.

ROBERT LEES, M.B., C.M.

A Country Physician.—The clinical thermometer seems to be largely used in the United States. The *Philadelphia Medical Times* states there are about eight thousand of such instruments annually sold in America.

Mr. A. Gillett.—We do not prescribe. Consult a registered medical practitioner.

URTICARIA.

To the Editor of THE LANCET.

SIR,—In answer to your correspondent, "H. H. N.," I would suggest to him to try the treatment adopted by me in a case nearly similar to his.

My patient, a young woman, aged twenty-eight, complained of spots occurring on her wrists and forearms, face, and feet. Her face became at times quite puffy, and, in addition, the irritation at the soles of her feet was so distressing to her that she had to wear soft slippers and constantly change her stockings, and rub her feet until the itching passed away. The line of treatment adopted by me was—internally, half-drachm doses of solution of acetate of ammonia, with five-minim doses of solution of arsenic, and a few drops of chloric ether, in water, every four hours; the application of compound tincture of benzoin to the parts affected locally, and bran baths twice daily. This having failed to give relief, after consultation with Dr. Murrell, of Westminster Hospital, the patient was given a wineglass of nettle-tea several times daily; a solution of carbolic acid (1 in 1000) locally, and a bath twice daily, consisting of common washing-soda and water. After a few days of such treatment, the patient improved in every respect, the irritation in soles of feet first disappearing, followed by the loss of swelling in the face, and the spots on the body, which resembled no other skin disease but urticaria.

I am, Sir, yours &c.,

Mount-street, W., Sept. 1880. A. B. KELLY, L.R.C.P., &c.

To the Editor of THE LANCET.

SIR,—In reply to your correspondent, "H. H. N.," who asks for aid in the treatment of the above common but often most obstinate affection, I would advise scrupulous attention to the food used, to find out if possible the origin of the evil, analysis of the urine, the exhibition of rhubarb with bicarbonate of soda, and the free use of spirits of nitre with feather or brush as a lotion on the parts affected, permitting free evaporation. This latter application I have found so useful in many distressing cases of nettle-rash that I would feel indebted to any of my brethren who, after trying it, would communicate the result to me. The articles of diet most likely to produce urticaria are flatfish, coffee, stone fruits, shellfish, bread containing alum, bitter beer, watercress, and edible rhubarb.

Yours faithfully,

Folkestone, Sept. 6th, 1880. S. CLARK, M.D.

Mr. H. Archibald had better put the question to his ordinary medical attendant.

Zeta.—The Secretary is Dr. W. H. Rollins, 12, Beacon-street, Boston, Mass., U.S.A.

THE INFLUENCE OF PEROXIDE OF HYDROGEN ON FERMENTATION.

To the Editor of THE LANCET.

SIR,—I beg to direct your attention to the fact that, while in noticing the recent experiments of M. Regnard, you did not overlook the prior researches of Guttman and Fraenkel, you have made no reference to my yet earlier investigation of the same subject. Some two years ago I addressed a short letter to you in connexion with this matter, and now I must again claim your indulgence to allow me to point out that M. Regnard's results are not in any sense more original than those of Guttman and Fraenkel, and that my investigation, which was the first of the kind, led to the discovery of the antiseptic properties of peroxide of hydrogen. A record of my experiments will be found in the *Chemical News*, Sept. 29th, 1876, and in the *Moniteur Scientifique* for July, 1877, and also in my recently published "Nature's Hygiene" (Baillière and Co.). M. Regnard certainly ought not to be unaware of my prior researches, seeing they were published long ago in a French scientific journal so well known as the *Moniteur Scientifique*.

I am, Sir, yours faithfully,

West Kensington, Sept. 4th, 1880. C. T. KINGZETT.

CORRIGENDA.—One of the works we mentioned last week as worthy of the notice of students in their pursuit of practical physiology was named "Power and Kidd." The little volume we intended to recommend was the "Manual for the Physiological Laboratory," by Dr. Vincent Harris and Mr. D'Arcy Power, published by Messrs. Baillière, Tindall, and Cox.—The number of men in the provident dispensary mentioned by Mr. Bradford in our issue of Sept. 4th, p. 400, should have been stated as 1197, not 1297.—The Scholarship in Human Anatomy at the London Hospital is awarded every year, and the examination for it takes place in March, not April, as stated in our last.

Bradford Observer, Society Times, Pharmaceutical Journal, Westminster and Chelsea News, Scottish Leather-Trader, North-Western Gazette, New York Medical Record, Boston Medical and Surgical Journal, Sanitary Journal, Western Morning News, Western Times, Wandsworth and Battersea District Times, City Press, Seaham Weekly News, Hand and Heart, Indian Medical Herald, Church of England Temperance Chronicle, Science, Egyptian Gazette, Englishman, Daily Free Press, Philadelphia Medical Times, El Observador Medico, Isle of Man Times, Morning Herald, &c. &c., have been received.

COMMUNICATIONS, LETTERS, &c., have been received from—Sir J. Paget, Chipping Sodbury; Sir H. Thompson; Sir T. Acland; Dr. Peacock, London; Dr. Burdon-Sanderson; Dr. Dyce Duckworth, London; Mr. Barnard Holt, London; Mr. J. Gant; Mr. G. Fleming, London; Dr. Atkinson, Kingston; Dr. Wise, London; Dr. Redwood, Rymney; Mr. Dyer; Mr. Bradford, Smethwick; Dr. Gee, London; Dr. Bantock, London; Rev. J. Rodgers, London; Dr. Milne, Shipham; Dr. Broom, Clifton; Mr. C. T. Kingzett; Messrs. Dalziel Brothers; Mr. Cresswell, Birmingham; Dr. Clark, Folkestone; Mr. Reckitt; Mr. D. D. Jones; Mr. Wood, Isle of Man; Mr. Hopkins; Dr. J. S. Stocker, London; Dr. Annington; Mr. Ewart, London; Mr. Palmer, London; Dr. Muter; Mr. Macdonald; Mr. Rendle; Messrs. King and Co.; Mr. J. Startin, London; Mr. Gillett; Dr. Tatham, Salford; Mr. Macdonald, Braco; Mr. Marsh; Mr. Shirley Deakin, Allahabad; Messrs. Oliver and Boyd; Dr. Finch; Mr. May, London; Mr. A. B. Kelly; Dr. Pitta, Funchal; Mr. Baker, Brentwood; Mr. Statham, London; Dr. Caldwell, Lakefield, Ontario; Mr. J. S. Ward; Mr. Hayden; Mr. Fancock, Norwich; Mr. Furlong, Lynton; Dr. Peters, Davos; Mr. R. Lees, Glasgow; Mr. Irvine, Mr. Hill, London; Dr. Spencer, Bath; Mr. Scott, London; Herr Jander; Dr. McNeill; Mr. Dyer; Mr. Stedman, Newport, R.I.; Mr. J. Brown, Leeds; Dr. Walker, Putney; Mr. Philip, Alexandria; Mr. Bert; Dr. Harris; Mr. Moore, Jersey; Dr. Packman, Hertford; Mr. Reed; Dr. Sayer, Earls Barton; Mr. Bloxham; Mr. Bentley; Messrs. Dick, Radcliffe, and Co.; Mr. Hoggood, Chipping Norton; Mr. Crisp; Mr. Forbes; Mr. Oldfield, Ashill; Mr. Stewart; Mr. Cox, Williton; Mr. Young; Mr. Watson; Mr. Dunn; Mr. Horsfall, Leeds; Mr. McKeown, Belfast; Messrs. Fannin and Co., Dublin; Dr. Athill, Dublin; Mr. Jackson, Liverpool; Mr. Gulliver, London; Mr. Stillard, Birmingham; Mr. Pitts, London; Mr. Bennett, Marsden; Mr. Walker; Rev. W. S. Mundon; Mr. Scott, Halifax; Messrs. Wright and Co., Birmingham; Mr. Crespi, Stroud; Mr. Eager, Melton; Mr. Holmes, Maidstone; Messrs. Bingham and Co.; Mr. Maclehoose, Glasgow; L. E. P.; Verbens; M.B.; Caius; Phys.; Canadian; Unlucky Watch; L.R.C.P.; A. G. H.; R. G. M.; Parson; J. S.; J. J. P.; F.R.C.S. Eng.; J. W. S., Aberdeen; Medicus; Veritas; &c. &c.

LETTERS, each with enclosure, are also acknowledged from—Mr. Legge, Derby; Mr. Nicholls, Hartest; Mr. Jones, Stratford; Mr. Johnston, Corby; Mr. Skinner, Shrewsbury; Dr. Ryley, Stratford; Mr. Cuckson, Gainsborough; Mr. Newman, Bowness; Mr. Tylecote, Sandon; Dr. Moreton, Sheffield; Mr. Corbett, London; Dr. Barnett, Rochester; Mr. Macgregor, Huddersfield; Mr. Reid, Canterbury; Mr. Thomas, Brecknock; Mr. Schoth, London; Mr. Hyatt, Stow-on-the-Wold; Mr. Tarleton, Cheddar; Mr. Sykes, Hackney; Mr. Moore, London; Mr. Bloxham, Littleborough; Mr. Robbins, Buxton; Mr. Ramsden, Ravensthorpe; Mr. Heywood, Manchester; Mr. Spencer, Glasgow; Mr. Hallas, Halifax; Mr. Callard, London; Dr. Prior, St. Albans; Mr. Ravenhill, Aylesbury; Dr. Waters, Liverpool; Mr. Armstrong, Newton Abbott; Mr. Taylor, Bocking; Mr. Shearman, Rotherham; Mr. Christy, Stafford; Dr. Wilson, Tunbridge; Mr. Whitley, Leeds; Mrs. Byrn, Weston-super-Mare; Mr. Cappe, Brookwood; Mr. Robson, Leeds; Dr. Meedham, Gloucester; Dr. Williams; Rev. M. Penny, Abbotsbury; Messrs. Dawson Brothers, Montreal; Mr. Trubshaw, Pendre; Mr. Hudson; Dr. Plumbe, Maidenhead; Dr. Baird, Plymouth; Mr. Langston, Grantham; Mr. G. Lawson, Guernsey; Mr. Richmond, Chester; Mr. Bazet, Newbury; Mrs. Merrill; Mr. Faux, Loughborough; Dr. Skrimshire, Holt; Mr. Salmond; Mr. Barker, Tunbridge; Mr. Bay, Berthley; Mr. Young, Cheddar; Mr. Jollye, Donington; Messrs. Morris and Cooper, Ross; Mr. Kellett, Wigan; Mr. Wray, Wolverhampton; Mr. Hirst, Morley; Mr. Cane, Halsley; Mr. Scott, Manchester; Mrs. Grubb, St. Leonards; Miss Cameron; Mr. Frampton, Weston-super-Mare; Dr. Morris, London; Mr. Watford, Dudley; Mr. Fosbrooke, Birmingham; Mr. Reynolds, Dasshai, India; Mr. Sampson; Messrs. Holderman and Co., Manchester; Mr. Kemm, Corsham; Messrs. Berdoe and Co., London; Messrs. Porteous and Co.,

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Medical Diary for the ensuing Week.

Monday, Sept. 20.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS. — Operations, 10½ A.M. each day, and at the same hour.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

ST. MARK'S HOSPITAL.—Operations, 2 P.M.; on Tuesday, 9 A.M.

Tuesday, Sept. 21.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 3 P.M.

Wednesday, Sept. 22.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL. — Operations, 1½ P.M., and on Saturday at the same hour.

ST. THOMAS'S HOSPITAL. — Operations, 1½ P.M., and on Saturday at the same hour.

ST. MARY'S HOSPITAL.—Operations, 1½ P.M.

KING'S COLLEGE HOSPITAL. — Operations, 2 P.M., and on Saturday at 1 P.M.

LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.

GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL. — Operations, 2 P.M., and on Saturday at the same hour.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN. — Operations, 2½ P.M.

Thursday, Sept. 23.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.

CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL. — Operations, 2 P.M., and on Friday at the same hour.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M.

Friday, Sept. 24.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, Sept. 25.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

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The postal arrangements relating to the distribution of THE LANCET will be considered from time to time in the interests of subscribers.

Tables of Contents, with the Index of Advertisements, for each Number can be had on application to the Publisher.

Agent for the Advertising Department in France—J. ASTIER, 67, Rue Caumartin, Paris.

Lectures ON

THE RELATIONS OF SARCOMA TO CARCINOMA.

Delivered at the Royal College of Surgeons in June, 1880,

By HENRY TRENTHAM BUTLIN, F.R.C.S.,

ERASMUS WILSON PROFESSOR OF PATHOLOGY TO THE COLLEGE,
ASSISTANT-SURGEON TO ST. BARTHOLOMEW'S HOSPITAL, &c.

LECTURE II.—PART I.

SUBPERIOSTEAL TUMOURS OF BONE.

MR. PRESIDENT AND GENTLEMEN,—The elaborate papers on "Sarcoma of the Long Bones" which have recently been published in the *American Journal of the Medical Sciences*,¹ based on a study of so large a number as 165 cases, and issuing from the pen of one of the ablest American surgeons, wellnigh deterred me from carrying out the project I had already formed of making sarcoma of bone the subject of some part of the present course of lectures. But on deliberation, I determined to adhere to that which I had purposed; for, in a subject so extensive, and possessing so many and such important bearings, even a study of the views now generally held would in itself be interesting. Such a study would not, however, as I think, fulfil the intention which your learned Committee had in view when they considered the scope of this professorship, and assigned to it its limits. Bearing in mind their design—the encouragement of original pathology,—I have employed the work of others only so far as may be necessary to enlarge or illustrate my subject; and have sought to combine and analyse the material at my disposal in such a manner as may serve perhaps to elicit some new fact or strengthen already existing views, and always in the hope of affording new material for the thought and work of others.

In the consideration of sarcoma of bone, I shall differ from Professor Gross in including sarcomas of all bones, with one exception—the upper jaw, the tumours of which are often of uncertain origin; and from almost all authors in placing the various tumours collected together under the generic term "Osteoid," each in the group to which the cell-growth which forms its basis appears naturally to refer it. In accordance with the general plan of division of tumours laid down yesterday all primary malignant tumours of bone must be regarded as sarcomas. For no epithelial elements exist normally in bone. The hard parts, the cancellous tissue, medulla, nerves, bloodvessels and lymphatics, even the endothelial lining of the vessels, belong to the connective-tissue series. The tumours which grow from bone must therefore be connective-tissue tumours, not carcinomas, and the presence of an alveolar structure, if decidedly impressed, can only serve to inspire a doubt if such a tumour be really primary. The subject, thus simplified, would still be very complex; but, happily, it is capable of division by an easy and natural method. I mean by separate consideration of the tumours of central and those of superficial origin. I shall speak of them throughout as central and subperiosteal; for although the latter are more probably of periosteal than of osseous origin, the term "subperiosteal" will serve to distinguish them from tumours growing from the outer surface of the periosteum, which will not be included in the present study. Of most tumours it is easy to decide the origin; but tumours which have attained a large size, and have by their growth destroyed much of the structures in whose midst they lie, the difficulty is often insuperable. The presence of a thin, bony shell surrounding the tumour, or the maintenance of the outline, however much thinned and softened, of the cortex through it, its position, shape, the relation of the periosteum to the bone at its extreme limit, are points to which the attention is sure to be directed in a doubtful case. Where these guides fail the case had best be laid aside as useless, or unsafe for purpose of comparison.

The subperiosteal sarcomata may be all arranged under three heads—(1) round-celled, (2) spindle-celled, and (3)

mixed-celled sarcoma. The round-celled and spindle-celled require no further definition than that which applies to such tumours wherever they occur. The first consist of vast numbers of round cells, generally of equal or nearly equal size, and bearing similar characters, embedded in a homogeneous or granular basis substance, often fibrillated or distinctly fibrous, or maybe calcified or chondrified, or even ossified, in parts. With these are associated the finely-reticulated tumours whose structure resembles that of a lymphatic gland, which have on that account received the name of "lympho-sarcoma" or "lymphadenoma"—a name to which their structure perhaps entitles them, even when their relation to adenoid or lymphatic tissue cannot be proved. In the second group all the other conditions may be those prevailing in the first, but the type of cell is altered. It is no longer round or oval, but is narrow and elongated. Although by courtesy these cells are all called spindle-cells, many of them are fibre-like or oat-shaped, or look like grains of wheat. As in form, so in size, the difference is striking, the cells of one tumour comparing as a race of giants with the pigmy forms belonging to another.

There still remain many tumours which, by reason of the various forms and characters of their cells, can neither be included among the round nor spindle-celled sarcomas. Not only in different sections of the same tumour, but in different areas of the same section, or even in the different parts of the same field of the microscope, may be discerned round, oval, elongated, spindle, and stellate cells, or the soft parts of a tumour may be formed of round and spindle, or of oval and stellate cells. Of these more complex tumours I have thought fit to make one separate group; not because they present precisely similar characters, but because they possess characters in common, which unite them more closely with one another, than with the tumours of either of the other groups. The presence of bone or lime salts or cartilage does not render a tumour mixed celled. The practice so universally adopted of classing together all tumours, large portions of which are ossified or calcified, and considering them as one common group, because they are so ossified or calcified appears unworthy of our present knowledge. The soft tumours are grouped according to the form of their cells; but hard tumours, or those which possess a hard base, are grouped together without reference to their more essential characters, as osteo- or osteoid sarcomas, or osteoid cancers, or osteoid chondromas. The term osteoid is singularly open to objection. It implies the presence of a substance like bone, yet not bone. Its use should be restricted to tumours which are calcifying; which present when macerated large, white, hard, chalk-like masses. But it is employed equally to designate those which are ossifying, which contain true bone. An osteoid cancer or sarcoma is, then, a sarcoma of bone which is either ossifying or calcifying. That is, the word osteoid is used to denote the presence of bone and of a substance like bone. If we could not distinguish between these two substances there would still exist a reason why we should call these tumours osteoid. But we can distinguish whether a sarcoma is ossifying or calcifying, therefore there is no reason why we should not call it an ossifying or calcifying sarcoma. Indeed, there is every reason why we should do so, and why we should discard a term which is unnecessary, and is often used inconsistently.

Again, an osteoid chondroma should be a tumour composed of cartilage but like bone. An osteoid chondroma, however, is usually a sarcoma, many parts of which are transformed into a substance in some respects resembling cartilage, or, rather, resembling the animal basis of a rough kind of bone after its earthy salts have been removed. If it were impregnated with earthy salts it would be true bone, and would cease to be cartilage. But it contains no earthy salts and is therefore not osteoid, at least in the same sense as an osteoid sarcoma or cancer is said to be osteoid. It is in truth a chondrifying sarcoma. The term osteo-sarcoma is on some accounts more objectionable than osteoid sarcoma. It may mean a soft sarcoma of bone or a sarcoma growing in the interior of a bone or a sarcoma which contains bone, and which grows either from a bone or from the soft parts. It is employed by different authors in all these different senses. It is therefore worse than useless, for it may mislead. To all these terms the same objection may be raised. They are not employed always in the same sense or to express the same condition. They are employed inconsistently, and are therefore mischievous.

Nothing is easier than to criticise or attack existing customs and institutions, but he who would destroy should

¹ July, 1879, p. 17. Professor Gross.

in honour be prepared to replace them by others which can be shown not only to be newer, but better adapted to the particular purpose for which they are to be employed. I have, however, no new nomenclature to propose, for with the exception of the word "mixed-celled," which appears unavoidable, I have introduced no new term into the nomenclature of bone sarcomas. But I desire that as the simple sarcomata of bone are classed according to the form of their cells, and as little difficulty is experienced in assigning to each its place, so may the more complex tumours which contain bone, or earthy salts, or cartilage, be classed according to the form of the cells which compose their softer parts. It is by the transformation of these softer parts that bone and cartilage are formed, and by the increase of these softer parts the increase of the mass takes place. If particles of bone, or lime, or cartilage are scattered through the tumour, no modification of its name seems needful. But if a large proportion of these tissues should occur so that the characters of the tumour are materially altered by them, this alteration may be expressed by some appropriate term preceding that which applies to the tumour, on account of the form of its cells. For example, this tumour, which consists partly of dense, hard substance, partly of soft succulent material, is a calcifying spindle-celled sarcoma, for the succulent material is formed of spindle cells, and the hard substance is impregnated with earthy salts, but there are no lacunæ or canaliculi. Again, this tumour, which presents to the eye characters almost identical, is an ossifying mixed-celled sarcoma, for the succulent material is formed of mixed cells, and the hard substance has the structure of the rough bone common in such tumours. A nomenclature such as this is sufficiently simple and easy of application. Of fifty-six cases of subperiosteal sarcoma, of which the accounts are sufficiently complete, twenty-two were round-celled, eighteen spindle-celled, and sixteen mixed-celled. The bones affected by them were—the femur in twenty-one instances, the skull and the tibia each in nine, the humerus in five, pelvis and lower jaw each in three, the clavicle and fibula in two, the ulna in one, and ribs in one. The relative proportions are probably approximately correct for all bones except the pelvis. But the number of tumours of the pelvis, especially of the sacrum, would be greater were it not for the extreme difficulty of deciding whether their origin is central or superficial.

Were I to follow the ordinary method of describing these subperiosteal tumours, I should write a separate account of each of the three groups of sarcoma in its relation to the bones, should state what bones it most commonly attacks, what is the manner of its growth, what its characters, its progress, duration, and its termination. But I think we shall gain a better knowledge of them if we employ a more tedious, but perhaps more useful, method of investigation, and study their characters and the conditions of their existence in each particular bone which they affect.

The femur is of all bones by far most frequently affected by subperiosteal sarcoma. It is subject to all three forms, and apparently to all three nearly in the same proportion; for of twenty-one cases five were round-celled, eight were spindle-celled, eight mixed-celled. The five round-celled sarcomas all grew about the lower third or lower epiphysis. They attacked patients, four of whom were males, varying in age from sixteen to twenty-seven years. Of three a squeeze or blow was the cause assigned; all were most rapid in their growth. Only one affected the lymphatic glands. In four amputation was performed, and in neither of the four was there recurrence in the stump. One of these patients recovered from the amputation and remained well after a period of fourteen months.

But thus to analyse in numbers each sub-group of tumours would weary you, and waste time which might more profitably be employed. I have therefore had these tables prepared, from which many of their more important characters may easily be read, and shall content myself with explaining what may seem to need explanation, with pointing out analogies and distinctions, and with supplying so far as possible the deficiencies which cannot but exist in tabular analyses.

Of these five cases only No. 1 was permitted to run its natural course. The tumour was a large chondrifying and calcifying sarcoma in a woman, twenty years of age. No operation was performed, and eight months after the first appearance of the growth the patient fell a victim to the disease. The tumour never ulcerated, but secondary tumours formed in the integument of the abdomen and axilla; and

after death the lungs and kidney were infiltrated with new growths, some of which, like the primary tumour, were calcified. Although amputation of the thigh was performed on No. 2, the operation can scarce be thought to have changed the course which the disease would naturally have run. Seven weeks after the operation the patient sank and died from a generalisation so extensive that I have no parallel case. The calvaria, sternum, heart, lungs, liver, kidneys, and inguinal glands were all the seat of secondary growths. And as the primary tumour was a blood-cyst, so were the growths of which it was the parent soft, easily broken down, and black with blood. The whole duration of the disease was only fourteen or fifteen weeks.

Of these five cases three were such as would generally be termed osteoid, and would therefore be classed separately from the softer tumours. But the most careful study fails to discover that they possess in common any characters except their bony structure, which distinguish them from tumours which contain no bone.

Of the eight cases of spindle-celled tumours, three affected the diaphysis, and five the lower third. The subjects of them ranged from nine to forty-one years old. The growth of all was rapid, the issue fatal. But death in three was due directly to the operation which had been practised for their relief. Though only one case was not submitted to operation, three may be considered to have run an almost natural course. On No. 6 an amputation at the hip was followed by the appearance of tumours beneath the skin in various regions, and in six months by death. But a more accurate account, together with the post-mortem examination, could not, unfortunately, be obtained. No. 9, whose tumour contained bone and cartilage, died from amputation of the hip; but had she survived the operation, the period of a year, during which the tumour had existed, could only have been extended for a short space longer, for secondary growths were already disseminated through both lungs.

In No. 11 many characters of the disease are so well exemplified that the case deserves more ample record. The patient was a married woman, twenty-seven years of age, under the care of Mr. Callender. The tumour had commenced a year before her admission to the hospital high up in front of the left thigh. Its growth, which had been slow at first, had latterly attained a fearful speed. It formed a smooth, elastic, almost fluctuating mass, but little painful, and not hot, the integument covering it dusky, oedematous, and traversed by large and tortuous veins. The whole thigh was occupied from the groin almost to the knee. Until her death, two months later, she remained an inmate of the hospital. During this time the tumour continued to increase in size, and the groin glands became enlarged, but the skin remained unbroken to the last. The autopsy discovered an enormous, brain-like growth, springing from the bone whose upper part was bare and rough. The periosteum was destroyed, and the tumour, infiltrating the surrounding muscles, passed up beneath the pubic arch into the pelvis and abdomen. There spreading, it attacked the bladder and the iliac veins, penetrating the walls of veins and viscus. The inguinal, pelvic, and lumbar glands were enlarged and sarcomatous, and both lungs were filled with growths. The cells which composed the tumours were rather oat- than spindle-shaped, and presented a singular uniformity in size and shape. In its continuous growth, infiltration of the surrounding structures, absence of ulceration, but secondary affection of the lungs, this tumour presents all the characters we may expect to find in a spindle-celled sarcoma of the femur. Only in one important respect does it differ from all the tumours of the same sub-group. The lymphatic glands were full of the same brain-like substance as that which formed the tumour. It may be that this rare event was caused by a continuous infiltration of some of the femoral or inguinal glands, and that from these the affection spread along the unwonted channel until gland after gland was transformed into a malignant mass.

Only in two cases was there recurrence after amputation. No. 7 and No. 13 were both females, and of nearly equal age. The former suffered amputation through the thigh for the removal of a tumour which had been three months growing, and had not yet attained a formidable size. It proved to be a brain-like mass, but broken down and mixed with semi-clotted blood—a form of the old fungus hæmatodes. Three months later she returned with recurrence in the stump, and disarticulation of the hip was practised. The second tumour, like that of which it was a recurrence, was full of black and semi-clotted blood. The patient rallied

SUBPERIOSTEAL TUMOURS OF BONE.

No. of case.	Sex.	Age.	Seat.	Simple or mixed.	Affection of surrounding parts.	Duration to operation.	Nature of operation.	Total duration.	Cause of death.	Recur-rence after operation.	Affec-tion of glands.	Affec-tion of lungs.	Affection of other parts.
<i>Femur: Round-celled.</i>													
1	F.	20	Lower third	Calc. & cart.	—	—	0	8 m.	Disease	—	0	Yes	Skin, kidney.
2	M.	27	Lower epiph.	Simple	—	2 m.	Amp. thigh	3½ "	"	0	Inguin.	Yes	Calv., sternum, heart, liver, & kidney.
3	M.	24	Lower third	Calcifying	Muscles	6 "	Amp. hip	11 "	"	0	0	Yes	Liver, spleen.
4	M.	26	Lower epiph.	Simple	0	15 "	Amp. thigh	15 "	Pyæmia	0	0	—	No post-mortem examination.
5	M.	16	Lower third	Bone	—	1 "	"	—	—	0	0	—	Well fourteen months after operation.
<i>Femur: Spindle-celled.</i>													
6	M.	14	Diaphysis	Simple	Muscle	8 "	Amp. hip	14 m.	Disease	0	—	—	No post-mortem examination.
7	F.	21	Lower third	"	—	3 "	Amp. thigh	8 "	"	Yes	0	—	No post-mortem examination.
8	M.	41	"	"	0	3½ "	"	4 "	Septicæm.	0	0	0	0
9	F.	31	Diaphysis	Bone & cart.	0	12 "	Amp. hip	12 "	Disease	0	0	Yes	0
10	F.	9	Lower third	Simple	Muscle	1 "	Incision	4 "	Supportn.	0	0	0	0
11	F.	27	Diaphysis	"	"	—	0	14 "	Disease	—	Inguin.	Yes	0
12	F.	34	Lower third	"	"	3 m.	Amp. thigh	3 "	Pyæmia	0	0	0	0
13	F.	18	"	Calc. & cart.	—	12 "	"	36 "	Disease	Yes	0	Yes	0
<i>Femur: Mixed-celled.</i>													
14	M.	14	Diaphysis	Bone & cart.	0	3 "	Amp. hip	3 "	Shock	—	0	Yes	0
15	F.	30	Diap., 1st half	"	Muscles	—	0	9 "	Disease	—	0	Yes	0
16	M.	13	Diaphysis	"	"	2½ m.	Amp. hip	12 "	"	Yes	0	—	No post-mortem examination.
17	M.	23	Diap., 2nd half	"	"	4½ "	"	—	"	—	—	—	—
18	M.	38	Lower third	Simple	"	2½ "	Amp. thigh	9 m.	Disease	0	0	—	No post-mortem examination.
19	F.	16	Diap., 1st half	"	"	9 "	Amp. hip	9 "	Shock	0	0	—	No post-mortem examination.
20	M.	27	"	"	Muscles	3½ "	"	9 m.	Disease	—	Bronch., poplit., lumbar, &c.	Yes	0
21	M.	24	Diap., 2nd half	Calcifying	0	—	0	—	—	—	—	—	—
<i>Tibia: Round-celled.</i>													
22	M.	53	Diaphysis	Simple	Skin	Years	Amp. thigh	Many years	Disease	0	0	—	No post-mort. examination. Tumour of forehead and of other calf.
23	F.	17	Upper epiph.	"	0	3 m.	"	9 m.	"	0	0	—	No post-mortem examination.
24	M.	26	Upper third	"	—	2 "	"	—	—	0	0	—	Well sixteen months after operation.
25	M.	51	"	"	Muscles	2 "	"	—	—	—	—	—	—
<i>Tibia: Spindle-celled.</i>													
26	M.	6½	Upper third	Bone	Skin	—	0	6 m.	Disease	—	0	0	0
<i>Tibia: Mixed-celled.</i>													
27	M.	18	Lower third	Bone	—	7 m.	Amp. leg	—	—	? Femur	Femor.	—	—
28	M.	20	Upper third	Calcifying	0	7 "	Amp. thigh	—	—	0	0	—	Well two years after operation.
29	M.	19	Diaphysis	Bone	Skin	—	0	10 m.	Disease	—	0	0	0
30	M.	24	Upper third	Simple	Muscles	9 m.	Amp. thigh	10 "	Pyæmia	—	0	Yes	0
<i>Fibula: Spindle-celled.</i>													
31	M.	20	Upper third	Simple	Mscs.	6 "	Amp. thigh	9 "	Disease	0	0	—	—
<i>Fibula: Mixed-celled.</i>													
32	M.	22	Upper third	Calcifying	"	3 "	"	12 "	"	0	0	0	In other calf and subcutaneous tiss.
<i>Humerus: Round-celled.</i>													
33	M.	19	Diaphysis	Simple	Muscles	2 "	Amp. shldr.	—	—	Yes	0	—	—
34	M.	19	"	"	"	3 "	"	3 m.	Shock	—	0	—	No post-mortem examination.
35	F.	27	"	"	"	4 "	"	16 "	Disease	Yes	0	—	No post-mortem examination.
36	"	6	"	"	"	1½ "	"	—	—	—	0	—	—
<i>Humerus: Spindle-celled.</i>													
37	M.	34	Diaphysis	Cartilage	Mscs. & bone	6 "	Resection	6 m.	Operatn	—	0	Yes	0
<i>Ulna: Mixed-celled.</i>													
38	M.	25	Upper third	Bones	—	12 "	Amp. arm	13½ "	Disease	0	0	—	No post-mort. ex. 5 tum. of biceps.
<i>Clavicle: Round-celled.</i>													
39	M.	18	Sternal half	Simple	Mscs.	9 "	Resection	—	Disease	Yes	? Cerv.	—	No post-mortem examination.
40	M.	14	Acrom. half	"	"	1½ "	"	—	—	—	Cerv.	—	—
<i>Lower Jaw: Spindle-celled.</i>													
41	F.	18	Body	Cartilage	Muscles	2 "	Resection	6½ m.	Disease	Yes	0	—	No post-mortem examination.
42	F.	29	"	Simple	"	1½ "	"	—	—	—	—	—	—
43	F.	20	"	"	0	3 "	"	12 m.	Suffocato.	Yes	0	—	No post-mortem examination.
<i>Ribs: Spindle-celled.</i>													
44	M.	33	Neck	Cartilage	Mscs.	12 "	Resection	—	—	0	0	—	Well nine months after operation.
<i>Pelvis: Round-celled.</i>													
45	M.	41	Innominate	Simple	Muscles	—	0	7 m.	Disease	—	Pelvic	0	0
46	M.	25	"	"	0	5 m.	Resection	5 "	Shock	—	0	Yes	—
47	M.	25	"	Cartilage	Muscles	—	0	20 "	Disease	—	Pelvic	Yes	Scapula, vertebra, heart, and liver.
<i>Skull: Round-celled.</i>													
48	F.	21	Multiple	Simple	—	—	0	6 "	Disease	—	Bronch.	0	Both breasts.
49	M.	17	"	"	0	—	0	3 "	"	—	Mesent.	0	Testis, kidneys, prostate.
50	M.	19	Base	"	Mcs. &c.	—	0	8 "	"	—	Medias.	Yes	0
51	M.	28	Multiple	"	"	—	0	11 "	"	—	0	Yes	Humerus, liver.
<i>Skull: Spindle-celled.</i>													
52	M.	19	Frontal	Simple	0	30 m.	Removal	30 "	Collapse	—	—	0	0
53	M.	3	Multiple	"	0	—	0	3½ "	Disease	—	Submax. lumbar, & msnt.	0	Lower jaw, suprarenal capsule.
<i>Skull: Mixed-celled.</i>													
54	M.	24	Base	"	Nerves	—	0	14 "	Cerebral	—	0	Yes	Liver, subcutaneous tissue.
55	M.	30	Multiple	Bone	0	—	0	24 "	Cerebral	—	0	0	0
56	M.	4	Frontal	Simple	0	3 m.	Removal	30 "	Disease	Yes	0	—	—

from the operation, but in a few days began to sink, and in three weeks died—apparently not from the amputation, for the wound was wellnigh healed, but from affection of the lungs, of which symptoms had lately been evinced. The tumour for which amputation was performed on No. 13 was a calcifying and chondrifying growth, which had already existed for a year—a longer time, by full four months, than the whole duration of the former case. It seems to have been recognised after the amputation that a portion of the disease still remained in the medulla of the femur, but it was not till six months later that the new growth was actually observed. A year after the amputation of the thigh a second amputation was performed at the hip-joint, and a year after the second operation the patient died with huge masses of secondary growth in the lungs and pleuræ and three small tumours of the lining membrane of the heart. These two cases are so similar that there are only two characters in which they manifestly differ—first, in the duration of each stage of the disease, and consequently in their whole duration; second, in the nature of the tumours. The more slowly growing was composed largely of cartilage, or was calcified; the more quickly growing of brain-like vascular tissue, whose consistence was so soft and vessels so weakly walled that more than half its bulk was composed of semi-clotted blood. It is impossible to refrain from associating the greater density and hardness of the one tumour with its slower growth and late recurrence, the greater vascularity and softness of the other with its far more rapid development. This impression is, however, speedily, and perhaps happily, corrected by the instance of another tumour equally dense and hard (No. 9), a chondrifying and ossifying sarcoma. Amputation was performed in this case also when the tumour had endured a year. But when, a few days later, the patient died, both lungs were partly filled with growths of a like nature and consistence.

The cases of *mixed-celled* sarcoma occurred in patients from thirteen to thirty-eight years old. Seven affected the shaft, one the lower fourth. Only two (Nos. 15 and 21) pursued an uninterrupted course. Of both the duration was equal. In both the lungs were the seat of secondary growths, but in one the popliteal, lumbar, bronchial, and tracheal glands were also so transformed by the disease that they retained no trace of normal structure. In its implication of the glands this tumour stands alone among the mixed-celled sarcomas of the femur. Nor is it easy to understand the relation which this glandular affection bore to the tumours of the femur. It may be that the popliteal glands were involved in its continuous growth. But the natural condition of the femoral and inguinal glands and the diseased condition of those of the abdomen, render it more probable that, as in most cases of sarcoma, so in this, the blood- and not the lymph-vessels were the channels by which the infection was conveyed.

Recurrence in the stump took place in one patient, No. 16, whose tumour, a huge mass containing many cysts or cystoid cavities, grew almost to the hip-joint, where amputation was performed. No. 14 deserves notice for the rapidity with which it spread, and, within three months of its first appearance in the thigh, filled the lungs with numerous tumours like itself. The date of its origin is almost indisputable, for the patient, a boy of fourteen years, while in what appeared to be good health, received a severe blow on the thigh from the handle of his cart on the 5th of November, 1872. The part at once began to swell, and so rapidly increased that in eight days from the injury he was unable longer to pursue his work. On the 3rd of February, 1873, he died immediately after amputation of the hip. The tumour ossifying, chondrifying, and hollowed out by large cavities filled with clear yellow fluid, surrounded the whole femur from the condyles to the lesser trochanter. Of these mixed-celled sarcomas the first four contained cavities of a similar nature, for the most part ragged and cystoid rather than cystic. And each of these four tumours was partly cartilaginous; two facts which I mention together because the second may perhaps help to explain the first, for the tendency of cartilage to soften down to a viscid or even thin clear fluid has long been recognised.

Let me also draw attention to the frequency with which bone or cartilage, or both, occurred in mixed-celled tumours of the femur. And let me at the same time point out that these ossifying or chondrifying or calcifying tumours present no other characters in common which entitle them to be classed together, and no characters which separate them from the remaining tumours of the sub-group.

Clinical Retrospect

OF A

HALF-YEAR'S HOSPITAL WORK,

BY MATTHEW CHARTERIS, M.D.,

PROFESSOR OF MATERIA MEDICA AT THE GLASGOW UNIVERSITY, AND
PHYSICIAN TO THE GLASGOW ROYAL INFIRMARY.

PART II.

THE various forms of heart diseases and murmurs were well illustrated by twenty-nine selected cases. There were seven cases of hypertrophy, one of which died. Here the organ was found nearly twice its normal weight, the increase being chiefly in the left ventricular wall. There was no valvular disease, and doubtless the hypertrophy was related to the kidney complication which had preceded the heart's increase.

Of three cases of pericarditis one died. There were two well-marked cases of mitral obstruction, the peculiar thrill, the limited area, and the presystolic character of the murmur being easily differentiated.

Of the more common valvular lesion of mitral regurgitant there were ten examples, and of these one died.

There were seven cases of aortic obstruction and aortic regurgitant, and of these two died, and post-mortems were permitted, which revealed narrowing in the one case, and patency of the valve in another. There was one case of intra-thoracic cancer, diagnosed as such during life, and verified after death. The symptoms were a husky voice followed by paralysis of left vocal cord, dulness on percussion at the base of the lung, and rapid emaciation. No red-current jelly appearance was presented by the sputa.

One case of diabetes mellitus died within forty-eight hours after admission, and an opportunity was afforded for a post-mortem examination. Nothing noteworthy was detected, although Dr. Foulis made a very diligent and accurate inspection of all the organs of the body, special attention being directed to the brain. Nothing confirmatory of Dr. Dickinson's views was observed. Previous to death the patient fell into a somnolent condition, the urine being passed involuntarily, and the breathing being stertorous. The conditions were similar to those noted in uræmia, but without the muscular twitchings and preceding headache. One diabetic patient was dismissed as irregular. The others were placed on an entirely new method of treatment, for the carrying out of which, and for many practical suggestions, I have to express my gratitude to my able and esteemed pupil and friend, Mr. Edmund A. Cook.

The plan adopted consisted in the administration of pilocarpin on the lip in 1-20th grain doses thrice daily for a fortnight. This relieved the distressing dryness of the tongue, and consequent thirst. The pilocarpin was followed by a course of the mixed phosphates—viz., of fresh bone-ash of femur, light calcined magnesia, bicarbonate of potash, phosphate of soda, syrupy phosphoric acid and water.

The cases will be reported in some subsequent paper more fully. It may, however, here be observed that the success was very striking. The urine diminished from 300 to 90 ounces, weight was regained, and the patients were enabled after four months' residence in the hospital to resume an out-door occupation. One of the diabetic patients was kindly transferred to my care by a colleague in whose wards he had been for three months without advantage either in regard to the general health or the diminution of urine. Placed upon the treatment mentioned there was decided improvement, and at the time of writing this the urine has lessened in quantity from 250 ounces to 120, and at this last point has remained stationary for some weeks.

A young woman, nineteen years of age, was admitted into the wards in a very critical condition. While waiting her turn to be examined in the out-patient department she was suddenly attacked with vomiting of blood, so copious and so exhausting that instant death seemed imminent. Ergotine was at once injected, and with excellent effect, for it seemed to stay the bleeding, and the circulation, as evidenced by the pulse, was restored in a few minutes after its administra-

tion. The ergotine was subsequently followed by gallic acid in four-grain doses every two hours for a night and a day, when all medicinal treatment was abandoned, and a carefully regulated dietary was put in force. This consisted of beef-tea injections thrice daily for nine days, while only a very little iced brandy-and-water was given by the mouth. When the thirst was excessive she was permitted to suck ice alone, but on no account was she allowed to raise herself in bed. After the ninth day an occasional teaspoonful of essence of beef was given, followed on subsequent days by milk, and, as convalescence became apparent, by dry toast. To combat the anæmia dialysed iron was also ordered. In other four cases of gastric ulcer, diagnosed by the localised pain, by the history of hæmatemesis, and by the weak, bloodless condition of the patients, the same line of treatment was adopted, and in every case with satisfactory results.

For a well-marked case of cancer of the stomach, recognised to be such by the presence of a tumour, the cancerous cachexia, and by the age (forty-five), only palliative means were employed, as Chian turpentine had not in the early part of the session come into vogue. Of three cases of acute peritonitis, two recovered; the treatment being by the calomel and opium pill. A case of lead, and another of carbonic-acid, poisoning, made good recoveries.

Of intestinal parasites there were four examples, two being those of tapeworm, and for these the usual remedies of oil of male fern, followed by castor oil, succeeded in dislodging many yards of the worm. The head, although carefully searched for, was not detected. For the two cases of ascaris lumbricoides santonin was given, and caused, as it frequently does, the expulsion of the parasite, although this was attended by great sickness, griping, and prostration.

Opportunities were afforded for the diagnosis of twenty cases of hepatic disease, including congestion, cirrhosis, cancer, jaundice, catarrh of bile-ducts, and gall-stones; and post-mortem examinations were made showing the characteristic appearances of cirrhosis and cancer of the organ.

A case of Hodgkin's disease, or lympho-sarcoma, terminated fatally, although arsenic, according to the suggestion of Billroth, was given in large and increasing doses. Death was preceded by a temperature of 103° for four days with profuse perspiration. In the preceding session there were three typical cases of Addison's disease, but this year there were none.

The treatment pursued in eleven examples of chronic Bright's disease with dropsy has been generally indicated in the previous part of the paper. In seven cases of the acute variety the treatment consisted in dry cupping over the loins, drastic cathartics (notably elaterium), and milk diet. Dr. Charteris said that experience in past years warned him against resorting to the induction of perspiration by artificial local means, such as hot air or warm bricks, in the acute form of nephritis. He had seen great distress occasioned and rise in temperature in all; while in two cases he distinctly attributed the supervention of uræmic convulsions to their persistent employment.

Diseases of the nervous system always bulk largely in hospital practice in Glasgow, and doubtless many patients are sent in because the friends are anxious to be spared the fatigue and expense attendant on careful nursing. Some of these are well worthy of observation during life; and it is greatly to be regretted that the after-death appearances cannot be observed, through the prejudice and ignorance of the relatives, exhibited in negating, as they term it, the "opening of the body." Much valuable information is thus lost which might be conveniently utilised.

Without entering into details in all, Dr. Charteris said that out of fifty cases of what might be termed diseases of the nervous system, including acute meningitis, hemiplegia, paraplegia, locomotor ataxy, sciatica, lumbago, pleurodynia, epilepsy, chorea, hysteria, and delirium tremens, a few deserved special notice.

Great interest was attached to a paraplegic female, aged twenty-six, who had been transferred to the medical from the surgical wards nine days after an operation for malignant sarcoma of the upper jaw. A localised redness over the sacrum was detected, and, notwithstanding the most careful nursing and the employment of all known remedial means, it deepened into a purple hue, and finally became black. As this result could not be attributed in any way to the persistent pressure which causes an ordinary bed sore, the attention of the class was directed to it as being "the acute decubitus of Charcot," and the fatal nature of the malady,

thus painfully and prominently illustrated, diagnosed. The friends were told of the opinion entertained, and they naturally desired she should be removed home. She died three weeks afterwards. The sore at the time of her dismissal could be covered by the palm of the hand, but it afterwards assumed more ghastly proportions; and death was attributed directly to it, and its production to the carelessness of the hospital attendants. A prolonged inquiry, extending over months, followed, and ended in the withdrawal of the charge. It is needless to say that this inquiry need never have been made had the authorities known anything about the opinion entertained and the medical treatment adopted while in the ward, and the significance attached to bedsores generally and this form of bed sore in particular, as recognised by recent important pathological observations. This information was offered, but refused. A coroner's inquest would have spared much trouble, and presumably would have enlightened official advisers.¹

Hydrophobia, if it can be called a nervous disease, claimed two victims, who came from the same part of a neighbouring county. Pilocarpin was the remedy employed in both cases, and in the first case it was at one time hoped that the trial would have justified its selection; for the patient was a muscular athlete, tall, strong, and wiry, whose constitution was unimpaired by previous illness, and who had, as he said, "neither tasted drink nor smoked tobacco in his life." The drug lowered the temperature, promoted copious salivation and perspiration, and strange to say, the inability to swallow was entirely removed, and the gloominess that hung over the patient at first was succeeded by wild bursts of delirious joy, with fanciful pictures of happiness and peace. The struggle, fierce and terribly violent, which lasted four days, seemed to exhaust the man, and without convulsions and without terror he sank and died.

The clinical record of this case after it had been decided to try pilocarpin is as follows. At 9.45 A.M., when first seen, his pulse was 150 and his temperature 102.6°. One-third of a grain of pilocarpin was injected, and in about three minutes afterwards he began to hawk and spit profusely, and this was followed by a copious perspiration. At 11.15 the injection was repeated, causing the same symptoms, and when seen at 12, he was lying comparatively quiet, and "sweating awfully," as he said. His temperature had fallen to 101°, fully a degree and a half. His pulse being 140 at 2 P.M., the reduction of temperature was more noted, as it was 100° and his pulse was 130. At 4 P.M. he complained of severe pain in the back of his head, for which a poultice was applied. He now asked for a drink of milk. The nurse steadied his hand and assisted him to bring the cup to his head; when it was there, he threw the milk into his mouth as a man might do a pill, and swallowed it with a great gulp. After he had done this, he rose to his full height in bed and said, "I have swallowed at last. I am a cured man. I'll go home to-morrow; but don't mind me, don't mind me, when I get out." Everything was done to foster the idea that he was getting better, and he promised money and the eternal gratitude of himself and family, adding, "The vale of Leven will wonder when they see me back a cured man." At 6 P.M. pilocarpin was repeated, but the result was not the same as before, for little perspiration was induced, but instead copious micturition. His temperature had again risen to 102°, and his pulse was 160. At 9 P.M. his condition with regard to temperature and pulse was unaltered, and he talked incessantly. Bromide of potassium was given in large doses, but no sleep was obtained. At 9 A.M., when again seen, he said he had not slept, for men had come in and sat on him, bruising him much all down the back. His temperature was 102°. Pilocarpin was again injected, but little perspiration was induced. At 12, three hours afterwards, pain was experienced over the kidney, and a trace of albumen detected in the urine. He saw his wife at his own request, and to show her he was better, he took some milk with an effort, but no particular spasm. He had taken in all since his amendment two pots of Brand's essence of beef. At 4 P.M. the nurse stated he had dozed about ten minutes at a time, but he had had no sound sleep. He appeared much excited about being beaten. Later on he slept about an hour after having an egg beat up

¹ In connexion with bedsores, I have to record that the woman with Erb's spastic paralysis was recently, at my request, readmitted into the ward. She had a large sloughing sore, which was easily treated; but after she had remained a month she found, to her astonishment, that she was pregnant, and, so far as can be judged, she has now advanced to about the fifth month. The paralysis remains *in statu quo*.—M. C.

with brandy, and on awakening he took a slice of bread soaked in water and some essence of beef. During the remainder of the day and the following morning he was simply exhausted through constant talking and want of sleep, but he could swallow easily. At 9 A.M. he wished to go out, and actually reached the door, but was persuaded to return. His exhaustion was very intense, and the albumen in the urine very abundant. At noon of the same day he died.

Thinking that perhaps the pilocarpin had not been pushed sufficiently actively in this case, in the next it was given at short intervals, and with beef-tea injections. The struggle was, however, shorter here, for within forty-eight hours of his admission the man succumbed. It is peculiar as showing the nature of the disease to state that in the first case there was a thorough and intelligent appreciation of what it was; while in the other there was neither wonder nor anxiety, or even, so far as could be learned, any knowledge that the disease was hydrophobia, or that a bite received three months previously had any connexion with the ailment for which he was admitted. Dr. Charteris said that his experience now of three cases under his immediate care, and of two others which he had seen, led him to call the disease "pantophobia"; for dread of everything, from the tiniest draught of air to the most carefully muffled footstep, was as significant as the undoubted terror inspired by the thought or the sight of water. The post-mortem, conducted by Dr. Foulis, and the microscopic observations subsequently made by him and Dr. Middleton, revealed nothing which cannot be observed in any nervous disease attended with great excitement and followed by rapid death—such, for instance, as acute mania or delirium tremens. These investigations will be published. The bite in the cases mentioned was in the fleshy part of the hand, between the thumb and forefinger, and the dogs that caused the injury, so far as can be accurately ascertained, were retrievers.

Four cases of chorea were treated by arsenic in the form of Fowler's solution, given in doses varying according to age, from four to eight drops. Improvement was observed about the eleventh day, and the system was thoroughly free from the malady in four weeks, when the constitutional effects of arsenic were manifested. Cod-liver oil, iron, and a generous diet formed the after-treatment of the patients elected to remain in the infirmary. Two girls of the age of fifteen happened to be admitted with the disease on the same day and were placed in contiguous beds. One was a severe case, the other was mild. After a few days it was observed that the malady in the latter was greatly aggravated, and that she was rapidly becoming worse instead of better. This was attributed, and rightly, to the peculiarly imitative character of chorea, and the patients were separated, one being placed in a private room. This precaution was amply justified by the amendment which ensued. In almost every case of chorea, if carefully investigated, the cause is found to be "fright," although this, on an inquiry, may not be obtained from the patient, but from the mother and other relatives. In Dr. Charteris's wards for the last three years all other drugs have been abandoned, and arsenic has alone been trusted to.

Numerous cases of skin diseases were treated, including erythema, eczema, rupia, ecthyma, sudamina, herpes (labialis and zoster), psoriasis, lupus, scabies, and tinea sycosis. Of psoriasis there were nine examples, and in these chrysophanic acid ointment (one drachm to the ounce) was alone employed. In two of the cases the disease was not confined to its usual sites, but completely covered the body, literally from the crown of the head to the soles of the feet. The peculiar and specific action of the ointment was very gratifying, and in an age of medical scepticism marks an epoch of therapeutic success. A singular circumstance was noted—viz., that the acid rubbed in must have some constitutional action, for if applied only to one side of the body it seems eventually, though more slowly, to remove the scales from the other. This observation, although true in one case, was not so marked in the other, and would require further verification. Generally speaking, in psoriasis the patient's skin can be made clean and smooth in nine days from the commencement of the treatment by the acid, and when, as formerly, arsenic was trusted, it required at least six weeks, and even then the result was by no means so satisfactory.

In conclusion (Dr. Charteris said) there had been in the wards 252 patients during the session; and of these, excluding six who died twenty-four hours after admission, the mor-

tality was twenty-four. Many of those admitted were hopelessly ill, but it seemed inhuman to remove them to the squalid misery of the homes from which they came, and they were allowed to linger amid the comparative comfort of a well-ventilated and well-nursed hospital ward. It would be easy to show a very clean bill of health and an infinitesimal mortality if the physician was foreseeing, and fatal chronic cases unfeelingly dismissed. Such fame—if it were not a desecration of the word to call it so—could only be attained at the sacrifice of conscience and self-respect. And besides, the chronic cases would form the staple of the after-practice of the students, and the knowledge acquired of the varied phases of approaching death was an inestimable boon to them, for they could tell of this to wearied watchers, and dictate little comforts during life's last hours.

They had had an opportunity of studying nearly every disease treated of in ordinary books of medicine, and in many of these they had seen how wide was the field, how hopeful the future of practical therapeutics. Clinical experience showed how few symptoms or signs were in reality significant of any one particular disease, and how slowly but surely the art of healing would be consolidated, not by physiological experiment or laboratory dreams, but by carefully recorded facts and well authenticated recoveries when the proper remedies had been judiciously chosen. They could assist much in the work, more than they at present imagined, if when practitioners they still remained students and jotted down for publication details of cases, whether successes or failures.

THE ANATOMY AND SURGERY OF THE PERITONEUM.

By AUGUSTUS J. PEPPER, M.S., M.B., F.R.C.S.

THE serous membranes—peritoneum, pleuræ, and pericardium—are derived primarily from one common cavity, the pleuro-peritoneal. This is formed by the splitting of the ventral lamina of the middle layer of the blastoderm, the outer portion of which forms the abdomeno-thoracic wall (somato-pleure), and the inner portion the muscular and sub-mucous coats of the alimentary canal, together with certain viscera—in part or entirely—of the thorax and abdomen (splanchno-pleure). Subsequently by the formation of the diaphragm, the pleural is shut off from the abdominal cavity; a further stage consists in the separation of the two pleural sacs and the pericardium. The lower part of the alimentary canal, it will be remembered, is derived from an invagination of the epiblast from the surface, in the same way that the buccal cavity is formed above or in front. Thus at one time the alimentary canal consists of three segments, mapped off by two septa; by absorption of the latter continuity is established. The normal remains of the anterior septum we see in the pillars of the fauces, whilst the posterior vanishes, except in certain cases known as imperforate anus and congenital absence of rectum.

I now confine myself chiefly to the consideration of the peritoneum—its anatomy, pathology, and surgery. And to simplify description I propose to make four categories. 1. Developmental anatomy. 2. Acquired pathological conditions. 3. Accidents or injuries. 4. Surgical operations.

First, as to certain points consequent on developmental changes.

A. The opening of the Fallopian tubes into the peritoneal space. The ducts of Müller arise in connexion with the splanchno-pleure layer of the mesoblast, their upper or forward extremities abutting on the adjacent cavity, and later on, when these become hollow, they are continuous with the peritoneum. The practical outcome of this is the possibility of fluids injected into the uterus or infective material formed there, finding their way into the peritoneum and setting up peritonitis.

B. The splitting of the mesoblast, stopping short of the termination of the trunk behind, the peritoneum will not reach to the extremity of the mucous canals, and so we find that the lower part of the rectum and the vagina are free

¹ Paper read before the Medical Society of St. Mary's Hospital, Nov. 26th, 1879.

from the serous covering; an explanation of the feasibility of performing numerous operations on this the most important surgical region of the body—e.g., the removal of stone, the cure of fistula, the relief from retention of urine; and, last but not least, that combination of “operative audacity and surgical triumph,” the removal of a foetus from the uterus by elytrotomy in the groin.

C. A process of peritoneum accompanies the testicle in its descent from the abdominal cavity to the scrotum, and this becomes obliterated to the extent of the spermatic cord, the closure usually becoming complete at from twenty to thirty days after birth (Birkett); the lower portion, however, remains open, as the tunica vaginalis testis, which may become the seat of hydrocele, hæmatocele, &c. The usual course is for the funicular part of the vaginal process to shrink, firstly at the internal ring, then at the upper part of the testis, and finally throughout its whole length; but not uncommonly it remains partially or entirely open. Let us consider the varieties that are met with. Supposing no closure occurs, then there is a direct passage from the peritoneal cavity into the tunica vaginalis, and along this a piece of bowel or serous fluid may pass, constituting congenital hernia and hydrocele respectively. We diagnose the former in many cases by the history of the sudden development of a swelling reaching at once to the bottom of the scrotum; the latter by the reducibility of the fluid, which had before occupied the vaginal sac.

There may, however, be apparent but not-absolute obliteration of the funicular process, and so a possibility of irritating injections (though these are rarely required for the cure of hydrocele in the child) reaching the peritoneum—a mishap you may always guard against by applying pressure at the time over the external ring. Again, should the tube be obliterated only at the top of the testis, a coil of intestine comes down, and does so as rapidly as in the hernia congenita of Haller, and differs from it only in the fact of its being co-extensive with the cord. This is funicular hernia. Or the tube may remain open for a variable extent along the cord—although its continuity with the abdomen is broken, in this case a hernial protrusion must make its own sac, which latter becoming ensheathed by the funicular part of the tunica vaginalis, constitutes encysted hernia, or, as it is often ambiguously styled, infantile. Lastly, a small sacculæ may be the only deviation from the normal, and this may be the seat of encysted hydrocele of the cord.

One word about the so-called diffuse funicular hydrocele. In most text-books it is described as a serous infiltration of the cellular tissue of the cord, which I believe to be erroneous, for pressure at the internal ring would give rise to it; and were this the correct pathology we ought always to find an associated varicocele—a combination not by any means constant. It seems to me that it may be caused by two anatomical states—*a*. Fluid in the whole funicular portion of the tube, but not communicating with the cavity of the abdomen. *b*. Fluid contained in several loculi of the tube from irregular closure at several spots. It would be well to abolish the word diffuse, and to speak only of the several forms of encysted hydrocele—congenital hydrocele comprising two varieties, complete and funicular. In the female the process of peritoneum, if open, forms the canal of Nuck, and may be the seat of hydrocele or hernia.

D. There are several points with regard to the changes taking place in the peritoneum after birth due to alteration in shape and size of the abdominal viscera, to the growth of the pelvis, and to the stretching of certain parts of the mesentery and other folds. Two or three illustrations will suffice.

Enlargement of the spleen in the earlier stage is known to encroach on the thoracic cavity relatively more in the child than in the adult. This is owing to the pleuro-colic fold—which forms a kind of shelf beneath the spleen—becoming gradually stretched as life advances, by the distension of the stomach and colon, for this reason the enlarging spleen in the adult more readily oversteps its natural barrier.

Intussusception of the bowel commencing at the ileo-cæcal valve might with propriety be termed an accident incidental to infancy and childhood. There are two factors in its causation; on the one hand, an irregular peristalsis, with an empty state of the bowel; on the other, the anatomical relations of the peritoneum. In children the whole of the cæcum is freely slung by mesentery, in adults it is more tightly bound down to the iliac fossa. And bearing in mind that in intussusception of the bowel the part first invaginated

is always the most advanced, or, in other words, that the ensheathing portion becomes involuted, we see how in children this portion of the bowel easily leaves its normal situation, stretching its moorings and carrying them with it.

The bladder in children is always to some extent in contact with the abdominal wall; in adults only when distended; for in children the pelvis is but little developed. This bears upon punctured wounds of the lower part of the abdomen, and also on the operation for stone.

As an illustration of abnormal development I may cite the case of congenital defect or absence of the diaphragm.

I pass now to the second division of the subject—acquired pathological conditions. These are practically inflammation and its results. It is strange that although the three main serous membranes have their origin in common, they differ so widely in their behaviour with regard to the common causes of inflammation, each one seeming to identify itself with the viscera with which it is connected. Thus we find that pleurisy frequently follows exposure to cold; pericarditis and peritonitis rarely, if ever, as an immediate result. Pericarditis is mainly dependent on toxicæmic conditions, such as that of acute rheumatism, chronic Bright's disease, and pyæmia; whilst peritonitis is almost unknown, except as a sequence of injury, taking the word injury in its widest sense, so as to include not only direct wounds of the peritoneum from without, but in addition the irritation from physical and chemical substances that may find their way from rupture of the underlying structures, such as a hydatid cyst, gall-bladder, and abdominal viscera; as well as diseased states, spreading by continuity, such as cancer of the liver, or typhoid ulceration of the intestine. Many cases are recorded as idiopathic peritonitis simply because a more rigorous search has not been instituted. How easily a minute perforation, or a body of small size (in one case the operculum of a whelk) impacted in the vermiform appendix, may be overlooked in presence of the more staring pathological appearances. It is only recently that I demonstrated in the post-mortem room a hole little larger than the diameter of a pin in the ileum of a patient who had died from perforative peritonitis complicating typhoid fever. This probably would never have been seen had we not carefully flushed the intestine with water, and yet, small as it was, no one could entertain the least doubt as to its having been formed during life—a small, deeply-excavated ulcer on the one side, an excessive amount of lymph on the other, and the aperture itself bounded by a narrow ring of necrosed tissue.

The symptoms and pathological appearances of peritonitis vary greatly in different cases, according to the intensity of the cause, the rapidity of the process, and the general condition of the patient. Thus it may be chronic, partial, and adhesive, as when it occurs in the course of cancer and tubercular enteritis without perforation. It may be latent, as we find after the operation for strangulated hernia in old people, or where the bowel has been acutely nipped for a long time. This, instead of being looked upon as a special kind of peritonitis, should be considered simply as peritonitis in a subject with depressed vital powers. The pathological changes are going on, but the general response is feeble. Finally, we meet with cases in which the inflammation is so rapid that it assumes a purulent form from the first.

I would call attention to two of the more important symptoms of the disease. Firstly, the *Pulse*. In the sthenic form it is said to be rapid, small, and wiry; this is due to reflex contraction of the arteries generally, excited by the irritation of a large number of nerves, together with a powerfully-acting heart. In the asthenic, and in all cases in the later stages, it is rapid, small, and compressible, a paralytic condition taking the place of, or succeeding, the irritative. Secondly, *Tympanites*. This is caused by increased pressure from accumulated gases from within, and paralysis caused by inflammation of the muscular coat from without. It is curious to what extent cellulitis may spread without producing peritonitis. In a case of lithotomy performed at this hospital purulent exudation had extended from the pelvis along the course of the ureter and iliac vessels, and yet there was no peritonitis.

One result of chronic thickening of the membrane is to diminish the liability to acute general inflammation, so that the sac of an old hernia may be opened with much less risk than that of a recent one. This is an instance of the general pathological law—that slowly progressing lesions produce less marked effects than others of even less extent with

rapid onset; for the parts involved appear to accommodate themselves to their altered mode of life. Thus a tumour within the skull for a long time may give but little evidence of its existence; whereas a hæmorrhage as large as a bean may be followed directly by complete hemiplegia. Again, the prognosis in secondary amputations for chronic disease is more favourable than primary ones for accident. We gather from this the indication that major operations of expediency should not be performed on patients immediately taken from active life, but they should be confined to bed for some days prior to surgical interference.

This brings me to the third part of my subject. The peritoneum may be bruised, extravasation occurring in the retro-peritoneal tissue; this in a healthy subject almost invariably leads to absorption, but if the continuity of the serous surface be broken, and especially if the lesion communicate with the air, the danger is manifoldly increased. The treatment of a simple, incised wound consists in passing the ligatures through the entire thickness of the abdominal wall, so as to bring the divided edges of the peritoneum together, in order that the inflammatory lymph may seal the wound from within. It has been objected that the needle-punctures may of themselves set up peritonitis; but surely this possible drawback is more than counterbalanced by the advantage gained. A slight amount of local peritonitis is advantageous in order to prevent discharge from the wound if it occurs from finding its way into the peritoneum. In lacerated wounds where adhesion by the first intention is impossible, it is best to leave them freely open to admit of the escape of pus and débris externally, there being less danger than would at first sight appear of noxious matter making its way into the abdomen; remember that in the natural condition there is no such thing as a peritoneal cavity; it is only a potential space, and the atmospheric pressure on the abdominal wall tends to prevent the separation of the parietal and visceral layers. Penetrating or perforating wounds, such as a bayonet-thrust, on account of the small intestine being loosely slung by the mesentery, may happen without injury to the coils of gut, these being pushed aside by the advancing body.

There are certain portions of the viscera less liable than others on rupture to extravasate their contents into the peritoneum. The best example is the duodenum in its second and third parts; for although this portion of the bowel, on account of its anatomical relation to the spine, is exposed to greater chances of injury from blows, still as its posterior surface is free from serous membrane, peritonitis from its rupture is less likely to occur than from rupture of other parts of the gut. The same argument applies, though with less force, to the cæcum and ascending and descending colon.

Large vessels may be severed and a loss of blood sufficient to cause death may occur without there being dulness on percussion, the extravasation being found diffused widely in the sub-peritoneal tissue; and yet as a matter of routine we percuss the flanks in severe abdominal injury, knowing that if the blood be poured into the cavity of the peritoneum to a fatal extent, it will mainly find its way into the more dependent parts.

Surgical operations about the abdomen are planned where possible so as to avoid implicating the peritoneum, it being found that under these circumstances the risk is much diminished. This it is which gives lumbar colotomy the superiority over Littre's operation, in spite of minor drawbacks.

Since the introduction of a rational system of antiseptics surgeons have become less timorous and unsparing with the use of the knife. I emphasise the word "rational," because antiseptics are not infallible. They cannot prevent contagion being carried by the unwashed hands of obliging assistants, or by a forceps, on which, perhaps, cling products of decomposition of blood, &c., from a former operation. There are certain operations which must be done through the peritoneum, such as gastrotomy, for establishing a fistulous opening into the stomach; gastrotomy for relief in certain cases of acute obstruction of the bowels, and for Cæsarean section. There are more which are done behind it—e.g., the perineal, rectal, and supra-pubic operations for stone; rectal and supra-pubic puncture for retention of urine; ligature of the main arteries of the abdomen; the removal of a calculus from the pelvis of the kidney, and the removal of a foetus from the uterus in cases of extreme pelvic deformity in lieu of the older and probably more dangerous procedure. Finally, there are the so-called tappings through the peritoneum, for ascites, for ovarian cyst, for hydatids,

for excessive tympanites, and for accumulation of fluid in Douglas's pouch, the last operation performed through the vaginal wall.

One word of advice and I have done. Never pass a trocar into the abdomen without having previously introduced a catheter into the bladder, and without having made yourself sure, by percussion, that no part of the bowel lies in your path by reason of an elongated mesentery.

ON IRREGULAR GOUT, WITH REMARKS ON THE PATHOLOGY OF GOUT.

By W. R. THOMAS, M.D., M.R.C.P.,

PHYSICIAN TO THE SHEFFIELD PUBLIC HOSPITAL; LECTURER ON MEDICINE, SHEFFIELD MEDICAL SCHOOL.

GOUT presents itself in so many different forms that it is often difficult to recognise it when we meet with it, and many cases of real gout are no doubt frequently overlooked because the disease has not been found in its accustomed seat.

One patient suffers from bronchitis, another from psoriasis; one may have gravel with or without albuminuria, another may have gout in his big toe. It may present itself as asthma, or again as neuralgia of the face. One may be alarmed by his having to be treated for apparent gonorrhœa, while another may have diarrhœa with piles and tenesmus—all of which diseases may be but local exhibitions of constitutional diathesis.

Frequently I have found that some of the skin diseases we meet with are entirely dependent upon the gouty diathesis. One patient had been suffering from psoriasis for three or four years, had had the usual remedies prescribed, but without success. Finding that his brother had suffered from gout, that his father had died of apoplexy, and had often been laid up with gravel, I treated the case as one of gout, and the patient gradually improved. I really looked upon this case as essentially gout of the skin, considered that the gravel the father suffered from was dependent upon the same cause, and that in all probability the apoplectic attack was owing to chalky deposit in the walls of the arteries of the brain, in consequence of which these walls were impaired, ultimately gave way, and apoplexy was the result.

I have treated several cases of eczema in the same way whenever I have been able to find that there was any tendency to gout.

A patient of mine, who had suffered for several years from severe attacks of this complaint confined to the big toe, who had been a heavy drinker, and had lived well, one night, when the pain in his toe was excruciating, was tempted to put his foot in a vessel containing cold water to relieve the pain. This did certainly relieve his pain, but soon afterwards his breathing became extremely difficult. I had to be sent for, and found that he had all the ordinary symptoms of asthma. Having been told of the manner in which he had treated himself, I naturally looked upon the asthma as dependent upon gout, and applied local remedies to try, if possible, to cause a return of the disease to the toe, but without avail. This gentleman continued to have severe attacks for two years, but he found that when he abstained from excessive eating and drinking, and took a reasonable amount of exercise, the pain to a certain extent was relieved. One day, when jumping out of a cab, he fell, and was laid up for weeks, for his old friend had returned to his big toe, took up its residence there, and frequently gave tokens of its presence whenever the owner of the toe acted unwisely.

How often we meet with patients who have suffered for days from many of the premonitory symptoms of gout, who have been, as it were, relieved of the gout by the passage of large quantities of gravel, in many instances calculi, and in one of my own cases the appearance of gravel alternated with gout in the big toe: a hint that we should treat such symptoms as gout whenever we have any suspicion of gouty diathesis, or where the habits of the patient tend to make us think that it might have been acquired.

One of my patients used to suffer from excruciating pain in the right sciatic nerve, along the greater part of its course; the attack generally lasted three or four days, and after an absence of four or five days returned. In this way he dragged on a miserable existence for three months. Finding that his grandfather had been a gouty patient and that one of his sisters had recently suffered from the same complaint, I treated this case as such with a certain amount of success. The following year he continued to pass for a considerable period large quantities of gravel, suffered from severe pain in the back, but never again from the sciatica; in fact, he became a very temperate man in every way; and I believe by so doing he succeeded in warding off the attack. I regard many of the neuralgiæ as really dependent upon the gouty diathesis probably due to the presence of chalky deposit either in the sheath of the nerve or somewhere in its course, in either case producing pain and irritation.

Frequently the gouty patient complains of pain in the back, and when the urine is examined, in addition to the salts, it contains albumen, a sign that disease of the kidneys is being produced by the gouty diathesis, and that there is danger of their being less and less able to perform their functions daily, more especially when deposit takes place in them, as proved after death by the appearance of white streaks of urate of soda.

I look upon gout when not hereditary as a disease invariably produced by excessive indulgence in food or drink, oftentimes accompanied by want of exercise. Excess of food by supplying excess of nitrogenous materials for the blood, tends ultimately to produce excess of urea and uric acid, which have to be expelled by the kidneys. These organs perform their functions properly for a while, but the excessive work thrown upon them for a considerable time ultimately tends, as in chronic alcoholism and disease which interfere with the action of the skin, to produce disease and consequent inefficient action of the kidneys.

Distilled spirits do not seem to produce gout to the same extent as wine, porter, and ale. Although there is a great hereditary tendency in gout, still generations do escape because the children, having seen the sufferings of their parents, sometimes have the good sense to avoid the exciting causes, and thus escape.

We know that in gout we find an excessive quantity of uric acid in the blood, and that the quantity daily excreted by the kidneys is diminished, and as we frequently find that in other diseases accompanied by excessive formation of urea and uric acid the kidneys are quite able to excrete as much as is required of them, we may safely come to the conclusion that from some cause there is deficient action of these organs, and consequent retention of materials which ought to have been excreted; for the urates, cartilage cells, fibrous tissue, and epithelial cells seem to have an affinity, and deposit in and around them takes place, producing diseases of joints, eruptions of skin, and inflammations of mucous membranes.

New deposit may take place in the kidneys, interfering still more with the functions of those organs, to such an extent that it is not satisfied now with small joints at a distance from the heart, but attacks the larger joints.

Many can indulge in eating and drinking for years, and yet never suffer from gout. In such patients there does not seem to be any hereditary tendency, or they have organs which perform their functions well, and thus the blood is not, as it were, rendered impure.

Every excreting organ in the body has certain functions to perform, and if these are not performed properly either some other organ has to do the work, or there is retention of matter for excretion in the blood, unless it be deposited somewhere, in which case it is practically excreted; in fact, every portion of the body may be said, by relieving the system of what that part requires for its nutrition, to act as an excreting organ. Even the bones by taking up certain earths act as excreting organs to a certain extent.

Now, when there is excess of hydro-carbonaceous matter in the blood, we find that there is a tendency to increase of fat all over the body. These cells, which naturally tend to take up fat, now that it is in excess, take it up in excess, showing that the presence of certain materials in the blood influences the formation of tissue.

When the kidneys act imperfectly, and there is consequent retention of certain materials in the blood, these are taken up by cartilage, fibrous tissue, and epithelial cells, and produce gout.

Sheffield.

NEUBER'S BONE DRAINAGE-TUBES.

By GEO. GRANVILLE BANTOCK, M.D., F.R.C.S. ED.,
SURGEON, SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.

In the paper which led to the discussion on antiseptics at St. Thomas's Hospital in December last, Mr. MacCormac first in this country drew attention to the use of Neuber's decalcified bone drainage-tubes. At that time I was about to remove a breast, and after carefully going through Neuber's paper I determined to try his tube. Accordingly I procured from Krohne a set of tubes prepared as the author directs, and in using them strictly followed his practice. That case was published in THE LANCET along with another of excision of the sac of a femoral hernia. Since then I have used the tube in a second extirpation of the breast, and the result has been uniform in all these cases. The first two tubes were made from ox bone, and the third from ivory.

Dr. Newman of Stamford has recently briefly referred to two cases in which he had used these drains. His object was to express his disappointment, for he said the tubes became flattened, collapsed, and blocked, and serum accumulated. He omitted to say what ultimately became of them. I have heard of another case—excision of the mamma—done under strict Listerism, in which, owing to the occurrence of erysipelatos inflammation, the tube broke down, and the pieces could only be got away with considerable difficulty. With such experience I am in a better position to give an opinion on this subject.

Neuber tells us that the bone drain inserted in a fresh wound remains for twenty-four hours without any material change. Then its surface loses its smoothness, and the walls gradually become thinner. On the fourth or fifth day the walls are partially perforated, and so thin that they can no longer resist the pressure of the surrounding tissues, and the tube gets flattened. Absorption then goes on more quickly, and after the sixth day only a gelatinous body remains, of which no trace can be found on the tenth day. The quickness with which a tube is absorbed is not in all cases alike. It depends on the individual energy of the local action; placed in a gangrenous wound it is hardly absorbed at all, whereas in a healthy granulating wound that process is very rapid.

As I have already said, the results in the cases in which I have used this drain have been uniform, so that the description of one may serve for all. The tube was blocked on the second day, and as far as I could make out the blood-clot within was already undergoing organisation. Moreover, the tube was fixed, and would not yield in the slightest degree to a moderate pull. On the fourth day the projecting part of the tube had dried up, and was cut off. After this the skin soon closed over the end. But the enclosed part of the tube could still be felt of its original length, and flattened. This was the state of things in the first patient when she left the hospital at the end of twenty-seven days (her stay was protracted by an attack of menorrhagia arising from the existence of a fibroid tumour of the uterus); and the adhesion to the skin was so strong that the tube could be freely moved about with it. A month after the operation, in the second case, the tube had undergone no diminution, and in the third case—a breast case—there was no perceptible change when she was examined after the lapse of two months, and the ends of the tube could still be seen projecting under the skin. In all these cases union was absolutely by first intention, without the slightest blush throughout the length of the wound. The first and second operations were done under the spray, but in neither of them was the raw surface washed with the 1 in 20 solution. In the third case the operation was done without the spray. But as a solution of phenol (1 in 60) was used for the sponges and instruments, care was taken to prevent the access of more of the antiseptic than was unavoidable. Of the two breast cases the latter was the more satisfactory in the matter of discharge, the thymol gauze, after the first dressing, presenting a mere stain not larger than a penny piece.

Now, how is this difference in the results reported by Neuber and myself to be accounted for? Neuber says the tube is absorbed. I cannot but think that in this he is in error, and that he has mistaken for absorption the gradual solution of the material during continued discharge.

In one breast operation I had to scoop out a lot of enlarged glands from the axilla, and I employed two skeins of catgut for the drainage. As the healing went on, although the skin presented its natural appearance, there was a considerable serous discharge, and the separate strands of the catgut evidently underwent a process of solution. This free serous discharge is characteristic of Listerian treatment, and I attribute its occurrence in this last case to the action of the strong carbolic acid (5 per cent.) solution with which I washed the cut surfaces. Here then, it appears to me, we have a satisfactory explanation of the point of variance between Neuber and myself. In my practice the discharge is trifling, after the immediate oozing has ceased, and the tube remains incorporated in the wound. With Neuber it is melted down and washed away. The strong solution is used, the cut surfaces acted upon are cauterised and have a whitened or greyish appearance. That is to say, they are covered with a film of coagulated albumen, which is nothing more than dead matter, and, impregnated as it is with a powerful irritant, must come away in great measure in the form of discharge. This is the peculiarity of Listerian wounds, and hence the necessity of Listerian drainage. It may be true that without the drainage the germs are destroyed, but the mischief done mechanically by tension from pent-up fluid would be as disastrous as anything occasioned by living organisms.

Why this inconsistent cauterisation should be put forward as essential to perfect Listerian practice I have always been at a loss to understand, seeing that a solution of half the strength is considered sufficient to cleanse the instruments, and for the spray. Surely, if the germs on the hands, instruments, and sponges succumb to a solution of 2½ per cent., it cannot be necessary to kill a part of the raw surface with a 5 per cent. solution to involve the few germs that may be there in the catastrophe. It is not maintained that the external germs—the spongel, instrumental, manual, imported, vagabond germs—are in any way different from the germs in the wound, the colonised germs; so that if 2½ per cent. is enough for the one, 5 per cent. must be too much for the other; or if 5 per cent. be the true germicidal proportion, the germs in the 2½ per cent. spray may still dance and be merry as notes in the sunbeam. Five per cent. either is or is not necessary: if necessary, the spray is a mockery; if not necessary, the wound treatment is bad surgery. It looks as if there were no escape from the horns of this dilemma.

The conclusions, then, that I have to draw with regard to the bone drainage-tubes are—1st, that they may be used without any immediate mischief in cases where they are wanted only for a short time; that is, in cases where there is a discharge only for the first few hours after operation. But in my experience there is even then this disadvantage, that with rapid union they remain encased and unabsorbed too long, and in that condition they generally cannot be said to do any good, and they may do harm. Time will show this. 2. When, however, from the nature of the case or the germophobic strength of the dressings the discharge is expected to be copious, and to continue for several days, the bone tubes are wholly inapplicable; hence it need excite no surprise that in Neuber's ovariectomies their use was "disastrous." For the drainage after this operation the glass tube must hold its own against all comers.

Granville-place, Portman-square.

TWO CASES OF MYXŒDEMA.

BY THOMAS INGLIS, F.R.C.P. ED.

So few cases of myxœdema have been recorded in the medical journals that it is clinically important to note a short account of them as they occur, as this form of disease is somewhat uncommon, is insidious in its symptoms, and its treatment hitherto difficult and unsatisfactory. The morbid condition was first pointed out by Sir William Gull in an article on "A Cretinoid State supervening in Adult Women,"¹ and was subsequently more fully described, and its pathology partly elucidated by Dr. Ord to the Medical and Chirurgical Society of London;² while cases have been observed by Drs. Duckworth, Sanders, and Savage.³ Its

most prominent feature consists of a jelly-like formation in the subcutaneous areolar tissue, which gives the patients a stolid, puffy appearance, approaching that of the cretin. Their appearance is suggestive of the dropsy of recent renal disease and the passive anasarca in cardiac complaints, but we find the urine usually normal till the termination of the illness, and the heart is also healthy. All the patients hitherto observed have been females, except a doubtful male case under the care of Dr. Savage. I will give a general outline of two cases at present under observation.

T. W—, a plumber, of temperate habits and good general health, became depressed in mind owing to his wife's bad conduct, and was admitted to an Asylum, labouring under melancholia, with strong suicidal tendencies, when the following particulars were ascertained. There was no hereditary predisposition to insanity or other neurosis, and he had two healthy children. He had taken a large dose of laudanum with suicidal intent, and required the application of remedies and artificial respiration when admitted. He answered questions in a confused way; stated he wished to take away his life.

In three months he made a recovery from the melancholia, but was observed to be slightly enfeebled in mind.

When the first symptoms made their appearance, a general swelling, affecting principally at first the eyelids and hands, and afterwards extending over the extremities and body, gradually and insensibly came on. This swelling was first noticeable about the face, where the skin of the eyelids became puffy, wrinkled, and waxlike, widening the nose, and causing a general blurring or obliteration of the facial expression, and giving it a flattened, cretinoid aspect. The nose looked levelled down, the lips were thick and heavy, the lower one protruding. The tongue looked too large for the mouth, but was not oedematous, while the interference with the function of speech was very evident, articulation being slow, indistinct, and paretic. The mode of speech resembles that of the hemiplegic, and the thickened articulation of the epileptic, and was most affected in the morning. The hands got much enlarged and "spade-like," and he complained of their being stiff, cold, and numb. On pressure over the front of the tibiae, where the oedema was considerable, there was no pitting. The urine contained no albumen; sp. gr. 1015. The heart's action was slow and laboured, but the sounds were healthy. The surface of the body was always cold to the touch. Temperature in axilla, 95°. He never felt warm even in the hottest weather. All over the skin is dry and brawny, and its sensibility is slightly impaired, somewhat resembling scleroderma. Although the skin is dry it is often subject to short-lived perspirations. There are no reflex contractions on tickling the soles of the feet. There is no atrophy of the muscles, but the grasp of the hands is feeble, chiefly from inability to flex them. There is an absence of excitability of the muscles of the legs and arms. On faradising the muscles of his face only a slight response (Weiss, fifty cells) was obtained in them. On applying the electrode of the intermitted battery current to his scalp, where there is little oedema, there is strong reaction, and he then says he sees flashes before his eyes.

The fact that the faradaic contraction of the muscles where the oedema was marked is much impaired would point to a degeneration of the nerve-tissue at the periphery, as it is known that the normal excitability of the muscles is retained after gross lesions of the central ganglia, as in hæmorrhage or softenings; while, after an injury to a nerve, such as the sciatic, there is no electrical response. On the other hand, that there is no atrophy of the muscles militates against the theory of peripheral nervous degeneration, and it is probable that the myxœdema presents a mechanical obstruction to the stimulation of the nerve endings. The helplessness and slow mobility appear to be due more to the mechanical obstruction of this mucoid degeneration than to defective innervation. He presents a blown-up, water-logged appearance, and waddles like a duck when walking. The appetite is usually very bad, and he can go without food for days and not feel hungry. When he does eat, the food tastes badly to him. Bowels are constipated. He has become rather deaf, while sight and smell remain good. He has become very lethargic, and sleeps a great deal. The mental characteristics are now slight enfeeblement; memory slightly impaired as to recent events. In the mind, as with the body, the period of activity is over, and his small routine duties are performed in an automatic, listless manner.

¹ Clin. Soc. Trans., vol. vii.

² THE LANCET, Oct. 18th, 1879.

³ Journal of Mental Science, Jan. 1880.

The second case is that of a woman, aged thirty-nine, of good general health, the mother of eight healthy children. She comes of neurotic stock, with an hereditary predisposition to insanity and other neuroses. Her mother died of apoplexy, and a sister was treated in an asylum for puerperal mania. Her illness came on five years ago, at the same time as an attack of melancholia, and was attended with perversions of the special senses. She said everything smelt of gunpowder. She presents the same bodily symptoms as T. W—, but in a lesser degree. Her mental condition is now permanently impaired. Three years ago an attack of mania followed the melancholia, and she had to be sent to an asylum. There she expressed many changing delusions, as that she was a queen, and sent to Edinburgh Castle for an escort to take her to Leith Fort. Sight is good, but the senses of smell and taste are impaired. She alleges that she smells snuff in her food, and that it tastes like poison. Numerous warty growths are scattered over her arms. Like the man she feels worst in the morning, when, she says, she can hardly see. The urine is natural, sp. gr. 1010. The heart's action is regular, the second sound being sharp and accentuated.

Her natural temperament was amiable, but she is now irritable, passionate, and sometimes violent without cause. Is becoming demented, is silly and childish in conversation, and frequently talks incoherently to herself. There is loss of that important faculty, the attention, and the judgment is warped, but the memory is still tolerable, and her affection for her children remains.

That the central nervous system is largely involved in myxœdema seems unquestionable, as in all the cases on record mental disturbance in some degree has been observed, ranging from perversion of the affection, irritability, slight depression, and loss of enjoyment in life, to aggressive mania and fatuity.

It appears to be a general progressive disease, which distinguishes it from simple scleroderma.

Post-mortem examination by Dr. Ord revealed a general œdema of the subcutaneous areolar tissue, which was composed largely of mucin and not of serum. It was also found in the internal viscera. The arteries of the brain were much degenerated and atheromatous, but the microscopic cerebral structure does not appear to have been fully examined. Where the extremities of the cutaneous nerves were observed, it was seen that they were enveloped in a soft transparent substance, so as to be padded and removed from the ready operation of incident impulses, tactile, thermal, or chemical.

When fluid accumulates in the subcutaneous areolar tissue we have a tense shining skin, pitting on pressure, and making its appearance in the lower extremities. When from impoverishment of the blood or pressure on veins we have dropsy, the œdema at first is not stationary, but is altered by position. In myxœdema we have the reverse. Scleroderma differs from it in being a sclerosis of the areolar tissues, and not an elastic mucoid change, but a limited indurated change unaltered by compression.

Although mental disturbance or aberration in some phase exists in all cases, the disease does not necessarily lead to insanity when it supervenes. This is possibly due more to the individual temperament or constitution of the patient than to the *materies morbi*, and in this particular it resembles many lesions and injuries of the brain, which frequently but not inevitably cause mental disorder. Its characters are so varying that it does not follow any typical course, but generally the lethargy and heaviness of the body find a reflex in the inactive and torpid mind. While the delusions and perversions of the special senses in the case of Mrs. H— are undoubtedly attributable to disordered brain function, the occasional profuse perspirations are also the indication of a failure of nerve power, and, like phthirical sweating, are due to the defective innervation of the nerves controlling the sweat-glands.

The irritability and mental excitement noticed in the first stages are probably the resultant of the action of poison on the cerebral convolutions, as when poisons act on the intelligence, such as alcohol or opium. There is first a high stimulation and sur-excitation, and ultimately derangement of the intellectual functions.

In some cases the departure from the normal mental state at the onset of the disease is marked more by a change in tone than by an actual state of insanity. The man feels ill, loses his sense of well-being, spontaneity; he feels uncomfortable, irritable, and listless—a phase of mild melan-

cholia. The changes come on slowly and insidiously; the alteration is noted first in temperament and disposition.

Dr. Ord is uncertain whether this mucoid change is a new product, the result of a disordered nutrition, a degeneration altering the function of the supreme cerebral centres, or a retrograde metamorphosis to a lower type, such as cretinism. Certainly the mental and bodily symptoms show a marked filiation to this disease.

I look upon myxœdema as primarily a nervous disease, and that the grosser changes in the skin and viscera are caused by deficient absorptive action of the lymphatics, the result of trophic changes in the cells of the higher ganglia.

The treatment of the disease has hitherto been very unsatisfactory, and the administration of nerve tonics, galvanism, and baths appear to have no beneficial effect, either in favouring the absorption of the deposit, or checking the progress of the disease, and at the best exercise only a palliative influence.

Deeping St. James.

ANTISEPTIC MIDWIFERY.

By WALTER VERDON, F.R.C.S.

THE following case is, I think, of interest in showing the value of Mr. Lister's treatment applied to midwifery.

Lately I have used antiseptics in ordinary midwifery cases, and with marked benefit. The discharge ceases sooner and does not become offensive. In some cases this disappears entirely during the first week. It is necessary, however, in order to obtain a good result, to guard against the admission of septic air both during and after confinement—to view the uterine and vaginal lesions in the same light you would the wound made in a subcutaneous operation, and as carefully protect them from septic influence.

In the case I quote below, the patient was exposed to the poison of erysipelas both during and after labour; and though she had a slight attack of cutaneous inflammation accompanied with fever, the uterine wound remained intact; the poison having no more influence upon it than it would have upon a wound caused by subcutaneous rupture of a muscle.

Mrs. T—, weak and anæmic, at full time, had suffered from frequent pains for two days. She had not sent for assistance because she did not think the labour far enough advanced, but now felt so exhausted she wished for help. The os was now fully dilated, membranes ruptured, head above the brim, pelvis roomy, pains frequent and short; the head descended with and receded after each, making no progress; pulse 98, weak and compressible; the patient was much exhausted. I then determined to use the forceps, and also to take every antiseptic precaution.

I syringed out the vagina with warm carbolised water; also had a small basin of carbolised oil at hand for the instruments, hands, &c., and to anoint the labia and adjacent parts. All vaginal manipulation was performed beneath the spray, and with very little traction the child was born. The after-applications were diapers soaked in carbolised oil and carbolised tow, and an injection of carbol lotion three times daily.

On the second day after confinement I found the nurse was suffering from an acute attack of erysipelas of the face; she told me she was feeling ill and her head felt tender the day before the confinement. She had slept with the patient on the night of the labour and on the following night.

On the third day the patient complained of sore-throat. Pulse 120; temperature 102° F. Vaginal discharge free from putrefactive smell; urine clear and copious.

On the fourth and fifth days the patient felt very ill and complained of pain in the right leg. Her tongue was coated; pulse 120. Still the vaginal discharge was going on satisfactorily, but there was a patch of cutaneous inflammation on the right thigh from the buttock extending almost to the knee.

On the sixth day the discharge ceased and did not return. The pulse remained above 100 until the eleventh day; the redness disappeared on the eighth day.

The child also was the subject of an unhealthy ulceration round the umbilicus, preceded by a superficial inflammation extending to the groin.

Both the child and mother made a good recovery.

Brixton-road.

A Mirror

HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

MIDDLESEX HOSPITAL.

TUBERCULAR PERITONITIS IN AN ADULT; NECROPSY; REMARKS.

(Under the care of Dr. FINLAY.)

MARGARET F—, aged thirty-four, married, was admitted on Oct. 1st, 1879. She had been an inmate of the hospital for a fortnight in June, under treatment for pleurisy, but with this exception she had enjoyed fair previous health. She was one of a family of twelve, all of whom, with the exception of herself, had died young—one at the age of nine months of "water on the brain," and another of consumption at the age of seventeen. Her own family consisted of five, all apparently healthy. Twelve days before admission her abdomen began to enlarge and to be painful and tender, especially over the hypogastric region. She had been troubled by cough since leaving the hospital in June, and she had lately lost much flesh.

On admission she was emaciated, and had a pale, earthy face and anxious expression. She complained of enlargement of the abdomen, and pain which was referred chiefly to the iliac and hypogastric regions. She was troubled also with frequent cough, accompanied by froth and mucopurulent expectoration, as well as with frequent and profuse menstruation. The temperature was 102° 6', pulse 108, and respiration 27. Her abdomen was uniformly enlarged, measuring at the level of the umbilicus thirty-five inches in circumference, and was everywhere tender on pressure. There was dullness in the flanks, shifting with change of position; and the superficial veins were prominent, but there was no ascitic wave. The areas of the liver and the splenic dullness appeared normal. In the chest, the percussion and auscultation signs were fair over the right side, but resonance was impaired over the upper half of the left lung posteriorly, and the breathing at this spot, as well as in front, was bronchial in character, and the expiration was prolonged. About the middle of the left back the breath-sounds were tubular, and were accompanied by crepitation. The heart-sounds were normal. The urine had a specific gravity of 1020, and was free from albumen. Uterine examination failed to detect any cause for the menorrhagia.

On Oct. 11th it was noted that the abdomen was more tense and shiny, measuring thirty-six inches at the level of the umbilicus. A week later the cough was more troublesome, and crepitation was more distinct over the left back, extending to the base, while moist sounds of very fine quality were heard also at the right base posteriorly. There was also a sense of fluctuation felt across the abdomen.

During her stay in the hospital she had frequent attacks of vomiting and diarrhoea, the stools being watery and dark in colour; the abdominal pain and tenderness persisted, and the woman was often delirious in the night. Her evening temperature ranged from 99° 2' to 102° 4', and she gradually sank and died on the twenty-first day after admission.

The following is a note of the post-mortem examination made by Dr. Coupland twenty-one hours after death. Abdomen distended; numerous linear atrophicae in skin of abdomen. On opening the abdominal cavity, the liver, considerably enlarged, was found adherent to parietal peritoneum, and the intestines, matted together, were also adherent, but the adhesions could be separated. The peritoneal cavity contained four pints of blood-stained fluid, most of it lodged in the lower third of the cavity, but some also was contained in loculi between and around the intestines. On carefully detaching the coils of intestine from one another, their serous coats were found to be everywhere thickly covered with granulations. In addition, there were numerous and extensive patches of extravasated blood on the intestines, as well as beneath the parietal peritoneum. The stomach was large, its mucous

membrane thick and soft; the walls of the lower end of the oesophagus for two inches presented a blackened and softened appearance (from post-mortem digestion). The mucous membrane of the intestines was generally pale, but was nowhere ulcerated. The liver was large, but not increased in weight; portions of it floated in water; it was pale, of a yellowish colour, of greasy appearance, and extremely friable in all parts. The spleen was pale and soft; and the kidneys were tough and engorged, with some adherence of capsules. The heart contained soft gelatinous clot in the right cavities, and the mitral valve was slightly thickened; it weighed only 7½ oz. The right lung was adherent, pigmented, slightly emphysematous, and congested posteriorly. The left lung was very firmly adherent, occasioning much difficulty in removal. The upper fourth of the lower lobe was consolidated, presenting on section a dark greyish-black appearance. In the midst of the altered tissue were some small, irregularly-shaped vomices, which were full of puriform secretion. The right lung weighed 17 oz. and the left 20½ oz.

Remarks by Dr. FINLAY.—It seems proper to call the foregoing a case of tubercular peritonitis, because although doubtless secondary to destructive disease of the lung, the abdominal symptoms were those chiefly complained of, and the brunt of the disease was borne by the peritoneum. Tubercular peritonitis in the adult is by no means a common disease. By this it is not meant that a certain amount of tubercle of the peritoneum is not found frequently in bodies that have succumbed to phthisis; but in such cases there is commonly found more or less tubercular ulceration of some part of the intestines, and the peritoneal tuberculosis is seen to be secondary to the lung disease not only in point of time, but also in respect of symptoms and importance. In the latter respect, at least, the case above recorded presents a different aspect. The case was further interesting from its extreme clearness as regards diagnosis. The personal history of the patient, no less than her family history, together with the physical signs detected in the lungs, rendered this a matter of great ease and certainty.

SHEFFIELD GENERAL INFIRMARY.

COMPOUND COMMINUTED FRACTURE OF THIGH; RECOVERY.

(Under the care of Mr. JONATHAN BARBER.)

FOR the following notes we are indebted to Mr. Charles M. Goyder, late house-surgeon.

J. H—, aged forty, a forger, was admitted December 6th, at midnight, suffering from injury to thigh.

Whilst intoxicated the patient attempted to cross the street, and was knocked down by a tramcar, the wheels of which passed over his left thigh. He was pale, and collapsed; his face disfigured and contused; the pulse small and regular; skin cold and sweating. The left thigh was much mutilated. In the upper third there existed a perforation the size of a penny piece, and in the lower third a large rectangular skin-flap was separated from the subjacent muscles, and the thigh-bone was fractured at the junction of the upper and middle third, obliquely from behind downward to forwards. The finger placed in the wound detected a number of comminuted fragments. The upper circular wound seemed to have been produced by the protrusion of the upper fragment through the soft parts. In addition to these injuries, the femoral artery was completely detached, pulsated, and was apparently enclosed in its sheath. The limb below was cold, but sensation was present, and the tibial arteries pulsated.

Mr. Barber saw the patient shortly after admission, and decided to allow reaction to set in before doing anything.

On Dec. 7th the patient's condition was better; the pulse was quick, and there was not much pain. The foot was warm and the sensation good. In consultation it was determined to treat the case antiseptically, amputation so high up being considered as well nigh hopeless. Accordingly the wounds were syringed with a 5 per cent. solution of carbolic acid, and the limb was dressed under antiseptic spray. Two drainage-tubes were inserted, the contused flap before noticed was stitched up, and an outside long splint was applied. Evening temperature 102° F.

Next day the wound was dressed and looked well. Pulse 120, tongue dry. Temperature 103° F. On the 10th the wound was dressed again; the skin-flap was sloughing, but otherwise the wound looked healthy. A bruise of violet tint

surrounding the thickness of the thigh, indicated the place at which the wheel passed over the limb. General condition good; temperature 102° F. On the 15th he was doing well; there was a plentiful discharge, which was becoming purulent, but was quite sweet. On the 16th the femoral artery was felt beating strongly in the wound; and on the 20th there was considerable bleeding from a branch of femoral artery, which was exposed and ligatured. The general condition was good. On the 27th the limb, which had been dressed daily, was placed on Dr. Heath's (of Newcastle-on-Tyne) splint.

On Jan. 11th, 1880, the patient expressed himself as being much more comfortable in the new splint. The wound was healing slowly, and the pulsation in femoral artery was less. The general condition was much improved.

From this time the wounds gradually closed, and the discharge diminished; the patient's general condition became daily more comfortable, the appetite was good, and the pulse regular and good.

From Feb. 2nd the limb was dressed at intervals of three days.

On May 13th two necrosed fragments of bone came away, and the splint was taken off, and the limb was laid between sandbags.

On June 25th there was good union, with three-quarters of an inch shortening. The wounds had contracted into sinuses, and the femoral artery appeared to be thrombosed at the seat of injury. The general health of the patient was extremely satisfactory.

TYRONE COUNTY INFIRMARY.

CASE OF STRANGULATED FEMORAL HERNIA; OPERATION WITHOUT OPENING THE SAC; RAPID RECOVERY.

(Under the care of Dr. EDWARD THOMPSON.)

JAMES F—, aged fifty-five, a delicate, decrepit-looking old man was admitted on May 15th, 1880, suffering from great sickness, with violent pain in the lower part of the abdomen. The day previous to his admission he was making some unusual exertion when he experienced a sudden pain in the abdomen as if something had given way, and was almost immediately seized with sickness and a feeling of faintness. He sought advice at the dispensary of the district, and was there recommended to the hospital.

On admission the face was pale and anxious, the pulse fluttering and very feeble, and the extremities were cold. There was constant vomiting, together with pain on pressure, over the lower part of the abdomen. The bowels had not moved since the previous day. Temperature 99°; urine diminished in quantity. In the usual situation a very small femoral hernia was readily detected. Taxis having proved ineffectual, it was determined to delay operative interference no longer.

The patient was accordingly put under the influence of ether, and the operation was done with the usual antiseptic precautions. The skin over the hernia was incised, and the structures overlying the sac were then carefully divided on a director until the sac was reached. The nail of the index-finger was then introduced under the edge of Gimbernat's ligament, and the stricture freely divided with Cooper's knife. The intestine was at once reduced, and a drainage-tube was inserted, and the edges of the incision were brought together by three silver wire-sutures. The wound was then dressed antiseptically, and the patient removed to his bed feeling much relieved.

After the operation all sickness ceased, and rapid reaction from extreme collapse set in. The extremities became warm, the pulse quickly improved, and the peculiar anxious expression of countenance soon faded away. The patient was ordered a grain of opium every fourth hour, and small quantities of milk frequently.

The morning after the operation the temperature rose to 99.5° F., but in the evening it was normal, the bowels having acted of themselves in the meantime. In a week the patient was out of bed, and the wound was quite healed.

Remarks by Dr. THOMPSON.—I have had many cases of hernia requiring operation, but unfortunately hitherto at least 50 per cent. of them have proved fatal; nor is this percentage, large as it undoubtedly is, in any way remarkable, for I feel convinced that if the statistics of operations for strangulated femoral and inguinal hernia were fairly

recorded, the unsuccessful as well as the successful, the mortality would at least reach the percentage I have stated. This excessive death-rate can, without doubt, be accounted for—first, owing to the common practice of opening the sac; and, secondly, the non-employment of Lister's antiseptic precautions. The case just recorded seems to demonstrate the advantages resulting from both these proceedings. There are of course cases which require the opening of the sac; for instance, where the hernia is an old one, and the strangulation has existed for many days, or again, if the intestine is gangrenous. In the former case there may be bands within the sac itself, binding down the intestine, and keeping up the symptoms of strangulation, even when the stricture has been freely divided. In the second case the sac must be opened in order to incise the gangrenous intestine for the purpose of forming an artificial anus. There can, I think, be no doubt that the modern practice of not opening the sac in recent cases of strangulated hernia is the right one.

Reviews and Notices of Books.

Practical Lithotomy and Lithotrity: or an Inquiry into the best modes of Removing Stone from the Bladder. By Sir HENRY THOMPSON, F.R.C.S., Surgeon Extraordinary to His Majesty the King of the Belgians, Emeritus Professor of Clinical Surgery, and Consulting Surgeon to University College Hospital, &c. &c. Third Edition, considerably enlarged. London: J. & A. Churchill. 1880.

THE worth of this treatise has been so well and long recognised that the work of a reviewer of a third edition of it is considerably simplified. Sir Henry Thompson's views, too, are tolerably generally known, for his annual course of lectures at University College Hospital and communications to our columns and various societies have enabled him to publish the fruits of his increasing and extensive experience. Although the whole of the work has been carefully revised and in several parts enriched for this edition, the chapters of most interest are that in which Bigelow's operation is discussed, and the final one, in which is a record of 500 operations for stone in cases of male adults under the author's care; such a table has never before been compiled by any surgeon. As we have recently drawn attention to Sir Henry Thompson's views on Bigelow's operation, as he expressed them at Cambridge, and as a *résumé* of the table of cases was presented to the Medico-Chirurgical Society two years ago, and commented on by us then, we need not notice them at length now. Suffice it that this edition is far more valuable to the practical surgeon than the last, and well worthy of the reputation of its accomplished author.

Leçons Cliniques sur l'Uréthrotomie Interne faites à l'Ecole pratique de la Faculté de Médecine de Paris. Par le Dr. DELEFOSSE, et recueillis par E. PROGEY. Paris: J. B. Baillière et Fils. 1880.

M. DELEFOSSE is an ardent advocate for the operation of internal urethrotomy, and in these five clinical lectures he has given forcibly and well "reasons for the faith that is in him." He regards dilatation as *par excellence* the treatment for stricture of the urethra; but in very nearly all cases in which it is impossible or difficult to carry it out, or in which it fails to give a thoroughly good result, he considers internal urethrotomy to be the best plan to be adopted. The use of caustics, which so long held their place in France, he rejects altogether, and he has nothing good to say of "rupture" or "forcible dilatation." He follows Civiale, Caudmont, and Thompson in preferring a urethrotome cutting from behind forwards to one acting in the opposite direction. Delefosse does not look upon urethrotomy as a mode of cure of an organic stricture, and he is at pains to point out what are the conditions most favourable to a slow recontraction of the strictured part. In his opinion they are, first, a complete division of the stricture tissue at one point; second, the ex-

istence of a layer of healthy elastic, supple, spongy tissue between the bottom of the wound and the fibrous sheath of the corpus spongiosum; and thirdly, the absence of inflammation in and around the wound, the occurrence of which is apt to cause a more rigid and contractile cicatrix. His after-treatment differs from that of English surgeons who have given most attention to this operation; for the first twenty-four to forty-eight hours he ties in a good-sized catheter, through which he allows the urine to drain continuously; by the end of this time the wound is glazed over, and the danger of urinary infiltration and the risk of primary adhesion of the lips of the wound avoided. After this he leaves the urethra quite alone for two or three weeks until cicatrization is complete, and then he completes the treatment by careful catheterisation. He points out that for any given case once urethrotomy, always urethrotomy. If recontraction occurs dilatation is of no avail to overcome it, but a repetition of the operation is necessary. There can be no doubt that internal urethrotomy is becoming more and more firmly established as a sound surgical procedure, and we think that its popularity is deserved. It is founded on correct principles, and promises to maintain its place. It is therefore especially desirable that it should be thoroughly understood and appreciated by the general surgeon, and that its performance should not be left in the hands of specialists alone. These lectures are, we believe, very honest, plain, and useful, and we welcome them as a practical contribution to a subject which, while attracting a good deal of attention now, is destined to do so far more in the future.

Fracture of the Patella. A Study of One Hundred and Twenty-seven Cases. By FRANK H. HAMILTON, A.M., M.D., LL.D., Surgeon to Bellevue Hospital, New York, &c. New York: Chas. L. Bermingham & Co. 1880.

DR. HAMILTON has chosen to study first all the cases of fracture of the patella that have come under his own care, and to those he has added all others that have been treated by his colleagues in the Bellevue Hospital of New York. He has not attempted to collect cases from all sources, and avail himself of all published experience; his object having been to study the general causes, course, and result of this fracture. A wider research would no doubt have given him a number of unusual cases; but taking the complete experience of one large institution, he has been able to avoid one of the most common statistical errors, and to present us with more trustworthy data. He is careful to point out that very many of the cases in which there is direct injury to the joint are really fractures by muscular force, and states that this is shown not only by a careful consideration of the history of these cases, but also by the fact that it is impossible to produce a transverse fracture of the patella by direct violence to the cadaver. Dr. Hamilton disapproves of Malgaigne's hooks and Dr. Hector Cameron's operation of suturing the fragments, but recommends a simple apparatus of his own, in principle like the simple inclined plane. He considers close fibrous union as the object to be aimed at, and remarks that bony union, even if possible, is not so strong as the ligamentous. In his experience refracture, or rather fresh separation of the fragments, has occurred in nearly every case quickly after the original accident, and he urges that great care should be taken to prevent its happening for three months, but after that its occurrence may be disregarded. Dr. Hamilton deprecates the employment of force in overcoming the ankylosis of the knee usually resulting, and recommends the joint to be slowly and carefully brought into use, and speaks of two years as the time in which the recovery may be looked upon as complete. Dr. Hamilton is too well known in this country as an authority upon fractures to require from us any support or

recommendation. This brochure is good work carefully and honestly done.

Life and Mind—on the Basis of Modern Medicine. By ROBERT LEWINS, M.D. Edited by "Thalassoplektos." London: Watts & Co. 1880.

HAVING no sympathy with the doctrines laid down in this book—full as it is of irrational dogmatism,—we would fain have set it aside without a word. It may perhaps be worth while just to indicate its tenor, which is that of pure materialism; although both author and editor (who has an appendix of his own exceeding the length of the original essay) lay down the law with so much confidence and self-assertion as to excite antipathy. Including in their onslaught the Christian, and, indeed, all religions, they demolish, no doubt to their own satisfaction, all the cherished beliefs of the majority of mankind. Nor do they spare even such rationalists as Huxley and Maudsley, but assail them for so far submitting to the English dread of ultimate analysis in confessing that there is something beyond our ken that science cannot solve. Assuming the unity of man, and basing their arguments upon cerebration as a function of organised matter, denying any ground for the hope of immortality or the existence of a Supreme Being, denouncing English timidity in refusing to accept the materialistic doctrines so prevalent in modern Germany, they profess to believe that the world will be better, morally, socially, and politically, as soon as their doctrines become universally accepted. And this is said to be the outcome of modern medicine! We do not, and will not, believe it; for we hold, that in restricting himself solely to the material, man unnaturally sets a boundary upon his intelligence, and enslaves himself even more than if he were to blindly accept the narrowest dogmas priestcraft has ever devised. It would be a melancholy thing indeed were such doctrines—which, in spite of the writer's denial, *must* inevitably lead to pessimism and all its evil consequences—to replace that surer trust based upon worthy aspirations after a better life, aspirations that are coeval not with the Christian religion, but with humanity itself.

THE SANITARY CONDITION OF MARGATE.

THE time has arrived when an energetic protest should be entered against the action, or rather the inaction, of the Margate authorities. This town occupies one of the most favoured spots in all England; it is frequented by thousands of visitors and hundreds of invalids, who come from all parts of the country. It has a duty, therefore, not merely to itself, but towards the visitors who enrich its inhabitants. Margate is so directly open to the north that a vessel steering north-half-east would reach no land before she coasts Greenland, in the latitude 75° N. Thus the wind from that direction may travel over 1380 miles of sea. Further, in consequence of the promontory Margate occupies, three winds out of the four pass over the sea before reaching it, and thus the climate is most bracing.

The white chalk soil, and the thin vegetable mould with which it is covered, enable the water to pass rapidly away. The dryness that results is also augmented by the scarcity of rain, for there are neither mountains nor trees to attract the clouds which often obscure the sky, but pass away inland. It is, however, unnecessary to insist further on the climatic advantages of Margate as a health resort; these have been fully vindicated over and over again, but the public at large have a right to protest against the impolicy of authorities who allow the benefits conferred by nature to be marred by the neglect of the most elementary rules of sanitation.

So far back as 1849 the town received a terrible warning. Dr. Chambers and others had in vain urged the necessity of sanitary reform, but it was only when the cholera broke out and killed 124 persons in one quarter, raising the death-rate from 18·5, which was the computed average at that time, to 29·5 per 1000, that some action was taken. A petition to the General Board of Health signed by 303 ratepayers brought Mr. Edward Cressy, C.E., down, who held an inquiry on the subject, and his report to the Board was published in 1850. Mr. Cressy recommended the laying down of sewers, the abolition of cesspools, of private slaughter-houses, and of piggeries within the town, the filling up of private wells, and the creation of a proper water-supply. During the course of thirty years that have elapsed since the cholera had inflicted so severe a lesson, only the latter of these suggestions has been carried out. Margate has a water-supply, though it is questionable if the water be safe from contamination.

In April, 1873, Dr. Gwynne Harries reported to the Medical Department of the Local Government Board on the sanitary condition of the town and the prevalence of certain kinds of disease. The picture given in that account should have sufficed to stir the authorities into action; but the grievances then denounced exist to this day. This damaging report has ominously been kept in the dark. Dr. Chambers, for instance, who has been twice mayor of Margate, had never seen a copy of it; indeed, so rare are the persons who have been privileged to read this report that there are actually rumours afloat of a supposed destruction of the documents.

The first and most prominent defect in the sanitary condition of Margate is what is known as the King-street sewer. This was originally built simply to carry away surface or rain-water. It joins a branch sewer from High-street, and has an outfall to the right of the jetty below low water-mark. A great number of houses, including some of the principal hotels, now drain into this sewer, and must suffer the natural consequences. Dr. Gwynne Harries describes it as of "peculiar, perhaps unique, construction, inasmuch as it rises 15 inches towards the latter part of its course, and thus forms a reservoir in which at least 15 inches of the thickest sewage is always retained. When the tide rises the sea pours down the sewer into this reservoir and drives back the sewage along the remainder of the drain, and sometimes out through the gratings."

Mr. W. Knight Treves, the Medical Officer of Health for Margate, in his report for the year 1875, protests, and has ever continued to protest, against this sewer. He compares it not only to an elongated cesspool, but to a bad cesspool, for it is built of old brick and is pervious. "At spring tides the sea forces back the sewage and causes it to overflow into the basements, and I have seen in this part of the town several of the basements flooded with some tons of liquid sewage." At its outfall the sewage occasions a nuisance at certain periods of the tide. The bathing, which is established on both sides of this sewer, is not so far removed as to be exempt from the probable presence of sewage in the water. At Ramsgate, where there is a similar outfall, the contamination of the bathing is acknowledged, and measures will, we are assured, be taken to prevent the evil.

The greater part of the houses in Margate do not, however, drain into sewers, but possess huge cesspools, which are special institutions in this part of the country, and find many advocates. These cesspools are dug out in the chalk to a depth of thirty, and sometimes even sixty feet. They receive the whole drainage of the house, with the exception of the rain-water, which is often collected in buckets for washing purposes; and, strange to say, the alleged virtue of these cesspools is, the inhabitants maintain, the fact that they readily allow all liquid matter to escape. This preposterous argument we found fully confirmed when we questioned persons in the habit of emptying the cesspools. One person, a plumber, declared that when his men had emptied a cesspool, he always went down in it to see that they had done their work properly. On our inquiring what he considered satisfactory, he replied that he made sure the sides had been "properly chipped." The grease from the kitchen waste and various other substances gradually clog

the pores of the chalk, and thus nature ultimately supplies what man should from the first have provided. The cesspool in time becomes water tight. But a water-tight cesspool means the necessity of frequent emptyings, and therefore of constant outlay, and such a result is viewed with no small displeasure by the householder. The plumber consequently plumed himself on his conscientious and disinterested action in rendering these receptacles of every sort of filth as leaky as possible. Not only are the sides "chipped" or scraped, but the bottom is generally dug out a foot or two deeper so that the plugging of the pores here also is removed.

We need not insist on the evils of such a system, they are universally acknowledged. In isolated country houses such cesspools would be bad enough, but in crowded, densely-populated streets they are a dangerous abomination. Yet this is the arrangement at Margate; some of the cesspools have been found even under the houses and the kitchens. In some instances the back yards are so small that the liquid matter escaping from the cesspools must pass under the houses, and the warmer atmosphere within these dwellings must draw the gases generated by this sewage filtration into the inhabited rooms and apartments. Of course, as was amply demonstrated in 1849, the neighbouring wells are contaminated, for the entire subsoil of Margate must be saturated with sewage matter. Ten years were, however, allowed to elapse after the outbreak of cholera before a general water supply was attempted, and even then this was not done by the town, but by a private company, and it was badly done.

A most unsuitable site was selected to sink a well. In a valley known as The Brooks the work was begun, and this on a spot which was probably a Danish burial-ground. In any case a number of human bones were among the first objects dug up. This unpropitious circumstance did not check the work; and when water was found, it was found at a level below that of the sea. Further, when a large quantity of water was extracted, the wells, for some distance round, were dried up, thus proving that the new supply was from the same water stratum as that which had already been condemned. This water has on many occasions been analysed, and though the reports vary considerably, they are, on the whole, decidedly unfavourable; indeed, considering the position of the source, any other result would have been very surprising. There are houses and leaking cesspools sufficiently near to account for anything; the cemetery also, though at some distance, is on a higher level and inland. It is also certain that the water does not invariably move towards the sea, but the rising tide forces it back towards the town well, rendering the supply not merely brackish, but bringing with the salt water some of the sewage of the houses that exist between the well and the sea. This is all the more blameworthy as, close at hand, in the Dane Valley, Professor Atfield indicated the presence of excellent water. Dr. F. Chambers has grouped together four of the reports that have been made in the following manner:—

One gallon contains—

	No. 1.	No. 2.	No. 3.	No. 4.
Total solid matter dried at 212° Fahr.	69	43	40	55
Free ammonia ¹	much	much	none	none
Ammoniacal, organic matter containing 10 per cent. of Nitrogen ¹	15·0	2·0	0·0	0·0
Albuminoid organic matter containing 10 per cent. of Nitrogen	2·25	1·60	·016	·161
Nitrites ²	none	much	none	none
Nitrates, containing 17 per cent. of Nitrogen ³	8·0	6·3	5·75	3·0
Chlorides, containing 60 per cent. of Chlorine	24·0	11·7	10·0	27·0
Hardness, reckoned as chalk, grains, or degrees removed on boiling the water.....	2·0	3·0	5·4	0·6
Unaffected by ebullition	6·5	4·5	4·0	4·0
Total hardness	8·5	7·5	9·4	4·6
Lead, none	0·0	0·0	0·0	0·0

¹ Taken together, No. 1 has a considerable quantity, and No. 2 much.

² Taken together, a considerable quantity.

No. 3 is water from the Dane valley. No. 4 is water from the Tivoli well.

Prof. G. W. Wigner, in 1877, analysed two samples of water, and found per gallon:—

	July 14th. Per gallon.	July 30th. Per gallon.
Chlorine, calculated as chloride of sodium	32.76	33.70
Nitrogen as ammonia	0.0025	0.0072
Albuminoid ammonia	0.0060	0.0045
Nitrates	0.8480	0.4220
Nitrites	0.0140	0.0080
Total nitrogen in these 4 forms	0.8705	0.4417
Oxygen absorbed by organic matter	0.0272	0.2500

In these two samples there was much suspended and vegetable matter. It is evident that the quality of the water varies considerably, according to the more or less intimate connexion between the drinking water and the enormous quantity of liquid filth purposely allowed to escape from hundreds of cesspools. As the town grows in size, and the number of cesspools becomes greater, so will this danger increase: and though the sewage matter undergoes a process of natural purification as it passes through the soil, still it is possible to over-tax this purifying agent, and the best filters, whether artificial or natural, are apt to become fouled.

So obvious are these facts, so pressing and present the danger, and so high is the death-rate at Margate, that the whole question has weighed heavily on the conscience of the town for many years. Lengthy discussions have been held, numerous schemes for draining the town have been drawn up, and finally the proposals of the borough surveyor, Mr. Albert Latham, were accepted, not only at Margate, but by the Local Government Board. Nevertheless years have already elapsed since this high sanction was obtained; but nothing has been done. The fact is that the scheme adopted is a somewhat expensive scheme. A portion of Margate lies so low that it is even below the sea-level, and it is indispensable to establish a pumping apparatus. The most difficult district to deal with is that known as the Marine-terrace. Here the street or esplanade was built after the houses, and these are so low down that they have two basements below the level of the street! Though apparently of but three stories they are really five stories; the drainage of these houses is into cesspools below sea-level, and constantly filled with sea-water. Immediately behind these houses the valley of the Brooks stretches out, and at a point called Tivoli is the well whence the town water-supply is derived. It is difficult to account for the presence of sea-water at Tivoli unless it has first passed by the cesspools in and about Marine-terrace.

The Town Council has just purchased for the great sum of £59,000 the plant and good-will of the Waterworks Company, and as a responsible public body, mindful of the health and life of their constituents, it is to be hoped that they will at once remove their pumping apparatus, &c., either to the Dane Valley or some other spot, where pure water can be obtained. It is equally urgent that the work of laying down sewers and properly draining the town should also be promptly commenced. By the accepted scheme the entire sewage of Margate and Cliftonville would be carried away to the Long-nose—Spit Rock, off the Foreness Point. For this purpose an outfall tunnel some 8000 feet long will be necessary. This will, or should, do away with all cesspools, and with the abominable drains that we have described falling into the sea near the jetty, and with the smaller drains of the Buenos Ayres district, that also fall into the sea objectionably near to the bathing and beach.

In the meanwhile there are smaller but also urgent reforms that could be at once carried out. The presence of piggeries within the town is a most offensive nuisance. A number of private slaughter-houses are badly managed; there is nothing to prevent the filth from them soaking into the soil. The Act, also, with respect to the management of dairies is not carried out, and apparently no one seems inclined to make it his business to enforce the excellent regulations laid down by the law. At the same time, we must give the Sanitary Inspector credit for a display of considerable energy. No less than 113 notices to abate nuisances were served during two weeks in August of this year, and many cesspools are now ventilated.

Nevertheless, considering the climatic advantages that Margate enjoys, the death-rate is high. This is due in some measure to the fact that during the season the inhabitants let

the better part of their houses as lodgings, and crowd down in the basements. Here the children are kept in close proximity with the sink, and its untrapped pipe leading to a cesspool, which is perhaps only emptied once in ten years! The infant mortality is consequently excessive. In the year 1878, for instance, the infant mortality at Margate was at the rate of 184 to 1000 births, as against 153 in all England!

The death-rate of Margate is estimated in a manner peculiar to itself. We were presented with what is called a corrected average, but in this the corrections are all on one side. The deaths taking place at the hospitals, at the Infirmary for Scrofulous Disease, and even at the Union work-house, are deducted. Nor is this all; even the visitors that die at Margate are not included. Nothing, on the other hand, is said of the deaths that occur at the Fever Hospital, which happens to stand within the Ramsgate district, though built for both towns. Apparently the fever cases removed from Margate to this hospital figure in the Ramsgate death-rate. Also it is evident that a great proportion of visitors, on the first symptom of disease contracted at Margate, hasten back to their homes, and thus for the most part augment the London death-rate, when in reality the bad sanitation of Margate is to blame. No allowance is made for this, and it is therefore not fair to compare the so-called corrected death-rate of Margate with that of other towns. Still, even when taken at the best, the figures are not over favourable. Thus, taking the reports of the medical officer of health—reports, by the way, which are only printed when they are considered favourable, and which therefore we had in some instances to read in the manuscript—we find that in 1875 the gross death-rate on the population—11,956—was 23.75 per 1000. The corrected estimate allows for an increase of population only, and amounts to 20.41; the zymotic death-rate being 3 per 1000. Dr. Gwynne Harries in his reports remarks that in 1872 the zymotic death-rate reached 3.8 per 1000, and that seven only of the forty-three English watering-places had a larger proportionate mortality from this cause. In 1876 the gross death-rate was 18.81, but by estimating the population at 13,000, and deducting 30 scrofulous persons who died in the hospital, and 10 visitors, we have a corrected death-rate of 14.23. The zymotic rate was 2.53. In 1877 the gross death-rate is given on a population of 13,500, and not on the census estimate, and it amounts to 18.81; from this 41 deaths in hospitals and 53 among visitors are deducted to produce a corrected average of 11.85. The zymotic rate was only 1.85. In 1878 the gross rate on a population of 14,000 was 21.35; the rate corrected as above was reduced to 17.28. The zymotic rate was 3.5. The average for these four years would be a gross death-rate of 21.18; the corrected death-rate was 15.94, and the zymotic rate 2.72. Nor are these four years exceptional years. They are better than many previous years, though there was a limited outbreak of scarlet fever in 1878.

Considering the bad sanitary condition of the town, these figures are a proof of the counteracting and purifying influence of the climate and winds. Still, for a town so exceptionally placed as Margate, they are anything but satisfactory. Indeed, this would be a good opportunity for interference on the part of the Local Government Board. This body might, at least, insist on the immediate execution of the drainage scheme it sanctioned three years ago, and on the proper supervision of the dairies, &c. The Harbour Company were sentenced in the Court of Queen's Bench to keep the harbour clean, but this is still a great nuisance every time the tide is down, though the decomposed seaweed laid bare would, if removed, make valuable manure. Margate, unfortunately, is a sedentary town, and will not move unless under severe pressure. This town actually fought against railways and against steamers. It would not allow the South-Eastern Railway Company to establish the coaling station here, which has since become the fortune of Whitstable. It resisted the creation of the jetty, which is now the glory of the town. In a word, every form of progress has been energetically resisted by the inhabitants of Margate. Whatever has been done, has been done long after other towns have set the example, and, therefore, it is not surprising if, in sanitary matters also, Margate should be behind the age.

THE net proceeds of the Hospital Saturday collection at Lincoln amount to £90 8s. 10d., £60 5s. 10d. of which is to be paid to the County Hospital, and £30 3s. to the Leeds Eye and Ear Infirmary.

THE LANCET.

LONDON: SATURDAY, SEPTEMBER 25, 1880.

THE nineteen bodies which compete with each other in the business of licensing men to practise medicine within the bounds of Her Majesty's dominions should be more eager than the profession itself for the amendment of the Medical Act. Mr. SIMON in a memorable speech in the Medical Council tried to impress that self-complacent body with the urgency of the question of medical reform by referring to the schism in the profession caused by this question. But to our thinking there is a more powerful appeal still to be made to the nineteen bodies, and that is the schism which exists among themselves. It is true that when the meeting of the Medical Council comes round, the common sense of living in a glass house makes the members all very courteous and considerate towards each other. The love of privilege and existence in them all, and in each of them, secures a sort of common action towards the preservation of each, and of each other. But it remains true that there is a kind of schism in the bodies. They disagree. They misrepresent each other; or, to use the lightest phrase, they misunderstand and distrust each other. This disagreement and mutual disparagement are a scandal incident to, and inseparable from, the present licensing system, and constitute a powerful argument against the system. If we can prove that the scandal exists, and that it is inseparable from the existing system, we shall hope—though it be against hope—to convince those who advocate the system that their great interest lies in a modification of it, and that their interest in such a modification is greater than that of anybody else.

We have, then, to prove the existence of a scandal in the present licensing system, and in the mutual misunderstanding and disparagement which it involves. We shall have no difficulty in doing this out of the mouth of witnesses whose authority will be admitted by both the Medical Council and the various Licensing Bodies in the several divisions of the kingdom. The authority we shall first quote as to the existence of a scandal in the present licensing system is that of a Committee of the Medical Council, representing each Royal College in the three kingdoms, and the Scotch, Irish, and English universities, the chairman of which was Dr. ANDREW WOOD. The language of this committee was as follows:—

“One of the great evils at the present moment is the inequality of the examinations for licence. This inequality of the test of efficiency is the more unfortunate as every licence confers an equality in the right to practise everywhere. The easy examination of one licensing body tends to depress the standard of the examination in all the rest. Visitations of examinations doubtless partly remedy this state of things, but to completely remove it a bolder course is necessary.”

The report then goes on to indicate the necessity for such a combination of the Licensing Bodies as may form a Conjoint Examining Board, and to indicate the probability of having to apply to Parliament for powers to effect such a combina-

tion. Twelve years have elapsed since this report was drawn up by a Committee of the very greatest weight and authority. The inequality remains, and is a scandal.

But the scandal to which we wish at present more particularly to allude, is the disposition to blame each other evinced by the various bodies and the light in which they have placed each other before Parliament and the public. It is one thing for the bodies to think meanly or disparagingly of each other, and another for them to discredit each other before Parliament, and then quietly to retire from the scene before asking for Parliamentary remedy and securities against the evils which they have described. England blames Scotland and Scotland retorts on England, and both blame Ireland, till statesmen must feel considerable surprise that honourable men should be amongst the defenders of a system under which such charges and insinuations can be made. Let us consider a few of the things that have been said by prominent witnesses before the Select Committee, and which are a part of the indelible evidence before Parliament. Mr. SIMON said the number of cases of gross ignorance passed by the Licensing Boards, and detected by the Army and Navy Boards, were a very serious blot on the system, and showed clearly and decidedly that there was slackness in some of these examinations. Referring to the examination for the degree of Bachelor of Medicine in the University of Edinburgh, to which Professor TURNER justly attaches very great value, Mr. SIMON coolly said:—“I have no reason at all to suppose that it is higher than might properly be the general examination for Scotland.” To question 785: Is there any tendency on the part of candidates to run to the easy gates of admission? Mr. SIMON said: “I can hardly suppose the contrary.” Sir JAMES PAGET, in his own delicate way, said: “There is a general belief that some of the examinations both in Ireland and Scotland are not so high as they might be. I do not hear it stated that they are so low as to be unsafe; but it is believed that some of them are not so high as they might be.” Before he left the Committee Sir JAMES PAGET had to confess that the examination of his own College was most indefensibly defective, and did not include Chemistry, Midwifery, Materia Medica, Pathology, and Jurisprudence. When the Scotch witnesses came before the Committee they were not slow to retaliate. Professor STRUTHERS charged Mr. SIMON with being unacquainted with the existing state of things. Professor GAIRDNER, referring to some hazy and vague language of Dr. ACLAND's as to the conditions of graduation at Glasgow, described Dr. ACLAND's state as one of invincible ignorance, or marvellously shutting his eyes to facts; and, referring to the examination for the membership of the English College of Surgeons, said: “England, in this respect, is alone among civilised countries; there is no civilised country in the world except England where it has been quite the habitual thing for a man to go out with a licence in Surgery and not to be examined in Medicine, or Midwifery, or Materia Medica; and there are hundreds of such men in the country now.”

Such are a few of the amenities exchanged by the rival witnesses before the Select Committee. Is it creditable that they should be willing to let all things continue as they are, and to take no step to satisfy Parliament and the public that they are doing their very best to remove all the inequalities

and supply all the defects which create mutual distrust, and constitute at the present moment a scandal in the eyes of Parliament? The Bodies themselves—this is our contention—have the greatest possible interest in demanding legislation that shall equalise minimum examinations and suppress that whisper of disparagement which has been heard in Parliament and which will be heard again till the system of Licensing and the Constitution of the Medical Council are altered. The examining system is no longer a parochial or territorial one. The meanest qualification of the lowest body carries Imperial privileges, and should be above suspicion.

THE proceedings that have recently taken place at Cork, whereby the treatment of a physician has been impugned, are too serious to be passed over in silence, for they involve matters of much importance to the profession, which in the person of Dr. MACNAUGHTON JONES has been so unwarrantably attacked. They took place, too, at a court of inquiry in which evidence was taken without the protection of an oath; where random and irreconcilable statements were made; where a leading solicitor of the town was opposed, with all the advantage of professional skill, against Dr. JONES, who had to conduct his own case heavily weighted, which he did with commendable vigour, conscious of the right on his side. His position was indeed an unenviable one, but we are proud of the manner in which he managed his case and met the aspersions on his character. It is well known how Dr. MACNAUGHTON JONES has won for himself, by sheer force of energy, a high position in the profession. His name is known not only in the city of Cork, but throughout the United Kingdom; and many will endorse the gratifying testimony of the high estimation in which he is held, given by Dr. DENIS O'CONNOR, the Nestor of the profession in that city, who last year held the honourable office of President of the British Medical Association.

With the evidence before us—and it fills the columns of the local daily journals during a whole week—we are amazed at the character of the inquiry. With scarcely an exception, there has never been so vexatious, so uncalled-for, so cruel a persecution of a public officer as that to which Dr. MACNAUGHTON JONES has been subjected. We would that we could say the case was wholly without parallel; but with regret we recall how, a few months ago, a member of the profession had to defend himself in a court of law in a somewhat similar manner. The occasion which called for the prosecution in that case was substantially the same as in this, although the circumstances were different. In the case at Westminster the same spirit seems to have been at work: the feelings of a bereaved parent (in that case unfortunately a brother practitioner) were aggrieved. Dr. MACNAUGHTON JONES has emerged from this inquiry with his character fully indicated and his course of action justified; but the pity of it is that he should have had to endure the anxiety and mental strain entailed by most painful proceedings. We will endeavour to put our readers in possession of the facts of this case, which is full of lessons to the medical profession and to the public.

So far as can be gathered from the mass of evidence—some of it very contradictory—the following is the history of the case that led to this prolonged inquiry, eight months afterwards. In the month of February last, a Mr.

CRAWFORD, schoolmaster, had the misfortune to lose two children from scarlet fever. A third child sickened, and the father was strongly urged by Dr. JOHNSON, who saw the case, and diagnosed it as scarlet fever, to send the boy to the Fever Hospital, where a certain number of wards are reserved for paying patients. The staff of this hospital consists of Drs. BEAMISH, JONES, and BUDDS. Mr. CRAWFORD demurred at first, but in yielding he asserts that he stipulated that the child should not come under the care of Dr. JONES, alleging as his reason that he knew Dr. JONES was an enthusiast for experimentation, and "he would not have his child experimented on." It was suggested that the patient should go into the same ward as his sister-in-law, who was under Dr. BUDDS, also for scarlet fever; but to this proposition it would seem Mr. CRAWFORD—who appears to have acted throughout in the most impracticable manner—also objected; and the result was that the child was admitted in the ordinary way, and fell under the care of Dr. JONES, who saw him the morning after his admission, who recognised the gravity of the case—it was one of suppressed malignant scarlet fever—and who prescribed, amongst other remedies, wet packing and the subcutaneous injection of pilocarpin. A few hours later the father, who had heard of the measures proposed, meeting Dr. JONES, requested that another physician, who had no connexion with the hospital, should be called in consultation. This of course was out of the question, and Dr. JONES, not suspecting the real reason of this strange request, told Mr. CRAWFORD so, but offered to hand over the case to, or to consult with, one of his colleagues if the father wished it. But Mr. CRAWFORD expressed himself satisfied. Meanwhile, some difficulty had been experienced in obtaining a solution of pilocarpin of the required strength, and the injection was not administered until Dr. JONES came and gave it himself at the end of the afternoon. The patient was then very ill, and it was evident that the remedy could only be adopted as a *dernier ressort*. The drug produced its usual effects, free diaphoresis, increased bronchial and salivary secretion, &c.; but in spite of stimulants the child died the same night. There are several points which seem to show want of judgment on the part of the resident officer, and bad management generally, but the above are the essential features of the case. There were contradictory statements as to whether Dr. JONES did or did not leave instructions to be sent for if the symptoms grew worse; at any rate he was not sent for, and only knew of the child's death on going to the hospital next morning. The father now alleged—first, that Dr. JONES had not shown care enough; and, second, with strange contradiction, that he had been too energetic in his treatment of the case. He caused an inquiry to be set on foot at the hospital itself, but as the proceedings there were not made public, he entrusted the case to one of the leading solicitors of Cork to formulate specific charges, and at the meeting of the Town Council on September 6th, his solicitor attended to oppose the usual grant to the Fever Hospital on the ground of these charges. After all the facts had been laid before the Town Council, a resolution was carried instructing the managers of the hospital, of which the Mayor is chairman, to hold another inquiry into the matter, and to report to the Council; an amendment by Dr. CREMEN,

expressing confidence in the management and in the inquiry already held, being withdrawn. On September 9th the inquiry was opened; and after public sittings of upwards of five days, during which the whole miserable business was raked up to the full, the committee reported its decision on the 18th. We regret that the inquiry elicited facts which showed that the hospital management was defective in more than one point—to which we shall presently advert.

The charges formulated by Mr. CRAWFORD ran as follows:—1. That having received a distinct promise that his child would not be placed under the care of Dr. JONES, he was subsequently so placed. 2. That Dr. JONES, having refused to allow his (Mr. CRAWFORD'S) private physician to be taken into consultation as to an operation proposed on his child, subsequently performed that operation (a new and dangerous one) without consulting his own colleagues in the hospital. 3. That he performed that operation without any proper explanation to Mr. CRAWFORD of its nature or effect, and without getting his sanction. 4. That he exhibited want of care and discretion as to the time of performing the operation, and great carelessness and neglect subsequently, considering the dangerous and novel nature of the operation.

Upon the first of these charges most contradictory statements were made, and there is only Mr. CRAWFORD'S evidence in support of the allegation. Dr. ADDERLEY, the resident medical officer, who upon some other points was in harmony with Mr. CRAWFORD, gives quite a different version of the supposed request and stipulation, averring that the father demurred to the child being placed under the care of Dr. BUDDS, and yet appeared satisfied when told that it would be admitted in order, and would come under Dr. JONES. The complainant said that at his request Dr. JOHNSON wrote to Dr. BUDDS about the case, but the letter was never sent, because, Dr. JOHNSON says, the child did not come under Dr. BUDDS' care. The charge, however, foolish as it is, gives a clue to the whole of this pursuit of Dr. JONES. From the very first Mr. CRAWFORD distrusted that gentleman, and it may well be imagined that his preconceived opinion dominated throughout, and made him attribute the child's death to its having been under the care of a man whom he mistrusted.

The second charge is the gravest; and the one which carries with it the issues most important to us as a profession and our relations with the public. It consists of at least two points. The first is that Dr. JONES refused to call in consultation upon the line of practice he was about to adopt in the case the "private physician" of Mr. CRAWFORD. This gentleman must have been strangely ignorant of hospital management if he supposed the procedure he suggested could be carried out; but we fear he was encouraged in this request by being told by Dr. ADDERLEY that there was a precedent for him to follow; that Dr. HARVEY had once attended his servant there and prescribed for him, the truth being that Dr. HARVEY only saw the case as any visitor might. It would be absurd and intolerable were this principle of extraneous consultation to be put into practice. A hospital management provides itself with its own staff, and has full confidence in its members, knowing that they are well able to cope with the diseases before them; and the idea of introducing further medical opinion to suit the caprices and whims of the patients'

friends is one which has never, we believe, been before broached. It was said that on hearing this request Dr. JONES should have perceived that the child's father had lost confidence in him, but, on the contrary, he expressed himself satisfied, and would not consent to Dr. JONES'S proposal to transfer the case to one of his colleagues! The other count of this charge was that Dr. JONES had performed a "novel and dangerous operation" without consulting his colleagues. That the hypodermic injection of a solution of pilocarpin should be so described is ridiculous. As Dr. JONES clearly showed in his admirable statement, that drug has for some years been used in many diseases, among them scarlet fever. Never were clearer indications given for its use than in the present case; and if once the principle be admitted that the employment of a powerful remedy in a desperate case is to lay the physician open to a charge of malpraxis, all hope of advance in medicine is gone. But we may ask, How was it that Mr. CRAWFORD knew of the intention to employ this drug? what ground had he as a layman to question the procedure, or to allege that it was dangerous? We regret to find it recorded that he obtained this information from Dr. ADDERLEY, who is said not only to have shown him the prescription, but to have intimated that the remedy was a new and untried one, and is further said to have added, that he himself would be afraid to use it. Such an expression of opinion was clearly enough to have disturbed the equanimity of even a stronger man than Mr. CRAWFORD has shown himself to be. Backed up by such a preposterous statement from the resident medical officer, no wonder he felt himself justified in the course he took, magnified the administration of a hypodermic injection into an "operation," and imagined that so grave a step should only be taken after consultation.

Upon the plea that pilocarpin was a new and dangerous remedy, Dr. JONES was, of course, enabled to bring overwhelming evidence in reply. He showed how grave the case was; how such a type of scarlet fever invariably ran a fatal course; how pilocarpin had been advised by some authorities and prescribed by others in like circumstances; and, in a word, how its use was almost the only resource left him to employ. He was supported in his argument upon the nature and uses of pilocarpin by the evidence of Dr. GAVAN DUFFY of Dublin, and by letters from distinguished practitioners. The "prosecution" endeavoured to urge that the drug should have been given by the mouth, and not injected under the skin (or into the veins, as they stated!); that jaborandi should have been given, and not its active principle; but confutation of this special pleading was easy enough. Nor could it be alleged that the injection was not given with the greatest care and caution. Pilocarpin is one of the most powerful drugs of its kind, and most certain in its action; and its employment in such a case as the present was rational and scientific. No time could be lost, and the desperate nature of the case demanded the administration of a rapidly and powerfully acting remedy. What would have been said, it was pertinently remarked, had Dr. JONES contented himself with letting the patient die without trying all the measures known to him? Was he to be blamed because his knowledge was of a wider scope than that of others? The case is another illustration—too common it is to be feared—of

the vulgar ignorance which would rather see the approach of death than sanction the employment of the only means which may avert it, because of a supposed "heroic" character. The father would have felt differently had Dr. JONES succeeded by these means in rescuing the child from death. But are still living in the age of unreason! As to the lack of consultation with his colleagues before giving the drug: it might have been prudent had this course been pursued; but the proposal does not seem to have been entertained at all, for consultations were not the rule at this hospital. Dr. JONES acted on his own responsibility, secure in his knowledge. His action was scientifically right, and there was really no more reason for consultation than there is in the treatment of every patient that comes under the care of a medical man.

The third charge is equally preposterous, and may be dismissed in a very few words. It is not the duty of the physician to explain every step of treatment of a case to the relatives of a patient, and to get their sanction for such treatment. It is enough for them to know that no means will be left untried in averting the fatal result; and to imagine that before such measures could be taken they should be consulted and their approval gained, is too absurd to be dwelt on. So, again, with the final charge, which accuses Dr. JONES of want of proper care and discretion. It was urged that the administration of the drug was postponed till it was too late to have any good effect. Some delay was, it seems, experienced in obtaining the drug, but its administration was left until Dr. JONES himself gave it, eight hours after he had first prescribed it. So again with his other orders,—the "packing" was not commenced until after this second visit, and the child does not appear to have had the stimulant Dr. JONES ordered. There was also a discrepancy as to whether Dr. JONES had left instructions to be sent for if the symptoms grew worse, or not—the result being that, after the pilocarpin was given, he heard no more of the case until the next morning, when he learnt that the child had died in the night.

As may be imagined, the Committee could have no difficulty in arriving at a decision, in spite of the able manner in which Mr. JULIAN, the advocate, conducted his case. They saw clearly that Dr. MACNAUGHTON JONES had acted with full cognisance of the responsibilities of his office, and yet they could not but see that there was something radically wrong in the working of the hospital. This, indeed, came out so plainly at the inquiry that Dr. O'KEEFE sent a letter, which was read in court, maintaining that unless improvements were speedily effected, the Fever Hospital had better be closed. The Committee found that Mr. CRAWFORD had good reason to believe that his child would not be placed under Dr. JONES's care, but that Dr. JONES was in no way involved in the matter, and that he was quite justified in refusing to take Mr. CRAWFORD's private physician into consultation. They did not think that the term "dangerous" was applicable to the drug administered in the case. They regretted that Dr. JONES did not take his colleagues into consultation, but the medical evidence showed that from Dr. JONES's special knowledge of the drug he was warranted in dispensing with the consultation. They did not think it was necessary for Dr. JONES to give

an explanation to Mr. CRAWFORD as to his intention to use the drug. Finally, as to the charges of negligence before and after the application of the remedy, want of care as to the time of performing the operation, and lamentable delay in its application, they considered that there was evinced an absence of sufficient care and interest in the treatment of the case. The Committee also expressed their intention of at once attending to the improvement of the management of the hospital.

Thus has ended one of the strangest inquiries that has ever been set on foot. Dr. JONES has been treated with scant courtesy and great injustice, but he has come out of the matter triumphant, and has thoroughly vindicated the rights of hospital medical officers, whose position and responsibilities should surely entitle them to be protected from misrepresentation. Fortunately, this is an uncommon occurrence, for the office of a hospital physician would be intolerable were his practice liable to misconception on any occasion when he is called upon to treat his patients independently. We are sure that the public will, no less than the profession, see that it is impossible for a hospital to do its work unless the fullest confidence is reposed in the medical officers.

A CORRESPONDENT, Dr. IRVINE, of Pitlochry, sends us an account of a curious method of treatment of the bite of a rabid dog. A boy was bitten by a dog, and severely lacerated on the face. There were three deep cuts, one requiring a stitch. In order to preserve the boy from the possibility of hydrophobia, the friends had adopted the following precaution:—They wiped all the saliva they could get out of the dog's mouth, rubbed this well into the cuts, and then shot the dog! It is a common belief among the peasantry of the district that this procedure will infallibly prevent the bitten person going mad. Our correspondent rightly points out that the measure constitutes a grave danger to the public, and is, indeed, a public disgrace. We think that the local authorities of the districts in which such a custom is practised should do something to diffuse a knowledge of its extreme danger. If a person were bitten through clothes (so that the saliva were wiped from the biting teeth), and then the saliva of the dog deliberately rubbed into the wound, and death from hydrophobia resulted, the person rubbing the saliva would almost certainly be responsible for the resulting death.

In his Gulstonian lectures Dr. GOWERS pointed out the identity of some of the symptoms of hydrophobia and hystero-epilepsy, that one effect of the poison of rabies seems to be to produce a transient hysteroid state, while, on the other hand, in the paroxysms of hystero-epilepsy there may be barking and biting in a curiously animal manner. This is no doubt the true explanation of a case which came recently under the notice of a police magistrate, and has furnished some of our lay contemporaries with a subject of discussion. A boy had suffered from epileptic attacks for some time, attributed to the bite of a dog two years previously. In these attacks, which recurred every evening, he would bark and bite, and his father was convinced that he was suffering from hydrophobia, notwithstanding the assurance to the contrary of some medical men who had seen the case, and the fact that the dog which had bitten the

boy was still well. From the accounts which appeared in the daily papers the nature of the affection is obvious.

Another case in which the same diagnostic problem arose has been reported from Buckinghamshire. In this, even a medical man appears to have been misled as to the nature of the disease. A boy, whose mother was epileptic and insane, was seized with a peculiar attack. Previously well, he one day "fell off his seat and commenced jumping about the room like a frog. He snapped at everything, even flies, and getting hold of a cap, tore it to shreds. He also barked and acted like a dog gone mad, and it took two men to hold him from the time he was seized with the fit until half past five." A doctor pronounced the case to be one of hydrophobia. The boy was removed to the Maidenhead Infirmary, where nothing could be found to be the matter with him. The lad himself only remembered feeling giddy, and then nothing more till he found himself in the hospital. This was clearly a case of an epileptoid seizure with post-epileptic hysteroid or maniacal symptoms of the character to which DR. GOWERS has called attention.

A case of hydrophobia, in which accidental circumstances rendered the diagnosis at first one of some difficulty, was described to a recent meeting of the Académie de Médecine, by M. HARDY. On August 18th he was asked, at the house of a patient whom he was visiting, to see also the coachman, who had had some painful symptoms since an attempt to move a heavy carriage a few days before. Feeling great pain in the arm immediately afterwards he had it tightly bandaged. In consequence of the compression the hand and forearm swelled and became livid and very painful. During the next two nights a new symptom came on, a sense of constriction in the chest and throat, occasional hiccough, and an inability to drink. At the same time the patient was restless and could not sleep. M. HARDY found him with a normal pulse, but with sunken eyes and anxious countenance. On being offered water in a glass or spoon the man threw back his head, closed his teeth, and was seized with spasm in the throat. It was ascertained that four months previously he had been bitten on the finger of the left hand by a small dog which was constantly with him, which slept in his bedroom, and was usually very quiet. On that day, however, it suddenly became troublesome, bit its master, and then ran away, and had not since been heard of. Two months and a half later, another dog in the house became ill, and a veterinary surgeon, to whom it was taken, pronounced it rabid, and poisoned it. It could scarcely be doubted, on these facts, that the coachman was suffering from rabies. Chloral was given by the rectum, an injection of morphia was administered by the skin, and the constant current applied to the throat. Under the latter the spasm ceased at once, and for some hours the man was able to drink. Forty-eight hours after the onset, however, convulsions came on; he endeavoured to get up and go away. Seven or eight assistants could scarcely keep him from jumping out of window. After several similar attacks he became weaker, and died on the third day. M. HARDY raised the question whether the pain suffered in consequence of the injury to the arm may not have acted as the excitant of the symptoms, and also remarked that the period of incubation in the man was, in this case, nearly double that in

the dog; and, lastly, pointed out the lesson, taught by so many cases of the disease, that suspicious symptoms in familiar dogs should be met by the same precautions as would be adopted in the case of strange animals. M. BOULEY also insisted on the importance of the diffusion of a knowledge of the early symptoms of rabies. In the case under discussion, in a household in good position, characteristic symptoms had been quite unnoticed. He mentioned a curious instance of the manner in which such things were managed better out of France than in it. When on a visit to Bavaria, to one of the councillors of the district, in 1866 or 1867, he found himself one day an object of great interest to a troop of children coming out of school, and he ascertained that at this school the children had been made to learn by heart a report on the early symptoms of rabies which he had presented to the Académie in 1862. The example might be followed with advantage elsewhere, and it seems probable that it will now be followed in France. M. BOULEY mentioned another instance of the value of the constant current in the paroxysms of spasm. A young veterinary surgeon in La Capelle, suffering from rabies in consequence of the bite of a dog, and violently convulsed, was treated by a constant current from the nape of the neck to the soles of the feet, and immediately all the phenomena of dysphagia ceased, and the patient recovered the power of drinking.

Another case of hydrophobia, which has lately occurred in Paris, was also that of a veterinary surgeon. He had been bitten at least twice previously by rabid dogs, but on each occasion the bite was in soft parts, where it could be immediately and efficiently cauterised. The last bite, which caused his death, was near a finger-joint, where there was no adipose tissue beneath the skin; and the cauterisation, first with nitrate of silver and then with nitric acid, was probably insufficient—at least this was the opinion of the unfortunate subject of the disease. The period of incubation in this case was three months.

These are the only two cases of hydrophobia which have occurred in the Department of the Seine since the commencement of the present year, although twenty-four persons are known to have been bitten by rabid dogs, and no less than 127 dogs have been killed as distinctly rabid or as presenting suspicious symptoms, and 103 dogs destroyed in consequence of their having been bitten by rabid animals.

Annotations.

"Ne quid nimis."

GUY'S HOSPITAL.

THE state of civil war at this hospital continues. At the meeting of St. Saviour's Board of Guardians on September 17th Dr. Iliff drew attention to the subject, upon a letter from Dr. Rendle, of Forest Hill, urging the Board to intervene between the Governors and the medical staff; and an extract from a letter written by one of the staff was enclosed, stating that the medical staff and the governing body were "more at loggerheads than ever." Dr. Iliff referred to the changes that had taken place in the nursing arrangements, and defended the old nurses from the aspersions cast on them; and after referring to the case of Ingle, which, he imagined, would have led to some alteration in the

arrangements, he moved that a memorial should be sent to the Governors, setting forth that the Guardians had heard with regret the differences between the Governors and the medical staff on the nursing question, and of the determination of the former to make the latter subordinate to the nurses, which could but result in great injury to the patients. They had also heard with regret the attacks made upon the old nurses, but were not without hope that the Governors would yet see their way clear to modify the present system, so that all concerned might work more harmoniously. The chairman, in seconding the resolution, said the memorial would call the attention of the Governors to the fact that they were subject to the opinion of the public. Mr. Robins was of opinion that the memorial did not go far enough, and intended to move at the vestry for a petition praying for an inquiry into the whole system. Mr. Williams would have liked the memorial to be more severe. It was unanimously agreed that the memorial should receive the seal of the Board and be forwarded to the Governors. We are glad to see this awakening of the public mind to the continuance of this scandalous state of affairs; and we are at a loss to conceive how the governing body can persist in their line of action in the face of an opposition which is by no means limited to their own medical staff. A letter from Sir Thomas Dyke Acland appears in our issue to-day on the present position of the nursing question at Guy's and elsewhere.

EXPERIMENTAL DIVISION OF THE OPTIC AND CILIARY NERVES.

THE effect of division of these nerves, separately and together, has been studied experimentally by M. P. Redard, on rabbits and dogs. The ciliary nerves were divided alone, chiefly upon dogs. The nerves are distinctly sensitive. After complete division the cornea had lost all its sensibility, and its transparency quickly disappeared. The pupil dilated. In rabbits the dilatation of the pupil was preceded by a transient contraction. If the section of the nerves is partial, the anaesthesia and paralysis of the iris are also partial. The pupil becomes irregular. When the outer ciliary nerves are alone divided, the outer part of the iris is alone paralysed, and the inner part still contracts under the influence of light. The division of the nerves did not, in these experiments, lead to any disturbance in the nutrition of the cornea or of the eyeball, unless the injury and hæmorrhage produced by the operation were very great. The dilatation of the pupil continued for four or five months, but the sensibility of the cornea returned in about three months, at first locally, afterwards generally. Several animals were exhibited to the Société de Biologie in which the ciliary nerves had been divided a year and a half before, and the sensibility of the cornea was perfect. The circulation in the optic papilla was disturbed soon after the operation. Sight was impaired at the commencement, but complete blindness was never observed. In some there appeared to be no disturbance of sight. In a few cases there was distinct optic neuritis, with partial consecutive atrophy, irregularity of the edges of the papilla, and dilatation of the veins.

If both the optic and the ciliary nerves are divided there results, of course, immediate insensibility of the cornea, and enormous dilatation of the pupil. The fundus oculi and papilla are pale, but some veins remain gorged with blood. Trophic changes often lead to failure of the operation; the cornea becomes perforated, and the eyeball undergoes atrophy. This happened with especial frequency when the blood effused in the wound hindered union of the divided structures, or when the upper part of the eyeball had been laid bare in the neighbourhood of the insertion of the superior rectus. This effect was attributed to the division

of the anterior ciliary vessels. In the majority of cases, however, the nutrition of the cornea, and the shape of the eyeball, were not affected. Black hæmorrhagic points were seen near the disc, and some patches of choroidal atrophy. The pupil remained dilated, and only at the end of about six months did it recover, in slight degree, its contractility. Corneal sensibility returned in three or four months. In the animals shown, which had been operated on a year and a half previously, it was almost perfect. The ciliary nerves appeared to have undergone almost complete regeneration.

THE PROVIDENT DISPENSARY MOVEMENT IN MANCHESTER.

THE most important development of the Provident Dispensary Movement of late years has been the attempt to establish them on a large scale systematically in Manchester, Liverpool, Birmingham, &c. The *Manchester Guardian* contains a report of a meeting of working-men in the dining-room at the Ashbury Carriage Company's works in connexion with the new branch of the Manchester and Salford Provident Dispensaries Association. Dr. John Watts delivered an address, in the course of which he said there were now four Provident Dispensaries in the city that were paying their expenses entirely, and wanted no contributions except from members. Two others were just upon the edge of self-support, and a seventh was making very fair progress, but it was not yet a year old. The Council wished to establish an eighth in that neighbourhood. As regards the mortality of Manchester, Dr. Watts stated that the death-rate in the city had decreased in forty years from 44 per 1000 to 24 or 25 per 1000. He thought by the progress of the work of Board Schools and of Provident Dispensaries the mortality would go down still further. It is very gratifying to read such reports. We can only criticise them with a view to the production of still better ones. We should be glad to hear how much the dispensaries pay their medical men,—that is to say, the proportion between the work that has to be done by the medical officers and the remuneration they receive for doing it. Secondly, we shall not be considered ungracious in reminding the sanitary authorities that in the week ending Sept. 4th the mortality of Salford was at the rate of 35.1 per 1000, and that it shared with Leicester in that week the discredit of the highest mortality in England from the seven principal zymotic diseases. The extension of Provident Dispensaries would tend greatly to the reduction of this mortality, as would also the more extensive establishment of *crèches*, where infantile life might be considered and cared for in the unavoidable absence of the mother. We may direct attention to a letter signed "L.R.C.P. Ed." printed in another column, in which the writer defends the system of provident dispensaries.

THE MEDICAL SCHOOL AT SHEFFIELD.

AN anonymous writer, signing himself "Investigator," in a letter to the *Sheffield Daily Telegraph*, discusses the expediency of procuring a new site for the medical school at Sheffield. He strongly opposes the proposal, on the ground that any want of success in the medical school in this town arises not from any fault in the building, but from other causes. Amongst them he assigns a principal place to the fact that the teachers are too much occupied in the arduous work of practice to be able to give proper attention to teaching duties. He adduces the "comparatively small population of Sheffield," "the exceptionally small fees customary there," and entailing large and laborious practices, as reasons for doubting the desirability of perpetuating the Medical School. This writer may be correct, but some of his arguments are weak. The population of Edinburgh, with a medical school in the university only of 1200 students,

is less than that of Sheffield—196,979 against 239,346. Newcastle-on-Tyne, with a fair provincial school, has only 128,443. The population of Leeds only exceeds that of Sheffield by about ten thousand. There is population enough for the purpose of a good medical school. Whether there is anything in medical practice different from that which obtains in other similar towns is a different and an interesting question, in which the profession in Sheffield must be the best judges; but we should be sorry to think that the conditions of medical life amid nearly a quarter of a million of people are so hard and commercial as to leave no time for the work of medical education.

THE ACTION OF THE HEART.

THE differences in the action of the right and left ventricles of the heart have been studied by MM. Chauveau and Marey. The form of the intra-cardiac pressure is, they find, not the same in the two ventricles. The maximum of effort of the right ventricle is attained from the commencement of the systole, while in the left ventricle the pressure goes on increasing up to the end of the systolic period. The pulsation of the heart which reveals the changes in the consistence of the ventricles, varies with the variations in the pressure exerted on the blood in the interior. Accordingly different traces are obtained from the right and left side of the heart. M. Marey has endeavoured to ascertain a criterion to indicate which ventricle is furnishing a given tracing. He finds that the two sides of the heart do not behave in the same manner during an arrest of respiration. The stasis in the right side, due to the impeded pulmonary circulation, soon changes the character of the corresponding pulsation. It loses its amplitude and it becomes several times more feeble. The lessened amplitude is due to the elevation of the base line, the summits always presenting the same horizontal line. The tracings from the left side of the heart show, on the other hand, an increase of amplitude instead of a diminution. Another distinctive sign depends on the intimate connexion between the blood pressure in the left side of the heart and in the aorta. If an influence lowers the aortic arterial tension (as by nitrite of amyl) so as to cause conspicuous waves in the aorta, similar waves occur in the trace obtained from the left ventricle, as a bifurcation or trifurcation of the summit. The tracing from the right ventricle, however, only presents indications of those waves which arise by propagation.

SANITATION AT OBER-AMMERGAU.

THE passion plays at Ober-Ammergau have this year been successful beyond all hope. The number of visitors was so considerable that many deemed themselves fortunate in obtaining sleeping accommodation in haylofts. The receipts made by the villagers who take in lodgers and by the performers must have swollen the budget of the local authorities to gigantic proportions. Under such circumstances we may, in the name of the visitors whose presence has enriched this village beyond all parallel, protest that some small proportion of this wealth might be devoted to observance of the laws of health and of decency, which at present are but too often totally disregarded. A square box placed in the centre of an ordinary room, containing a leaky pail, even though ornamented by the rough wood-carving of an Ober-Ammergau artist, is not our ideal of commodious house-drainage. The pools of escaped liquid matter formed on the floor and saturating the basement of the houses are neither pleasant nor safe. The inhabitants also manifest a distinct disinclination to empty these obnoxious buckets, and when finally they are compelled to do so, the pail is rarely conveyed more than a few yards from the door of the house, so that the outer air as well as the

inner air is more or less poisoned by this reckless and disorderly disposal of sewage. The passion plays originated in an outbreak of what was called plague, though it was probably typhus fever. The malady was imported by a peasant who came to visit some relations, and it resulted in the death of eighty persons. This caused so great a panic that the superstitious inhabitants determined to institute a passion play, which was to be repeated every ten years if the plague ceased. As this took some trouble to organise, the plague had time to wear itself out before the performances were completed, and they have consequently been repeated every ten years. If, however, some sanitary measures are not adopted for the reception of the thousands of tourists who now flock from all parts of the world, and crowd together in this little village, epidemic disease will probably make its reappearance. The villagers have made their fortunes out of the first advent of the plague, but they should be careful, or a second epidemic may rob them of these advantages. The theatre, we are informed, is always full and it holds six thousand persons. The price of the places varies from one to twelve shillings; the working expenses are very small, and there are two performances per week. Surely the margin of profits will admit of some little expenditure in defence of public health, and in the cause of cleanliness, which is next to the godliness the pious villagers so loudly profess.

THE PHYSIOLOGY OF WALKING.

M. MAREY has applied the graphic method to the investigation of some points in the physiology of walking. Some time ago he devised an apparatus for registering the steps, which he has called an "odograph." It consists of a small cylinder, rotating by means of clockwork in its interior; and of a pen, which marks on the cylinder, and is raised at each step by an impulse communicated by a ball of air beneath the sole. Observations have been made on a number of young soldiers. It was ascertained that the step is longer in going up-hill than in going down-hill. It is shorter when a burden is carried; longer with low- than with high-heeled boots; longer when the sole is thick and prolonged a little beyond the foot, than when it is short and flexible. It thus appears that the heel may, with benefit, be almost indefinitely lowered, while it is disadvantageous to prolong the sole of the boot beyond a certain limit, or to give it an absolute rigidity. Some influences which lengthen the step lessen its frequency; so in going up-hill the step becomes at the same time longer and less frequent. In walking on level ground the length of the step and its frequency are always proportioned; the quicker the walk, the longer the step. M. Marey is inclined to believe that when the steps are lengthened by a change in the boot, the recurrence is rendered more frequent.

HOSPITAL DIETARIES.

AT the half-yearly meeting of the subscribers to the Bristol General Hospital, the chairman, Mr. Naish, submitted the usual report, in the course of which he stated that the medical staff were rather extravagant in their dietary arrangements. They ordered a great deal of fish and fowl, with consequent great increase in the expenditure. The Rev. Canon Girdlestone, in moving a vote of thanks to the chairman, whose devotion to the institution he warmly eulogised, ventured to differ from him upon the above point, and quoted from his experience of the poor that the change from their scanty living to the generous diet of the hospital materially aided in their recovery; and he would therefore leave the question of diet to the medical staff; in which the chairman concurred. No doubt it is in matters such as these that hospital expenditure is much increased; but we are pleased to see that there was no intention to tie the hands of

the medical staff, or to dictate to them as to the manner in which the patients should be dieted. This is a matter in which they only can judge, and they must consider the welfare of their patients before the question of hospital finance. Parsimony in this direction is, after all, the worst paying policy.

CADAVERIC ALKALOIDS.

THE properties of the alkaline compounds which are formed during the decomposition of animal tissues have been the subject of an investigation by MM. Brouardel and Boutmy, which has been communicated to the French Association for the Advancement of Science. Such substances have been called *ptomaines*, and they have been found in the bodies of individuals who have died a natural death, and also in those who have been poisoned. In cases in which the tissues are to be subjected to chemical analysis, it is important to prevent the formation of these alkaloids, and the most efficient agent for this purpose is cold, and hence M. Brouardel has arranged for bodies which are to be subjected to analysis to be kept in the Morgue in chambers of refrigerated air. The "*ptomaines*" come into the general class of organic alkaloids, and many of them are most energetic poisons, others being quite innocuous. Although there are many distinct substances in the class, identical bodies are formed under very different conditions of putrefaction. The same alkaloid, for instance, was found in two individuals who were poisoned, the one by carbonic oxide, the other by prussic acid. A few are fixed, but the majority are volatile. A substance closely analogous to veratrine was found in a body which had been eighteen months in the Seine, and another in a goose which had been subjected to the heat necessary for cooking. Certain of these substances are clearly poisonous to man, and apparently cause the toxic effects which occasionally result from eating decomposing meat. Symptoms of serious poisoning occurred, for instance, in twelve persons who had partaken of a putrid goose which had contained a peculiar alkaloid, and one of these persons died in a few hours after nausea and vomiting. These poisonous substances may be quickly formed, for in this case the goose had been purchased in the market in the morning of the day on which it was eaten.

THE SANITARY CONGRESS.

THE annual autumnal Congress of the Sanitary Institute commenced its sittings, under the Presidency of Earl Fortescue, in Exeter on Tuesday, the former part of which day was devoted to the usual procession, festivity, and mutual congratulations. On Wednesday, Professor de Chaumont presided over the section of Sanitary Science and Preventive Medicine, and delivered an interesting address. Mr. H. C. Burdett then read a paper on the "Unhealthiness of Public Institutions," which excited a long and animated discussion, many leading sanitarians taking part in it.

THE SENSE OF COLOURS.

M. CHARPENTIER of Nancy has propounded to the French Association for the Advancement of Science the somewhat novel theory that the sense of light and that of colours is independent. White light being the sum of the various colours, it has been commonly thought that the sensation of white light was simply the sum total of the sensations of its constituent colours. On the ground that the sensitiveness of the eye for white light may be increased—as, for instance, by the previous absence of all light—without the sensitiveness for colour being increased, he urges that there is a colour-sense as distinct from that of light as is the sense of touch from the sense of heat.

THE VAUXHALL RAILWAY ACCIDENT.

ON Friday last Watson, the driver of the stationary engine in the recent accident at Vauxhall, was seriously ill with new symptoms, accompanied by a high temperature (104° to 105°). Mr. Sydney Jones then saw him in consultation with Dr. Crossman. It was decided to trephine Watson for a punctured wound of skull; a piece of the outer table of the right parietal bone had been driven in, splintering and depressing the inner table. The man has since been improving. On Saturday, the day after the trephining, his temperature had fallen to 101° ; on Monday to 99.6° .

ICHTHYOSIS.

MARKED changes in the nerve-roots in congenital ichthyosis have been found by M. Leloir. The cutaneous nerves presented changes such as have been before described. In the nerve-roots, moreover, at their origin from the spinal cord, a considerable number of nerve-fibres, of both the anterior and the posterior roots, were degenerated; presenting the lesions of "atrophic neuritis," empty sheaths with nuclei here and there, the myelin and axis cylinder having completely disappeared. A few nerve-tubules presented more recent lesions. The spinal ganglia were not examined.

THE death is announced of Mr. W. B. Whitmarsh, Coroner for Wilts. Mr. Whitmarsh, at the time of his decease, was the oldest coroner, both as to age and office, in England, he having held the post for fifty-three years. The county coronership had descended from father to son for more than three hundred years, all, with the exception of its latest holder, having, we believe, belonged to the medical profession. Dr. Michael Whitmarsh, son of the deceased, will, it is understood, solicit the suffrages of the freeholders for the post.

MR. R. BASIL CANE, Local Government Board inspector, has been conferring with the West Derby Guardians on the subject of boarding-out of pauper children. Whilst generally approving of the system, Mr. Cane submitted a few suggestions for its improvement, and amongst other pieces of useful advice, pointed out the necessity of the children undergoing a medical examination before being dismissed from the workhouse.

DR. AUSTIN FLINT, JUN., has been invited to the Chair of Physiology in the Jefferson Medical College, Philadelphia, but has declined, preferring to remain at Bellevue Hospital Medical College, New York. We congratulate Bellevue on this decision of Dr. Flint, who must be regarded as not only one of the most advanced teachers in the States, but one of the best friends of higher medical education.

THE work of Dr. W. W. Ireland, of the Scottish National Institution at Larbert, on Idiocy and Imbecility has recently been translated into the Russian language by Dr. Tomaszewski, with a preface by Professor Mierzejewski; at the same time the Medico-Psychological Society of St. Petersburg (Société des Psychiatres) has conferred on Dr. Ireland the diploma of Corresponding Member of their body.

THE Melbourne Hospital Committee (says the *Australian Medical Journal*) has determined to pay the whole of Dr. Stirling's expenses in the recent action of Dean v. Stirling, notwithstanding the recommendation of a sub-committee that one-half only should be paid.

WE regret to report the death, from heat apoplexy on August 13th, at Sibi, en route to Kandahar, of Surgeon-Major John Simpson, in medical charge of the 23rd Bombay Native Infantry. Dr. Simpson was in his thirty-ninth year.

ABOUT £88,000 has now been subscribed towards the cost of the projected University College of Liverpool. Amongst the endowments is a sum of £10,000, given by the trustees of the late Mr. Roger Lyon Jones to the Royal Infirmary School of Medicine, to found a chair of Experimental Physics, with which Mathematics will for a time be associated.

THE Committee of the Manchester Free Library have resolved to place at the disposal of the Guardians books which have been withdrawn from circulation as worn out or imperfect, and also a number of newspapers, for the use of the inmates of the workhouse hospital. This is a work of practical benevolence which we have long advocated.

WE regret to notice the death of another army medical officer in the terrible catastrophe at Naini Tal. Surgeon-Major J. B. Hannah, M.D., is reported in the meagre telegram from India to be among the killed. Further particulars of this untoward occurrence will be anxiously looked for.

IN the late sortie from Kandahar against Ayoo Khan's forces Dr. Trafford was wounded, but is reported to be doing well.

DR. T. SPENCER COBBOLD, F.R.S., has been elected Foreign Corresponding Member of the Turin Royal Academy of Agriculture.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Huddersfield (estimated population 80,245).—Dr. Spottiswoode Cameron's report for the year 1879 has a special interest from the information it contains, particularly during a considerable prevalence of scarlet fever, respecting the operation of the compulsory clauses regarding the notification of infectious diseases contained in the Local Improvement Act for the borough. He tells us that this clause "has been more carefully attended to than formerly," but that there is, in this respect, still much to be desired. 244 cases of infectious disease were, it appears, reported to the corporation under the clause. Of these cases 175 were removed to the corporation's fever hospital, of whom 12 died; and 69 were isolated at home, of whom 16 died. In addition to information of cases received under the compulsory clause, the corporation obtained information from other sources of 217 cases of infectious diseases, including 43 first ascertained from the death returns. Three of these cases were removed to hospital, of whom 2 died; and 101 were isolated at home, "or were supposed to be," of whom 27 died. It would thus appear that of 461 cases, little more than half were brought to the knowledge of the sanitary authority by the operation of the compulsory notification clause. Obviously there is much friction (passive if not active) still to be overcome in Huddersfield before the population can reap the full benefit of the clause.

"There are two difficulties," Dr. Cameron observes, "in the working of our present clause. One is the 'sufficient accommodation' proviso. Should the new Act become law information will be required in every case of certain infectious diseases, and the shifting of the responsibility of determining what is sufficient accommodation from the medical attendant to us will place him in a less embarrassing position with the friends of the patient. The other difficulty is one of diagnosis. It is often quite impossible to say whether a particular disease really exists or not. Scarlet fever not unfrequently presents itself without a rash, with no noteworthy fever, and without any very marked indication of sore throat. Such cases are apt to be overlooked; it is such

cases often that spread the disease to a whole family, and, unfortunately, parents have too frequently the notion that these cases are not infectious, or that infectiousness ceases when the children can run about. Several instances of this kind have come under our notice during the past year, and in many of them there seems every reason to believe that the parents, and sometimes even the doctor, have been in doubt as to the real nature of the malady. Such cases, too, present a grave difficulty to your medical officer, for if brought under his notice it is a serious responsibility to remove such doubtful cases to hospital; while, if not removed, they may cause grave mischief in their neighbourhood. We have had very little opposition to contend with in carrying out the clause. As has been already hinted, our difficulty at one time was rather to find accommodation for the patients."

The hospital accommodation at the command of the corporation was inadequate for the number of cases which might have been isolated, alike to the advantage of the community and the patient. The actual accommodation afforded by the hospital is not stated, but there were 22 patients in it on the 1st January, 1879, and 200 cases were treated in it in the course of the year. Of these cases 175 were cases of scarlet fever, 17 of enteric fever, 1 of diphtheria, 4 of measles, and 3 of a doubtful nature. The hospital accommodation is being increased by the erection of a new pavilion, stated to be, at the time of completion of this report, "far advanced towards completion."

South Shields (estimated population 62,000).—Mr. John Spears reports for the year 1879 a birth-rate of 35·8 per 1000 population, and a death-rate of 19·6—"the lowest death-rate for South Shields on record." The most noteworthy facts recorded in the report related to an epidemic of scarlet fever which had been prevalent in the borough for two years, but which in 1879 began to give indications of decline. The measures which it had been practicable to put in operation with a view of preventing this epidemic proved to be inadequate from the absence of proper hospital accommodation for the isolation of sufferers, and of the necessary statutory provisions for the enforcement of such isolation at their own houses. Four hundred cases of the disease were brought to the knowledge of the medical officer of health, and in each case disinfectants were distributed free of cost, and disinfection made use of under the supervision of the medical officer of health or the inspector of nuisances. At the time of the first outbreak of the disease, the influence of public day-schools in the dissemination of the infection was very apparent; and the same fact was made further so as the disease extended. On different occasions children were found attending school from infected houses, and local outbreaks of the disease were clearly traceable to conveyance of the infection in this manner. The extension of the disease, moreover, was observed in tenemented houses by its spread, in several instances, from the families on the lower floor to the families on the higher floors. The congregation of neighbours in fever-stricken houses for purposes of sympathy and gossip proved also to be a fertile source of mischief. "To deal effectually with such an outbreak as that from which we have suffered and are suffering," Mr. Spears observes, "suitable hospital accommodation for the removal of the afflicted from tenemented houses is required, and also a system of compulsory registration of infectious diseases, with increased statutory powers to prevent the exposure of reckless and ignorant persons, themselves and their children, to the dangers of infection."

Mr. Spears relates the following instances of recurrences of zymotic disease in a particular house, occupied by two tenants. In this house, within twenty months, there had been three separate outbreaks of diphtheria, all fatal; one of scarlet fever; and two of erysipelas. An examination of the house had been made, but no sanitary defects discovered. On a further examination, however, being instituted, it was found that the rain-spouts from the roof at the front of the building ran through the house, quite out of sight, to a rain-water tank in the back yard. This tank had an overflow-pipe communicating directly with the sewer; and it was found by experiment with sulphuretted hydrogen gas that sewer-air could, from the escape-pipe of the tank, reach every room in the house.

Five cases of typhus occurred in the borough during the year, all caused by infection introduced from Jarrow, where the disease had prevailed.

Whitechapel.—Mr. John Liddle's report for the second quarter of the present year (ending July 3rd) shows a mor-

tality at the unusually low annual rate of 19·8 per 1000 population of the district. The number of deaths during the last quarter was less than had occurred in any other quarter since the establishment of the local Board of Works. An effort made by Mr. Liddle and his board to induce the Metropolitan Board of Works to adopt, under the Artisans and Labourers' Dwellings Act, 1875, an improvement scheme in part of the Whitechapel district failed, the Metropolitan Board holding that the unhealthy area, to wit, 8650 square yards (or nearly two acres), and containing a population of about 1050 people, was too small to admit of a comprehensive improvement scheme being designed. The reason assigned for not dealing with the area seems curious in view of the public-health aspects of the question. Mr. Liddle expresses his regret that attempts should have been made to alter the existing Vaccination Acts, so far as repeated prosecutions of persons who refuse to have their children vaccinated are concerned. He believes that such alteration would have seriously interfered with the successful way in which the Acts are now being worked within his district, and he deprecates meddling with them.

It is pleasant to read that a disused Quakers' burial-ground in Whitechapel has been converted into a public recreation ground. The ground contains 5445 square yards, or about 1½th acre, and it has been laid out by Mr. Irons and ornamented with shrubs and flowers. It was opened for public use by the Prince and Princess of Wales on June 24th, and it now forms, Mr. Liddle says, "an enjoyable playground, where children can amuse themselves in safety, and where adults may find temporary rest and repose away from the confined and crowded courts in which so many of the poorer inhabitants of this district reside." Mr. Liddle tells us that there are still two other open spaces in Whitechapel—both disused burial-grounds—which may be made available for public recreation-grounds, and we heartily sympathise with his hope that they may shortly be converted to this use.

THE DISTRESS ON THE WEST COAST OF IRELAND.

One of the most interesting official papers which have been issued with respect to the distress in Ireland is a report by Captain Geo. Digby Morant, R.N., on the operations of the several vessels of the Royal Navy, six in number, which, under the command of H.R.H. the Duke of Edinburgh, were directed to aid in the distribution of relief to the distressed populations on the West Coast of Ireland and on the islands there. The service of these vessels, forming what is known as the "Relief Squadron," began early in the year, and continued to the 1st of August; and during this period they carried large amounts of food and clothing from the Mansion House and Duchess of Marlborough's committees to places which would else have been inaccessible, or with difficulty accessible, and so obviated, in all probability, much fatal starvation. The communities relieved are estimated approximately to number 36,841 persons, and the relief issued consisted of 856½ tons of meal, 453 tons of seed potatoes, 30 tons of oats and barley, and 110 bales of clothing, besides a considerable quantity of loose clothing. The report throws a good deal of light upon the present condition of the populations relieved. The distress did not come suddenly upon them on account of the failure of last year's harvest. For several years the people have been getting poorer and poorer, when all credit having been stopped by the shopkeepers, and the potatoes saved from the previous harvest eaten, the crisis was determined, and the people reduced to the verge of starvation. Kelp-burning, which not long ago formed the principal source of livelihood of the people, has seriously fallen off in value of late years. In Tory island, for example, where not long ago the burnt kelp sold for £7 a ton, the material only realised £2 a ton last summer. Again, in Connemara, in the Kilkieran district, up to four or five years ago a sum of £15,000 a year was paid for kelp, but during the last two or three years the district has received only £2000 or £3000 a year. While the times were prosperous the population appears to have multiplied largely, the early age at which marriage takes place—namely, nineteen and twenty years—contributing greatly to this increase. The kelp industry having failed, the people had to fall back chiefly upon tilling the ground and fishing. But the crops capable of being grown are utterly insufficient to support the populations, and, moreover, the holdings are very small; while the means for fishing are, as a rule, too imperfect to help much in the sustenance of the communities. It is the old distressful story of a people too thick upon a

ground where there is no dependable industry for support—where the land itself, partly from the nature of the climate, partly from the smallness of the holdings, cannot support them as they ought to be supported, and where there is not the means of developing new sources of profitable industry. Life is, as a rule, only maintained on the cheapest and most accessible food, at the best in barely sufficient quantity; and a succession of imperfect crops, or a failure of the principal crops, at once plunges the mass of the population into an extremity of destitution.

THE METROPOLITAN WATER-SUPPLY.

The Metropolitan Asylums Board, at their meeting on the 18th inst., had under consideration the occasional failure of the water-supply, derived from the Southwark and Vauxhall Company, of the Stockwell Fever Asylum. Notwithstanding the intervention of the Local Government Board, who directed an inquiry into the matter, the explanation given by the Company appears to have been most unsatisfactory. The serious consequences apt to arise from a great hospital being deprived, even for a very brief time, of its water-supply, at once arrests the attention. But proportionately the evil is no greater than when a like fate befalls a private dwelling, whether by accident or by the cutting off the supply by the Company. Accidental failures cannot at all times be guarded against, but there needs to be some control, in the sanitary interests of the public, over the power which the water companies now hold of depriving houses of their water-supply. In the impending revision of the powers, if not entire change in the position, of these companies, regard should be given to this absolute control over the supply, so that it be not exercised to the prejudice of the public health.

THE METROPOLITAN INFECTIOUS-DISEASE REMOVAL MUDDLE.

At the meeting of the Metropolitan Asylums Board just referred to an interesting illustration of the confusion existing in London regarding the removal of cases of infectious diseases to hospital for purposes of isolation was afforded. A patient suffering from scarlet fever had been sent from University College Hospital to one of the Asylums Board hospitals without regard to the required forms. If a pauper, the patient should have been sent through the agency of the relieving officer; if a non-pauper, through the proper officers of the Vestry. It is to be inferred, however, that the Vestry have not made any arrangement under the Poor-law Amendment Act of 1879 for the admission of non-pauper cases to the asylum hospitals. The Vestry concerned have, in fact, evaded their responsibilities in this respect, and the Local Government hold that the Asylums Board are not justified in receiving patients who are not paupers. The Poor-law Amendment Act of 1879, so far as relates to facilitating the admission of non-pauper patients to the Asylums Board hospitals, has proved a failure, and the question of hospital isolation of cases of infectious diseases in its general public-health aspects, and not as a poor-law matter only, has still to be solved. Is it hopeless to look for a statesman with capacity and courage sufficient to relieve the metropolis from this discreditable administrative muddle?

QUEENSTOWN WATER-SUPPLY.

Recently the engineering inspector of the Local Government Board for Ireland held an inquiry at the Town-hall, Queenstown, as to the present supply of water to this town. Evidence was given as to the inadequate supply by various witnesses. Dr. R. Townsend, one of the dispensary medical officers, stated that in the district of which he had charge there was but one well available, and one public fountain from which water could be obtained only for a short period every day. The town commissioners have applied to the Local Government Board to carry out a scheme for improving the water-supply, as they believe that the water company is unable to meet the wants of the inhabitants.

COTTAGE HOSPITALS.

Dr. Paget Blake, R.N., recently brought before the Plympton St. Mary Board of Guardians (whether sitting as guardians or as the rural sanitary authority does not appear) the question of establishing a cottage hospital for the isolation of cases of infectious diseases in each district of the union. He advanced most excellent arguments in

favour of this being done, but the guardians appeared to have so hazy a knowledge of their respective duties in the matter under the poor-law and the public-health law, and of the mode of reconciling their responsibilities under the two series of laws, that the discussion proved abortive. From the remarks made by the clerk, in the progress of the meeting, it would appear that the Local Government Board has not been unmindful of the wants of the district in respect to hospital accommodation for cases of infectious diseases, and has intimated that such accommodation must, when provided, be kept entirely apart from the workhouse.

BOURNEMOUTH.

We congratulate the Bournemouth Commissioners on the step they have taken for making all who are concerned in their district familiar with their newly adopted regulations relating to house-drains in communication with the public sewers. These regulations are founded upon the model bye-laws of the Local Government Board, and they have been printed for circulation, accompanied with drawings illustrative of the mode of carrying out in detail the regulations. The drawings are clear, readily comprehensible, and serve admirably to show the thoroughly sound principles upon which the regulations have been formed. We trust that the good example set by Bournemouth in this respect will be followed by other health resorts.

SUBURBAN DWELLINGS.

We are glad to learn that the Edmonton Local Board have instituted proceedings against, and successfully prosecuted, a builder for using as mortar a compound chiefly consisting of common mould in the construction of houses. We welcome any indications of activity on the part of local authorities in the suburbs in endeavouring to grapple with the serious sanitary evils attaching to much of the building operations going on there, and which, we believe, are in no place to be found more glaring than in Edmonton.

THE ADULTERATION OF MILK.

The numerous instances recorded in the public press of prosecutions by sanitary authorities for milk adulteration lead to the conclusion that such adulteration must prove a very profitable process. An instance recently occurred in Manchester, where a milk-dealer was charged for the eighth time with adulterating milk, or for offences connected therewith. He was fined £20, and it appears that the total fines he had paid for the offence, including the fine last inflicted, amounted to £110, irrespective of the costs of the prosecutions.

On the 3rd instant Mr. Alderman Bennett, of Liverpool, had presented to him by Viscount Sandon, M.P., in the name of numerous friends, a testimonial and address in recognition of his municipal services, and as token of the esteem in which they held him. Our readers will learn with surprise that among the "services" Mr. Bennett was deemed to have rendered to the borough, was his strenuous support to the project of supplying Liverpool with water obtained locally from the red sandstone;—in other words, from wells within the limits of the borough, as against the Rivington Pike scheme; and his opposition to the introduction of water-closets in the smaller classes of property; referring, we presume, to the introduction of the trough water-closet which is understood to have worked so admirably, and which is known as the "Liverpool trough-closet."

A Fulham pauper, an inmate of the workhouse there, has complained to the Local Government Board, in respect to the diet he receives, as follows: "We get hot water without any sugar in; and on pudding days we get no suet in the pudding, and not half done, it is like putty soup; and stew days we get some smashed bones, and not any herbs in it, only a few old onion-stalks, and that is very seldom. I only get meat once a week, and when I get it I cannot eat it, and we do not get weight. . . . The food is not properly cooked at all."

At Barmouth (Merionethshire) bathing appears to be permitted in primitive guise and in friendly association, male and female; and so attached is the so-called sanitary authority to the locally produced filth, that it proposes to turn the sewage of the place into the harbour, so that visitors may not suffer by being subjected to too sudden a change in passing from the filthy air of the town to the purer air of the sea-shore.

The autumnal outbreak of letters to *The Times* on the water-supply of rural districts and water-supply generally, although briefer than customary, has not been useless. It is rare for a correspondent not to state some fact or express some opinion worthy of consideration. The instructional aspect of this correspondence, which we are now fairly justified in looking for annually, cannot well be overrated.

Dr. Kelly, medical officer of health for the West Sussex combined district, has recently submitted to the Horsham Rural Sanitary Authority a report showing excessive pollution of the river Arun, owing to the defective outfall of the new sewage farm of the urban sanitary district of Horsham. The stream below the outfall is described as a black, thick, unbearably offensive fluid.

A correspondent of the *Daily Telegraph*, writing to that journal on drainage and health, makes the following pithy statement:—"My experience of country places points to the blunt truth of a remark I once heard, 'A man buys a plot of land, builds a house, and digs two holes; out of the one he drinks, and into the other he casts all manner of dirt and refuse.'"

The *Cambrian News* is righteously wrathful with the combination of physical and moral filth to be found in Aberystwith, and takes the local authority soundly to task for its neglect in this matter.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

THE recent decline of temperature caused a slight decline of urban mortality last week. In twenty of the largest English towns, estimated to contain in the middle of this year seven and a half millions of persons, or nearly one-third of the entire population of England and Wales, 4814 births and 3591 deaths were registered last week. The births were 371 below, whereas the deaths exceeded by 316 the average weekly numbers during 1879. The deaths were 52 fewer than those returned in the previous week, and were equal to an annual rate of 25.0 per 1000 against 24.6 and 25.4 in the two preceding weeks. The lowest death-rates in the twenty towns last week were 16.7 in Plymouth, 20.0 in Bristol, 20.5 in London, and 25.7 in Portsmouth. The rates in the other towns ranged upwards to 34.3 in Liverpool, 35.6 in Hull, 35.9 in Norwich, and 36.5 in Leicester. The high rates in these last-mentioned towns were mainly due to excessive zymotic fatality. During the eleven weeks ending last Saturday, the death-rate in these twenty towns averaged 23.3 per 1000, against 24.3 and 18.2 in the corresponding periods of 1878 and 1879.

The deaths referred to the seven principal zymotic diseases in the twenty towns, which had been 1120 and 1190 in the two preceding weeks, declined to 1009 last week. Of these 818 resulted from diarrhoea, 94 from scarlet fever, 59 from whooping-cough, and 58 from fever, principally enteric. The annual death-rate from these seven diseases averaged 7.4 per 1000 in the twenty towns; it was but 3.9 and 4.2 in Brighton and Plymouth, while it ranged upwards in the other towns to 17.3 in Leicester, 17.4 in Hull, and 18.8 in Norwich. Scarlet fever showed the largest proportional fatality in Sunderland, and enteric fever in Sunderland and Portsmouth. The 18 deaths from diphtheria included 12 in London and 2 in Manchester. Diarrhoea fatality was somewhat lower than in the previous week; the annual death-rate from this disease averaged 8.2 per 1000 in the nineteen provincial towns, while in London the rate was but 3.1. Among the nineteen towns, the diarrhoea death-rate ranged from 3.4 and 3.5 in Brighton and Plymouth to 15.3 in Leicester, 15.7 in Hull, and 15.8 in Norwich. Small-pox caused 3 more deaths in London. The number of small-pox patients in the Metropolitan Asylum Hospitals, which had steadily declined from 200 to 104 in the eight preceding weeks, rose to 116 on Saturday last, and 27 new cases of small-pox were admitted to these hospitals during the week, against but 7 and 13 in the two previous weeks. The Highgate Small-pox Hospital contained 9 patients on Saturday last.

The deaths referred to diseases of the respiratory organs in London, which had been 152 and 124 in the two preceding weeks, rose again to 153 last week, although they were still 6 below the corrected weekly average; 91 resulted from bronchitis, and 45 from pneumonia. The annual death-rate

from lung-diseases was equal to 2·2 per 1000 in London, against 4·6 in Liverpool, and 3·4 in Salford.

HEALTH OF SCOTCH TOWNS.

In eight of the largest Scotch towns, having an estimated population of rather more than a million and a quarter persons, the annual death-rate last week averaged 20·3 per 1000, against 19·3 and 18·2 in the two preceding weeks; this rate was 4·7 per 1000 below the average rate in the twenty large English towns. The rates in the eight Scotch towns ranged from 14·4 and 16·9 in Dundee and Leith, to 25·6 and 39·0 in Greenock and Perth. The fatal cases of the seven principal zymotic diseases in the eight towns were 163, against 130 and 129 in the two preceding weeks; they included 69 from diarrhoea, 36 from scarlet fever, 23 from whooping-cough, 17 from fever, principally enteric, 12 from diphtheria, 6 from measles, and not one from small-pox. The annual death-rate from these seven diseases averaged 6·6 per 1000 in the eight towns, which, although showing an increase upon the zymotic rate in recent weeks, was 1·8 per 1000 below the rate from the same diseases last week in the large English towns. The excess in the English zymotic death-rate was entirely due to the greater fatality of infantile diarrhoea. The zymotic death-rate in the Scotch towns last week ranged from 3·6 and 4·2 in Leith and Paisley to 7·8 and 8·1 in Perth and Edinburgh; the excess in the zymotic rate was due to diarrhoea in Perth and to scarlet fever in Edinburgh. The fatal cases of diarrhoea in the eight towns, which had been 65 and 63 in the two previous weeks, were 69 last week, and equal to an annual rate of but 2·8 per 1000, while in the twenty English towns the diarrhoea death-rate averaged no less than 5·7. The largest proportional fatality from diarrhoea in the Scotch towns occurred in Perth and Aberdeen. The 17 deaths referred to fever showed a further increase upon recent weekly numbers, and included 10 in Glasgow and 2 each in Edinburgh, Dundee, and Aberdeen. Fever fatality last week was greater by 73 per cent. in the Scotch than in the English towns. Scarlet fever also showed an increased fatality in the Scotch towns last week, causing 36 deaths against 22 and 18 in the two previous weeks; 15 occurred in Edinburgh (against 8 in the previous week) and 12 in Glasgow. Seven of the 12 deaths from diphtheria occurred in Glasgow, and 2 both in Edinburgh and Greenock. The deaths attributed to acute diseases of the lungs (bronchitis, pneumonia, and pleurisy) were 61 last week in the eight towns, against 65 and 60 in the two preceding weeks; the annual death-rate from these diseases was equal to 2·5 per 1000, against 2·0 in London.

HEALTH OF DUBLIN.

The excessive death-rate in Dublin showed a considerable increase last week. The annual death-rate in the city, which had been equal to 35·5 and 34·7 in the two preceding weeks, rose last week to 39·3, a higher rate than has prevailed in any week since the beginning of June. During the past eleven weeks of the current quarter, the death-rate in the city has averaged no less than 34·1 per 1000, against 21·5 in London and in Edinburgh. The 237 deaths in Dublin last week included 78, or nearly 33 per cent., which were referred to the seven principal zymotic diseases, exceeding the number of these deaths in any previous week of the year; 38 resulted from diarrhoea, 12 from whooping-cough, 10 from measles, 9 from scarlet fever, 7 from fever, and one each from small-pox and diphtheria. The annual death-rate from these seven diseases was equal to 12·9 per 1000 in Dublin, while it did not exceed 4·7 in London, and 8·1 in Edinburgh. The 38 fatal cases of diarrhoea in Dublin exceeded the number returned in any week for this year, and were equal to an annual rate of 6·3 per 1000; the diarrhoea death-rate in London did not exceed 3·0 per 1000. The deaths from measles and whooping-cough showed a marked increase in Dublin last week; while those from scarlet fever and enteric fever differed but slightly from those returned in the previous week. The rate of infant mortality showed a considerable decline in Dublin last week.

SUICIDES IN LONDON.

The Registrar-General's returns show an unusual excess in the recent recorded cases of suicide in London. During the three weeks ending last Saturday no less than 38 cases of suicide were registered in the metropolis, whereas the

average number in the corresponding period of the ten years 1870-79, after correction for increase of population, is but 17. The London suicides in the past three weeks have, therefore, been more than twice the average number. Eleven suicides were effected by drowning, 9 by cut or stab, 8 by poison, 6 by hanging, only one by gunshot, and in three other cases the mode of suicide was indefinitely described. No record of assigned causes of suicide is attempted, but even if it were very little assistance would be rendered in the way of ascertaining the true cause of the recent increase of suicides in London.

HEALTH MATTERS GENERALLY AT HOME AND ABROAD.

THE LONDON FOG OF NOVEMBER, 1879, TO FEBRUARY, 1880.

In a paper of very considerable interest, published in the recently-issued quarterly part of the *Journal of the Scottish Meteorological Society* (vol. v., pts. 49-53), Dr. Arthur Mitchell has endeavoured to show the influence on the death-rate of London of the very remarkable period of fog which occurred in the metropolis from November, 1879, to the first week of February, 1880. He writes of the fogs of this period as forming, in fact, one continuous fog, "constituting one of the most remarkable fogs on record in this country." From an analysis of the Registrar's Weekly Returns during this period he arrives at the following general results:—

(1) The whole death-rate was enormously increased. (2) No approach to so large an increase of the death-rate showed itself in any of the other British large towns for which we have weekly returns; and in connexion with this it is to be remarked that in none of them did fog of a noteworthy character occur. (3) Asthma is the disease which appeared to be most directly influenced in its fatality by the fog. In the first three weeks of 1880, when the fog more or less completely disappeared, the deaths from this disease fell at once to about 30 per cent. below the average, having previously risen in the middle of December, when the fog was severe, to 43 per cent. above the average, and rising again in the end of January and beginning of February, when the fog was densest and most persistent, to 220 per cent. above the average. When the fog finally disappeared, as it did after the end of the first week of February, the deaths fell to 40 per cent. below the average for the latter half of the month. (4) The deaths from bronchitis, pneumonia, pleurisy, and other lung diseases were greatly influenced in their number by the fog, but did not show the close and direct obedience to the varying density and persistence of the fog which the deaths from asthma showed. (5) In the case of whooping-cough, as was to a certain extent true of bronchitis, the pernicious effects of the fog continued to manifest themselves in an increased mortality during the whole period, and did not disappear, as in the case of asthma, during the temporary abatements of the fog. (6) The deaths from rheumatism did not show any clear relation to the fog, and the same thing can be said of the deaths from croup. (7) Other causes of death showed no very striking relation to the varying density and persistence of the periods of fog.

PELLAGRA.

A correspondent of the *Pall Mall Gazette*, writing from Venice, under the date of Sept. 1st, gives some interesting information about the prevalence of pellagra in the Lombardo-Venetian provinces. The number of pellagrosi in these provinces is estimated at no less than 100,000, and even this number is held by "one of the most practical writers on economical and social questions" as falling short of the reality. He describes briefly the state of the pellagrosi in the Santo Clemente Asylum at Venice, of which 500 of the 1000 beds it contains are occupied by sufferers from the disease. The malady is attributed to bad and insufficient nourishment, and particularly to an exclusive use of maize, especially of spoiled maize. The Mantua Commission on the subject suggest the formation of a committee in every commune, consisting of the syndic, a doctor, the president of the Congregation of Charity, and one agriculturist. The duties of this committee would be to supply all who were threatened by pellagra with proper food and medical care in their own homes or in a poorhouse; to open a bank of credit to assist the small peasant proprietors, small farmers, and day labourers; to transmit to the provincial deputation a

monthly report; and so forth. Upon this suggestion the *Pall Mall* correspondent observes: "Now, had these proposals been made to ward off cholera, small-pox, or any other contagious disease, they would at once have been accepted; but for a disease proceeding from misery, only affecting the poorest classes, never even menacing the well-to-do members of society, the very idea was scouted as anarchical. Hence pellagra flourishes and increases in the north of Italy, as do the Camorra, brigandage, and the Mafia in the south."

THE MASSACHUSETTS STATE BOARD OF HEALTH.

We should regard with profound regret the last (the eleventh) report of the State Board of Health of Massachusetts, now lying before us, if we did not feel assured that the Board had simply undergone a transformation, and that in the first annual report of the State Board of Health, Lunacy, and Charity of Massachusetts, it reappears in another, and, we presume, more influential form. The cessation of the reports of the former State Board would have been regarded as a serious loss to the literature of public hygiene, if it were not (as we are wishful to believe) that the new Board will no doubt continue to report in the same fashion, and, as we hope, with wider opportunities of enriching public-health literature. The eleventh report of the State Board, which relates to the six months ending June 30th, 1879, announces the transformation of the Board, and contains a report of certain cases illustrative of the law relating to noxious and offensive trades, and a series of instructive circulars issued by the Board on disinfection, care of young children, house drainage, &c. But the main bulk of the report is occupied by an index to the complete series. The first annual report of the existing Board is devoted to a description of the organisation of the Board, its several duties in relation to public health, lunacy, and pauperism, the laws under which it acts, and sundry papers relating thereto. The report is of considerable interest with reference to these matters.

THE WATER-SUPPLY OF LIMERICK.

The Corporation have under their consideration several schemes for a proper supply of water to this town, which at present is inadequate as regards quantity, while the quality is very inferior. The schemes are ten in number, and the estimate for the lowest will require an outlay of about £46,000. One plan proposes to bring the water from the river Clare, distant a dozen miles; another from the Mulkear river, flowing by gravitation to the local reservoir. A third suggests the Shannon, and to pump the water by steam-power into the service reservoir; while Doonas Falls, Castleconnel, and Lough Gur are other sources proposed for a water-supply. It will thus be seen that two methods are suggested—viz., by pumping and gravitation; but it is believed that the former method will be more suitable, more especially if the supply is obtained from the river Shannon. The Corporation will meet this week to decide on the course they will adopt in reference to the plans proposed.

Two cases of typhoid fever—one affecting a prisoner, the other a gaoler—are reported under somewhat anomalous circumstances in connexion with the Wormwood Scrubs prison. The prisoner died, and in the course of the inquest held on the cause of death it was stated that the prison was much exposed to nuisance from piggeries in the neighbourhood. The cases will, no doubt, be made the subject of official medical inquiry.

At the recent Trades' Union Congress, held in Dublin, the question of "woolsorters' disease" was discussed, and a resolution adopted, by a large majority, that the Parliamentary Committee of the Union be requested to continue their exertions with a view of obtaining protection for woolsorters against blood-poisoning (septic, that is) whilst following their occupations.

Sir Henry A. Hunt, C.B., has made his final award in respect of property to be taken compulsorily in Wolverhampton under the Artisans' Dwellings Act. The scheme provides for the outlay of £250,000 in making improvements in the centre of the town. The total value of the property arbitrated upon amounts to about £60,000.

A very fatal epizootic is reported among the crayfish in Bavaria.

MANCHESTER "SLUMS" AND AIR.

THE Manchester correspondent of *The Times* has been endeavouring to elucidate in the columns of that journal several of the great local questions, touching social matters, which at the present time are occupying the attention of the citizens of our northern metropolis. He has concerned himself particularly with the subjects of the housing of the labouring classes in the city, and with its air in relation to out-door exercise and to art. As regards "art," and the contending views of the Manchester folk and their Corporation with reference to the best methods for its greater development in the city, and how these views may be affected by the ordinary constitution of the city's air, these do not concern us here; and as regards the provision of facilities for out-door exercise and open-air recreation, this is an obvious need, and the Corporation would appear to have not been wholly unmindful of the requirements of the population in this respect. Nothing is said of the prospect of purging to a greater extent than has yet been done Manchester air of the dense volumes of smoke which from Monday morning to Saturday noon intermingle with the atmosphere, too generally reducing daylight to a dismal sort of twilight. The question of the slums has perhaps the most immediate interest for the medico-sanitarian and student of public health. It is well known that the Corporation of Manchester has been for some time depending upon the ordinary changes in progress within the city for the relief of those conditions attaching to the older parts of it most inimical to the health of its inhabitants. As the central parts have become more and more devoted to business purposes, the inhabitants have been displaced, and have moved to the outer and less thickly populated parts of the borough. The older, unwholesomely constructed and arranged cottages vacated have been cleared away to give place to warehouses and public buildings, and the displaced inhabitants have found house-room in the more open districts, where they are scattered comparatively widely over the ground, and are housed in dwellings constructed with a stricter regard to health principles. This migration to the outer districts has been largely assisted by a corresponding transference of manufactories to the same districts, rendering it in a measure necessary that the workpeople engaged in them should follow and establish their residences near at hand. The changes here noted have been proceeding so steadily of late years, and at so considerable a rate, that if we understand the question aright, the Corporation, under the advice of the medical officer of health, Mr. John Leigh, have determined not to interfere, but suffer them to proceed without interruption, and leave the present many defective conditions of cottage dwellings in central Manchester to be done away with, as they must be in a comparatively short time, by the natural operation of the business and social changes going on in the city. In so doing, it is argued the desired changes will be, as it were, insensibly effected, and with less difficulty to the displaced population, less danger of contingencies, such as dangerous overcrowdings of already occupied dwellings in the process of displacement, and greater certainty that the change would be made in such a way as would contribute best, from the public-health point of view, to the permanent well-being of the population. Of the soundness of the view here taken, assuming the facts to be as stated (and these scarcely admit of doubt as given in Mr. Leigh's reports), there can hardly be a question. It is the view of a statesman grafted on that of a public health reformer. But, meanwhile, what remains of the old cottage dwellings of Manchester shocks every sense of residents there who take an active interest in the sanitary reform of the city, and who are not prepared to relegate attempts at amendment to an indefinite future. They regard with irritation the refusal of the Corporation—unlike other great towns, Birmingham for example—to take advantage of general or special Acts of Parliament for clearing areas covered by unhealthy houses, and erecting thereon, or permitting others to erect, model dwellings for the labouring classes. They would anticipate the natural progress of the changes on which the Corporation depends. They have a righteous impatience of delay which begets every sympathy in view of the evils which they would eradicate; and, incited by

Dr. Arthur Ransome and others, they have taken the inhabitants generally into consultation with them, and after a fashion declared war against the Corporation notions. The form which this movement has assumed gives little hope that it is sympathised with to any large extent in Manchester, or that it will lead to any marked result in accelerating changes which both the Corporation and the citizens must desire to see completed. It has resulted in a proposition to form a limited liability company for providing improved dwellings for the labouring classes, with a capital of £20,000 in 4000 shares of £5 each. This is modestly spoken of as looking "at least like a step to business." But in view of the magnitude of the task to be undertaken and of the wealth of Manchester, does not this seem rather like another version of the "mountain in labour"? At least it would indicate that the time for inaugurating this movement has been very badly chosen. In discussing the question of art and public park accommodation in Manchester, *The Times'* correspondent writes of the Corporation as being hampered as to means. We know how difficult it has been found by the managers of the Royal Infirmary to get together from the inhabitants a sum barely sufficient to effect absolutely necessary alterations in the institution presumed to be the most cherished in the city. On all sides we hear of a ridiculous inconsistency between the reputed wealth of Manchester and its incapability or unwillingness, in consequence of recent and continuing bad times, to contribute to charitable and philanthropic objects within its own boundaries. We prefer to assume that the petty result of the labourers' improved dwellings movement is another indication of the "hard times" in the district than the result of indifference to the question sought to be solved. That the movement is inadequate to a solution of this question should be obvious, but that it might aid in ameliorating some of the most painful aspects of it, and helping importantly to the final result sought, does not admit of doubt.

Correspondence.

"Audi alteram partem."

THE IMMEDIATE TREATMENT OF STRICTURE OF THE URETHRA.

To the Editor of THE LANCET.

SIR,—As it has been suggested to me that some misconception might arise respecting the two deaths mentioned in my letter of last week, I take the earliest opportunity of stating that I only referred to those mentioned by Mr. Wood. There was another death in King's College Hospital in which a false passage was found extending through the neck of the bladder, but this was published years since; and the two deaths that occurred in the Westminster Hospital, also years ago, both resulted from kidney disease.

I have been fortunate enough not to have had a fatal case in private.

Very faithfully yours,

Savile-row, Sept. 20th, 1880.

BARNARD HOLT.

To the Editor of THE LANCET.

SIR,—I am glad to see that Mr. Barnard Holt has defended his method of treatment of stricture from the aspersions unfairly cast upon it. Having witnessed the great success of Mr. Holt's method whilst his colleague at the Westminster Hospital, I have continued to adopt the proceeding in suitable cases ever since, and I am well satisfied with it. Mr. Holt does not profess that his operation will "cure" what is acknowledged on all hands to be practically an incurable disorder; but I believe with him that a "split" stricture contracts less rapidly than one dilated or divided, and that when it has been allowed to contract it can be readily restored to full size. Since it is allowed that in cases of old-standing stricture, with disorganised kidneys, the mere passing of a catheter may kill by inducing suppression of urine, it is not surprising that death may occasionally follow the use of Holt's dilator under similar circumstances, as occurred to a private patient of my own two years back.

Again, if the dilator unfortunately enters a false passage, which is then split up, a consequent death cannot be fairly attributed to the method, though it may be to the operation.

I have before me the very carefully compiled printed annual Surgical Reports of University College Hospital for the last nine years, in each of which a special table of cases of stricture is given. I have collated these carefully, excluding only cases of extravasation of urine (admitted as such), and cases in which no treatment was adopted, with the following results:—

Treated by dilatation	157 cases with 13 deaths.
" internal urethrotomy 130	" 7 "
" external urethrotomy 18	" 4 "
" Holt's method . . . 32	" 4 "
" other dilators . . . 8	" 2 "

Total cases 345 " 30 "

It should be mentioned that the cases of internal urethrotomy include a large number of cases of simple "meatotomy," and also operations by various methods. I believe I may claim nearly all the "Holt's," and certainly the four deaths, two of which were due to false passage, and two to pyæmia. It should also be understood that Mr. Erichsen and Sir H. Thompson gave up all charge of patients early in 1875.

Your obedient servant,

CHRISTOPHER HEATH.

Cavendish-square, Sept. 20th, 1880.

To the Editor of THE LANCET.

SIR,—Being the surgeon who first introduced to the notice of the profession in this city Mr. Holt's plan of treating stricture, perhaps you will kindly permit me to say a few words on the subject, and to place on record in your pages the result of my experience of a number of cases, now to be counted, not by units but by hundreds. During all the years I have treated stricture on the immediate plan I have never had one fatal case, nor have I ever witnessed any more untoward consequence of the operation than, in some very exceptional cases, rigors. Every surgeon of experience has met with individuals who could not tolerate the attempt to introduce an ordinary instrument without, as the result, the supervention of rigors. Cases of this kind have come under my care, yet in many of these have I used Mr. Holt's plan without rigors ensuing. This I account for by my having used proper precautions and treatment. Early in this year a gentleman, a victim to stricture, consulted me. That his case was one of no ordinary difficulty can be certified by a gentleman who deprecates in no measured language Mr. Holt's plan of treatment, under whose care the patient was for some weeks in London. Every attempt to introduce an instrument was followed by such spasm as for hours to render him unable to void one drop of urine. I placed him under the influence of methylene, introduced the dilator, and forcibly dilated his stricture to such an extent as to allow of the passage of a No. 10 catheter (Weiss's gauge), a sized instrument which he is now able to pass for himself; yet he did not experience the slightest subsequent trouble. This gentleman called on me within the past week, and told me that, though a perfect stranger to Mr. Holt, he had twice called at his house, but was not fortunate enough to see him; the object of his visit being to express his gratitude to Mr. Holt for having introduced a plan of treatment whereby a life of misery had been converted into one of thorough enjoyment.

That fatal results may be ascribed, but erroneously so, to Mr. Holt's treatment, will be illustrated by what I am now about to state. Last month I had arranged to operate on two cases of stricture on the same morning in the Meath Hospital. On arrival I found one of the patients "seedy," and accordingly put him back, but operated on the other, who left the hospital a few days afterwards master of a No. 10 gum-elastic catheter, which, before my class, he himself introduced into his bladder. But what became of the other patient? The same day he was carried out of the hospital dead. Double pneumonia—rapid effusion; and in spite of the most energetic treatment the poor fellow succumbed. Had I been imprudent enough to operate that morning on that man, doubtless Mr. Holt's operation would have been credited with (or rather discredited by) another fatal result.

In conclusion, I may be allowed to add that my operations

have been conducted in the presence of large classes of students in the Meath Hospital, as well as in private. Were my results less favourable than I have here recorded, there would be plenty of witnesses to bear evidence against the accuracy of my statements.

Your obedient servant,

RAWDON MACNAMARA, F.R.C.S.I., &c.,

Surgeon to the Meath Hospital and to the Westmoreland

Dublin, Sept. 18th, 1880. Lock Hospital.

To the Editor of THE LANCET.

SIR,—Having had some considerable experience in the treatment of stricture by sudden and forcible dilatation, I am anxious to corroborate the testimony of Mr. Barnard Holt, in your last impression, as to the safety and efficiency of that proceeding.

I wish to do so because in comparing it with internal urethrotomy it has, in my judgment, been rather unfairly treated by some of the advocates of the latter method.

The disparaging remarks to which I allude consist not so much in argument as in vague condemnation on account of its supposed dangers, and unsupported insinuations of bad faith on the part of those who practise it in concealing unfavourable results. Thus in the late discussion at Cambridge one speaker is reported to have said: "He entirely agreed with the remarks that rupture was a dangerous proceeding. He never did it himself, but he had seen a good number of cases that went to the bad from it, and believed that such a rupture must lead to a traumatic stricture of the worst kind." What these vague statements amount to is shown by Mr. Holt in his letter of last week.

Another speaker on the same occasion said: "There were surgeons who still practised immediate dilatation, and that they did so showed that they were but imperfectly acquainted with the rationale of the operation, and were not aware of the great mortality attached to it." This is certainly true as regards myself. I know little and care less about its rationale, but am content to judge it by its results; while as to the great mortality alleged, I shall disbelieve it until I see some evidence in its support.

The same gentleman further says that, "had the deaths which have occurred after forcible dilatation been published, the operation would long ago have received its *congé*; and he thought the advocates of that method had not acted straightforwardly in omitting to publish them." This is an imputation of bad faith which, entirely unsupported as it is, ought to be discountenanced as altogether out of place in a scientific discussion. I should like to know why this propensity to the *suppressio veri*, if it has any existence, should be supposed to appertain to those who use the dilator rather than to the urethrotomists.

My own experience of the treatment by forcible dilatation may be briefly expressed. I have practised it in all suitable cases of obstinate stricture, both in hospital and private patients for the last fifteen to twenty years, and though I have kept no numerical account, I can safely say that they amount by this time to many scores. In no single instance have I met with a fatal result, or with any subsequent symptoms which gave me cause for serious uneasiness. My experience, in fact, coincides exactly with that of Professor Macleod of Glasgow, who said at the late meeting at Cambridge, "that he had never seen any complication, and no possible danger, follow the use of Holt's dilator when used in cases fitted for it."

I constantly see my colleagues at St. Mary's Hospital using the dilator, but very rarely the urethrotome, and though I, of course, only speak for myself, I assume that they would not continue to use it if they found their cases dying or "going to the bad" in the manner that has been alleged.

I have no wish to decry internal urethrotomy. I have never practised it, and therefore cannot speak from personal experience, but I accept, without reserve, the statements of such authorities as Sir Henry Thompson and Mr. Berkeley Hill as to its satisfactory results and its freedom from danger. I adhere to immediate dilatation because I believe it to be a less formidable proceeding, and because if urethrotomy would do all its advocates claim for it, I do not see that I should get better results than I have been accustomed to obtain from dilatation.

Deaths may now and then occur, and serious consequences may follow, after either operation (as they may happen after

any surgical proceeding, however slight), but there is no evidence, that I know of, to show that dilatation is more liable to them than urethrotomy. Bad results will be exceedingly rare in both if cases unsuited to any operation at all are carefully excluded.

No treatment of stricture yet known, whether by gradual or forcible dilatation, by internal or by external urethrotomy, will prevent a recurrence of the complaint, unless the patient will persevere in the use of instruments for a lengthened period. But I have not myself found these relapses more early or more severe in the intractable cases demanding the immediate treatment, than in the milder ones which are amenable to gradual dilatation, or than the more severe ones which are subjected to external urethrotomy, as advocated by Syme, in which latter, as Sir H. Thompson observes, "the diseased structures constituting stricture have been entirely divided, and in a way more certainly complete than any internal urethrotomy can offer."

Very faithfully yours,

Norfolk-square, Sept. 20th, 1880.

JAMES R. LANE.

"SIR T. D. ACLAND ON HOSPITAL NURSING."

To the Editor of THE LANCET.

SIR,—I am obliged by your kind notice of my few words at Exeter on Hospital Nursing. I need some excuse for intruding on professional ground. I inherit from boyhood a deep respect for the profession. In and out of Parliament I have watched its welfare, or rather that of the nation, for forty years and more.

I ask your leave to explain that I did not mean to deny that there is a desire to introduce sisterhoods in hospitals. Of course I know what is in action at King's College and University Hospitals and elsewhere. My object was to take the first opportunity I could find, as a responsible man in a public position, to stem the torrent of misunderstanding about Guy's, which was current in my own neighbourhood and reacting on our excellent local hospital.

The circulation in *The Times* of a sneer about dress and prayers was accepted by a too credulous public as evidence of ritualistic aims and centralisation which have no place at Guy's. Religious cries are too often simply weapons of warfare in secular battles. The English laity generally find out the truth in time.

What is now needed is that the earnest endeavours of active governors to deliberate freely with able men should not be hampered by the dictation of private meetings pledging a collective body, or by public attacks on women and men who are not at liberty to defend themselves by controversy about their responsible duties in the journals. I had hoped some such result might have been reached before the critical 1st of October. I have worked hard to help it forward. I can only now ask you to allow me, as an individual governor, to appeal to the great body of Guy's men not to be led off on a false scent, to rally round their old school at the opening of this session, and to judge for themselves whether there is any hindrance in respect of medical science, or observation or practice in the way of the students or their teachers.

Your obedient servant,

THOMAS DYKE ACLAND.

Holnicote, Taunton, Sept. 18th, 1880.

"HOSPITAL ETIQUETTE."

To the Editor of THE LANCET.

SIR,—I think any unprejudiced person reading Mr. Ewart's letter on "Hospital Etiquette" must come to the conclusion that there must be a misunderstanding somewhere. Allow me a few lines in explanation of the matter.

The medical officer at our dispensary reported to my colleagues and myself that a case of scarlet fever, with stone in the bladder, was coming to us from St. Mary's Hospital, with the request that the patient might be returned to them for operation. An opinion was expressed that we ought not to accept the case under any restrictions; but no decision was come to, and the matter dropped. The next day the boy was admitted into hospital under my care, and was shortly followed by a hip case, with scarlet fever, from the same quarter. A few days afterwards, Dr. Lloyd Roberts and Dr. Walter called on me on the subject. The former said the stone case had been admitted under his

care, but he had made it over to his colleague, and asked me to send it back to St. Mary's when well of the fever, as Mr. Ewart was anxious to perform lithotomy. I replied "that personally I did not care who had the stone, but I would speak to my colleague, Mr. T. Jones, and I had no doubt if I did so he would waive any claim he might have." On another occasion, when Dr. Lloyd Roberts was in my house about another matter, I suddenly remembered the case, and said, "Oh, that stone case is doing well; I must remember to see about him for you." I also told the boy (aged ten) that he might tell his mother that when he was no longer infectious she might take him back to St. Mary's. Now, about this time it happened that Mr. Jones, in consequence of the illness of a relation, was a good deal from home, and was much taken up by other pressing engagements; I seldom saw him, and, most unfortunately, it entirely slipped my memory to set matters straight about the stone. A few weeks afterwards I left home at a short notice, and unluckily the operation was performed by my colleague in complete ignorance of my interview with Dr. Lloyd Roberts. On my return I was exceedingly annoyed with myself for not having left special directions concerning the case. I took an early opportunity of explaining to Dr. Lloyd Roberts what had happened, and expressed my great regret that I should have been so forgetful in the matter, and how I would willingly take upon myself the blame of what had occurred. I must say, Sir, that after thus expressing my regret I never for a moment expected to hear any more of the matter. I was surprised to hear that it had become a burning question of "hospital etiquette;" and still more astonished was I to read that Mr. Ewart had "learnt that from the first the Pendlebury staff never meant the boy to return to St. Mary's." Let me say at once this is untrue. The case was admitted under my care, and except on the occasion just referred to I never spoke to my colleagues on the subject. I am unaware of any decision affecting its destiny, and had I not forgotten to speak to my colleague I do not doubt it would have returned to St. Mary's.

Having thus apologised to Dr. Lloyd Roberts, to whom the case belonged, and who had specially called on me on the subject, what more, Sir, could I do? I am sorry Mr. Ewart was disappointed and annoyed, but if he is still angry I cannot help it; and if he still impute bad faith to me, I have no more apologies to make, and will willingly leave it to the "sentiments of the profession" to decide, to whom the "discourteous" and "ungenerous" apply.

I remain, Sir, yours, &c.,

Manchester, Sept. 21st, 1880.

HENRY ASHBY.

** We are glad to receive this explanation, which will, of course, close the matter.—ED. L.

"NEW INSTRUMENT FOR CLEFT PALATE,"

To the Editor of THE LANCET.

SIR,—Having read Mr. Furlong's description of his needle on the shuttle principle in THE LANCET of September 18th, I hasten to concede to him whatever credit may be due for priority of invention over the instrument on the same principle devised by me, a description of which appeared in THE LANCET of July 24th. I would also express my appreciation of the additional miniature blade for isolating the tissues during perforation, which is part of his instrument, and is a deficiency in my own which I was even now attempting to supply.

At the same time it is due to myself to state that, previously to forwarding my communication, I had taken every pains to ascertain whether the idea as it occurred to me had been already carried out. It was only after failing to discover any knowledge of such an instrument either on the part of those surgeons to whom I showed mine, or of the instrument makers, and after a vain search through every accessible record of surgical appliances, that I forwarded it for publication. This general ignorance respecting the existence of Mr. Furlong's invention cannot be wondered at, as he states "there is no published account" of it. I think, therefore, Mr. Furlong will have no cause to regret the step I took in calling attention to a needle on the shuttle principle, I being absolutely ignorant of his invention—inasmuch as my so doing has served to rescue him from the undeserved oblivion into which he had suffered it to lapse.

Respecting the points of divergence between the two in-

struments, whether the blades should be scissors or forceps, the method of fixing the needle on the one blade and of clamping it in the other, these are matters of detail concerning the respective advantages of which experience alone will enable a correct estimate to be formed. What is of more importance to know, and which Mr. Furlong's experience goes to prove, is that the irksomeness of cleft palate operations can be lessened by the use of an instrument which his ingenuity had already devised when I was labouring to attain it. Had it not been for Mr. Furlong's reservation of his skill I should have been spared this labour, and your columns the tedium of a personal explanation.

I remain, Sir, yours, &c.,

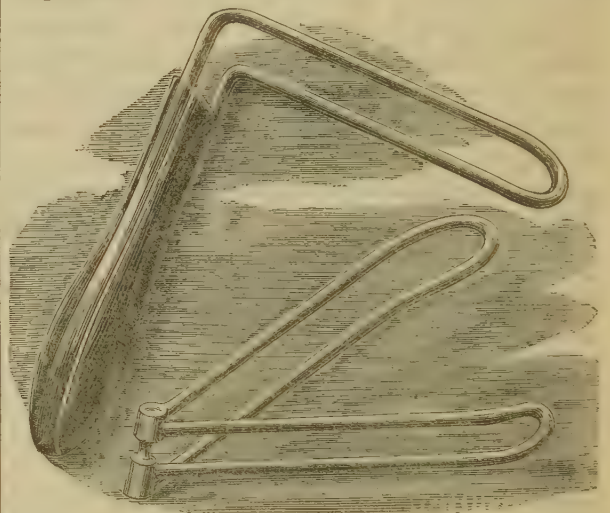
London, Sept. 20th.

ED. WOAKES, M.D.

A TONGUE-DEPRESSOR.

To the Editor of THE LANCET.

SIR,—In bringing forward the accompanying pattern of a tongue-depressor, I do not claim for it any undue amount of importance; but as it is a little instrument in frequent requisition, I have devised the present form, and, finding it so convenient after twelve months' use, send you a pattern for publication.



The advantages it possesses over the ordinary clumsy instrument are, that the tendency to retching is lessened by the smaller surface of metal inserted into the mouth. The tongue is not concealed by it; and with patients who have the knack of "hawing up" the tongue, the sides of the instrument, which press into its substance, admit of a view of the fauces, which would be impossible with the old instrument.

I have found it useful in the examination of the irritable throat of phthisis, where the ordinary mass of metal introduced into the mouth renders a view impossible by reason of the discomfort and irritation produced. It is light and portable, of much less cost than the ordinary form, and easily cleaned.

The woodcut represents one pattern with a handle for hospital use, and the other jointed for the pocket. These have been made for me by Mr. Goode, of Praed-street.

I am, Sir, your obedient servant,

ALFRED WISE, M.D.,

Sutherland-gardens, W.,
September, 1880.

Visiting Physician to the Infirmary for
Consumption, Margaret-street.

DIPHTHERIA.

To the Editor of THE LANCET.

SIR,—In the spring of last year (1879) I attended during an outbreak of diphtheria a family consisting of five persons—viz., father, mother, two little children, and a young servant girl.

The servant showed symptoms of the disease on March 22nd; it ran a favourable course, and she was convalescent on the 29th.

The youngest child, aged two years and three months, was seized on April 13th, and died on April 20th.

The other child, aged five years, was taken ill on April the 18th; she recovered to some extent, but after lingering till May 31st she died from blood-poisoning and paralysis.

The mother also became ill on April 18th, but recovered; and the father escaped with the exception of slight sore-throat.

I myself contracted the disease whilst attending them, but had little more than the local symptoms, and was well in a few days. The drains were said to have been recently examined.

Owing to a leakage of sewage into the basement, it has just been discovered that the drains of this house and those of the next have one common exit into the sewer. The people next door, having had their water cut off more than three years ago, have since been using only what they could beg from neighbours, the natural result being the blocking up of the common drain-pipe, and probably causing the outbreak related above.

As under the present system of drainage this is a danger that may attack any of us, it does not seem to me unreasonable to ask whether the water companies, possessing as they do the monopoly of supplying us with what is a necessary of life, should be permitted to enforce payment of their rates by cutting off that supply, thus seriously endangering the lives of a whole neighbourhood, and, as in the present case, punishing not so much the defaulter as a man who owed them nothing, but who is, nevertheless, in all probability doomed to end his days childless.

I remain, Sir, yours truly,

Brixton-road, August 18th, 1880.

H. J. F. GROVES.

THE SERVICES.

MEDICAL OFFICERS FOR AFGHANISTAN.

The following medical officers of the Madras Army have been ordered to proceed on service to Afghanistan:—Surgeon-Majors A. C. Gaye, J. M. Cogan, E. A. Roche; Surgeons J. Mulrenan and A. Kirwan; also Surgeon-Majors F. C. Reeves, H. Jagoe, R. M. Bradford, John North, and J. Elcum, of the Indian Medical Service.

Surgeon-Major H. L. Bruce, Indian Medical Service, has been appointed Principal Medical Officer of the Reserve Division, Southern Afghanistan Force, with the temporary rank of Deputy Surgeon-General.

Deputy Surgeon-General Thomas Wm. Fox, M.B., has been appointed on promotion Principal Medical Officer of the North British District, Edinburgh, vice Deputy Surgeon-General J. S. Furlong, transferred to Nova Scotia.

The *Gazette of India* of the 14th August announces that the Viceroy has appointed Surgeon-Major J. M. Cunningham, M.D., Sanitary Commissioner with the Government of India, to be Surgeon-General Indian Medical Service, with permanent rank from the 29th March, 1880, in succession to Surgeon-General J. F. Beatson, M.D., retired.

ADMIRALTY.—Surgeon W. J. Lightfoot has been appointed to the *Serapis*.

INDIA.

(From an occasional Correspondent.)

DURING the early part of the hot weather an epidemic of diarrhoea, remarkable for the impartiality of its attacks, prevailed at Simla. As the disease did not, fortunately, prove fatal, people could afford to make light of the matter, and the "prevailing ep.," as the epidemic was familiarly called, became a standing joke, as "five o'clock beef-tea" at the club became a standing institution. So general was the epidemic, that it is stated more than 300 prescriptions for the complaint were dispensed by one druggist's establishment in one afternoon. Guests had to quit the dinner-table in a hurried and undignified manner, and at one large official dinner more than half the invited guests sent excuses at the last moment. A curious point about the epidemic was that

scarcely any children, and but comparatively few ladies, suffered. The new Simla water-supply was in some quarters accused of causing the outbreak, but the partiality shown by the disease would indicate some other cause. The Army Sanitary Commission, which appears to be little else than the Sanitary Commissioner with the Government of India "writ large," has given publicity to some astonishing statements which (I am glad to see) have been challenged by a writer in the *Pioneer*, August 7th. The Sanitary Commissioner states: "It is no part of our duty to enter on etiological controversies, but when facts of this kind present themselves it becomes our duty to call the attention of the authorities in India to them, and to point out that the occurrence of cases of cholera among the population using Vehar water and the high death-rate among them are in direct contradiction to the water theory. This fact has been already recognised by the Calcutta authorities, and, fortunately for the advance of public health improvements, the Indian authorities are too acute to be led astray by European disease theories, and they know how to deal with theorists. Calcutta and Bombay have both better water supplies than London, and both suffer from cholera." This writer remarks:—"The commission do not seem to be aware that large tracts of Calcutta lie outside the field of the new water supply, and that most of the cholera deaths that now occur take place among the poor and dense populations who reside on these tracts. But even within the field of supply the difficulties under which the poorer classes lie in getting the filtered water are so great that a large quantity of very foul water is in daily use among them. Referring to an outbreak of cholera in Hastings-street, Calcutta, the health officer, in a recent report, thus writes: 'A police guard was stationed on the bank (of Tolly's nullah), not to prevent bathing, for this was out of the question, but to caution the people against the further use of the water. The engineer was ordered to prepare estimates for doubling the number of hydrants.' This nullah, in which tens of thousands of people bathe, from having no better water convenient for the purpose, is little better than a foul sewer. Its water is defiled by the drainage of many public and innumerable private latrines, and by the discharge of many sewers which do not communicate with the new main sewer. Another defect in the new water supply arrangements is that the supply is turned off at night, and the consequence of this is that careless, improvident people, who have no storage arrangements, have to resort for water after sunset to the innumerable foul tanks on which Dr. Payne has been waging a noble war of extermination for some years. Such is the water-supply which the Army Sanitary Commission—in its eagerness to discredit 'European disease theories,' propagated and popularised by men like Parkes and Simon—say is better than the water-supply of London! I lately heard of a remarkable testimony to the value of the new Calcutta water-supply in preventing cholera. It was that of the chaplain whose duty it was to minister at the burial of Europeans. This gentleman noticed that with the introduction of the new water his work suddenly became much less, owing to the almost entire cessation of cholera among European residents, as the disease was now nearly confined to the sailors living on the river, who continued to use the Hooghly water as before."

What the condition of the Bombay water-supply was during the hot weather of the present year is best seen from the following extract from the *Times of India* (*Pioneer*, July 22nd, 1880): "The almost complete failure of the Tulsī water system during the past hot season, and the narrow escape which the city had from the evils and inconveniences of a water famine, have naturally excited much attention. Even in the early part of May the enormous quantity of water which had been drawn off from the Tulsī lake had reduced the water to an alarmingly low level; and as the month wore on it became more and more apparent that, unless the strictest care was exercised in the distribution of the water in hand, a total stoppage of the supply was imminent. Consequently the water was only admitted into the city at certain short intervals, and then in comparatively small quantities. As day succeeded day, and as the level in the lake got to be lower and lower, it became more manifest that unless the rains arrived at an early date the city would be subjected to a dearth of water

¹ A watercourse.

during a period when pure and wholesome water was most essential to the well-being of the people. As the end of the hot season approached, the quality of the fluid sent through the mains into the city was very bad, and the bath tubs of households were charged with a quantity of solid matter which could not be separated from the water by any amount of filtration. The Vehar supply was called in to supplement Tulsī, and in this manner the supply was kept up until the 5th of June, when the monsoon burst, and a heavy fall of some five inches of rain in two days relieved the anxiety of the municipal officers. Of course, such a glaring failure of the water-supply was not to be allowed to pass without comment: Dr. Weir, the Acting Municipal Commissioner, has succeeded in proving that up to the present there was no ground for saying that there had been any miscalculation as to the nature of the Tulsī supply. It has been urged, and with great show of reason, that until the Malabar Hill Reservoir, which is an important part of the Tulsī scheme, has been completed, it is impossible to judge as to the capabilities of the project for supplying the city with water, and that, until the system is carried out in its entirety, any condemnation of the work would be unfair."

Cholera has been prevalent in the Lucknow and Allahabad Districts. The 2-22nd Regiment, stationed at Allahabad, has lost thirty-five men in all. On the 31st of July the epidemic threatened to assume serious proportions, no less than sixteen men and one officer—a young A. M. D. surgeon, Dr. Noad—having been buried on that day. Dr. Noad's case was a sad one. He was a Charing-cross man, who had only arrived in India in March; he was in delicate health, and under the heavy work he succumbed. He was attacked at 2 A.M., and died at eight o'clock next morning, much regretted by all who knew him. He fell at his post.

The outbreak in the 22nd presented some interesting etiological features; but at such times as the onset of an epidemic medical officers have no leisure to institute inquiries into the circumstances connected with the outbreak. The disease was for some days confined to the European infantry, although between it and the native city, where cholera prevailed largely, lay a battery of artillery, which only had one case, and that some ten days after the outbreak in the infantry barracks. Immediately to the north-east of the infantry were the Native infantry lines, where no case of cholera appeared until after the solitary one in the artillery. Every barrack of the 22nd, excepting the hospital, seems to have furnished cases indiscriminately, excepting the two hospital barracks. The women and children also were quite free from cholera. These conditions would, therefore, appear to be strongly opposed to any epidemic wave hypothesis, and they tend to indicate to me food or water contamination as the cause, to which the men of the regiment only, with the important exception of the hospital patients, were exposed. Such a cause might exist in connexion with the canteen, to which all the men, excepting the hospital patients, had access. No officer, excepting Dr. Noad, was attacked. It is stated that at the time of the outbreak there was plenty of money among the men, owing to many of them having re-engaged, and having received the usual bounty.

A TABULAR VIEW OF THE DAYS AND HOURS OF THE INTRODUCTORY LECTURES

To be delivered at the different Medical Schools.

	Lecturers.	Days and Hours.
St. Bartholomew's Hospital	(No Lecture)	Oct. 1st
Charing-cross Hospital	(No Lecture)	" 1st
St. George's Hospital	Dr. Cavafy	" 1st, 4
Guy's Hospital	(No Lecture)	" 1st
King's College	Prof. George Johnson	" 1st, 4
London Hospital	Dr. Andrew Clark	" 1st
St. Mary's Hospital	Mr. Walter Pye	" 1st 3
Middlesex Hospital	(No Lecture)	" 4th, 3
St. Thomas's Hospital	Dr. Ord	" 1st, 3
University College	Prof. Burdon-Sanderson	" 4th, 8
Westminster Hospital	Dr. Donkin	" 1st 3
Durham University	Mr. T. W. Barron, M.A.	" 1st 2
Owens College, Manchester		" 1st
Queen's College, Birmingham	Prof. Bartleet	" 4th 3
Sheffield School of Medicine	Dr. Gwynne	" 1st 4
Edinburgh School of Medicine	Dr. Moinet	" 25th 11
Aberdeen University		" 18th
Glasgow University	Prof. Cleland	" 26th
Glasgow Royal Infirmary	Dr. Clark	" 27th 3
Anderson's College, Glasgow	Prof. Dittmar	" 26th 2
Queen's College, Cork		Nov. 1st
Queen's College, Belfast		" 2nd

Medical News.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Sept. 16th:—

Dacachauji, Edalji Rustauji, Bombay.
Kinneir, Francis William Edward, Doughty-street.
Lane, Alexander, Bishop's Castle, Salop.
Wasse, Gervas Miles, Newton, Devon.

The following gentleman also on the same day passed his Primary Professional Examination:—
Harris, John Harry, Guy's Hospital.

At the Preliminary Examination in Arts held at the Hall on Sept. 17th and 18th, 145 candidates presented themselves, of whom 47 passed and received certificates of proficiency in General Education—viz.:

FIRST CLASS.
Florence Nightingale Toms.

SECOND CLASS (in alphabetical order).

C. A. Adams.	R. B. Leggatt.
R. H. Barrett.	C. E. Liesching.
E. D. Bell.	Emma M. D. Miller.
F. Brightman.	Paul von Nordeck.
E. H. Brock.	G. C. H. Norman.
G. T. Cattell.	A. C. A. Packman.
Kate Crooke.	Jiteudja N. Pálit.
H. W. Denton-Cardew.	T. J. Palmer.
R. Dobson.	E. W. Paul.
T. U. Duer.	W. J. Procter.
W. B. Felton.	Edmund Raghib.
G. W. H. French.	H. V. Rake.
A. J. Gibbon.	H. E. Rayner.
Edwin Gill.	A. Y. Reilly.
C. H. Glasson.	Jane Goff Richardson.
G. R. Hall.	Robert Rogers.
E. B. Harris.	W. D. Ross.
W. E. G. Jackson.	S. E. Rossiter.
A. E. Johns.	S. N. Scott.
C. St. Johnston.	G. H. Thompson.
W. M. Joyce.	S. Wachter.
H. H. Kent.	J. J. Wheeler.
H. B. Lavies.	F. A. Yonge.

MR. PARETTE, surgeon, of Beaufort, Breconshire, was, on the 14th instant, presented with an illuminated address and a massive gold Albert by the workmen and inhabitants of Sirhowy and district, in recognition of long and valuable services.

THE annual dinner of the East-end Tradesmen's Association in aid of the London Hospital was held on the 16th inst. The chairman, Mr. Dix, stated that the members of the society now numbered 311, and that its efforts had resulted in the addition of something like £1500 to the funds of the hospital.

ANOTHER death from shock, apparently resulting from wasp-stings, is reported. A woman, aged sixty-one, residing at Langham, near Colchester, in picking grass from the roadside disturbed a nest of wasps, and was stung on the forehead. On her return home her head became much swollen; she fell into unconsciousness, and shortly afterwards expired.

THE ISLINGTON WORKHOUSE.—The excellent and courteous medical officer of the Islington Workhouse, Mr. Philip Cowen, has lately resigned his post, to the great regret of the inmates of the workhouse, who had in him a careful and wise adviser, and of all medical men whose duties brought them into occasional contact with Mr. Cowen. Mr. Cowen had also the pleasure to receive a substantial proof of esteem from his fellow officials in the institution. He leaves the workhouse to commence private practice. The guardians have shown their respect for him in giving him the charge of an outside district.

BEQUESTS ETC. TO MEDICAL CHARITIES.—Mr. Peregrine H. Purvis, late of Winchmore-hill, bequeathed £100 each to the Royal Free Hospital, the Metropolitan Free Hospital, the British Home for Incurables, the Earlswood Asylum, the City of London Hospital for Diseases of the Chest, and the Deaconesses' Institution and Training Hospital, Tottenham. By the will of Mr. John Rahles, late of Camden-road, the German Hospital, Dalston, becomes entitled to £200. The managers of the Metropolitan Convalescent Institution have received from an anonymous donor the sum of £6500, on condition that they at once establish a seaside convalescent home. Miss Fanny Brookman, of Sandford, Winscombe, bequeathed £500 to the Weston-super-Mare Hospital, and £1000 to the West of England Sanatorium.

Medical Appointments.

Intimations for this column must be sent DIRECT to the Office of THE LANCET before 9 o'clock on Thursday Morning, at the latest.

- ADRIEN, E. N., L.K.Q.C.P.I., has been appointed Medical Officer to the Balbriggan District of the Balrothery Union, vice McEvoy, resigned.
- BUCKENHAM, J., L.R.C.P.Ed., M.R.C.S.E., has been appointed Public Vaccinator for the Borough of Cambridge, vice Knowles, deceased.
- DALE, B. H., L.R.C.P.Ed., M.R.C.S.E., has been appointed Medical Officer to the Arncliffe District of the Settle Union.
- ENGLAND, W., M.D., F.R.C.S.E., has been appointed Medical Officer to the First District of the New Winchester Union.
- HAMMOND, G., L.D.S.R.C.S.E., has been appointed Dental Surgeon to the Western General Dispensary, Marylebone-road.
- HARRISON, H. F. E., L.R.C.P.L., M.R.C.S.E., has been appointed Public Vaccinator for No. 2 District of the Fulham Union.
- KNOWLES, E., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for the First District of the Cambridge Union, vice Dr. Knowles, deceased.
- MAGNER, E., M.D., M.Ch., L.M.K.Q.C.P.I., has been appointed House-Surgeon to the Cork Workhouse, vice Riordan, resigned.
- PENTLAND, A., M.B., L.R.C.S.I., has been appointed Medical Officer to the Ryan Dispensary District of the Mohill Union, vice Creery, resigned.
- POLAND, J., L.R.C.P.L., has been appointed Registrar to the North-East Hospital for Children.
- PORRITT, N., M.R.C.S.E., has been appointed House-Surgeon to the Huddersfield Infirmary, vice Evans, resigned.
- ROWNTREE, W. G., L.R.C.P.Ed., M.R.C.S.E., has been appointed Medical Officer for the Barnsbury District of the Islington Union, vice Hurston, resigned.
- SOUTHEY, A. J., M.R.C.S.E., L.S.A.L., has been reappointed Medical Officer of Health for the Slough Urban Sanitary District for three years. £25 per annum.
- STEELE, R., L.R.C.P.Ed., M.R.C.S.E., has been appointed House-Surgeon to the North-East Hospital for Children.
- STEVENSON, T., M.D., F.R.C.P.L., has been appointed Public Analyst for the Borough of Godalming for one year.
- WALSH, P. C., L.R.C.P.Ed., M.R.C.S.E., has been appointed Medical Officer and Public Vaccinator for the Frenchpark Dispensary District of the Castlereagh Union, vice Gillespie, resigned.

Births, Marriages, and Deaths.

BIRTHS.

- BUCHANAN.—On the 16th inst., at Paddock House, Chatham, the wife of Walter Buchanan, M.R.C.S.E. &c. (prematurely), of a daughter.
- ELLIOTT.—On the 14th inst., at Mansfield, Notts, the wife of Thomas Elliott, M.D., of a son.
- GRIMBLY.—On the 9th inst., at Newton Abbot, South Devon, the wife of Richard Henry Grimbly, M.R.C.S.E., of a daughter.
- GUNNING.—On the 13th inst., at Silverdale, Staffordshire, the wife of John Edmund Gunning, M.R.C.S.E., of a son.
- MOORE.—On the 13th inst., at Roker-terrace, Sunderland, the wife of Dr. George Moore, Fleet Surgeon, Royal Navy, of a daughter.
- PARAMORE.—On the 13th inst., at Hunter-street, Brunswick-square, the wife of Richard Paramore, M.R.C.S.E., of a daughter.

MARRIAGES.

- COLBOURNE—KRABBÉ.—On the 7th ult., at St. John's Church, Buenos Ayres, Louis Colbourne, M.D., to Nora, third daughter of the late Charles Brehmer Krabbé, Esq.
- MACREADY—DAVIDSON.—On the 1st inst., at the Parish Church of St. Marylebone, Jonathan F. C. H. Macready, Esq., F.R.C.S.E., of Harley-street, to Fanny Sarah, youngest daughter of the late James Davidson, Esq., of the Bengal Civil Service.
- PARISH—ANDERSON.—On the 9th inst., at Christ Church, Erith, Kent, Frank Parish, M.R.C.S.E. & L.R.C.P., of Worthing, Sussex, son of John Parish, Esq., of Erith, to Emma Frances, eldest daughter of William Anderson, Esq., C.E., of Erith.
- PHILLIPS—TOMS.—On the 4th inst., at St. Abbot's, Kensington, George Bagster Phillips, M.R.C.S.E., of Spital-square, Norton Folgate, to Lizzie Toms, of Dorset Villa, Campden-hill, youngest daughter of the late John Toms, of Chard, Somerset.
- RENNER—BERTLING.—On the 2nd inst., at Portsdown-road, Charles Renner, Esq., M.D., to Emma, eldest daughter of Robert Bertling, Esq., M.D.

DEATHS.

- BREEZE.—On the 5th inst., at his residence, Park Lodge, Finchley, Richard Goodwin Breeze, Esq., M.B., M.R.C.S.E., only surviving son of the late Rev. Richard Breeze, aged 46.
- DAVIES.—On the 5th inst., in London, John Davies, M.D., late Surgeon to the Ebbw Vale Iron Works, aged 60.
- IMRAY.—On the 22nd ult., at his residence, Saint Aroment, Dominica, West Indies, the Hon. John Imray, M.D., much loved and deeply regretted. Friends will please kindly accept of this intimation.
- REID.—On the 20th inst., at Moira House, Arnold, Notts, Alexander William Reid, M.A., M.B., C.M. Glasg., L.R.C.S.Ed., aged 31.
- STOKES.—On the 18th inst., at Clanciarde gardens, Bayswater, London, John Milbourne Stokes, M.D., of Milbourne, Hawke's Bay, New Zealand, aged 67. New Zealand papers, please copy.
- STOLTERFOTH.—On the 19th inst., at Queen's-park, Chester, Sigismund Stolterfoth, M.D., F.R.C.P., late of Dover, in his 85th year.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET OFFICE, September 23rd, 1880.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radiation in Vacuo.	Max. Temp. Shade.	Min. Temp.	Rain fall.	Remarks at 8.30 A.M.
Sept. 17	29.84	W.	59	57	86	68	53	..	Overcast
" 18	29.72	W.	59	58	89	64	53	0.05	Raining
" 19	29.81	S.W.	46	45	84	60	43	0.25	Raining
" 20	29.83	W.	54	51	93	64	43	0.13	Bright
" 21	29.92	W.	54	52	66	59	43	0.02	Overcast
" 22	29.82	W.	58	56	87	71	51	0.02	Overcast
" 23	30.17	N.E.	62	60	81	67	56	..	Overcast

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Local papers containing reports or news-paragraphs should be marked.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

Lectures, original articles, and reports should be written on one side only of the paper.

We cannot prescribe, or recommend practitioners.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET to be addressed "To the Publisher."

OBLIQUE INCISIONS.

At a recent meeting of the Philadelphia Academy of Surgery, Dr. Packard called attention to the advantage of oblique cutaneous incisions, not only in avoiding scar, but in promoting immediate union. Though the method is no novelty, the hint may be useful to young surgeons elsewhere than in America.

J. G. S.—We believe our correspondent's qualifications would be admitted for the appointment; but it would be best to write to the Secretary of the Local Government Board (Ireland), Dublin, and ask for a copy of the Regulations concerning the appointment of Union medical officers.

D. M. R.—We know of no institution of the kind, except perhaps the Ladies' Charity School, 22, Queen-square, W.C.

EFFECTS OF AN EXCLUSIVE MEAT DIET.

To the Editor of THE LANCET.

SIR,—Can any reader of THE LANCET kindly supply me with information on an experiment tried at the Gobelins? The experiment was to feed criminals on exclusive meat diet. They died in a few days. Any information on the subject, or an account of this particular case, will oblige,
Yours truly,

Sept. 14th, 1880.

DIETETIC.

* * We are not acquainted with the particulars of the experiment alluded to by our correspondent. The exclusive use of a meat diet could hardly be fatal in a few days. The first serious result would be the development of scurvy, and it is hardly to be supposed that, after the serious symptoms which accompany the disease had manifested themselves, the experiment would have been pushed to a fatal conclusion. In an experiment, however, made on dogs, a diet consisting of purely proteid material, such as dried fibrin or coagulated albumen, proved speedily fatal, since these substances do not contain the fatty principles and extractives found in ordinary meat, and which thus render it a fairly representative food. Dogs fed exclusively on Liebig's extract were found to die sooner than dogs not fed at all. This has been accounted for as due to the deleterious influence of the potash salts of the extract; for, though these are indispensable to the economy, a large dose of them is injurious in the absence of the food whose metabolism it is their office to direct. For the latest particulars with regard to the physiological effect of meat diet, we would refer our correspondent to Professor Foster's "Text-book of Physiology," and to some observations made on this point by Dr. Ralfe, and published by him in our columns, 1877, in a contribution entitled "An Inquiry into the General Pathology of Scurvy."—ED. L.

A CHINESE OPINION OF WESTERN MEDICAL PRACTICE.

The *Foochow Herald* publishes the following translation of an article from a Mandarin organ. The portrait of the European practitioner of medicine is certainly not flattering:—

"The reason why foreigners adhere to their own system is because they are well aware that China and foreign lands are different, that the constitutions of the people and medicines and climates are like wise different, that the countries are thousands of miles apart, the languages and tastes are also dissimilar, and that under these circumstances the medical practice cannot be the same. Otherwise, with their intelligence, western nations would have had no difficulty in learning anatomy on Chinese principles, and would have adopted our ancient system. It is because they do not understand our principles that they retain their own medical science for their own use. But our people do not understand the foreigners' principles, and we do not want to borrow foreigners' science to cure us. In so doing we are stupid and mistaken, whether that science be good or bad. As people say, they are foolish doctors who cheat others. Because they know nothing of the pulse, they delight to copy foreigners who pay no attention to the pulse; because they know nothing of the nature of drugs, they delight in western science, which does not inquire into the nature of drugs. They (the foreigners) force upon their patients pills, powders, plasters, and potions, without knowing anything about them. They never adopt the plan of writing out descriptions of cases. In their surgical practice they cut, slice, chop, and hack in the cruellest manner. They perform the most horrible and disgusting of operations with the nonchalance of a juggler playing with his ivory balls, utterly regardless of their patient's life. The proverb that it is no good to cure a disease if you kill your patient applies to them thoroughly. These doctors are just like executioners, except that the latter kill by order those who ought to die. The former with a turn of the wrist calmly and coolly kill those who have done no wrong, but have merely asked to be cured of some disease. Neither heaven nor mankind can be insensible to this, which is insupportable, if there be anything that is insupportable. The desire of heaven and earth is to give life to men; the wish of princes and rulers is to preserve it. These people make a business of killing men, and do so under the pretence of saving their lives. They should be happy that they are able to remain upon the earth."

Vertebra.—By the reading of the Regulations, it would appear that both examinations must be passed. Application might be made to the Secretary.

Zymotic.—The paper will appear in an early number.

Mr. Buckland.—We do not prescribe.

THE CASE OF MR. O'BRIEN JONES.

To the Editor of THE LANCET.

SIR,—The case of Howell v. Jones and West must be fresh in the recollection of your readers, and I think only requires increased publicity in order to obtain for Mr. Jones such a response as will fully compensate him for the pecuniary loss he has sustained—viz., £500. The following sums have already been received:—

Special Donations.

The Rev. B. B. Bockett, Vicar of Epsom ..	£10	10	0
Mrs. Bockett	10	10	0
R. Brooks, Esq.	21	0	0
H. Brooks, Esq.	10	0	0
J. E. Erichsen, Esq.	10	10	0
Dr. Drage Hatfield	10	10	0
	72	10	0
Subscriptions to this date	187	15	6
	£260	5	6

I trust you will allow me by the insertion of this letter to invite further subscriptions, which will be duly acknowledged by,

Yours obediently,

ED. HART VINEN, M.D., Treasurer.

17, Chepstow-villas, Bayswater, Sept. 20th, 1880.

"EASY EXPULSION OF GALL-STONES."

To the Editor of THE LANCET.

SIR,—Dr. Roderick Kennedy's communication on this subject, which appears in to-day's LANCET, deserves some comment. Dr. Kennedy states that in every case in which gall-stones were proved or presumed to be the cause of periodic suffering, and in some instances in which there was merely obstruction to the proper flow of bile, the administration of large doses of olive oil was followed by prompt and painless expulsion of a surprising number of gall-stones. It is probable that Dr. Kennedy might have obtained equally surprising results if he had administered similar doses of oil to persons who had no liver symptoms whatever. Dr. Kennedy has offered no satisfactory proof that these bodies which were expelled in such a wholesale and painless manner were really gall-stones. A reference will be found in Flint's Practice of Medicine, fourth edition, page 460, to cases where enormous numbers of fatty concretions were passed after administration of large doses of olive oil given with a view to expel gall-stones. At all events a treatment followed by such tangible results must needs be very comforting to the patient's feelings.

Yours truly,

JAMES B. BALL.

Brixton, Sept. 18th, 1880.

GLASGOW ROYAL INFIRMARY SCHOOL OF MEDICINE.

We regret that, through an inadvertence, the above institution was omitted from the tabular list of Scotch Medical Schools in our Students' Number. Most of the information regarding the Glasgow School of Medicine was, however, comprised in a paragraph on page 446 of that number, to which we would refer our readers.

Dr. Alderson.—1. The age of the patient does not militate against his being the subject of typhoid fever, as this disease has been met with in subjects over forty years of age.—2. The toxic effects of quassia upon man and the higher animals was discussed by Pereira, and the history of the case recorded in the "Mirror" for August 14th leaves no room for doubt as to the symptoms exhibited being due to the drug.

Mr. W. W. Vinnedge.—Mr. Erichsen has written a work on the subject. *Zero* and *D. M. R.* have forgotten to enclose their cards.

"LEGALISED QUACKERY AND LOW CHARGES." A DEFENCE

To the Editor of THE LANCET.

SIR,—Much has been written and said against the self-supporting dispensaries and the doctors attached to them; but I think the arguments that have been brought forward against them have been very fairly refuted by those most interested. I should wish to try to make some defence to the hostile criticism that appeared in your journal a few weeks since. The self-supporting dispensary is now an established institution. The numbers that have sprung up in all parts of the metropolis, and the general success attached to their establishment, stamp the fact plainly that they were required to meet a want amongst the poorer classes. In few neighbourhoods where they have been established can it be shown that the general practitioner is injured or that any chemists' shops have been closed, and no better argument can be advanced as to their utility and benefit than this general success and non-injurious effect upon the general practitioner or the legitimate part of a chemist's business. The scathing pen that writes down the self-supporting dispensary doctor abuses a very useful member of society, and does not take into consideration "the times," and that these institutions and the men for them have sprung up to supply a great and general want—viz., good advice and medicine cheap, and without in one sense "charity." As well might the practitioner who has club and union practice be abused. I have been associated with large club and union practices as well as dispensary work, and my experience is that the dispensary doctor is equally able, if not much more so, to give time, attention, and good medicine to his patients as is the club and parish doctor to his; and although there is this difference, that clubs and union appointments are mostly held to work in with private practice, I doubt if the club and union patients get the better attendance or physic supplied to them for that reason, and I would wish to ask the club doctor if the average club, which includes women and children, pays him 1s. per visit and 6d. for each bottle of medicine supplied to the sick members? yet clubs are seldom refused by the general practitioners, even in good practice, and are not unfrequently canvassed for. Then as to the impossibility to supply good medicine (in fact all that is necessary) for 6d.: I maintain it can be done, as anyone will admit who has a knowledge of the working of dispensaries, whether self-supporting or supported by voluntary contributions. The drug bill for a dispensary paying £500 a year need not exceed £70 per annum. The dispensary doctor is better off than the average rural practitioner, whose work and expenses are frequently wholly out of proportion to his receipts.

The popularity of the "dispensary" in the profession is clearly proved by the eagerness with which they are purchased when offered for sale—purchased not only by men with inferior qualifications, but by those who have distinguished themselves at their hospitals at the different examining boards. They are used as stepping-stones to better things, and many a man, who will in time to come stand well in the profession and with the public, will have to thank the ready-money dispensary for helping him to bear the heat and burden of the day.

Lastly, the old-fashioned medical etiquette is a thing of the past. Many of our leading surgeons and physicians do not hesitate to usurp the duties of the general practitioner. They certainly do not set a good example to the struggling, striving mass of professional men at the bottom of the ladder. We must live, and in this crowded, competing world of ours it will not do to stand and starve because such-and-such a thing is not professional according to the lights above. Without doubt the dispensary is a necessary institution, and before the medical men attached to them are so ruthlessly condemned, it would be well to inquire into and see the work done; for, believe me, many there are of us who are honestly and earnestly working in our humble way, often without fee and without appreciation, always with the hope of alleviating the suffering and distress around us, and at the same time for the support of ourselves and family.

August 24th, 1880.

VULCANITE PLATES.

L.R.C.P. Ed.

DR. SEXTON, in a recent paper in the *American Journal of the Medical Sciences*, states it as his opinion that the wearing of vulcanite plates in the mouth is productive of conditions that frequently give rise to reflex aurial disease.

Mr. E. S. Scott.—Ellis among English authors; or Smith or Meigs and Pepper among American authors.

M. M. Heron.—We have no knowledge of the individual.

Dr. Percy Boulton.—Soon.

*Dr. G. W. Parker, (Madagascar).—*1. Reports on Disinfectants will be found in THE LANCET of July 26th and August 9th, 1873. Sulphurous acid, chloride of lime, carbolic acid, and chloride of zinc are amongst the best. — 2. We shall be glad to receive the paper referred to. — 3. The problem has not been solved so far as we are aware, and would form an important subject for observation and inquiry.

*Mr. Hope, (York, W. Australia).—*The papers have been received, and are marked for insertion.

*Candidate.—*See the Students' Number of THE LANCET, September 11th.

CHLORAL AND MORPHIA.

To the Editor of THE LANCET.

SIR,—In THE LANCET of March 6th of this year you were generous enough to publish a letter of mine upon "Serious Collapse from Chloral and Bromide of Potassium combined with Opium." The lamented death of Mr. Amphlett is another illustration of the fatal result of the ingestion of these drugs. The late Mr. Amphlett, whilst yet conscious, declared that he had not taken an overdose of any drug. His statement I feel sure is correct. It is the ordinary doses of the one following that of the other that produces so fatal a condition. One of the cases I alluded to in my letter of the 6th of March is somewhat similar to the late Mr. Amphlett's. The patient, a young man, had been delirious for some time. Chloral hydrate had been given without any beneficial effect. A second opinion was called in, and it was decided to give a subcutaneous injection of morphia of one-fourth or one-sixth of a grain. The patient soon became quiet, livid, and died in two hours. The doses were not above those usually given, yet death followed. The late Mr. Amphlett's almost last words were that he had not taken an excessive dose of medicine. The case given above will bear out the truth of his statement.

Yours obediently,

PETER W. DE LA MOTTE, M.R.C.S. Eng.

Staines, Middlesex, September, 1880.

*G. M.—*All advertisers are to be avoided as men outside the pale of professional intercourse.

*Dr. Beckingsale.—*The names were placed in the order in which they were returned to us.

*Mr. J. H. Courtenay.—*The paper is marked for insertion.

"MEDICAL ETHICS AND PRACTICE IN NEW ZEALAND."

To the Editor of THE LANCET.

SIR,—Under the above heading in your issue of Sept. 4th is a letter signed "Doctor," dated New Zealand, Dec. 1879. As the New Zealand medical men can hardly be expected to take notice of a letter bearing an assumed name and giving no details, I think it only fair towards that body of men to ask you to insert this letter.

I was in Christchurch, New Zealand, in November and December, 1878, and had occasion to call in two medical men of that town in consultation over a patient with whom I was at the time travelling. Both of these gentlemen exhibited the most perfect acquaintance with the ethics and etiquette as usually followed by our leading London physicians and surgeons, and, in addition, went out of their way to be courteous to me as being a stranger, as well as being a professional brother. During my short stay in Canterbury colony I met several other medical men, and in all cases was very pleased to see the high standard of ethical bearing taken by our colonial confrères. I can assure you it would contrast very favourably with that commonly exhibited in this country. In Melbourne and Sydney I can also attest to the high position and delicate appreciation of points of ethics shown by the leading medical men. There are, of course, numerous quacks and bad cases of advertising; but the respectable people in the colonies never patronise such men, and know quite well the value of being treated by men who appreciate a good code of ethics.

Yours faithfully,

London, S.W., Sept. 18th, 1880. J. KINGSTON BARTON.

COATED PILLS.

To the Editor of THE LANCET.

SIR,—I should like to call the attention of your readers to a matter which has lately come very prominently under my notice. I refer to the use, among dispensing surgeons, of the coated pills as usually supplied by wholesale druggists. It has been my custom to have a certain number of pills of various formulæ made up and coated by my wholesale druggist. On several occasions these pills have hardly acted as one would have wished, and the other day the following occurred:—A patient consulted me, who appeared to be suffering from an attack of dyspepsia. I prescribed a tonic mixture to be taken three times a day, with one aperient pill (coated) with each dose of the mixture. In two days the aperient effect was nil. I repeated the mixture, substituting pil. cathart. fort. for the pil. aperiens. After having taken thirteen of these with no aperient effect, it occurred to the patient to divide two of the pills. This was followed by considerable disturbance of the bowels. The patient having told me of this, I made up two pills of the same nature, and these, too, were followed by markedly aperient effects. The question, therefore, naturally arises: Is it possible that coated pills in many cases are never dissolved at all? If this be so, surely it gives rise to a question of no little importance, taking into consideration the enormous number of coated pills that are used in the present day.

I think it would be interesting to the general practitioner branch of the profession to hear the opinions of men who have had extensive experience of coated pills.

Yours faithfully,

Shipdham, Norfolk, Sept. 14th, 1880.

IRVINE K. MILNE, M.D.

*Veritas.—*Though we do not agree with our correspondent's views, we might have been disposed to allow him to ventilate them in our columns; but the motives he imputes and the epithets he applies to the gentlemen respecting whom he writes make such a course quite impossible.

*Dr. Roderick Maclaren.—*The matter shall have attention.

THE LICENCE OF THE APOTHECARIES' COMPANY.

To the Editor of THE LANCET.

SIR,—As an old member of the profession, and one having a sincere regard for its position in the eyes of the public, I have read with much satisfaction the various articles that have lately appeared on this subject in the columns of THE LANCET, and trust that you will continue to uphold the view you have hitherto taken of the question.

It is impossible to doubt that the Apothecaries' Company as a licensing body is an anomaly and a superfluity. It is so in the eyes of the most intelligent members of the profession in this country, and in the eyes of foreigners it involves an absurdity, which they find it difficult to comprehend. As to the attempts made to explain away the relations of the licensing to the trading parts of the Company's affairs, they do not appear to me to be either very successful or very intelligible; for I suppose it will not be denied that a trade is still carried on by somebody at the Apothecaries' Hall, and that therefore the mere deputing of the licensing to other parties who use the name of the Company is something very like a subterfuge. But however this may be, the fact remains that the Company as a licensing body is a superfluity, and that if it retired from the scene, its place could at once be effectually supplied by the conjoint action of the Colleges of Physicians and Surgeons.

"Delenda est Carthago."

I am, Sir, yours &c.,

F.R.C.S. Eng.

September 9th, 1880.

MEDICAL DEPARTMENT OF THE CONVICT SERVICE.

To the Editor of THE LANCET.

SIR,—Will you allow me to give a warning note to all who may be invited to accept employment in the Medical Department of the Convict Service.

Much as the Army and Navy Boards are to be condemned for their unwarrantable depreciation of, and enmity to, medical officers, the official mind that directs the affairs of prisons is invested with a thicker coating of prejudice than that which forms such a marked development in the heads of the other branches of the public service. Without the doctor the occupation of a prison governor would be at an end. Questions of every conceivable kind are submitted to the doctor's judgment from morning to night. The authorities know his value; but prejudice, or whatever the contemptible spirit is, forbids recognition of his worth. They place assistant-surgeons very nearly on an equality as to pay with a chief warder, and when promotion, which may be very slow, comes, the maximum pay never exceeds, and is often below, that of a deputy-governor, who may have been in the service only three months, and who easily acquired a knowledge of his duties in thirty minutes. As to treatment, *ex uno disce omnes*. An assistant-surgeon, who had been a distinguished scholar in his school, recently declined in health. Knowing that in two or three instances deputy governors had obtained leave of absence for long periods on sick certificate, he applied for a similar privilege, and offered to provide a substitute. The reply was on a level with the contumelious disposition of the authorities. He immediately received the notice, ordinarily given to subordinate officers and domestics, that he must go in a month, and that he would be recommended for a gratuity—probably a few pounds.

Let candidates, therefore, beware. They cannot join a more woful branch of the public service.

Yours obediently,

R. W.

August 23rd, 1880.

THE BENGAL MEDICAL RETIRING FUND.

To the Editor of THE LANCET.

SIR,—Amongst the numerous discussions that have followed upon the recent amalgamation of the Royal with the Indian Medical Service, I have not observed any notice in your publication of the disastrous consequences of this change to expectant annuitants.

There are many men who, like myself, have been compelled from ill health to retire from the service on a smaller pension than they otherwise might have received. They, however, always had in view their Fund annuity, to which a compulsory subscription had been paid by them from their date of joining the service. The annuitants are appointed by seniority, and the periods after which the annuity has become available for retired men was, in 1877 and 1878, twenty-four and twenty-five years respectively. Last year, in consequence of the changes in the service, our seniors retired and took the annuities that, under the former conditions of the service, would have been allotted to us.

It is now upwards of twenty-six years since I entered the Bengal Medical Service, and there are retired officers still senior to me who now find their prospects of obtaining their annuity retarded for an indefinite period through this sudden and large influx of seniors to the retired list. In March last, in consequence of a representation of this grievance that I made in February, I received a communication to the effect that the same had been referred to the Government of India.

I cannot learn that any measures have yet been taken to compensate us for the postponement of the allotment of our annuities, although it must be well known that on the 1st of November next, the date on which the allotment always takes place, most of the eight annuities will be taken up by newly retired medical officers of twenty-eight years service and upwards.

Yours truly,

September, 1880.

BENGAL RETIRED.

AN ADVERTISING HOSPITAL IN BELFAST.

As hospitals cannot advertise themselves, it must be concluded that some individual medical man is responsible for the following piece of indelicate touting:—

"SAMARITAN HOSPITAL, BELFAST. — Objects: For the medical and surgical relief of women afflicted with diseases peculiar to the sex, including displacements of the womb, tumours of the womb and ovaries, ruptures of the bladder, strictures, blood-tumours of the pelvis, abscesses of the pelvis; the infirmities and diseases incidental to pregnancy, cancers of the breast and womb, difficult and painful menstruation, &c.; also, diseases of the bladder, piles, fistula, &c. Terms of admission for pay patients: 7s., 8s., 9s., and 12s. per week, according to accommodation desired or required. Free department: There is a free ward for those unable to pay. Out-patients seen daily at ten o'clock."

INTRA-PARIETAL TUBE.

Mr. H. G. Dyer.—Our correspondent's device, although ingenious, would, we fear, be attended with risk in its application.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Sturges; Sir T. D. Acland; Dr. Eustace Smith, London; Dr. Cavafy, London; Dr. Vinen, London; Mr. Stanley Haynes; Mr. Palmer; Mr. Ingpen; Dr. Burney Yeo, London; Mr. Sydney Jones, London; Dr. Whitmarsh; Dr. Beckingsale; Dr. Thomas, Glasgow; Dr. Ireland; Mr. Macdonald, Beith; Dr. Diver, Kenley; Mr. Heron; Mr. S. Cameron; Mr. Barton, London; Dr. F. H. Alderson, London; Mr. King, Exeter; Dr. Inglis; Dr. F. H. Daly; Mr. P. W. De la Motte, Staines; Dr. M. Jones, Cork; Dr. Wallace, Greenock; Mr. J. B. Ball, Brixton; Mr. Buckland; Mr. Teevan, London; Mr. B. Holt, London; Mr. Heath, London; Dr. Murray, London; Dr. Wigg, Derby; Mr. L. Tait; Mr. Macnamara, Dublin; Dr. Nicholls, Chelmsford; Dr. Woakes, London; Dr. Iliff; Mr. H. C. Burdett, London; Mr. Verdon, London; Dr. Budd, Clifton; Dr. Thomas, Sheffield; Mr. Mansfield; Mr. Jones, Menai Bridge; Dr. Charteris, Glasgow; Mr. Tudor-Risk, Harrow; Mr. W. R. Barker, London; Mr. J. D. McCaw, Belfast; Dr. Sargent, London; Dr. Saer, Mr. Keartland, Chester; Dr. Tatham, Salford; Mr. Pilkington, London; Dr. J. Adams, Ashburton; Dr. Ashby; Mr. J. Spear, Jarrow; Dr. J. MacCormac, Lindley; Mr. Lovett, London; Dr. Stuart, Wigan; Dr. Courtenay; Mr. Sweeting, Fulham; Mr. Colbourn, Cardiff; Dr. Row; Mr. Knight, Whitehaven; Mr. Purcell, Feakle; Mr. Watkins, Worcester; Messrs. Macniven and Cameron, Edinburgh; Mr. Lloyd; Mr. Withers; Mr. Wright, Plymouth; Mr. Ricks; Dr. Struthers, Aberdeen; Mr. Johnston, Southport; Mr. Wildman, Penzance; Mr. Blott, London; Mr. Hall, Redwood; Messrs. Wilson and Son, Manchester; Dr. Wood, London; Mr. Guliver, London; Mr. Stilliard, Birmingham; Mr. Peacocke, Bombay; Mr. Kirkman, Ramsgate; Messrs. Gurden and Co., London; Mr. Elliott, London; Dr. Kirkpatrick, Woodbridge; Mr. A. Legge, Lewisham; Mr. Gostling; Mr. Coombe, Jamalpore; Mr. Benington, London; Dr. Lawrie, Lahore; Mr. Downes, Kashmir; Dr. Maclaren, Carlisle; Messrs. Douglas and Mason, Edinburgh; Mr. Norris; Mr. Murray, Islay; Messrs. Remington and Co., London; Dr. Nash, Aldershot; Mr. Hope, York, W. Australia; Mr. Marsden, Eastbourne; Surgeon-Major Fitzgerald, Mirzapur; Mr. Cripps Lawrence, London; Mr. Walter Pye, London; Zeta; Alpha; Ichabod; Hospital; J. H. C.; An Old Subscriber; J. H. N.; L. H.; Tenax; Medicus, Elgin; W. H. L., Derby; H. C. T.; M.R.C.S., Hull; T. D. P., Willesden; L.F.P.S.G., Bradford; D. M., Bristol; Dietetic; A Provincial Practitioner; Candidate; H. M. B.; J. G. S.; The Dean of King's College Medical Department; G. M., Medicus, Oldbeach; M., Devon; Epsilon; Beta; L.R.C.P., Kentish-town; Medicus, Chesterfield; Hygeia; Vertebra; A. S. G.; Qual; &c. &c.

LETTERS, each with enclosure, are also acknowledged from—Mr. Holmes, Maidstone; Mrs. Arkell; Mr. Wales; Mr. Johnson; Dr. Burges, Frampton; Messrs. Merritt and Co.; Mr. Watson, Chudleigh; Mr. Roberts, Attercliffe; Mr. Taunton, Norwood; Dr. Davies, Cymer; Mr. Carrington, Burnley; Dr. Parkinson, Royston; Mr. Oldfield,

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Cork Examiner, Bradford Observer, Cork Constitution, Revue d'Hygiène, Daily Bristol Times, Cork Daily Examiner, Western Morning News, Australian Medical Journal, Lincoln Gazette, Lincolnshire Chronicle, Revue Mensuelle de Laryngologie, d'Otologie, et de Rhinologie, Pharmaceutical Journal, Chemists' Journal, La Independencia Médica, Γαλνός, Science, &c. &c., have been received.

Medical Diary for the ensuing Week.

Monday, Sept. 27.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS. — Operations, 10½ A.M. each day, and at the same hour.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

ST. MARK'S HOSPITAL.—Operations, 2 P.M.; on Tuesday, 9 A.M.

Tuesday, Sept. 28.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 3 P.M.

Wednesday, Sept. 29.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.

ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.

ST. MARY'S HOSPITAL.—Operations, 1½ P.M.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at 1 P.M.

LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.

GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.

Thursday, Sept. 30.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.

CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M.

Friday, Oct. 1.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, Oct. 2.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

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Agent for the Advertising Department in France—J. ASTIER, 67, Rue Caumartin, Paris.

PART OF A

Lecture
ON

AUDITORY VERTIGO.

Delivered at the National Hospital for the Epileptic and Paralysed.

By J. HUGHLINGS JACKSON, M.D., F.R.S., &c.

PHYSICIAN TO THE HOSPITAL.

WE are occasionally consulted by patients for attacks of vertigo. Sometimes the attack is epileptic, and then the case is infinitely serious; sometimes, at least many think so, it is owing to dyspepsia only, and then it is a thing of comparatively little gravity. Vertigo occurs occasionally as a result of sexual excesses. Some weakly people are giddy and totter if they get up quickly from the recumbent position, but here the attack, if we may call it one, is artificially produced. There is another kind of vertigo which has long been known, but which is not yet widely known—auditory vertigo, or, as it is often called, Menière's disease. It is quite certain that paroxysms of exceedingly severe vertigo occur with ear disease. No experienced person can deny that, even if he denies that there is a relation of cause and effect. Whilst auditory vertigo is the most distressing to the patient, epileptic vertigo is infinitely the most serious of all paroxysms of vertigo. Epileptic vertigo, I must tell you, is often used as a name for a very slight attack of epilepsy—for cases in which there is no true vertigo. I think it would be better to use it as a name for vertigo in slight epileptic paroxysms, or at the onset of severe ones. Thus, if a patient has, in a slight paroxysm of epilepsy, or at the onset of a severe one, the sensation of external objects moving, or of himself moving, I call that sensation epileptic vertigo. I do not call a very slight attack of epilepsy epileptic vertigo if there be neither of these sensations. In no case, indeed, do I conclude that a patient has vertigo unless I learn from him that objects appear to him to move, or that he feels to move.

The diagnosis of the nature of an attack of vertigo is not always easy. We ought to investigate the simpler cases first. There is a very important vertigo we have yet to mention; one, however, which does not come on in attacks; it comes on when the patient walks. I mean vertigo from paralysis of an ocular muscle, or of several ocular muscles. To study vertigo in cases of paralysis of ocular muscles is the most methodical way of beginning the study of vertiges in general. I think it is unwise to study auditory vertigo and epileptic vertigo before carefully investigating the much simpler case of vertigo from paralysis of ocular muscles.

Our subject to-day is auditory vertigo.¹ The term does not suggest the whole symptomatology of the affection it names, there is much more than giddiness with ear disease in a severe attack. The patient consults you for attacks of giddiness with vomiting, but the symptomatology is usually very much wider than this even. He will tell you that suddenly things seem to move—to move to one side, or to whirl round, or that he himself feels lifted up or pushed forwards. He is unsteady, and his gait is a reel, if walking be possible at all. Even when lying down he feels unsafe, and will grasp the sides of the couch. If he moves his head he is worse. The above vertigo, with reeling, is only one-half of the patient's condition. We may call the two symptoms we have mentioned locomotor symptoms. Vertigo is on the physical side incipient or rudimentary disorder of locomotion. The following additional symptoms we may call "vital." We see that the patient is pale and haggard, that there is profuse perspiration. He tells us that he feels sick, and he may vomit. He has horrible depression, he may say that he feels as if he were going to die, and not unfrequently com-

pares his condition to that in sea-sickness. Another symptom is pain in the head.

The paroxysm may last an hour or more. I have described what occurs in a severe attack; there are minor attacks, such as a little transitory giddiness and unsteadiness. There are also still severer attacks; sometimes the patient loses consciousness. A medical man told me that the first attack occurred in the streets in London. He was taken to a hospital unconscious, and remained so for three hours. Such a seizure would give us a hard task in diagnosis from epilepsy. Subsequently he had attacks without loss of consciousness.

In these cases there is "something wrong with the ear," or ears. Sometimes the patient has been long deaf of one ear before any attack; occasionally it happens that he is rendered deaf at his first attack; there is in other cases great noise in one ear when the paroxysm sets in, or an increase of a noise which exists betwixt the paroxysms.

In these cases the ear is the part in fault. But manifestly all the symptoms we spoke of as locomotor and vital are owing to something wrong with nervous centres. We may put it that the ear is in fault, and that the centres suffer. But this is not, I think, without qualification. Borrowing an idea from Sydney Ringer as to diminished resistance of centres in cases of migraine, I would suggest that any general lowering of health will be a factor in the production of auditory vertigo; the resistance of nervous centres being diminished, they more readily give way to the "irritations" by the ear. In another way of putting it we may say that the nervous centres are healthy in auditory vertigo, except, perhaps, for a defect in their nutrition in common with the rest of the body. They are, nevertheless, as healthy as any of the other centres, but they alone give way, they alone being worried *ab extra*. There is no reasonable doubt that the starting-point is ear disease; these particular paroxysms would not occur even in ill-health unless there were the particular defect ear disease. I find, however, that some patients consider the diagnosis to be nonsensical. A patient may reply that he has long been deaf, and that he does not care about his ear, that he does not come to you for *that*. (Sometimes, however, he does not know himself to be deaf of one ear.) He evidently supposes you are "thinking too curiously," that you are neglecting obvious causes and explaining the ailment by far-fetched and vague theoretical reasoning. The obvious cause to him is usually stomach and liver derangement; very naturally, for he vomits and may bring up much bile. He cannot see what an old aural affection has to do with a recent sudden paroxysm of vertigo, with urgent vomiting, and great prostration. He would be better satisfied, doubtless, by being told that his attack was due to "suppressed gout," to "liver derangement," &c., for these terms are familiar to him, if the explanations given in them are not really more intelligible. Then he may tell us, in confirmation of his hypothesis, that alterative aperients put him right again, not seeing that, the affection being in its nature transitory, he must come right after a time. What Buzzard says of treatment of batches of lightning pains in *tabes dorsalis* applies here.² I don't blame the patient, although I have to combat his notions. Not many years ago I did not know that ear disease was a cause of the symptoms I have mentioned, and I do not doubt in the least that my then erroneous, but quite conscientious, explanations appeared more rational to my patients than those I give now.³ You must not suppose that an advance in your knowledge of disease will necessarily make you more fitted to obtain your patient's confidence; it fits you to treat him better, and you must get your satisfaction out of that. If you tell a man who sees perfectly well that he has a grave condition of his optic nerves, he is often the reverse of being assured that you understand his case. The ophthalmoscopic examination which you make, simply because he has intense headache and perhaps vomiting, naturally seems to him quite irrelevant. If you told him that he was suffering from severe biliousness he might be satisfied. He may, indeed, reply to the expression of your opinion that he

² THE LANCET, Feb. 14th, 1880.

³ My attention was first thoroughly drawn to the subject by a masterly paper by Knapp, Archives of Ophthalmology and Otology, vol. ii., No. 1. I gave a short *résumé* of previous opinions on this disease, Med. Times and Gazette, Aug. 17th, 1872. Charcot has published one of the most important cases of Menière's disease. I have given an account of this in the Medical Record, April 22nd and 29th, 1874. A brief account of Menière's disease is given by Ramskill, in Reynolds's System of Medicine, the first account by a physician in the country, I believe.

knows it to be "all liver," and, perhaps, may add that he was always very bilious. One great thing you wish to do is to prevent his becoming blind, but if your iodide of potassium makes him "more bilious" very likely you do not see him again. In intense headache we should always use the ophthalmoscope, and if, as very often happens, you discover nothing wrong in a patient's eyes, he evidently feels that he scores one; he *knew* there was nothing wrong with his eyes. Similarly he often *knows* that there is nothing the matter with his heart, lungs, and kidneys, although we are obliged to examine the chest and urine as a matter of routine. If you get to know that hypermetropia is an occasional cause of severe head trouble, totally incapacitating the subject of it for study, you are in error if you suppose that a correct diagnosis founded on such knowledge will always be acceptable to the patient. Very naturally when he finds that, for a time at least, he can read small type, such an explanation of his symptoms appears to him simply absurd. Many of our patients seem to wish to have a conversation on their cases on some basis (gout, liver, rheumatism, &c.), which makes them feel that they follow the doctor in his investigations, and understand his conclusion. They cannot appreciate a scientific medical investigation. If a patient "who knows something of medical matters" consults you for amaurosis (simple optic atrophy), he naturally thinks you are wandering when, after looking into his eyes, you ask about pains in his legs, and then "tap his knees." If you took his view that the lightning pains in his legs were rheumatic, and that his failure of sight was owing to rheumatism of the optic nerves or their centres, he would be more in harmony with you.

Even medical men who have aural disease very often totally reject the proffered explanation of their attacks of vertigo; many of them also ascribe the ailment to digestive troubles. A medical man had deafness of his left ear, with occasional slight vertigo. One day, walking in his garden, he had pain in his head, was very giddy, fell in some shrubs, and vomited. This was plainly ear-vertigo, as he himself knew. But he had the following diagnoses made of his case by other medical men—(1) Nothing, (2) Nervousness, (3) Deranged stomach.

Be very careful how you interpret acute digestive symptoms. They may be effects, not causes. I imagine that in at least one in five cases of epilepsy the first paroxysm is erroneously put down to stomach derangement. Migraine, unquestionably a nervous affection, is very often similarly explained, and indeed goes under the unfortunate name of "sick headache." Besides, it is very common for cases of fatal brain disease to be explained away in their earliest stages as being caused in this simple manner. It is quite true that as we get older in practice we attach more and more importance to the state of our patient's alimentary system, for plainly our operations are often based on its condition. We always inquire now-a-days about our patient's digestion and regulate his diet, whatever ailment he may have, just as we examine his urine, heart, and arteries. But for my part I attach less and less importance to abnormal states of the digestive system as direct causes of definite nervous symptoms. Very often there is no other warrant for the diagnosis of liver affection in cases of intense headache, of vertigo, and of transient loss of consciousness, than sickness and vomiting, with the appearance, perhaps, of bile in the vomit. If anyone from any cause vomits long enough and strongly enough he will bring up bile; indeed, I should take a plentiful supply of bile in the vomit as evidence that the liver was working well. Vomiting is a very general symptom. I mean that it occurs under very many different circumstances—"shock," passage of a biliary or renal calculus, tubercular meningitis, tumour of the brain, migraine, ear disease; then there are the "gastric crises" of tabes dorsalis (Charcot). You do quite right, of course, to note the "stomach symptoms" in auditory vertigo, but you should inquire as to the state of digestion in the intervals of the attacks, when it is often quite good. When the digestion is right in the intervals the "dyspepsia" is paroxysmal, is part of the paroxysm, and no doubt depends on something wrong, not at the stomach end, but at or acting on the central end of the pneumogastric nerve. In a masterly article on "Vomiting in Connexion with Cerebral Disease,"⁴ Ferrier brings evidence to show that in cases of vomiting from cerebral or any other disease or morbid condition, irritation of the vagus, centrally or peripherally, is the one

thing in common to all. I think it is a good piece of work to make a comparative clinical study of the paroxysmal dyspeptic symptoms of migraine, auditory vertigo, and of those in some cases of tabes dorsalis ("gastric crises" of Charcot).

There is, however, described a "stomach vertigo," and as one of the describers of it is Trousseau, we must consider this matter with great respect. If you will read what Niemeyer calls Trousseau's "life-like description" of it, you will find that he does not really make out a strong case. He says that the attacks generally come on long after digestion, that sometimes a small quantity of food prevents an attack or stops it if it has begun, that stomach vertigo does not differ greatly from auditory vertigo, that the "slightest cause" may bring it on, as a sudden movement of the head, or looking at a range of bars, a trellised wall, or a striped pattern in the hangings of a room. I will read an extract from Niemeyer's well-known work. "As above mentioned, Trousseau believes that these attacks of dizziness depend on dyspepsia; at the same time he acknowledges that in many cases the signs of dyspepsia are so slight as to be readily overlooked. He relates cases of the successful treatment of 'vertige stomacale' by the alternate administration of infusion of quassia and a composition of carbonates of the alkalis. Even from this prescription I have never seen any benefit, and while I must acknowledge that the first attacks of dizziness affecting the patients that I have seen usually occurred after an indigestion, and were accompanied by dyspeptic symptoms, still in none of them were there evident signs of indigestion during the subsequent attacks, which often continued for years. I believe the repetition of the attacks of dizziness to be due to psychical causes." Observe how cautiously Niemeyer writes "usually occurred after an indigestion," and "were accompanied by dyspeptic symptoms"; he does not say "caused by." Curiously, some people deaf of one ear do not know it until it is pointed out to them. Hence Gowers has well said: "The fact that the patient may be unconscious of a most significant auditory defect lessens the value of former observations as evidence of the definite character of stomacal vertigo."⁵ I think Gowers will turn out to be right in what he has further written:—"My own conviction is that, in the vast majority of the cases in which a vertigo of definite and uniform character is apparently excited by gastric disturbance, an auditory defect will be discovered on careful examination." I confess that I do not believe that a sudden severe attack of giddiness would occur from dyspepsia, if there were not some flaw elsewhere. Of course, common sense leads us to treat dyspepsia whenever we meet with it; all would agree in this. But we must be careful lest we treat for it when it does not exist; and if there be dyspepsia, we must not neglect to care for other conditions which may not depend on the dyspepsia, or only very indirectly depend on it. I do not deny that ordinary dyspepsia, nor the dyspepsia artificially induced by over-indulgence, may be a factor. I think that dyspepsia, or any other cause of lowering of general health, is a factor in producing or allowing paroxysms both of migraine and auditory vertigo. This was in principle admitted when we referred to Sydney Ringer's opinions. Gowers has put the question very clearly:—"In persons the subjects of ordinary vertigo, whose equilibrium nerves and centres are damaged, a primary gastric disturbance seems sometimes to excite a paroxysm of the special vertigo to which they are liable, and the gastric disturbance which thus brings on the attack is naturally regarded as its only antecedent." An admirable observer, Dr. Russell of Birmingham, has described the case of a woman who had symptoms of gastric ulcer and paroxysm of "definite" vertigo, and no sort of ear affection; but he says that "some proclivity in one of the vaso-motor centres, or in some other part of the nervous tract involved, must be presupposed."⁶

To return to our special topic. No one need diagnose ear vertigo when there is nothing aural to get hold of. On any view, we should note the presence of ear trouble, if there be any, whether it is accepted as causative or not. This we are bound to do. If anyone believes that a patient's attacks of headache are really owing to deranged digestion, he is bound to take heed of any retinal projections there may be in the paroxysms (vibrating air, fortification outline, &c.), and of the mode of their progression over the field of vision. He has to hold his hypothesis, not by ignoring these

⁴ Brain, Part 6, July, 1879.

⁵ Brit. Med. Jour., April 7th, 1877.

⁶ Med. Times and Gazette, March 8th, 1879.

"definite" projections, but after fully considering them. Then, as Gowers points out, we have to note the kind of vertigo. To use again an expression of his, it is often "definite." Is it likely that when it is so particular that objects appear to be displaced to one side that stomach derangement is the cause of it? Is it not, on the contrary, more likely to be owing to some local lesion in the centres, even if not to disturbance of them by ear disease? And if there were no deafness, it would be rash to say there was no ear disease. I spoke also of retinal projections in some cases of migraine as being "definite." Is dyspepsia or any ailment affecting the nervous system generally likely to be the cause of a migraine with projections creeping over the field from one side towards the other? I entreat of you to inquire into the state of the ear in all cases of paroxysmal vertigo. I am ashamed to confess that I nearly made a very great diagnostic blunder recently by neglecting what I am now urging on you. Of course, you must not put down all paroxysmal affections, even starting with giddiness, as a matter of course to aural affection, even when there is such affection. Some attacks of epilepsy begin by noise in one ear;⁷ in some cases of epilepsy and of epileptiform seizures there is organic ear disease, and probably a causative relation. These two kinds of cases differ *toto cælo* from one another, and each also from cases of Menière's disease.

I will now recapitulate and also adduce further evidence showing the relation between ear disease and paroxysm, in which there is vertigo with vital symptoms, or in which there is ear disease with a slight and transient vertigo which is often definite. (1) There often is ear disease in the severest cases of vertigo. (2) Often the patient becomes deaf at his first seizure, and remains so afterwards. (3) When deaf of one ear (either before or after his first attack), suddenly turning the head in one direction may make him slightly giddy. (a) Thus one of my patients whose ear disease was right was a little giddy when he turned over to the left in bed. He had severe paroxysms also. (b) A medical man, whose ear disease is right, tells me in a letter, "The third attack was brought on by a sudden turn from right to left when lying in bed, when the giddiness and confusion lasted for eight or ten days. I have still difficulty in lying on the left side, and could still make myself giddy by turning quickly from right to left when lying. I can turn quite well any way when in the upright position. Auscultating with the right ear a patient lying in bed, the throwing the head to the right is apt to make me a little giddy, this does not occur when the head is thrown to the left." (c) Buzzard reports of a patient *subject to paroxysms of auditory vertigo*:⁸—

"The patient, deaf of the left ear and with noise in it, kept his bed three or four months, unable to turn his head to the left." These facts are, I believe, to be trusted. I must say, however, that the statements of patients as to side of body turned to or side affected in paroxysms of any kind are not to be confidently relied upon. (4) Some patients deaf and subject to attacks may make themselves a little giddy by pressure on the ear. Schwabach reports a case of discharge from the left ear, in which pressure above and below the left auricle caused the eyes to oscillate horizontally to the left side, and slightly downwards—that is to say, the pressure produced a physical condition for vertigo; moreover, the patient felt giddy. I take the following from a paper by Maas:⁹ "Of late E. Pflüger observed a case of formation of polypi on the posterior wall of the external auditory canal, close to the membrana tympani. When the polypi were touched with a probe, oscillatory movements in the horizontal direction ensued in both eyeballs." Flourens and other physiologists give oscillation of the eyeballs as one result of experimental injury of the semicircular canals. (5) Syringing the ear in some patients with aural disease produces an attack of auditory vertigo. Every medical man has seen patients thus treated ghastly pale, and reeling. In Schwabach's patient the oscillatory movements of the eyes were repeated in a lesser degree on syringing the ear. (6) Some foreign bodies in the ear produce great misery. I do not know, however, that they produce paroxysms like those of Menière's disease. You are aware that the pneumogastric

nerve sends a branch to the membrana tympani—some say to enable us to hear the dinner-bell. The membrana tympani receives branches from the fifth also. Possibly irritation of the pneumogastric branch is in greatest measure to blame for such symptoms as occurred in the following case. The case is of some interest; possibly it is a very common one in aural practice. For the notes of it I am indebted to Mr. Lewis Mackenzie, formerly house-physician at the London Hospital:—

About 12.30 P.M. on Dec. 30th, 1872, John D—, aged twenty-two, a strong-built soldier, came into the receiving-room of this hospital in a state of great mental excitement. His face was much congested, the conjunctivæ were suffused, and for the moment it seemed as if he were the subject of a delirium from drink. He was complaining in an excited manner of a "buzzing" in the right ear, and of intense pain, the character of which he could not describe. He frequently repeated that "he would go mad if not relieved." His head rested with his right ear on the palm of his right hand, and it was noticed that he frequently walked round and round, and always from right to left. The house-surgeon had some difficulty in getting him to be quiet, and explain his sufferings. When asked how long he had had the pain, he said since he got out of bed in the morning; in fact he awoke in great pain, "The pain woke me, but has got worse and worse." Whilst I was deliberating as to the diagnosis, the patient said, "It feels like a large insect in my ear." This leading observation at once suggested an examination of the ear. Nothing was seen by ordinary examination, but with an ear speculum and reflected light from a mirror all the tissues appeared healthy, but on more close examination a small black dot was seen at the anterior wall of the tympanum and its junction with the mucous membrane of the external ear, and moving about as if trying to scratch its way between the membrana tympani and the wall of the meatus. One syringeful of water brought out the offender, which proved to be a louse of rather large size, and dark. The patient was *at once relieved*, though his ear still felt "queer." He left the hospital in a state of intense gratitude.

(7) There are the well-known experiments of Flourens on the semicircular canals, narrated in every text-book of physiology. (8) There are the recent inestimable experiments of Cyon, carrying us a long way further than those of Flourens. (9) There are the researches of Mach and Crum Brown into the functions of the semicircular canals; these researches are of great value; by showing the particular importance of these canals in health they indirectly enforce the opinion that diseases of them may produce definite locomotor symptoms; they are also most valuable contributions to the physiology of the nervous system.

My chief subject is the paroxysm, but there are "chronic" cases. I speak of these to enforce that vertigo and reeling may have a causative relation with ear disease, that not only do "attacks" of vertigo go with it, but that more continuous vertigo does also; in some cases there are both attacks and frequent or continuous reeling. Of course, there is another difference between the two than that of acuteness and chronicity, which, however, for our present empirical purpose, does not concern us. A few persons with ear disease nearly always, or for very long periods, walk unsteadily; they have to walk with attention, and sometimes with their legs too widely apart; they feel slightly giddy; they may walk as if slightly drunk. If the deaf patient comes to you walking well, and yet complains that he frequently is unsteady, you should get him to walk a short distance with closed eyes. All sorts of bad walkings are made worse by closing the eyes, although none so much worse as the gait in locomotor ataxy. I will mention only one case of this kind. I have recorded it in *Brain*, Part 5, vol. ii., April, 1879, partly from notes by Mr. Lewis Mackenzie. It looks to me like a production of chronic vertigo and reeling by experimental injury of one ear. A medical man, after firing a heavily-loaded gun, felt giddy and stunned, and walked badly. Since he has been partly deaf of the right ear, has had noise in it, and has tended to the left side in walking; when arm in arm with someone he would pull or push his companion to the left, according to the arm hooked to. His wife had often to remind him that he walked to the left. He is never without the noise in the right ear. This case is, so to speak, the production of "half a reel" by injury of one ear.

In the case last mentioned there were no paroxysms, but, as already said, there are cases with both severe paroxysms

⁷ I have published two cases of this kind without autopsy in THE LANCET of March 11th, 1876, p. 338. Recently I have, as Gowers mentions in his second Gulstonian Lecture (THE LANCET, March 20th, 1880, p. 435), had an autopsy in a case of epilepsy, or epileptiform convulsions, in which noise in one ear was the "aura." Gowers examined the specimen for me, and found tumours in the opposite side of the brain.

⁸ Clinical Society, THE LANCET, March 4th, 1876.

⁹ Archives of Ophthalmology and Otology, vol. vii., p. 493.

and interparoxysmal slight symptoms. Some patients have strong paroxysms and frequent slight ones. A patient, under the care of my colleague, Dr. Buzzard, besides having strong paroxysms, has what he calls "staggers" five or six times a day, or even in an hour. He has a feeling of sickness when they come on.

So far we have only empirical evidence of various kinds to show that there is a relation betwixt ear disease and certain nervous symptoms. That there should be is a necessary outcome of very old physiological researches on animals, and of the very recent ones of Cyon.

Lectures

ON

THE RELATIONS OF SARCOMA TO CARCINOMA.

Delivered at the Royal College of Surgeons in June, 1880,

By HENRY TRENTHAM BUTLIN, F.R.C.S.,

ERASMUS WILSON PROFESSOR OF PATHOLOGY TO THE COLLEGE, ASSISTANT-SURGEON TO ST. BARTHOLOMEW'S HOSPITAL, &c.

LECTURE II.—PART II.

SUBPERIOSTEAL TUMOURS OF BONE.

LET us pause for a moment to consider the characters which all these tumours of the femur bear in common. First, their deadly nature and rapid course. Eighteen are dead, and, of the remaining three, only of one is it recorded that he was still alive a year after amputation. But of the eighteen who died, five lost their lives from the direct effects of operation. The operation was practised so early in three of these cases that we are not surprised the autopsies showed no affection of the viscera. The nine post-mortem examinations of other cases revealed affection of the lungs in all. And of those on whom no section was permitted, more than one died with well-marked signs of pulmonary disease. Affection of the glands occurred so rarely that it is more difficult to explain why the glands were sarcomatous than why they were not. But as I think the explanation may more easily be given during or after the discussion of the tumours of other bones, I shall defer it until then. Affection of more than a single organ occurred only in the round-celled sarcomas. Recurrence of the primary disease was rare. Ossification, calcification, chondrification, were so common that they were present in almost half the cases, and with these changes softening down into cystoid spaces, sometimes with the formation of a locular structure, was often associated. Ulceration of the integuments was almost unknown; even those tumours which were permitted to pursue their course without interruption to death did not break through the skin. The duration of disease was in most cases from nine to twelve or fourteen months, but two died with affection of the viscera within four months, and one lived for three years. Of the age at which these tumours of the femur grew, I can only say that they were rare before the age of puberty, were still more rare after forty, and were most frequent from twelve to thirty years of age. In connexion with this point let me call attention to an arithmetical fallacy into which Prof. Gross has been betrayed, and into which, therefore, others may also be misled. In describing each form of sarcoma he has taken the mean of the ages of a number of patients, and has assumed that this mean represents the age at which the disease will be most frequently observed; but the mean of ages does not necessarily correspond with the age at which the disease most frequently occurs. If, for example, we take the mean of the ages of these patients with spindle-celled tumours, it is found to be 24·3; but there are only two patients whose age is within three years of this mean age, while all the others are either younger than twenty or older than thirty. Again, the mean age of those with mixed-celled tumours is 23·1. But five of the eight patients are under sixteen, or over thirty years of age. So little does the mean age of these cases represent the real age of occurrence.

Of size, or shape, or contour, little can be said. Large

size, fusiform shape, smooth contour, were perhaps the properties most common. But of position there can be no question; the lower end of the bone, and next to this the diaphysis, had the preference. Last of all, the disease may be traced to blow or squeeze in some few instances; one of these I have already mentioned.

The tumours of the TIBIA include all three varieties, but the spindle-celled is represented by a single case. This patient and one other died without operation. In both the skin was ulcerated; in neither was there visceral disease. In no important respect do the three varieties differ among themselves, save in the prevalence of ossification or calcification in the mixed forms, but in some respects they differ widely from the tumours of the femur. Thus two of them occurred in patients over fifty years of age; in only one instance is there clear history of hurt; growth is often slower, the tumour not infrequently breaks through the skin and fungates, and the whole course of the disease is milder and less markedly malignant. Thus the round-celled tumour of No. 22 had already existed for many years before the thigh was amputated. Two years later a tumour appeared in the calf of his other leg, and grew rapidly. The symptoms of cachexy were already far advanced when this tumour was removed, and in three weeks death followed the operation, caused not by the operation, but by the continuance of the cachectic symptoms. No autopsy was made, therefore the supposition of lung disease, to which the symptoms distinctly pointed, could not be verified. It may be doubted whether these tumours were not separate outbreaks of tumour-disease, bearing no direct relation to each other, but each bearing a like relation to a disposition in the patient to the formation of such tumours. The second tumour was much softer and more juicy than the first. Another of the patients with round-celled growth was well sixteen months after amputation through the thigh. In this case and in two of those who suffered amputation for mixed-celled tumours (Nos. 27 and 28), the operation appears to have delayed or even arrested the course of the disease. One of these was a young mason, twenty years of age, whose tumour, as large as his head, grew from the upper portion of the tibia. It formed an aggregate of partly isolated, partly confluent lobes of what looked like pale golden spongy bone; around the lobes was softer brain-like substance. The microscope, however, showed a deposit of earthy salts, not true bone. The thigh was amputated when the tumour had existed seven months, and two years later the patient was alive and well. The other was a youth of eighteen years, whose leg was amputated by Mr. Croft seven months after the lower end of the tibia had been the seat of a large soft and pulsating tumour. It had the consistence of firm brain, possessed a ruddy hue, and exhibited a reticulated structure, of which the trabeculae contained bone, the meshes, soft cell growth. Nearly a year after the operation the hip was amputated for a soft and spongy tumour of the femur, first noticed four months after the removal of the leg; and with this tumour was removed a group of glands whose size and colour left no doubt that they too were sarcomatous.

It should be observed that this is the only tumour of the tibia with which was associated glandular disease; and in this case I cannot but think it far more probable that the affection of the glands was due not to the tumour of the tibia, but to the tumour of the femur. The skin in this case and in another somewhat similar was broken. It may therefore be supposed the ulcer thus formed established a drain, through which the course of the disease was averted from more vital parts. Or, to express this in other terms, the pressure within the tumour was relieved by the breaking of its surface, and with the relief of pressure the tendency diminished to the projection of cells or fluids into the vascular and lymphatic channels. If it be really true that ulcerated sarcomas are less liable than others to dissemination, the very faculty of ulceration possessed by tumours of the tibia may be regarded as a sign of less malignancy.

That sarcoma of the tibia may affect more vital parts is proved by the autopsy of one case in which secondary growths filled the lungs, is indicated by the well-marked signs which were present in other cases. The seat of election of sarcoma of the tibia in two-thirds of these cases was the upper end or upper third, in which respect, again, the tibia differs widely from the femur.

Like the tibia, the FIBULA is most often affected at the upper end—indeed, of these two tumours, both occupied the upper third or upper end. The mixed-celled tumour differs from the other, first in its calcification, in which it

corresponds with the mixed-celled tumours of other bones, next and more important in the manner of its generalisation, for the secondary growths occurred, one in the other calf, many in the subcutaneous tissue, but none in the viscera. In other respects their histories are parallel—the age, the position of the tumour, the rapidity of growth, invasion of the surrounding muscles, absence of lymphatic affection, death within a year, in neither case due to amputation, but in each case in spite of amputation from the continued progress of the disease. No autopsy was obtained of No. 31, for he died at home in Wales a few days after his return there from the hospital, but the supposition is strongly in favour of affection of the lungs, the signs of which were present before and after amputation in a continued shortness of breath and frequent hacking cough, both of which increased in severity until he died.

Of tumours of the HUMERUS I have but five cases, four of which are round-celled, and one spindle-celled. But few as are the instances, certain of the features which they exhibit in common are so marked and singular that they may well be borne in mind. All five grew on the shaft of the humerus; all grew with a surprising rapidity; all grew along the shaft of the bone, yet through the periosteum, which therefore could not long have confined them, into the surrounding muscles. As an example, I cannot adduce a better than that of a child six years old (No. 36), who had been always well and strong until the beginning of the present year. There then appeared in the middle of his right arm a lump of small size lying deep down upon the bone, owing no cause, producing no pain, and giving rise to so little inconvenience that it was regarded by the parents as an ill of minor kind. But it spread with fearful speed, so that in less than five weeks it occupied the whole arm, from the elbow to just below the shoulder. The skin was red and hot, the forearm swollen and œdematous, the tumour so soft and elastic as almost to fluctuate. A section after amputation at the shoulder-joint displayed the whole diaphysis surrounded by a brain-like growth, through the midst of which the periosteum could be traced raised from the bone like the arch of a bow. The bone was softened so that it could easily be cut or broken. The tumour extended through the muscles almost to the subcutaneous tissue.

That these tumours are exceedingly malignant may be inferred from the rapidity and manner of their growth, yet none of them produced enlargement of the glands. Two recurred after amputation—a circumstance easily explained by their position, and by their extension into the surrounding muscles. Two died from the effects of the operation; but although there are three deaths only one autopsy is recorded. In this case the lungs were the only viscera affected.

The forearm presents us with a solitary case—a calcifying, mixed-celled tumour of the ULNA, growing from its upper third, but occupying the bend of the elbow and lower part of the arm. A series of five smaller tumours extended up the arm, in the substance of the biceps muscle, but the axilla was free from disease, and remained so till the patient's death. The tumour was noticed in February, 1869, and the limb was amputated in February, 1870; but within a month he was attacked with paraplegia, and the cough which had been noted at the time of operation became more urgent. Towards the end of March he died, but no autopsy could be obtained.

Of the CLAVICLE there are two cases, both round-celled, both in males, both in young subjects. Nor does the resemblance cease here, for the growth of both was rapid. In both the neighbouring glands appeared to be affected; in one certainly, for some of them were removed when the tumour, with the affected portion of the clavicle, was resected; in the other probably, yet not so surely, for in the recurrence which took place the irregular growth might well have been mistaken for glandular enlargement. In both the surrounding soft parts were involved in the disease; in both the tumour bore the same opaque-white colour and cancerous appearance. The cases are distinguished by the difference in the position of the tumours, the one being attached to the sternal, the other to the acromial, half of the bone; and in the rapidity of their growth, for to attain its size, in which it scarcely doubled the lesser, the tumour of the older patient had occupied six times as long. I am not able to give the date of death, and therefore the total duration in either case; for of one the termination is unknown, and of the other, although his death was ascertained, it took place in a remote region of Ireland, whence I could obtain no further information respecting him.

The three tumours of the LOWER JAW are all spindle-celled, all of female subjects, of the body of the jaw, of rapid growth. Unfortunately neither case is complete, No. 42 least of all, for its history is traced only up to and immediately beyond the operation. Of the first two each is known to have died with recurrence of the disease, although resection was practised in one of them, two, in the other three months, after the first appearance of the tumour. Recurrence took place almost from the time of the operation in the former, only after seven months in the latter, a difference for which we yet may find a reason in the muscle-invasion recorded in the first. No post-mortem examination was made in either case, but the glands appear to have been sound. It remains only to be said that of these three cases one was chondrifying.

The sarcoma of the RIBS is chiefly interesting for the rarity of primary sarcoma of the ribs. It deserves attention, too, for that it attacked two ribs close to their heads, destroyed much of their structure where it grew from them, possessed no capsule, infiltrated the surrounding muscles, was excised at the end of a year, and left the patient alive, free from recurrence, and with all the signs of health nine months after operation. We have seen from one of the cases of the lower jaw how widely different may be the course of a chondrifying spindle-celled sarcoma, even when, as in this instance, its bulk is mainly made of cartilage.

The rapidity of growth and quick recurrence of the one contrasts strangely with the slower growth and the effect of operation in the other. How can facts so much at variance as these be reconciled?

Yet, I think, perhaps some explanation may be found—first, of the different speed of growth in the different conditions of moisture and vascularity and power of resistance of the affected parts; next, of the difference as regards recurrence in the relative freedom with which removal can be effected of a tumour of the jaw, and of a tumour of the back.

I have already said that probably I should have collected a greater number of tumours of the PELVIS were it not for the difficulty in deciding their origin. This applies especially to tumours of the sacral region. Even these three cases, however, furnish some points in common which well may serve to illustrate not only their pathology but that of all subperiosteal tumours. They are all round-celled, all of males, all growing from the innominate bone, and of course all fatal. But in one important respect two of them differ from the third, and also from most of the tumours I have hitherto discussed, I mean in their infection of the lymphatic glands. In order rightly to appreciate the importance of this circumstance it must be studied in connexion with certain facts in which these tumours differ, and with some facts in which they both agree. Observe, on the one hand, that there was sixteen years difference in age between these two patients, and one of the tumours was a simple round-celled tumour with bands of fibrous tissue, the other a chondrifying sarcoma, therefore these things are not the cause or the prevention of glandular affection. On the other hand, both these tumours were of enormous size, were without capsule, grew into the surrounding muscles, filled a large part of the cavity of the pelvis, and were therefore brought directly in contact with, and probably grew into, the lymphatic glands. These characters of concordance and disparity would be of less moment were they not so strongly contrasted in the remaining tumour. The very points in which it agrees with one of them are those in which they differ from each other; the very points in which it differs from them both are those in which they most agree. Even the pulsation of the second and third and its absence in the first, and the short duration of the first and second compared with the slow course of the third, may be adduced as evidence in favour of the argument. Of No. 46 it must be stated that although the patient died from the effects of operation the lungs were already full of secondary growths.

The bones of the SKULL are subject to all three forms of sarcoma—to neither of the three forms apparently in marked pre-eminence. From whatever region of the skull they grow, whether from the vault or from the base, there is entire absence of glandular affection, unless that be considered glandular affection which, except that by it certain glands are affected, differs in no way from generalisation by the blood. I mean the affection of glands which lie far distant from the primary disease—not even in the line between it and the main lymphatic trunk.

As examples of such affection let me adduce two cases of

round-celled sarcoma (Nos. 48 and 49), which deserve on other grounds a more extended notice. They are both cases of what has been called chloroma or green cancer, a rare disease, said to have been described first by Balfour, now five-and-forty years ago. Even at the present time there exist so few recorded cases that they may be counted by units. Yet the disease bears characters that can scarce be overlooked. It commences in the bones of the skull or face, is of periosteal or subperiosteal origin, produces always or almost always multiple tumours of the skull, runs a most rapid course, producing growths of unconnected and unexpected parts, such as the bronchial and mesenteric glands, the kidneys, prostate, testes, breasts, and lungs, and kills in from three to six months. All the growths, wherever they occur, present a similar green colour and round-celled structure. Thus much at least is gleaned from the recorded cases, which have been well analysed by Huber, who, in 1878, was able to collect but seven of them.¹

In some features, which distinguish them from tumours of almost every other bone, these chloromas differ not at all from most sarcomas of the skull. Multiplicity, for instance, is so common that most sarcomas of the vault present, not one, but many flattened tumours of the inner or the outer table, and this equally whether they are mixed-, or round-, or spindle-celled. They grow, too, as if simultaneously, upon both aspects of the bone, so that it is rare to find a tumour of even moderate bulk upon the outer, which has not its counterpart, although perhaps not quite of equal size, upon the inner surface. Yet this occurrence is not, as I believe, due to simultaneous growth, but to penetration of the bone either from the inner or the outer side. The direction of growth of any tumour is determined mainly by two factors: first, the resistance offered by the surrounding parts; and next, their capacity for contagion by the tumour elements. The resistance offered by the tight-drawn pericranium on the convex aspect, and by the dura mater within—to which must be added the intra-cranial pressure—must in every case be great; neither of these membranes is easily infiltrated or destroyed by the disease. But the bone yields readily before the invading host of cells; its surface is eroded, its cancellous tissue filled with the new material. Its Haversian canals are widened and varicose, its cancellous spaces enlarged, and all these parts are filled with a similar tissue to that which formed the tumours. Probably, too, the infiltration of the substance of the long bones at the seat of sarcomas of superficial origin, which is rarely, if ever, absent, is only another example of the effect of similar forces.

Frequent as are tumours of the inner aspect of the bone, death from pressure on the brain is rare. While the greater part, at least, of tumours of the skull cause death within a year or little more, some of them are marked by a much slower growth and longer course. Of this the most characteristic example is a spindle-celled sarcoma of the forehead and head of a young man, nineteen years of age (No. 52), which had grown gradually until it attained a large size and helmet shape. It extended from the eyebrows to behind the parietal protuberances, and across the vault from one semicircular line to the other. Its contour was smooth, its consistence firm and elastic. After two years and a half the patient died, not from the growth or generalisation of the tumour, but four days after an unsuccessful attempt by Von Rothmund to remove it. It is hardly to be wondered that the attempt failed, for, on section, the mass penetrated the bone through a series of fine pores, and was even grown into the cavum cranii on either side the falx cerebri as a tumour, the size of a hen's egg. Yet the patient had betrayed no signs of derangement of the functions of the brain, if we except a slight occasional sensation of giddiness. In its minute structure the tumour consisted merely of closely-massed spindle-cells, varied by the presence in its deeper parts of stalactite processes growing into it from the surface of the bone.

No secondary deposits were discovered in the body. Only in the absence of myeloid cells does this tumour differ from that so admirably described by Sir James Paget in his lectures on Tumours.² The duration, position, manner of growth, even to the projection on either side the falx cerebri, are the same in both. And in that case, as in the one I have just recorded, there were no growths in any other part of the body. The long duration and slow malignancy of these

cases is the more remarkable that they have no parallel in the spindle-celled tumours here collected of other bones, and are totally unlike the other spindle tumours of the skull. Nor can they justly be compared with these two mixed tumours of the skull, both of which existed an almost equal time, and neither of which appears to have been generalised. For the structure of these tumours differs so much from that of other mixed-celled tumours that I have been in doubt whether these are in truth sarcomata. Each of them was composed largely of fibrous tissue, mixed with cells of various shapes, sometimes collected in irregular spaces. The tumours of the base grew in each case from the body of the sphenoid bone, and differed only in one important respect from those of the vault, that neither of them was multiple.]

CASE OF MALFORMATION OF THE HEART.

By THOS. B. PEACOCK, M.D., F.R.C.P.

Great constriction or stenosis of the orifice of the pulmonary artery; aorta arising from both ventricles; defects in the fold of the foramen ovale; ductus arteriosus closed.—The child which was the subject of this malformation was first seen by me at St. Thomas's Hospital in the spring of 1876. It was then a year and seven months old, and the signs of malformation of the heart were very marked. The lips, hands, and feet were very livid, the ends of the fingers and toes were clubbed, and the nails incurvated. The cyanosis was probably present from birth, but it first attracted decided attention when the child was nine days old. It had gradually become more marked since that time. The head was disproportionately large, and there was some inequality between the two sides. The jugular veins were greatly distended, and there was a systolic murmur heard in the region of the heart. The scrotum and inguinal regions were very livid and in places excoriated. The temperature in the axilla was 98°·6°, that of the ward being 57°. The child was stated to be very easily chilled, so that it required to be very carefully protected against the cold. Its digestion was also very difficult, and great attention was needed in feeding it, and when the food did not agree, the breathing became difficult, and there was violent beating at the heart, and increased lividity. On August 25th, 1876, the child was again seen by me at my own house. The eruption on the skin had subsided under the use of warm baths, but the cyanosis was very marked. There was a loud systolic murmur in the pulmonary artery, which was not heard in the course of the aorta, nor at the apex. The temperature in the axilla was 97°·2°, in the hand 92°·6°, that of the room being 65°. After this time I did not see the child again till the commencement of its last illness in August of the present year. In the interval it had passed favourably through measles and whooping-cough, and had had attacks of croup and of jaundice.

The last illness of the child commenced on August 8th with earache and restlessness, followed by loss of power in the right hand. In the afternoon of the 9th he had violent shaking of the right arm and hand, and the following morning of the right leg also, with twitching of the right side of the face, and the right arm and leg were powerless afterwards. On the evening of the 12th the temperature was 101°; on the 22nd he had a general convulsive fit, followed by partial stupor; on the 23rd he recovered consciousness and could speak, though he did not articulate distinctly; on the 24th he had a second attack of convulsions, after which he was entirely unconscious, and he gradually sank till he died, at 11 P.M. on the same day. He was six years and nine days old at the time of death. During the child's illness it was attended by Dr. Bateman and Dr. Glover of Islington.

The post-mortem examination took place at the child's residence on the 27th, and was made by Mr. King, the senior clinical assistant at the Victoria-park Hospital, in the presence of Dr. Glover and myself. There was much difficulty in obtaining permission to examine the body, and the examination was restricted to the heart. The organ was of large size for the age of the subject; it weighed four ounces and three-quarters avoirdupois. From the heat of the weather and the time which had elapsed since death, the organ was very flaccid. The aorta was

¹ Archiv d. Heilkunde, 1878, xix., 8. 129.

² Lectures on Surgical Pathology, 1863, vol. ii., p. 221.

situated further to the right than usual, and the ascending portion was of large size. The pulmonary artery, on the contrary, was very small, and its coats thin, like those of a vein. The orifice was very small, admitting only of the passage of a cylinder measuring seven Paris lines (15·75 mm.) in circumference. There was only one valve at the orifice, and that was much thickened. The ventricles, but especially the right, were large, and their walls thick. The septum of the ventricles was deficient at the upper part, so that the aorta communicated with both cavities. The right auricle was very much dilated. The foramen ovale was closed, but there were several large openings in the fold. The ductus arteriosus was impervious.

The malformation of the heart in which the pulmonary artery is constricted and the septum of the ventricles defective, so that the aorta communicates with both ventricles, of which this case affords an instance, was first described by Sandifoot in 1777, and a considerable number of cases of the kind have since been placed on record in this country, France, Germany, and the United States. Indeed, as stated by Dr. Farre in 1814, it is the most common kind of deviation from the natural conformation of the heart. I have myself described four cases, and in 1866 I had no difficulty in collecting references to upwards of sixty published cases. When the child was first seen at St. Thomas's Hospital, from there being a loud murmur in the course of the pulmonary artery, it was thought most probable that it was a case of pulmonary stenosis, and as in cases where the pulmonary artery or its orifice is much constricted there is generally imperfection in the septum of the ventricles, it was supposed that the case was one of the combined form of defect. During the last illness, however, the murmur at the heart did not exist, and no precise diagnosis could therefore be formed, though it was thought most probable that it would prove to be a case of pulmonary stenosis with an aperture in the intraventricular septum.

The duration of life in cases of this description varies considerably, being mainly influenced by the degree of impediment to the circulation resulting from the cardiac defect.

In my own cases the patients survived to the ages of two years and five months, six years and a half, nine years, and nineteen years, death being in the last instance due to choleraic diarrhoea during the cholera epidemic in 1854. Of 45 published cases, 5 proved fatal under three years of age, 13 between three and seven, 12 between seven and twelve, 7 between twelve and eighteen; 2 lived to the age of twenty-one, 1 to twenty-two, 1 to twenty-three, 3 to twenty-five, and 1 to thirty-nine.

The death of the patients is, in the largest proportion of these cases, as in the present instance, caused by cerebral disease. Two of my previously published cases died in attacks of convulsions. It would have been interesting to have ascertained the precise seat and nature of the brain disease in the case, but permission was with difficulty obtained for the examination of the body, and examination of the heart only was allowed.

Though during life the temperature, as in such cases generally, was below the average, it will be seen that it rose during the child's last illness to 101°. In a cyanotic child, whose case is reported in the Pathological Transactions, the temperature rose during a fatal attack of measles to 104°.

Finchbury-circus, E.C.

HEMIANÆSTHESIA REMOVED BY STATIC ELECTRICITY.

By PROFESSOR B. BALL.

M—, aged nineteen, entered the Laennec Hospital, Paris, on January 25th, 1880. Family history: father died from the effects of an accident; mother living, nervous, and of strange and fanciful character. One brother died, in infancy, of convulsions, and another of a complaint unknown.

The patient herself has lived in Paris for the last five years. She has menstruated since the age of sixteen, but irregularly. Ten months since the catamenia disappeared after a prolonged exposure of the feet in cold water. A hoarse, barking cough supervened and has not yet ceased.

In March, 1874, her mistress amused herself by "magnetising" her, and this practice has been continued daily. Som-

nambolic sleep was easily induced. The patient says that she could put herself to sleep by joining her hands and exerting her will. The first hysterical attack took place on Jan. 10th, 1880, when she had two fits. On the 23rd, two more, which were violent and prolonged. The 24th, a slight attack. The menses had appeared on the 22nd.

Jan. 25th.—On admission the patient presents every appearance of health. She is well developed, strong and fresh-coloured. Her general condition is excellent. She was found to be completely anæsthetic on the right side, but of this she had previously been ignorant. Hearing, smelling, and taste are manifestly weakened on this side. Vision appears to be equally good on both sides, but no tests were applied as regards achromatopsia. There is slight ovarian hyperæsthesia on the right side.

28th.—Some choreic movements occurred on the right side.

29th.—Patient had an attack which lasted a quarter of an hour.

30th.—Patient nervous and excitable. Under the influence of slight pressure on the right ovarian region a violent attack took place, which lasted for ten minutes. She had no recollection of it afterwards. A mixture was ordered containing bromides of ammonium and sodium, three grammes of each daily.

From this date attacks occurred frequently; sometimes at a few days' interval, and there were occasionally several on the same day. During the attacks there is always laryngeal spasm, with hissing inspiration, and there is always headache afterwards, which sometimes persists until the next attack. At first the hysterical fit could be arrested by pressure on the right ovary, but after a time this became ineffective, and the inhalation of chloroform was substituted. This soon lost its action, and only suspended the attack, which would take place as soon as the inhalation was over.

From March 8th various modes of treatment were adopted, including "hydropathy," chloral, tartar emetic and morphia, and also continuous and faradaic currents. No improvement was observed in the patient's state with the exception of a few hours sleep at night. The hemianæsthesia and choreic movements still persisted, and as a natural consequence the limbs exhibited numerous bruises. It was then proposed to adopt static electricity as a method of treatment, the other modes of applying that agent having entirely failed. On July 30th the patient was placed upon an insulating stool with glass legs, and submitted for twenty minutes to the influence of the negative fluid of Nairn's static electrical machine. The experiment was abruptly brought to a close by the patient falling to the ground. When she rose the anæsthesia had completely disappeared. Sensibility was tested by the æsthesiometer and a variety of other means, and found to be perfect. There was no *transfert* in this case, the left side retaining its previous degree of sensibility. The sense of touch, however, was slightly more acute on the right (previously anæsthetic) side than on the left. Before the experiment the prick of a pin did not draw blood from the right arm; immediately after the prick of a pin drew blood. The plantar-reflex was the same on both sides, the choreic movements were lessened, and locomotion had become much easier.

The improvement thus acquired continued for a whole month, and on August 6th the catamenia reappeared. Up to the beginning of the present month (September) the girl remained in a satisfactory condition, but after that period she gradually began to lose ground, and has now relapsed into her former condition. It is proposed to commence the treatment by static electricity within a few days.

The noteworthy features of this case are: 1st, the sudden recovery of sensibility in consequence of a single application of static electricity, when everything else had failed; 2nd, the absence of *transfert*, both sides remaining in the normal condition; 3rd, the recurrence of the former symptoms after an interval of a whole month, during which the patient enjoyed perfect health.

It will be interesting to watch the further progress of the case, but as the facts now stand, they seem fully to justify the employment of static electricity in cases of hysteria, with or without hemianæsthesia.

Paris.

THE foundation-stone of a new chapel for the Bristol Borough Lunatic Asylum was laid on the 24th ult., in the presence of the Mayor and Mayoress and the visitors of the asylum.

FIVE YEARS' SURGICAL WORK IN THE
CARDIFF INFIRMARY.BY ALFRED SHEEN, M.D.,
SURGEON TO THE INFIRMARY.

IN 1874 Mr. Edward Lund, one of the surgeons to the Manchester Royal Infirmary, published the results of five years' surgical work in that institution, based on a record of 1309 cases, to illustrate the utility of following out some "ready method of recording surgical cases in hospital practice," and as an inducement to other surgeons occupying similar positions in connexion with such charitable institutions, to undertake a similar task, "and thus by comparing different modes of treatment in those cases which form the routine of every-day surgery, to render our practice more correct and more certain in its results." As one of the two honorary surgeons attached to a small county infirmary making up a total of 58 beds, I have endeavoured to carry out the plan initiated by Mr. Lund, and, in doing so, I have availed myself of his admirable suggestions for a "ready method of recording cases in hospital practice." The following paper is the outcome.

During the period traversed by these notes (1875-79) I have had a total of 682 cases under my care—viz., 367 injuries and 316 diseases. My arrangement of these cases is somewhat different from that adopted by Mr. Lund. I have divided them first into two great classes—injuries and diseases; and in the latter, instead of referring the cases to the various parts of the body, I have, for the most part, placed them in classes which indicate the structure diseased. In addition, I have dealt separately with the various amputations and operations rendered necessary by the nature of the accident or disease for which they were performed. According to this arrangement the cases may be tabulated as follows:—

A. Injuries.

1. Contusions	60
2. Sprains	19
3. Wounds	88
4. Burns and Scalds..	20
5. Dislocations	9
6. Fractures :	
a. Simple	105
b. Compound ...	66

367

B. Diseases.

1. Bone	25
2. Joints	51
3. Bursæ and tendons	11
4. Talipes	4
5. Ulcers	55
6. Abscesses	17
7. Tumours	9
8. Cancer	26
9. Hernia	11
10. Spinal disease	9
11. Arteries	3
12. Veins	1
13. Eye	27
14. Rectum	10
15. Urinary organs ...	38
16. Unclassified	19

Total of injuries and diseases 683.

316

C. Amputations.

1. Accident	35
2. Disease	11

Total

D. Operations

73

46

CONTUSIONS.

	Under ten.	Under twenty.	Under forty.	Under sixty.	Over sixty.	Totals.
Head	0	2	1	0	1	4
Face & neck	0	0	0	1	1	2
Chest & back	1	1	5	3	0	10
Abdomen	1	4	4	1	0	10
Pelvis	0	1	0	0	0	1
Hip	1	1	3	1	0	6
Thigh	0	3	4	2	1	10
Thigh & leg	1	3	3	3	1	11
Shoulder	1	2	2	0	0	5
Brain	0	1	0	0	0	1
	5	18	22	11	4	60

SPRAINS.

	Under ten.	Under twenty.	Under forty.	Under sixty.	Over sixty.	Totals.
Knee	0	2	2	0	1	5
Ankle	2	5	4	2	1	14
	2	7	6	2	2	19

Of the total number of contusions and sprains, 71 were in males and 8 only in females. This is in some measure accounted for by the comparatively small number of women employed in arduous work. One case of contusion of the abdomen died. The patient was a man, aged twenty-eight, who had been squeezed between the buffers of two railway waggons. He was admitted at 11 A.M., almost immediately after the accident; no injury could be made out, there was not much shock, and his pulse was fairly full. At 6 P.M. normal urine was drawn off by catheter, and he complained of a feeling of distension in the abdomen; pulse 100. At 3 A.M. next day he became restless, and died in an hour. At the necropsy, twenty-four hours after death, the abdomen was distended. There was no external mark of injury beyond a slight abrasion midway between the trochanter and anterior superior spine on the right side. On cutting through the walls of the abdomen, slight extravasation of blood and other signs of contusion, limited to the hypogastric region, were noted. The abdominal cavity contained some pints of yellow fluid feculent matter. The intestines generally were much injected, and there was a limited effusion of lymph on several coils of the small bowel. A portion of the ileum, opposite its mesenteric attachment, had a transverse wound that admitted a finger easily. On removing the intestines, a large quantity of blood was found behind the peritoneum, which extended on each side up to and around each kidney and below into the pelvis. On making a careful dissection, there was found a laceration of the aorta, just at its division into the common iliacs and slightly posterior, which laceration would admit the top of an ordinary-sized pencil-case. There was no injury to the vertebrae.

Cases of contusion of the abdomen frequently turn out to be more serious than at first sight appeared; for this reason I always direct that such cases, however apparently trivial, shall be admitted, and kept quietly in bed till all chances of danger have disappeared.

One case of contusion of the thigh was followed by the effusion of a large quantity of blood. Such cases almost invariably do well if not interfered with; and in this instance, after the urgent symptoms had passed away, aided by pressure by means of strapping and bandages, nearly the whole of this blood was absorbed in about six weeks.

I have but little to say on the treatment of this class of cases. The main indications have usually been well fulfilled by rest in bed, the application of equable warmth by hot fomentations or cotton-wool, and, when the urgent symptoms have passed away, by gentle passive movement of parts where joints are implicated. My favourite treatment for contusions and sprains about the extremities is simply to wrap the parts well in cotton-wool for some days, with the patient at rest in bed; and I claim for this treatment, as compared with all others I have tried, a more complete absence of all uncomfortable symptoms.

Three of the shoulder cases were not recent, and were fair illustrations of the injury done by keeping parts too long at rest after contusion or sprain. In each case the joint was stiff and the deltoid wasted; but passive motion, aided by faradisation of the muscle, soon improved matters. Why such treatment had not been adopted previous to admission I am unable to say.

WOUNDS, BURNS, AND SCALDS.

	Under ten.	Under twenty.	Under forty.	Under sixty.	Over sixty.	Totals.	
Eye.....	1	...	5	...	3	...	10
Scalp	2	...	5	...	1	...	20
Face	1	...	1	...	3	...	5
Tongue	0	...	1	...	0	...	1
Upper ex- tremity	1	...	6	...	3	...	16
Lower ex- tremity	3	...	7	...	2	...	21
Perineum ...	1	...	0	...	0	...	2
Arteries	1	...	1	...	0	...	3
Stabs	0	...	1	...	3	...	4
Cut-throat ..	0	...	0	...	2	...	5
Gunshot ...	0	...	0	...	1	...	1
	10	23	41	10	4	88	
Burns.....	4	...	3	...	2	...	11
Scalds	6	...	1	...	1	...	9
	10	4	3	3	0	20	

Of the total 108 cases in these two classes, 95 were males and 13 females. It will be noted that the wounds were most numerous at the ages when men are actively employed, and that the burns and scalds were mostly in young children. Instead of following the usual custom of classifying wounds as incised, contused, &c., I have grouped them chiefly according to their position. Almost all the wounds were lacerated and contused, and of so severe a character as to necessitate their admission. Many were treated in the first instance by *carbolic oil* (1 to 10) dressing, after being carefully cleansed, and, where necessary, parts brought into apposition by silver wire or carbolised catgut sutures. The carbolic-oil dressing is soon replaced by boracic ointment, or, where there is a healthy granulating wound, by the old hospital *lotio rubra*. In every case where it has appeared likely to answer, I have used *styptic colloid* as a primary and permanent dressing. It has been for many years a favourite and successful mode of treatment with me in wounds of all kinds. Some time ago Professor Gamgee, in an admirable paper, drew the attention of the profession to the advantages of the "dry dressing" of wounds,¹ and for years before that the treatment there advocated had been almost a routine treatment with me in the class of cases under consideration. Some surgeons advocate and practise the use of *poultices* as a dressing for wounds. I may say, in dealing with such cases, if there is one thing more than another that I have a horror of, it is a poultice. I fail to see what good it can do which cannot be done much better by other means, and, as a promoter of suppurative and a carrier of all sorts of possible abominations, it has no equal. Whilst saying this I am quite ready to admit that now and again we see cases where a poultice seems to meet the indications better than other applications, but I very seldom see such cases. *Irrigation* with warm carbolised water I have found to answer extremely well in suitable cases, such as sloughy wounds in the extremities, &c., and I have seen sloughy wounds of small extent progress most favourably under a daily dressing of boracic ointment, and the least possible disturbance. I think the value of rest, or rather an absence of continual meddling, is not sufficiently recognised in our ordinary every-day treatment of wounds.

Some few cases of severe laceration of the extremities were dressed *antiseptically*, with favourable results; and *skin-grafting* has in suitable cases aided very much the progress of cicatrisation and the subsequent firmness of the cicatrix. *Splints* have been found valuable in some instances to secure that rest which is so necessary to repair.

CASE.—H. W—, aged twenty-four. On Oct. 2nd, 1879, got his foot squeezed between the buffers of an engine and tender. No bones were broken, but the injury to the soft parts was such that there was considerable doubt about the possibility of saving the foot. It was dressed antiseptically, and again on the 3rd, 4th, and 6th, and boracic ointment was applied on the 10th. By the end of the month he was up, nearly well, and had no symptoms from beginning to end.

In the case of wound of the tongue, the accompanying hæmorrhage was apparently arrested by the application of a solution of perchloride of iron.

The eye cases mostly resulted in blindness from the nature of the accident. In one case, however, where the eyeball had been pierced by the point of a reaping-machine a little above the edge of the cornea, the patient was discharged in sixteen days, without damage to his sight.

Of the two cases of ruptured perineum, one had followed the use of the forceps in a tedious labour in a primipara: the parts had been brought together at once by sutures, but these had given way, and whilst the patient was in the infirmary the whole surface healed soundly by granulation, without any further interference. The other case was in a child, and was caused by a cart-wheel going over the perineum.

Of wounds of arteries, one was of the posterior tibial, near the calf of the leg. It had been under medical care for a week previous to admission, but there had been repeated bleedings. The wounded vessel was cut down upon, and I was fortunate in securing it and tying both ends. The case went on uninterruptedly to recovery.

In one case of stab in the abdomen the wound was deep, and the knife must have gone perilously near the iliac artery. It was dressed antiseptically. On the seventh and eighth days the temperature went up to 102°, being normal each

morning. Five grains of quinine were ordered every four hours. Next day the temperature was normal, and remained so; but on inquiry it was ascertained that, by some mistake, no quinine had been given. This is an illustration of how very careful we ought to be in arriving at certain conclusions in dealing with the action of medicines. It is a difficult subject, and continually confronting one in every-day practice. A medicine is given with a certain definite object, and that object is attained, but the instances (apart from the fact of no medicine having been given, and that fact not ascertained) where it might be wrong to draw the conclusion that the effect was due to the medicine, must be sufficiently numerous in every thoughtful medical man's practice to be very perplexing to him in his endeavour to draw correct conclusions.

The cut-throat cases were all self-inflicted, and were all the result of drinking, except in one instance, where a man suffering from melancholia, having previously murdered his wife, afterwards cut his own throat. All these cases recovered.

Of burns, all those in children were caused by clothes catching fire. I give brief notes of the other three.

Geo. H—, aged twenty-four, was working at the bottom of a boat, when a boy above, whose duty it was to bring down red-hot rivets to him, threw one down instead; and it went inside his trousers and down his leg, producing several burns on its way. These were dressed with an ointment of carbolic acid, oxide of zinc, and resin cerate, as suggested by Mr. Lund; and he was discharged in ten days.

Samuel J—, aged forty-three, got drunk, and slept out all night with his leg in contact with some burning ashes.

Two of the children died, one on the third, the other on the fifth day.

Of scalds, one case was in a child aged three—a scald of the throat caused by drinking water from the spout of a kettle. Edema of the glottis supervened, and there was increasing difficulty of the breathing, for which symptom he was admitted. He was treated by calomel, half a grain every half hour, for two hours; and then one grain every hour all night. (I cannot remember where I saw this treatment suggested.) Next morning his breathing was almost normal, and he was well in four days. All the cases, except two in adults, were caused by boiling water; the exceptions were from hot caustic solutions used at an adjoining paper-mill.

(To be continued.)

NOTES ON CHIAN TURPENTINE, AND ITS USE IN CANCER.

BY PROFESSOR JOHN CLAY,
OBSTETRIC SURGEON TO THE QUEEN'S HOSPITAL, BIRMINGHAM.

IN the correspondence which has been recently published in the medical journals the efficiency of Chian turpentine in the treatment of cancer has been altogether denied by certain writers. Some have suggested that unsuccessful results may be attributed to the impurity of the drug employed; others have ungenerously questioned the validity of the statements made in my paper, which appeared in THE LANCET for March 27th, 1880. It consequently seems advisable to offer some further general observations, by way of explanation and elucidation, on the subject.

It is a matter for regret that the supply of the genuine Chian turpentine has been so limited, as this has led to the substitution of factitious drugs, the use of which, as I have previously explained, unfavourably influences the results, besides entailing the further disadvantage of preventing a thorough testing of this method of treating cancer. I believe it is a fact that Chian turpentine, in mass, can scarcely be procured in this country at the present time, and therefore it is obvious that the treatment of the disease must be somewhat in abeyance until a supply of the pure drug arrives from abroad. I hope that the difficulty will soon be overcome, as I have been making special efforts to obtain the pure turpentine direct from Scio, and have had three excellent samples of the genuine drug sent to me through the post from that island; a supply may therefore be expected

¹ THE LANCET, vol. II., 1876, p. 886.

shortly, when the purity of the drug at least will be definitely determined. The specimens referred to differ in some particulars from the Chian turpentine which I have previously described, and which had been in stock some years. There are also samples of larch turpentine in the market, which slightly resemble the recently gathered genuine drug. It may be of advantage therefore to the profession to describe each, and to note their differences.

Specimen No. 1 is of a pale, amber colour, and almost entirely free from impurities. It has the fragrant odour peculiar to Chian turpentine well-marked, which is readily perceptible after rubbing a small portion between the thumb and finger. It has a mild terebinthinate taste, which rapidly disappears. On placing a small portion of the drug on a piece of glass, and exposing it to the atmosphere, it considerably thickens after a few days' exposure.

Specimen No. 2. This, obtained last year, is the drug as collected. It contains a large quantity of foreign matter, such as pieces of bark, sand, &c., all of which give it a darker colour than the last-mentioned specimen. Two ounces of this crude product yielded, after straining, upwards of half an ounce of impurities. The strained portion contained still a quantity of minute particles of foreign substances. The taste and odour are the same as in the Specimen No. 1.

Specimen No. 3 resembles soft glazier's putty, but is somewhat whiter, and is of the same consistence. It is Chian turpentine that has been well washed in water, to free it from impurities. It has a mild taste of turpentine, and the peculiar odour is well-marked. If a portion is subjected to pressure between two pieces of glass, water can be readily forced out of the mass.

Three specimens have been submitted to me as genuine Chian which were purely larch turpentine. They may, as alleged, have been gathered in Cyprus. They have a strong odour of pine wood, and are of a browner appearance than the recent specimens just described. On tasting a portion, it appears tasteless for the first minute, after which a strong, bitter, nauseous flavour became manifest, eventually leaving a strong, sickening sensation at the back of the throat, which is slow to disappear. A portion placed on glass, and exposed to the atmosphere for four weeks, showed no signs of thickening, and readily adhered to the fingers.

The degree of solubility of the two kinds of turpentine, in ether and alcohol, is not materially different from that described in a former paper. The mild terebinthinate taste of the pure drug, its peculiar odour, with its power to solidify on exposure to the atmosphere, are characters sufficient to distinguish it from any other turpentine resin.

The results of the treatment of various forms of cancer, in the hands of certain medical practitioners, are alleged to be so different from those obtained by myself, that these gentlemen have thought fit to question the validity of my experiments. Certain results obtained by the use of a remedy, almost forgotten by the therapist, were placed by me unreservedly before the profession; and for the benefit of suffering humanity at least a fair trial of the remedy ought to be given before condemning it. In testing the efficacy of the drug, it is doubtless all-important that the true one should be used. It would appear to be not an easy matter to decide the question of purity, for upwards of three hundred specimens have been sent to me for examination by English and foreign medical men, most of them being guaranteed by the druggists supplying them, and it was a surprise to me to find so few examples of the genuine article amongst them. It will be as necessary now as before to use extreme vigilance in this respect in expectation of the new supply. In a large percentage of cases the factitious turpentine only has been used in the treatment of cancer. In one institution this was particularly so; and after the genuine drug had been tried for about three weeks the results of the two were combined, and a letter forthwith appeared in *The Times*, alleging that the remedy was useless. A similar instance occurred in an institution in this town, where the impure drug was first used, and then after a trial with the pure drug for about three weeks, letters appeared in a medical journal declaring that the remedy was of no benefit in the treatment of cancer. It is plain that sufficient time has not been allowed to elapse for the full effects of the remedy to be manifested, as in these instances of condemnation it has almost invariably been declared inoperative after a few weeks' trial only. Besides the unsatisfactory results which have accrued from the use of the impure drug, the full effects of the pure turpentine have not been gained in some

instances from the drug not having been entirely digested. This has arisen occasionally from its incomplete preparation for administration. In compounding the mixture, freshly-prepared mucilage of tragacanth, B. P., has not been used, and then it rapidly decomposes; or sufficient of the mucilage has not been employed, which causes the resin to separate, and the doses of the medicine, therefore, have been irregular and insufficient. It has been shown in the *Pharmaceutical Journal* that acacia powder might be advantageously substituted for the tragacanth. It is necessary, therefore, to provide that a sufficient quantity of either gum shall be used in the preparation of the Chio turpentine mixture. Where the digestive powers are impaired, an addition of twenty minims of the compound tincture of cinchona to each dose has occasionally proved beneficial. The discontinuance of the sulphur has been advised, in order to make the mixture more elegant and miscible. I believe, however, that the mixture is more efficient, when it is well tolerated, if prepared with the sulphur.

In reference to the pills, if they are not properly prepared they are not always digested. If this is discovered on examining the evacuations, the use of the mixture in conjunction with the pills is indicated; that is, a dose of the mixture should be taken by the patient night and morning, and two pills in the middle of the day, in each case after food. It is advisable, when commencing the treatment, to give only half doses of the turpentine for the first week. Magnesia should not be used as an excipient in the preparation of the pills, but whether this exception ought to apply to the recently collected drug future experiment will have to decide. Pills prepared with magnesia are almost insoluble, and the same remark applies to some coated ones. The pills may be prepared sometimes with ether, to soften the turpentine, or it may be made soft by immersing the mortar in a hot-water bath, the sulphur being added to the mass in its softened state. The latter mode appears preferable, if only to facilitate the digestion of the pills, as if any difficulty is met with in this way they may be roughly powdered and taken in milk or some bland liquid, and then they are generally digested.

The statements made in my original paper as to the efficacy of Chian turpentine in cancer appear to me to be fully confirmed by the additional experience gained in the use of the remedy. In the cases previously reported the cancer has disappeared, and there are no signs of its return. This fact must be considered at least as a complete refutation of the statements, recently and boldly made, that Chian turpentine in the treatment of cancer is useless. The cases just referred to are unique of their kind, for, so far as I know, they are the only instances on record of cancer being cured solely by the administration of an internal remedy. I feel justified, therefore, in stating that uterine cancer at least may be removed by the use of Chian turpentine.

It is a fact which might be expected that most of the cases of cancer which have presented themselves are in an advanced stage of the disease; and more especially is this the case in cancers of the uterus. Yet the treatment continues to be very efficient. My experience does not stand alone in this respect, for several gentlemen have given independent testimony of the good effects produced by the turpentine treatment in cancer of various organs. In my original experiments the turpentine alone was used in order to thoroughly test its efficacy, but it now appears that the use of certain local and general measures undoubtedly promotes the convalescence of the patient. It is possible, therefore, to formulate a line of treatment which shall be successful in cancers of the uterus. Hence, given a case of cancer limited to that organ, and a steady use of the remedy for six or eight months, continued with certain general and local remedies if necessary, and a disappearance of the cancer may be reasonably expected. Eleven cases of uterine cancer under this treatment at the Queen's Hospital, besides a number of others in private practice, so far justify the preceding statements. Some very interesting facts have been observed during their treatment, which I hope to detail on a future occasion.

It is advisable not to be too precipitate in rejecting a case of uterine cancer on the ground of its being too far advanced for treatment. The following case, amongst others, is to the point. Mary B— took her discharge from the Middlesex Hospital, London, about four months ago, and, according to report, was informed that her case was incurable, and that she had not long to live. She had heard of the turpentine treatment, and was very anxious to be under my care at the

Queen's Hospital, but I advised her not to undertake the journey, as I believed the case, from what I heard of it, was too far advanced for treatment. This advice, however, she disregarded, and became an in-patient at the Queen's Hospital. Here she was placed under the Chian turpentine treatment, and improved so much in nine weeks that she is about to return to London with every prospect of soon being cured.

In cancer of the uterus the conclusion expressed in a former paper, that the remedy destroys the cancer cells and causes the death of the growth, is strengthened by experience, and, as a consequence, there is cessation of pain and hæmorrhage in the first instance. But the turpentine at first does not destroy the bloodvessels of the part. As the dead tissue escapes, these become denuded, and give rise to hæmorrhage, especially at the menstrual period. In patients who have past the climacteric period this has not been observed. Ergot has been found of no benefit in arresting the hæmorrhage. Insufflation with three grains each of sulphate of zinc and powdered charcoal, once or twice a day, after syringing the vagina, has proved effectual, and appears to promote the obliteration and atrophy of the vessels. The same end may be attained by using a weak solution of perchloride of iron and glycerine. I have ordered some patients to syringe the vagina daily with equal parts of common vinegar and water, with good effect. When the anterior walls of the vagina are involved; either primarily or from extension, the case is not so suitable for treatment with the turpentine. A vesico-vaginal fistula is soon generally formed, but if this do not happen, cystitis supervenes, and the patient succumbs to the uræmic symptoms which are rapidly developed. Moreover, the turpentine is not well tolerated, but when a fistula forms, it is better borne, and uræmia does not arise.

Excision of the cervix uteri is not advisable, as the disease readily extends to the anterior wall of the vagina subsequently; and then the bladder complications, above described, arise with increased force. The use of the curette is not so objectionable if it is employed to remove only the sloughing mass after some weeks' use of the Chian turpentine, but it has not been deemed necessary to use the instrument, it being all important to preserve as much normal tissue as possible.

The mode in which Chian turpentine effects the removal of cancer was well illustrated in a case of epithelioma of the vulva. The patient, aged sixty, had been operated upon for cancer of the clitoris or vulva. The case was reported in THE LANCET at the time. The patient thoroughly recovered from the operation. About a year afterwards cancer reappeared in the lower part of the vulva and vagina. The growth was again excised, and she made a good recovery this time. About eight months afterwards a cancer appeared on the right labium, and when it was there seen for the first time it was the size of half-a-crown. It was determined to give the Chian turpentine, and the drug was given in full doses three times daily. At the end of the first week there was no alteration, excepting that the cancer was thought to be somewhat paler on its surface, and the surrounding swelling less. Second week: The growth was coated with a secretion of a greyish colour, which appeared to be firmly adherent. Fourth week: The growth was only half its former size. Its surface was somewhat convex; and was considerably thicker than previously, and was surrounded by a ring of a bright crimson colour. One of the resident surgeons of the hospital who saw it remarked that it looked like a small mushroom springing from the vulva. Sixth week: The growth was now diminished to the size of a fourpenny piece, and was still surrounded by the bright coloured ring, but was free from the secretion. The surface did not bleed on being touched. Eighth week: The coloured ring had disappeared. The growth was much smaller, and it had the appearance of a large "seedy" wart, such as is sometimes seen on the hands. Tenth week: The growth remained about the same. Twelfth week: The growth had all but disappeared, and the patient went into the country for a short time, but promised to report herself when she returned.

In private practice three cases of cancer of the rectum are under treatment; two of which are much improved; and one has not been seen again, but a favourable report is given after seven weeks' trial. Three cases of cancer of the stomach are under treatment; one has discharged herself, but the other two have remarkably improved, as regards freedom from pain and capacity of retaining nourishment, though continual sickness existed previously. So far as the

treatment has extended, these cases seem to prove that the turpentine is equally, if not more, efficient in cancer of the stomach than of any other organ. In one case the glands of the neck were much enlarged; but these swellings entirely disappeared after the use of the remedy. Four cases of cancer of the tongue have been under observation. In one case the growth was as large as a cherry, and in four weeks it was reduced to a level with the mucous membrane, and it appears now to be cicatrising.

Several cases of cancer of the face have been very much benefited. In two cases of endothelial cancer of the abdomen and one of cancer of the liver, no benefit seemed to be derived, excepting that in one case there was some alleviation of pain, and an improvement of general health for a time.

In all forms of cancer, where the turpentine has been taken for six or eight weeks, I have found the administration of a tonic to be of advantage, as it promotes the convalescence of the patient, and if the disease affects the uterus or rectum it seems to facilitate the escape of the debris from the destroyed mass, and to promote cicatrization. Four minims of the tincture of perchloride of iron, and three minims of liquor strychniæ, taken three times daily, are recommended; and if there be any pain, which often happens after six months' use of the remedy, six drops of tincture of belladonna are added. A generous diet is allowed. Morphia is not advised. The bowels should be kept daily moved, when necessary, by a mild aperient. After the turpentine has been regularly taken for three or four months, I now recommend it to be discontinued for three or four days in the fortnight. It is probable that future experience will show that, after it has been taken for the above-named period, it will be no longer necessary in the majority of cases, but as a precautionary measure it has been generally continued in the manner just described.

There are sixteen cases of cancer of the breast under treatment in the hospital, and a large number are under observation privately. The effects of the remedy in the first few weeks are, the relief of pain, and a diminution in the size of the breast, which is generally more movable, even when apparently fixed to the walls of the chest; this probably arises from a diminution of the surrounding cancerous infiltration. Time has not been sufficient, however, to speak with definiteness as to the ultimate results. The clinical facts brought out in this class of cases are very interesting and instructive. There is a great probability that the disease is arrested, as after four months' trial of the remedy the morbid growth has not increased in size. As far as can be stated at present, for therapeutical purposes the cases appear to be divisible into three classes:—1. The ordinary scirrhus of the breast, with or without surrounding infiltration. 2. Epithelial cancer. 3. Cases of ulceration after previous operation.

In the first class of cases great interest attaches to the experiment, as indicating how the solid mass is removed. It appears at present to deport itself as if it were a foreign body, and seems disposed to make its way rapidly to the surface; but in the cases where this has occurred the growth is not of an active character, for as the mass comes to the surface a crust forms upon it. This disappears in time, and another forms, while the whole bulk of the mass gradually diminishes in size. It may prove eventually that this is one mode of the removal of the disease. In these cases the growth does not increase in size, but, on the contrary, gradually diminishes.

In the second class—i.e., epithelial cancers—the surface of the growth becomes paler at first, then smoother, as if it had been levelled by friction; sometimes some of the nodules slough away. Then a process of cicatrization takes place. There are two cases in which the new tissue around the growth is quite half an inch in breadth. Two others, about one and a half and two inches respectively in diameter, have entirely healed over.

In the third class of cases the results are so far favourable that the ulceration has not increased in size, but they have not progressed so favourably as the other cases. In several instances the glands of the axilla have been enlarged, but the enlargement has generally disappeared under a steady use of the turpentine.

The importance of these imperfect notes to the profession, and the influence they may have in aiding the treatment of cancer will, I hope, be a sufficient apology for reverting to the subject. At least I trust I have shown that the remedy is not useless. I may, in conclusion, state that in the treatment of these diseases patience and perseverance for a few

months are absolutely necessary. In some diseases which affect the human race, a continued treatment for twelve or eighteen months is often thought requisite. It has, I believe, been here shown that the remedy does produce some influence on the progress of cancer; and it is but reasonable to require that a similar indulgence be extended to the treatment of cancer by this method, as in the chronic diseases just referred to. As the remedy can be taken with impunity for a long period, and if time be granted for the trial of it, I feel that I am justified in stating that its steady use promises excellent future results.

ON INFANTILE RICKETS.

By H. CRIPPS LAWRENCE, L.R.C.P. LOND.

RICKETS, the offspring of mal-nutrition in the fullest sense of the term, is so inseparably connected with many interesting physiological and pathological phenomena that it has attracted the attention of numerous observers, who in recording their experiences have obtained for the disease a literature of its own.

Essentially a disease of infancy, rickets may overstep the borderland on either side; for while Boerhaave¹ wrote, "Never congenital, rickets rarely occurs before the ninth month, scarcely ever after the second year," Dr. Gee, in commenting upon the aphorism, wrote,² "Never congenital! This is, I believe, not far from the truth; but the question of congenital rickets has never been fully investigated." On the other hand, Sir William Jenner³ "saw, some years since, a girl aged nine years who was then only beginning to suffer."

Much has been written respecting rickets in general, and the phases of the affection in particular; but the outcome is not so satisfactory as it might be in reference to the requirements of daily professional practice.

I have placed the term "infantile rickets" at the head of this communication to impress the fact that rickets develops earlier in life than is generally recognised. Taking 2018 cases, including all diseases, observed at the North-West London Dispensary for Sick Children, I found 129 attributable to rickets. Of these the largest proportion first came under my observation between the first and third year. Similar results are recorded by Drs. Brueniche, Gee, Guérin, and Ritchie. In Von Rittershain's statistics⁴ rickets occurred more frequently between the sixth month and second year. A distinction has to be drawn, however, between the frequency of the occurrence of rickets according to the ages at which the cases actually commenced, as compared with the ages at which such cases first come under observation. While ordinary statistics seem to show that rickets as a disease is more frequent between the first and third years, it must be remembered that cases of rickets appearing well developed when first seen represent several cases which have probably been developing for several weeks or months previously. Again, several cases of slight development of rickets are never examined at all, and the mal-nutrition upon which the rickets is dependent receiving its appropriate treatment, such cases pass by unrecorded. Among the 129 cases I observed, it appeared that 68 first came under notice between the first and third year; 39 were noticed between birth and the first year. I believe if my inquiry had been especially directed to the investigation of rickets at the time when the patients first came under observation, 129 would not represent numerically the total number of rachitic cases present in the 2018, which included all diseases. Any number of cases which, upon careful inquiry, might have had to be subtracted from the total of 2018, and added to the 129 cases of rickets, would have to yield a quota likely to increase largely the proportion of cases occurring in the earlier months of infancy. Some such hypothesis will serve to explain apparent discrepancies between the statistics recorded by different observers. Another reason serving to explain the

frequency with which slight developments of rickets are overlooked is to be found in the fact that in practice we are apt to be on the look-out, not for the early manifestations of the disease, but for some fuller development, which mentally accords with the stereotyped descriptions of rickets. Upon this point Guérin, in his "*Mémoire sur les Caractères Généraux du Rachitisme*,"⁵ gives this practical advice:—"It is necessary to avoid the notion that rachitism only commences with the osseous deformity. This manifestation of the disorder belongs to the second stage. Before it affects the osseous system rachitism expresses itself by more or less evident general phenomena, which are only absent in cases where the disease is but imperfectly developed."

I. With the primary stage, to which Guérin refers, are associated by English authors the three following symptoms—viz., (a) sweating about the head; (b) a tendency to lie uncovered when asleep; (c) general tenderness. It is the omission to note these indications of the first stage of rickets that leads to the overlooking, certainly for a time, it may be till too late, many cases of rickets. In general practice the attention of the practitioner is often drawn off from these essential primary phenomena by the occurrence of some intercurrent, accidental complication. Thus it comes to pass that a slight gastro-intestinal disorder, a bronchial or broncho-pneumonic attack, an imperfect attack of laryngismus, or a partial convulsion having occurred, the treatment is directed to the complication, whatever it may be, while frequently no evidence of rickets is sought for. Recovery takes place, and hence, the essential characteristics of rickets being either unnoticed, or, if noticed, soon forgotten, the disease meanwhile progresses, it may be slowly, but surely, to a fuller development. If the attention in practice were, as a general rule, more fully directed to all cases of mal-nutrition,—as an obvious result, cases of undeveloped rickets would be more often detected, and the further advance of the disease not only arrested, but a decrease in the actual amount of rickets also ensured. Another source of misconception arises from the erroneous idea that mal-nutrition is the heritage of poverty, instead of recognising and bearing in mind the fact that mal-nutrition means imperfect nutrition. Mal-nutrition exists largely, owing to their whims and fancies, among the upper and middle classes. From this cause a large number of cases of rickets develops unrecognised among the rich, and not only unrecognised, but unrecorded. As a consequence of imperfectly realising the presence of the prodromata of rickets, and overlooking the likelihood of mal-nutrition in the upper and middle classes, the proportion in which rickets affects infants under one year of age is manifestly underrated.

II. In the second stage of rickets various essential characteristics become evident, to three of which let me refer. (1) Among the osseous deformities, that of "beading" of the ribs; (2) among the rachitic neuroses, that of laryngismus; and (3) that of general tenderness, as a link between the first and second stages of the disease.

(1) The researches of Sir William Jenner⁶ led him to propound the law that "rickets being a general disease, the bones are affected as one organ, just as the arterial system is in the degeneration of age; the consequence of this is, that no one bone is ever affected without all suffering, and that whether the disease manifest itself chiefly by enlargement of the ends of the bones, or by softening of the bones, or by both in a proportionate degree." Again, in reference to the lymphatic system, he adds: "The lymphatic glands are, in regard of albuminoid infiltration, to be regarded as one organ, just as I told you the bones in rickets are to be regarded as one organ. And as in the osseous system we never find one bone only affected with softening, and the other lesions characteristic of rickets, so in the lymphatic system we never find one gland only, or one set of glands only, the seat of albuminoid infiltration. The knowledge of the oneness, so to say, of the glandular system in reference to albuminoid disease, is of much practical importance, inasmuch as we can readily ascertain the state of the lymphatic glands in the groin, axillæ, and neck, while it is difficult to determine by the eye or touch during life the condition of the mesenteric and other internal glands." As the infiltration of the superficial glands thus affords a sure and certain index of a like implication existing in the deeper-seated glands, we have therein also a practical illus-

¹ Aphorisms, 1841.

² St. Bart. Hos. Reports, vol. iv., p. 70.

³ Medical Times and Gazette. Lecture III. on Rickets, April 28th, 1860, p. 415.

⁴ Ziemssen's Encyclopedia.

⁵ Guérin, *Différences du Système Osseux*. Paris, 1840.

⁶ Med. Times and Gazette, April 7th, 1860.

tration of how rickets as a constitutional disease exerts its influence in reference to location and place.

Now, in the manner in which rickets attacks the osseous system we have, I believe, a valuable practical indication in point of time. I here refer to "beading of the ribs." In the paper already referred to by Dr. Gee⁷ on Rickets, it is stated: "Unquestionable 'beading' of the ribs may occasionally be found in infants of only three or four weeks old. Moreover, I believe that no characteristic alteration in the bones (an essential element in the diagnosis of rickets) can be discovered more early than 'beading' of the ribs." My own, comparatively limited, clinical experience has led me independently to a like conclusion. There are two reasons why "beading" of the ribs is frequently overlooked. To one I referred in a paper on Rickets recently read before the Harveian Society of London in these terms:—"One reason why this essential characteristic is overlooked is that the ribs are out of sight, and as it involves trouble to investigate their condition, not of necessity, but owing to the ribs being out of sight, it often happens that 'beading' of the ribs is not looked for until either notice has been taken of the sweating about the head, restlessness, laryngismus, or enlargement of the wrists and ankles, and then 'beading' of the ribs, being sought for and found, is regarded as a crucial test, confirmatory rather of the other symptoms than as premonitory of their occurrence. Secondly, the frequency with which rickety children present a fat, plump appearance disguises the presence of the enlarged ends of the ribs. If this order were more universally reversed in the diagnosis of rickets, and the child stripped at the first visit for examination, I believe 'beading' of the ribs would be found more often than not to precede the other essential characteristics." Possibly exceptions may arise in which the value of "beading" of the ribs as the earliest symptom of osseous implication in rickets may become questionable; for instance, if ossification were advancing earlier or more rapidly in other directions. I have already mentioned Dr. Gee's observations respecting "beading" of the ribs; if we supplement those remarks by reference to the law propounded by Sir William Jenner relative to the osseous lesions in rickets, "beading" of the ribs at once becomes an early symptom of great practical value in point of time—the analogue as regards the osseous system to that which implication of the superficial glands has been shown to occupy in reference to the other lymphatic glands in rickets in regard to time. In addition to this, "beading" of the ribs is a precursor of primary importance in reference to the osseous lesions in rickets, indicating not only that the second stage of the disorder is impending, but that it has already commenced; and that the treatment appropriate to rickets should be at once instituted to prevent its further development.

(2) The neuroses in rickets are often as misleading in practice as are the early manifestations of the osseous lesions. The explanation of this may be readily accounted for. It arises partly from the age at which rickets attacks the system being an early one. At this age, as we all know, the nervous system is undergoing a rapid development, which reacts upon the economy in a twofold direction. Slight causes suffice to produce phenomena which find their expression through the nervous system, and this whether due to a central or peripheral irritation. Hence the error to which this leads in practice, is a misconception of the significance of one or more symptoms, as indicative of some independent disorder, instead of regarding the symptom or symptoms as being "the consequence of the constitutional disease."

In reference to the convulsions of infancy, it may be stated, on the one hand, in the case of an exanthem, or a thoracic or abdominal inflammation, if an infant or child be attacked thus, the premonitory symptom would probably be a convulsion of less or greater intensity; while in the adult one would expect to be forewarned rather by a rigor. On the other, as Trousseau has shown, convulsions may be induced by some external irritant, such as a pin in the garments of the child transfixing the liver or anterior fontanelle, which being removed the convulsions ceased. Now in rickets the various neuroses acquire a relative value and importance, owing to the method and manner in which they occur in the infant or child.

Of late years much attention has been directed to the etiology of neuroses, and confining our attention to those

concerned with rickets it may be said that laryngismus is one of the most frequent and prominent of the rachitic neuroses.

Sir William Jenner, in enumerating the causes of death in rickets, places the neuroses in the following order: laryngismus; chronic hydrocephalus; convulsions; mentioning especially the frequency of laryngismus in its connexion with the disease. It may be said also of laryngismus, that it is one of the earliest neuroses affecting infancy, and, it may be added, especially the rachitic infant. Upon this point, in a paper "On Convulsions in Children,"⁸ Dr. Gee writes: "Now spontaneous laryngismus is always associated with rickets. For this great middle proposition we are indebted to Elsässer. Forty-eight out of the fifty cases of laryngismus spoken of above were undoubtedly rickety." Of the fifty cases it is also noted that nineteen had eclamptic fits.

Mal-nutrition being so intimate an etiological factor in the production of rickets goes far to explain the frequency with which laryngismus is associated with the disorder. As a concomitant of mal-nutrition, digestive incapacity plays an important rôle in its production. The relationship existing between the larynx and the pneumogastric nerve, by means of its recurrent laryngeal branch, indicates how readily an irritation communicated through the intestinal tract would be transferred to the larynx, exciting its muscles to spasmodic contraction.

To Jacobi and Elsässer is attributed the theory that cranio-tabes (which Elsässer maintains precedes in point of time "beading" of the ribs) itself, arising from undue pressure upon the cranial bones by the brain-substance from within, and from without when the head rests upon the pillow, is intimately associated through the self-same pressure with the production of laryngismus. But Vogel, while admitting the connexion between cranio-tabes and laryngeal spasm as an "irrefutable" fact, requires "further physiological and anatomo-pathological investigations for the conclusive proof as to cause and effect." Be this as it may, many cases of rachitic laryngismus remain to be otherwise explained. Laryngismus thus acquires a position of primary importance among the rachitic neuroses, whether we refer to its frequency or its early prominence. These characteristics increase its value as a symptom in reference to the early diagnosis of rickets.

(3) General tenderness is a third symptom of value in reference to the early diagnosis of infantile rickets. Whether this tenderness be periosteal in nature, as Trousseau maintained; or the result of emaciation and cachexia, as Ritter believed; or "distinctly muscular," as Sir W. Jenner and Dr. Gee have taught,—each and all of these authors associate general tenderness with rickets as a proximate cause. Vogel claims that "the first symptom of rachitis of the ribs, is a marked pain on touching or pressure of the thoracic walls," the production of which can be obviated if the infant be "tenderly raised with one hand under the pelvis, and the other supporting the neck." This observation materially enhances its value as a symptom with reference to the early diagnosis of the affection.

The proposition of Elsässer, that cranio-tabes is the earliest evidence of osseous implication in rickets, may be regarded as still *sub judice*. If we believe, however, with Dr. Gee that "beading" of the ribs is the first and most reliable, demonstrable evidence of an osseous lesion in rickets, and with Vogel that general tenderness is "the first symptom of rachitis of the ribs," then this general tenderness at once acquires the position of being an important link between the symptoms of the first and second stages of rickets.

In conclusion I would remark: 1. That rickets as a disease is frequently developed earlier in life than is generally recognised. 2. That the symptoms of the first stage, though frequently recognised, such as sweating about the head and a tendency to lie uncovered, are soon forgotten, and the rickets, the occurrence of which they predicate, meanwhile develops. 3. That between this primary stage and the second stage of well-marked osseous deformity there are intervening symptoms, to which in practice sufficient value is frequently not attached. 4. That in general tenderness we have a symptom of great value, indicating the onset of the second stage of rickets, being its earliest manifestation. 5. That in "beading" of the ribs we have a more marked, demonstrable evidence that the second stage of rickets has commenced. 6. That in laryngismus as a neurosis we have

⁷ Vol. iv. of the St. Bartholomew's Hospital Reports.

⁸ St. Bartholomew's Hospital Reports, vol. iii., p. 103.

probably one of the earliest evidences that rickets has invaded the nervous system.

If the above symptoms be overlooked or ignored, our next acquaintance with the disease will probably be in a fully developed, it may be an irremediable, form.

Oxford-terrace, Hyde-park.

EXTRACTION OF A REVOLVER BULLET FROM THE SKULL.

BY SAMPSON GAMGEE, F.R.C.S.,

SURGEON TO THE QUEEN'S HOSPITAL, BIRMINGHAM.

A FEW minutes before 1 A.M. on Wednesday, the 22nd ult., I received an urgent note from my house-surgeon, Mr. Westwood Moore, reporting that a gentleman had just been admitted into the Queen's Hospital after firing a revolver bullet into his right ear. I proceeded to the institution at once, and found the patient in bed. He was sensible, with a fair pulse. A little blood was oozing from the right meatus, and the ear was most sensitive to touch, but not wounded; only slightly bruised at one point. On the left side of the neck, reaching below the larynx, and upwards on to the cheek, was a large, hot, brawny swelling, which, the patient informed me, had been in process of formation for about ten days. Everything had been done most judiciously and promptly for the patient's comfort by the hospital staff. Restoratives, ice, &c., were continued; and I resolved not to interfere, beyond removing a strong metal plate with artificial teeth from the upper jaw.

The patient continued for the next two days in much the same state, as denoted by the subjoined extracts from the temperature chart. For brevity, I only quote the maximum numbers:—23rd, temperature 99.4°, pulse 96, respiration 16; 24th, temperature 99.4°, pulse 104, respiration 22; 25th, temperature 99.3°, pulse 96, respiration 24.

The swelling on the left side of the neck increased greatly, and on the 25th, I could feel indistinct fluctuation in its centre. Through an incision I gave exit to about one ounce and a half of very fetid pus.

Next morning (Sunday, 26th ult.) the swelling just referred to had so much diminished, and the patient was generally in such a favourable condition, that I determined on exploring the right ear; while Mr. Brett, our resident obstetric surgeon, administered ether. There had been a slight but continuous oozing of bloody serosity from the earhole.

With a narrow scalpel I made an incision in the roof and floor of the meatus, so as to admit the tip of my little finger, a metallic probe having previously detected a rough, hard substance within the passage. The inner ear was evidently blocked; but whether by bone or bullet, or both, I could not tell until I introduced a Nélaton porcelain probe. This soon solved the problem. On withdrawing it I found a shiny black mark on the white bulb; only lead could produce that. The diagnosis cleared, arose the question what to do, for the obstructing body seemed immovably rammed into the temporal bone.

I allowed the patient to wake, to have a little nourishment, while messengers were sent to all the members of our honorary staff urgently requesting them to favour me with their opinion in consultation. Their response was most cordial, their counsel and practical assistance most valuable. My friend, Mr. W. G. Archer, of the general hospital staff, was also good enough to attend and assist me, as was Mr. T. P. Salt, our surgical mechanician.

The propriety of attempting the extraction of the bullet having been unanimously agreed upon, rose the question of means. Mr. Brett again placed the patient in a beautiful sleep under ether. Bullet forceps proved of no use. I made all the room I prudently could with the knife, but there was no space for ordinary bullet extractors. By working with the left hand a steel elevator, as a lever against my right index-finger as a fulcrum, I succeeded in extracting the bullet. It weighs 126 grains, and one of the bullets left in the revolver weighs precisely the same. The patient quickly regained perfect consciousness, and took liquid nourishment. Next morning the temperature had risen

to nearly 103°; pulse 144; respiration 24. The state in the evening was: temperature 101°; pulse 136; respiration 24. Perfect rest enjoined; ice internally and to the head, and attention to the bowels by enemata. Some refreshing sleeps were enjoyed. There was no sickness and no paralysis for the first thirty-six hours after the operation; but then coma rapidly supervened; the pupils became fixed; the body motionless. At 10.30, 28th ult., temperature 103.6°; pulse 168; respiration 17. Death occurred twenty minutes later, forty-two hours after the operation.

The post-mortem examination was conducted by Dr. James Oliver, with the assistance of Mr. R. Fitch. There was a considerable amount of sero-purulent effusion in the cavity of the arachnoid, and its vessels were injected. A thin, purulent deposit covered the surface of the brain, especially of the right hemisphere. Much punctiform redness interspersed the cerebral substance. On removing the dura mater a ragged fissure was visible through the roof of the right temporal bone. On laying open the interior of the petrous portion it proved to be tunnelled with an irregular dirty cavity with broken walls, demonstrably the place of lodgment of the bullet.

In the next issue of this journal I hope to offer some comments on the case, with illustrations of the bullet as moulded into the inner ear, and also of the lead mark on the porcelain probe.

(To be concluded.)

TREATMENT OF CHOLERAIC DIARRHŒA BY THE HYPODERMIC INJECTION OF MORPHIA.

BY W. HARDMAN, M.B. EDIN., C.M.

IN THE LANCET for Sept. 27th, 1879, appeared a communication from me on the subject of the treatment of choleraic diarrhœa by the hypodermic injection of morphia. I will recapitulate the conclusions I there ventured to draw from an extensive experience of over three years' routine use of this method:—

1. Choleraic diarrhœa can be always immediately stopped by the administration of morphia hypodermically.

2. If severe diarrhœa have persisted over two hours in spite of the administration of morphia or opium by the mouth frequently, the hypodermic injection of morphia should be at once resorted to.

3. If cramps and collapse be present, the purging persisting, no time should be lost in administering morphia subcutaneously in full dose.

4. The treatment is absolutely free from danger, even if temporary suppression of urine or albuminuria be present.

5. Where not curative the treatment is diagnostic, enabling us to foretell with certainty the advent of dysenteric symptoms.

6. The best preparation of morphia for this and other hypodermic purposes is the sulphate, on account of its smaller liability to undergo change into apomorphia. For a knowledge of this last fact I am indebted to my friend, Mr. H. O. Thomas of Liverpool. Obstinate vomiting may persist for twelve to forty-eight hours after the purging is stopped, but need occasion no anxiety. It is the purging that kills.

I am anxious for the beneficial and gratifying results of this treatment to be as widely known as possible; and with this object in view I give a few illustrative cases.

CASE 1.—Mrs. S—, aged fifty-six, has been purged violently all day. Watery stools; now nearly unconscious and voiceless. Purging continues. A third of a grain of sulphate of morphia was administered hypodermically at once. This was on July 23rd. She was never purged again, and was convalescent on the 25th.

CASE 2.—On August 6th was called to a delicate woman, a Mrs. T—, aged about fifty. She had purged all night violently; and up to my seeing her, which would be about 9 A.M., I found her passing colourless, watery stools, sometimes involuntarily, and vomiting almost constantly. She was pale, sunk, cold, with blue lips and finger-nails, fear-

ully cramped, hoarse weak voice, and quick, small, irregular pulse. The people of the house thought her dying. Administered one-third of a grain of sulphate of morphia hypodermically, at once.—Aug. 7th: Never purged again.—Aug. 8th: Convalescent.

CASE 3.—Miss M—, choleraic diarrhœa for twenty-four hours. Cramped; motions like rice-water. Gave a third of a grain of sulphate of morphia at once. Next day convalescent. Never purged again after injection.

CASE 4.—July 19th: Mr. F—, choleraic diarrhœa for twenty-four hours. Gave half a grain of sulphate of morphia at once.—July 20th: Not another stool. Convalescent.

CASE 5.—Was called up on July 26th to a Miss H— about 4 A.M. Was sent word she was dying. I found her unconscious on the floor in a faint, having been purged violently involuntarily. The motions were like rice-water. I ascertained that the purging had been going on since 8 P.M., and that between that time and 4 A.M. she had been moved copiously more than twenty times; she had also terrible vomiting. Gave half a grain of sulphate of morphia hypodermically at once.—11 A.M.: Not purged again; rallying.—July 27th: Convalescent, but weak; never purged again since the injection.

CASE 6.—Miss N— was attacked on August 7th with severe choleraic diarrhœa. Gave one-third of a grain of sulphate of morphia at once.—8th: Convalescent. Never purged again.

CASE 7.—Was called up about 6 A.M. on Aug. 11th to a Mrs. D—, aged sixty. They sent word she was dying. Found she had suffered from diarrhœa for some days, which had become choleraic during the last twelve hours, having had from twenty to thirty motions during the night, which were pale, colourless, and odourless; vomiting incessant; cold sweats; pinched features; voiceless; blue lips; cold extremities; and very thready, weak, irregular pulse; fearful cramps all over; semi-conscious; passing stools involuntarily; countenance changed. Gave half a grain of sulphate of morphia at once. 11 A.M.: Never purged again; rallying; vomiting continues.—Aug. 12th: No more purging; vomiting better.—Aug. 13th: Convalescent and up. This was a very bad case.

CASE 8.—Was called on Aug. 12th to a Mr. S—, who had been vomiting and purging all day and night. I saw him in the evening, receiving a message that he could not last long. Found him hoarse, pinched, and cramped. Gave one-third of a grain of sulphate of morphia at once. Aug. 13th: Never purged again. Up.

CASE 9.—Was called about three weeks ago to a Mr. D—, who had been violently purged about twenty-four hours, with violent cutting pains in belly; had also vomited. Gave half a grain of sulphate of morphia at once. Motions loose and watery-yellowish. Saw him again same evening. Purging, after being better some hours, had returned as bad as ever. Gave opinion that case would develop into dysenteric diarrhœa. Next morning motion still watery, but on slanting the vessel, the characteristic bloody slime was seen adhering to the bottom. He was gradually cured by the administration of ipecacuanha and opium.

Whatever the evacuation, cutting pains in the belly usually denote that the diarrhœa is of a dysenteric nature, and will not yield to morphia alone. Cramps occur only in choleraic diarrhœa, the purging of which is usually, but not always, painless in the commencement.

CASE 10.—On August 10th, 1879, was called to a Mrs. W—, who had been seized with violent vomiting and purging in the night. Temperature 104°. Gave a mixture containing chalk and opium after every liquid stool. 8 P.M.: Worse. Motions assuming the rice-water character. Temperature 101°. Motions come from her without her knowledge if she moves. One teaspoonful of the medicine every quarter of an hour until the purging stopped. 10.30 P.M.: Worse than ever. Gave half a grain of sulphate of morphia at once.—Aug. 11th, 10 A.M.: Better. Laughing and cheerful. Says in about a quarter of an hour she felt the injection produce a most wonderful effect. A pleasant, warm feeling spread all over her, and then the purging ceased. Was not purged again, and not the least sleepy.—12th: Convalescent.

CASE 11.—Was called to an old lady, aged sixty-seven, on August 21st, 1879, who had been weakly and failing some time, and who had been purging violently all night. Motions watery, with yellowish flocculi. Gave mixture of opium with chalk after every liquid stool, but after a few hours' trial the

purging was as bad as ever. Gave a quarter of a grain of sulphate of morphia hypodermically.—9 P.M.: Purging, which stopped after the hypodermic injection, has returned again, and she has been purged five times. Mixture of opium with chalk, one drachm every quarter of an hour until purging stopped.—Aug. 22nd: Still purged and vomiting severely. Motions yellowish, watery, with yellowish bilious flakes floating in the fluid. 9 P.M.: Motions assuming the greenish slimy dysenteric character. Patient was now treated for dysentery, and in a few days made a good recovery.

CASE 12 is with difficulty distinguished from genuine Asiatic cholera. Miss F—, a delicate elderly spinster, was seized on Sept. 16th, 1879, about 11 P.M., with violent vomiting. This continued until 12 P.M., when violent purging was superadded; these continued with violence until 1.30 A.M., when I was called up to her. I gave a mixture of opium with chalk after each liquid stool. 2.30 A.M.: Was called up again, as they thought her dying. I found her nearly unconscious, cramped all over body and legs, vomiting violently every minute or two, purging every few minutes, the purging being involuntary and under her. She was showing the whites of the eyes, and the countenance was changed. She was certainly all but gone. Gave at once two-fifths of a grain of sulphate of morphia hypodermically. She did not feel the prick of the needle in the least. 10.30 A.M.: Never purged since injection, but vomiting tiresome. 8 P.M.: Vomiting a little better.—Sept. 18th: Convalescent.

CASE 13.—On August 12th I was called to a Mr. M—. He began purging on the 10th, and got worse and worse until I saw him on the evening of the 12th, when he stated that he had been purged more than thirty times in the preceding twenty-four hours. Motions watery and yellowish. I gave him a mixture containing compound ipecacuanha powder, to be taken every hour until the purging stopped.—13th: Purged all night; very weak; voice going. Gave at once half a grain of sulphate of morphia hypodermically.—14th: Never purged again since injection. Convalescent.

These thirteen cases, which are taken, almost at random, from a considerable number of which I possess notes, illustrate my propositions. Cases 1 to 8 are ordinary cases of choleraic diarrhœa, where hypodermic injection of morphia was resorted to at once, and constituted the sole treatment. One dose usually is sufficient, and convalescence is rapid. Cases 9 and 11 illustrate the proposition that if the purging return it will ultimately prove dysenteric. Cases 10, 12, and 13 show the rapid and complete results of the hypodermic administration of morphia after the equally complete failure of opium by the mouth. I can hardly conceive it possible that this plan of treatment will not prove equally successful in Asiatic cholera, for the more purely choleraic the cases the more perfect and rapid the result. There is a form of diarrhœa attended by vomiting of bile and the passage of yellow, powdery, liquid stools. This form of diarrhœa seems due to an excessive formation of bile by the liver, and will not be cured by the administration of morphia hypodermically. As regards genuine choleraic diarrhœa, I can only repeat what I wrote in THE LANCET last year, that "in the whole range of medicine there is no one deed so gratifying to both patient and practitioner as the administration of a hypodermic injection of morphia in choleraic diarrhœa."

Blackpool.

A HARELIP TROCAR AND TUBE.

Contrived by

SURGEON-MAJOR E. AMBROSE FITZGERALD,

BENGAL MEDICAL SERVICE.

THIS little instrument, to which I wish to draw attention, is devised on the trocar and cannula principle. The piercing portion of the trocar is thin and round, with the point strong, sharp, and somewhat spear-shaped, and made of the best steel. The tube, about two inches long, is made of coin silver, sufficiently stout as not to bend on ordinary pressure or straining, and admits of slight expansion and contraction in its entire length, so as to fit on accurately to the trocar. When a harelip operation is to be performed, the edges of the fissure having been pared, the trocar, armed with a silver tube

is thrust through a quarter of an inch from the raw edges of the fissure, close under the mucous lining of the lip. This being done, the trocar is withdrawn and the tube allowed to remain. Two tubes are sufficient for most cases of harelip. The margins of the fissure being brought well in apposition, a piece of strong silk or carbolised thread is twisted round each silver tube separately. Long narrow strips of sticking plaster are then passed over the lip, between the tubes and above and below them. The tubes can as a rule be safely withdrawn on the sixth or seventh day after the operation.

Mirzapur.

A Mirror

OF

HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. GEORGE'S HOSPITAL.

EPITHELIOMA OF THE RECTUM REMOVED AFTER A NEW PLAN WITHOUT INJURING THE SPHINCTER ANI; RECOVERY.

(Under the care of Mr. ROUSE.)

FOR the following notes we are indebted to Mr. C. T. Dent, late surgical registrar.

I. C—, aged sixty-four, married, was admitted in May last with an epithelioma of the rectum of about six months' growth, situated on the left side of the bowel, about one inch above the anus. The growth was flat, sessile, of about the area of half a crown, and limited to the mucous membrane and the sub-mucous tissue. The deeper parts felt apparently uninvolved.

On June 17th Mr. Rouse removed the growth in the following manner. A curved incision, an inch and a half in length, was made, just outside to the external sphincter, and parallel to the outline of that muscle. The skin was then dissected up outwards for a short distance, so that the outer circular fibres of the sphincter were exposed. The muscle was then drawn over towards the middle line. By introducing the finger into the rectum, the growth was pressed into the external wound, and it was then cut out, together with that part of the wall of the rectum to which it was attached. In the way an opening, about the size of a half-crown, was made through the bowel. After the closure of the skin wound but a small cavity could be felt, corresponding to the former situation of the growth. The hæmorrhage was very slight.

Opium was given in order to keep the bowels confined for some days. The recovery was almost uninterrupted. For some few days slight feculent discharge took place from the wound, but after about three weeks this had completely ceased, and the patient then had entire control over the contents of the rectum. As a matter of fact, scarcely any fæces escaped, but the suppuration resulting during the granulation and closure of the cavity possessed a fecal odour. When the patient left the hospital, about a month after the operation, the power of the sphincter was perfectly normal. The general symptoms were much relieved.

Remarks.—The advantages of this method of operating, in suitable cases, are obvious. In the instance described above, it is true, the growth was of small extent and limited to one side of the bowel. There seems no reason, however, why this operation should not be equally applicable to growths of much larger size. The advantage of preserving the sphincter intact is patent; no doubt, in some cases an operation of this nature might advantageously be substituted for complete removal of the lower end of the rectum. Certainly, numerous cases have been recorded where no incontinence of fæces followed the latter proceeding; but still this method of operation gives the patient additional security against a highly unpleasant condition, without any additional concomitant risk.

DUNDEE ROYAL INFIRMARY.

THREE CASES ILLUSTRATING THE DIFFICULTIES OF RECOGNISING INTERNAL CANCER.

(Under the care of Dr. SINCLAIR.)

THE following cases were all instances of well-marked malignant disease, though the symptoms were by no means characteristic.

CASE 1. *Cancer of lesser curvature of the stomach.*—D. S—, aged fifty-five, weaver, was admitted on Aug. 5th, 1879. The patient had been in good health till six weeks before admission, when he became troubled with "pain and weakness in the stomach." A week later he gave up work on account of oedema of feet and legs, and took to his bed. He had passed only half the usual quantity of urine during the last few weeks.

On admission his face was pale, but not cachectic, and the conjunctivæ were pearly; there was no jaundice; the appetite was much impaired, the tongue clean, and the bowels were regular; pulse 100, weak; heart sounds weak, but clear; sonorous râles in chest; considerable oedema of feet and legs; urine normal. Diarrhœa soon set in; the stools were ochry, but did not contain blood; there was no vomiting; the tongue was red and fissured. On Aug. 21st, the abdomen was distended, tympanitic in front, dull in flanks; dulness changed with change of position; the hepatic as well as the splenic dulness was normal; pain in right hypochondrium (which was referred by patient to "the stomach") continued. On Sept. 22nd there was still absence of vomiting, and had been since admission; the urine was free from albumen and casts, and the patient complained of nothing but weakness and loss of appetite. He, however, became steadily weaker, and died on Oct. 2nd.

Necropsy.—The body was fairly nourished. There was very great oedema of feet, legs, and genitals. There were old adhesions of the pleura on both sides. The bronchial tubes were congested, and there was oedema at the bases of the lungs. Weight of lungs 45 ounces. The pericardium bore traces of old inflammation, and contained a normal quantity of fluid. The heart substance was firm and the valves were competent. The coronary vessels were enormously dilated and very tortuous. Weight of heart 7½ ounces. The peritoneal cavity contained several pints of serum. Both orifices of the stomach were free from disease. The lesser curvature was occupied by a soft cancerous mass, suppurating in some parts, and everywhere breaking down readily under the finger. There was no disease elsewhere in the organ. The pancreas was so adherent to the stomach for four inches of its length that it could not be separated without causing perforations. Weight of stomach 17½ ounces. The liver was fatty; weight 37 ounces. The pancreas was unusually hard, but otherwise normal; weight 4½ ounces. The capsules of the kidney were adherent, and the kidney tissue was pale and hard. Weight of both 9 ounces. The spleen was normal in structure; weight 2½ ounces.

Remarks by Dr. SINCLAIR.—Emaciation, weakness, anorexia, occasional slight gastric pain and hydrops cachecticus were the only symptoms pointing to malignant disease of the stomach, but, in the absence of vomiting and discernible tumour, they could hardly warrant a diagnosis till it became evident that the man was sinking rapidly. The marked oedema of the lower limbs, without an evident cause in the heart, liver, or kidneys might, however, have awakened suspicion earlier.

CASE 2. *Primary cancer of greater and lesser curvatures and of the pyloric orifice of the stomach; secondary cancer of liver.*—G. R—, aged fifty-three, labourer, admitted Dec. 27th, 1879. The patient was in good health till six weeks before admission, when he began to suffer occasional but not severe pain in the umbilical, right hypochondriac, and right lumbar regions. He had no vomiting. The bowels were kept in action by laxatives for some time before admission.

On admission he was in no distress, but he appeared apathetic and was emaciated. There was no notable cachexia or jaundice. There was tenderness on pressure over the hepatic region. The hepatic dulness reached the umbilical level in nipple line, and within an inch of it in the ensiform line. The urine was dark amber, acid, 1030, with heavy deposit of urates and a little albumen.

He had no vomiting while in the hospital. About the beginning of January he became jaundiced, and died on Jan. 5th.

Necropsy.—The peritoneal cavity contained about two pints of bile-stained fluid. The liver was much enlarged, and presented evidence of old peri-hepatitis on the right lobe. The whole of the upper and lower surfaces were studded with cancerous nodules. On section the entire organ was infiltrated with cancer and cancerous juice. The upper surface was adherent to the diaphragm; weight eight pounds ten ounces. The stomach was adherent to the liver, pancreas, and diaphragm. On opening the stomach, about thirty polypoid masses were observed, varying in size from a large pea to that of a horse-bean, and situated mostly in the greater curvature towards the pylorus. The whole lesser curvature was occupied by a hard cancerous mass plainly visible on the peritoneal side. The mass extended into the pyloric orifice, which was somewhat narrowed; weight twenty-one ounces. The spleen was rather friable. The kidneys were pale, but otherwise normal.

Remarks by Dr. SINCLAIR.—Although primary cancer of the liver is a comparatively rare affection (according to Frerich's analysis 22 being primary and 69 secondary in a total of 91 cases), I hardly doubted that this patient suffered from the primary disease. This opinion even now seems quite tenable had there been no post-mortem examination, because there were no gastric symptoms, and there was indubitable evidence of painful enlargement of the liver. The value of this case consists in showing that, however exceptionally, a patient may die of gastric cancer affecting every important part of the organ except the cardia, without showing notable symptoms of the disease even when the morbid growths have increased the stomach to something like five times its normal weight.

CASE 3. Cancer of splenic flexure of colon, causing fatal obstruction.—On the evening of Feb. 4th, 1880, at the request of Dr. Low, K. H.—, aged forty-nine, a rather weak-minded female, was seen, in consultation, at the East Poor-house. The patient was in her usual health till a week before, when she complained of loss of appetite and constipation. There was no vomiting till the 3rd of February, when some bile was ejected. On the following morning there was some stercoraceous vomiting. There had up to this time been no complaint of pain. The abdomen began to swell for the first time on the 3rd, and within twenty-four hours the distension had much increased. Urine was passed freely till the afternoon of the 4th. Except constipation she had no urgent symptoms till the forenoon of the Sunday. She then had some opium. The countenance was pale and anxious; pulse feeble. There was pain only in the right iliac fossa. There was great and general distension of the abdomen, which was tympanitic all over. Some lumps of hardened feces were found in rectum. The uterus was small, and free from adhesions or displacement. An enema of soap and water and liberal doses of opium were ordered; but the woman died suddenly, three hours after the consultation.

Necropsy.—The intestines in the neighbourhood of cæcum were covered with soft feces, which had evidently come from a perforation about the size of a sixpence in the anterior wall of the cæcum. The small and the greater portion of the large intestines were enormously distended with gas and fluid feces. The distension was particularly great at the cæcum, the walls of which were thinned at several parts. The ascending and transverse colon were so much distended that the latter resembled the stomach. At the splenic flexure of the colon an annular malignant stricture was found. Here the dilatation suddenly ceased, and the descending colon and rectum were found to be of much smaller calibre than usual, and contained some lumps of hardened feces.

Remarks.—It was evident that this case was a very grave one, though, from the short duration of the illness, and the absence of all the characteristic symptoms of malignant disease, the theory of cancer was never entertained. Even had the tympanitic distension of the bowels been much less, the neoplasm, on account of its small size, could certainly not have been detected. It is just possible that a more intelligent patient might have furnished information that would have led to a correct opinion.

ALTRINCHAM HOSPITAL.

STONE IN THE BLADDER; LITHOTRITY, WITH EVACUATION; CURE.

(Under the care of Mr. T. TORKINGTON BLEASE.)

G. H. S.—, aged sixty-eight years, a scripture reader, of sallow complexion, first came under treatment in November, 1879. He had been in delicate health for about eight

years, and had consulted many surgeons. He had spent the winter, from Dec. 27th, 1870, to May 9th, 1871, in the Hospital for Consumption at Ventnor. He had frequently suffered from hæmoptysis, and during the same period had often had hæmaturia. At the time he applied to Mr. Blease the urine constantly contained a large quantity of pus, there was frequent desire to micturate, and there was great pain in the pelvic viscera and in the penis.

The patient was in great agony, having recourse to hot baths three times daily, and linseed-meal poultices over the sacrum and abdomen. The bladder had been examined six times by four surgeons during the eight years he had been suffering, but no allusion had been made by any of them to the viscus containing a stone. The patient hesitated a long time before he would submit to another sounding, but on Jan. 10th, he allowed an instrument to be passed into the bladder, and a stone was at once discovered. The nature of the case was explained to the man, and, with the sanction of his colleagues, Mr. Blease advised the operation of lithotomy, with rapid evacuation, on Bigelow's method.

On Jan. 29th he was placed under chloroform, and the lithotrite was used. Thirty grains (dry weight) of a calculus was washed out, when it was found inconvenient, in consequence of the smallness of the bladder, to use the lithotrite longer. After this and the subsequent operations the circulation and temperature remained undisturbed.

On Feb. 9th the lithotrite was used again, and 117 grains of stone were washed out. On Feb. 18th the lithotrite was used a third time, and fifty-three grains were removed in a similar manner. There was still a very small portion in the bladder, but it could not be seized, and on March 3rd it was thought desirable to send the patient out of hospital for a short time. From domestic causes he was unable to return before June 14th, when a fourth operation was performed, and every particle, thirty grains, was removed.

Remarks.—No doubt few operations would have been necessary had not the bladder been so much diminished in size. After each operation the troublesome symptoms were less, and the patient might have left the hospital the day after the last crushing, but he remained six days, when he was discharged cured. The man had doubtless been suffering many years from stone in the bladder, but although he had been examined by four different surgeons, and the symptoms had grown more severe each year, no operative interference had been suggested. The case affords additional proof how tolerant a bladder may become, even when in a very unhealthy condition. The stone was composed of uric acid, with an oxalate of lime nucleus.

Reviews and Notices of Books.

Hygiene and Treatment of Catarrh. By THOS. F. RUMBOLD, M.D. St. Louis: Geo. O. Rumbold & Co. 1880.

THIS is a semi-popular and readable little work upon the prophylaxis and treatment of a "common cold"—a subject to which the writer tells us he has long given much attention. It abounds in advice, for the most part sensible enough, although here and there it would not be difficult to differ from the writer, who seems to have been carried away by his subject. For example, the closing chapter is devoted to an exhaustive counterblast against tobacco, the use of which he maintains is positively pernicious to a catarrhal patient and of very questionable benefit to the healthy; since, he maintains, its effect is invariably that of a depressant, whilst locally it produces a permanent state of congestion of the mucous membrane of the upper respiratory tract. There is no denying the truth of some of his statements, but it is not possible to follow him through his whole indictment. The book is well-planned. It opens with chapters on personal hygiene, in the matter of head-coverings, the treatment of the hair, clothing, &c., and many valuable hints are given on these points. The writer is especially severe and somewhat satirical upon the prevailing fashion of female dress and head-attire—to the use of which he attributes rightly enough many catarrhal attacks. He is a firm believer in the efficacy of inunction, not only for the head and

feet, but for the body generally; and his favourite unguent for this purpose is vaseline. He speaks strongly about the importance of free ventilation of the sleeping apartment, and urges, rather extravagantly, that disturbed mental states predispose to catarrh, and warns people against giving way to anger and ill-temper. On this latter point some may object that he has mistaken the *post hoc* for the *propter hoc*, for it is notorious that a common cold does not generally conduce to an equable frame of mind. Upon remedial measures he is especially urgent in inculcating the use of frequent and thorough cleansing of the nasal and laryngeal passages, and shows that the Weber douche does not fulfil its requirements, for as commonly applied it leaves untouched portions of the nasal cavities, where secretion most frequently is lodged. Moreover, he has had cases where inflammation of the antrum and otitis have been set up by its employment. He has therefore discarded this apparatus in favour of a spray douche, which he figures and describes. A chapter is also devoted to the cleansing of the ears, for which he employs a modification of Luce's injector. The widespread prevalence of catarrh, the scanty consideration usually given to it both by laymen and medical men, render this book one of some utility, and in spite of a tendency to magnify the importance of the subject it will repay perusal.

Alcohol Tables, founded on the Tables of Fownes and Drinkwater. By OTTO HEHNER, F.C.S. London: Churchill. 1880.—This useful compilation gives the percentage of alcohol by weight and by volume, and the percentage of proof spirit for every unit of specific gravity, from 1.000 to 0.7938—that is, from pure water to pure alcohol. It will save analysts much trouble.

Tables for the Analysis of a Simple Salt: for use in School Laboratories. By A. VINTER, M.A., late Scholar of Gonville and Caius College, Cambridge. London: Longmans & Co. 1880.—We are already flooded with little books of this kind. Why they are published is a mystery, each one seems so like the one before it.

ABSTRACTS OF

INTRODUCTORY ADDRESSES.

ST. MARY'S HOSPITAL.

INTRODUCTORY ADDRESS BY WALTER PYE, F.R.C.S.,
ASSISTANT-SURGEON AND LECTURER IN PHYSIOLOGY.

AFTER welcoming in a few words the old friends of the school who had met together to celebrate the beginning of another medical year, and those who were as yet strangers to their school and to their work, the lecturer warned the latter against entering the profession unless they were prepared to follow it for its own sake, and urged those whose motives for joining it were interested or unworthy to give up the task now before it was well begun. In discussing the prospects of those who honestly loved their work, he said that while the getting of large incomes was the fortune of very few, still none could fail, except through their own fault, to earn money enough for comfortable subsistence. The prospects and standing of the profession, however, were not to be judged by a mere money standard; in the eyes of the outside public its importance was being every year more recognised, and the social position of its members was steadily rising; this was not due to a better appreciation by the world outside of the higher aims of medicine, but to a steady improvement in the culture and education of medical men. The lower standards, however, of previous education, he held, were not yet high enough nor broad enough, and he urged that a scientific education, which should be really preliminary to the professional education at the hospital schools, should be made compulsory for all; and that the schools themselves should be relieved from the necessity of teaching the elements of sciences which were only allied to

medicine. He pointed out that not only would this course leave the student free to give his whole attention to his proper work as soon as he came up to the hospital, but that the systematic cultivation of scientific habits of thought was of the greatest importance to medical men, even though in after years the actual details of what they learnt did not remain in their memory. Men came up to the hospital, not to learn to be chemists or botanists, but to be doctors; but the latter they could not be, in the highest sense of the term, unless they had gone through a previous scientific training.

The course of study of a medical student seemed to be peculiar in this, that it grew steadily more and more pleasant, even more and more easy, to pursue, as the student advanced in it. No argument was needed to prove that both naked-eye and microscopic anatomy were to be mastered; but he held that the study of physiology was even more essential, and he insisted on the importance of progress in this branch of their work, and on the necessity which lay upon all who hoped to advance their art of studying it both normally and pathologically. He pointed out that medicine at the present day was advancing, not as it had been for the last two hundred years, simply by the accumulation of clinical experience, but by striving as far as possible to reduce its practice to the conditions of that of an exact science—to establish a new empiricism; and he said that though the ideal end of this school of practitioners would never be reached, still, every step towards it was a step in the right direction, and that the only way in which advance could be made was by the earnest study of physiology. The progress in the way of exactness in medicine which had been made during past years was real, and gave promise of an abundant harvest in the future. He strongly urged the junior students to get their first professional examination over as soon as possible, and till that was done not to attempt to do any clinical work in the wards. That examination—or those examinations—over, the most enjoyable part of their student's life lay before them. This was divided into work in the wards as dressers or clinical clerks, and work in the out-patient rooms and casualty room. In the wards of the hospital students were to recollect that the standard of illness was very high, and that those cases which looked commonplace by contrast with still more severe ones there would be regarded as very serious ones indeed under any other conditions. He reminded them that the more common illnesses in the wards would be the ones they would most frequently see on leaving the hospital; and he urged them to take careful and continuous histories of all the patients they had to watch. When surgical dressers also, they were advised to study to acquire habits of manual dexterity and mechanical ingenuity in dealing with the varying difficulties of their cases. He pointed out that in the out-patients' rooms their work and the lessons they had to learn from their patients differed considerably from their experience in the hospital wards. In these latter patients were put in the best possible condition for getting well. In the out-patients' rooms few of the really ill were able to receive the treatment they most required—namely, food and rest in bed; these rooms, however, were the great school for the getting experience of illness and of habits of rapid diagnosis and self-dependence; but they were to bear in mind that the treatment was generally a compromise, and not that which patients ought properly to have. He advised the students to haunt the hospital, and to know its aspect at all hours of the day and of the night; but he reminded them that during their life in London they were not to neglect to cultivate their faculties in other directions; they were to recollect that they had to be in the highest sense men of the world, able to appreciate the cultured thoughts and words of others; and in order to be able thus to get the best out of their lives they should not pass by those storehouses of literature and art that nowhere were so large or so easily entered as in London.

He warned them against the use of books as means of getting that knowledge which should be learnt at the bedside; text-books should be merely used as means for sorting or pigeon-holing knowledge previously acquired; and the really original professional works should not be studied until the student was well-established in the practical knowledge of disease.

In conclusion, he reminded the students that in the case of St. Mary's the school and hospital had one foundation and could only exist together; they had common interests,

common hopes and fears, and while they could look back upon an unsullied past they must not forget that the original scheme of the hospital exceeded by far its present size, and that its usefulness, both as a great charity and as a medical school, fell, from its limited accommodation, far short of what was required by the district in which it was placed or designed by its founders. Their hopes for its enlarged prosperity in the future were high, and could not but be soon fulfilled if they determined in the present to sustain its good name and good fame as they had received it, till the time came for them to hand it down stainless to their successors.

WESTMINSTER HOSPITAL.

INTRODUCTORY LECTURE BY DR. DONKIN,
SENIOR ASSISTANT-PHYSICIAN TO THE HOSPITAL.

THE lecturer took for his subject the duty of the doctor towards society and some of his derelictions therefrom, considering also the reciprocal attitude of society to the doctor, and showing that the widespread ignorance that existed of the nature and scope of science made undue demands from the profession, and must be held partly responsible for the dishonest quackery that still disfigures it.

Attention was called first to the wide foundation of varied knowledge on which medicine was based, and one of the first duties of the doctor towards society was shown to be the endeavour to keep abreast of the advancing tide of knowledge. Modern invention and recent research were doing much to increase the difficulty of this work and add to the responsibilities of the profession. At the same time it was none the less incumbent on the practitioner to keep firm hold of the knowledge accumulated during past ages, which, though to some extent wanting in definiteness and communicability, was invaluable to the practical physician, and should be appropriated by the student with as much care as the results of the latest lights of science.

One more important point to remember was the part played by the mind in the causation and modification of many diseases, the doctor's whole duty not being always discharged by an examination of the patient, which was strictly physical in the narrowest sense of the word. To obviate errors from the neglect of this consideration a careful and sympathetic study of human character was necessary.

The difficulty of fulfilling these duties being obviously great, examples of transgressors were not far to seek. The quack still flourishes under various aspects, and prominent among this class were those who professed to have a definite "system" of therapeutics, and were always ready to give a plausible explanation of their method of procedure to those who were entirely ignorant of the subject. A complete system of therapeutics was impossible while the knowledge of disease remained as imperfect as it was; he, therefore, who professed to be the possessor of such a system was an impostor. Quacks of this order ignored the scientific studies of the causes of disease, and looked no further than the symptoms, thereby flattering the intellect of the patient, whose vision was similarly limited. The practice of the homœopath, both concealed and confessed, was an instance of this, in that it made capital out of the ignorance of the public and the common desire of men to know by what method they were cured. Men, after all, had no scientific right to expect that any given disease should be curable, and a more scientific knowledge of what disease is in its relation to health would show them that it was more rational to be surprised and thankful that any of their ailments should be cured than to grumble at the powerlessness of medical art to dissipate them all. There was not, nor was there reason that there should be, any real parallel relation between drugs and disease, although it had always been the popular superstition that there existed in nature a remedy for nearly every ill, if only the doctors could find it out. Of this superstition the quacks of all ages had taken, and were taking, advantage. They had their reward, for they flourished well.

A prominent form of quackery in orthodox ranks was that of exaggerated specialism, which was based on the plausible and popular teaching that the body could be studied piecemeal. Hence arose a posse of doctors for almost every organ of the body; hence also a perverted use of instruments in themselves valuable—instruments rendering possible an in-

spection of parts of the body invisible to the unaided eye and beyond the patient's own power of observation. Might not this very possibility evoke sometimes from its lurking-place that evil spirit of designing Quackery which sank the profession in the trade of medicine, and tempt it to turn invention to its own base ends by forcing the "regular" practitioner, whose body it too often inhabited, to raise a false alarm of a disease which he declared himself specially able to cure? And a fancy not over-fertile might picture a perhaps fabulous or professedly curable ailment of one organ of the body exclusively treated by such perverted art, while fatal maladies were running their silent course unrecognised or, still worse, unreported by the skilled observer. It was to be deplored that ever the ark of science should be touched by such unholy hands.

The ignorance of the public as to what the science and art of medicine really were, and a widespread hostility to scientific method, coupled often with an arrogant assumption of knowledge, were important factors in the production of these men, who disgraced their profession. Were the "dry light" of science to shine more widely, the various emotional "systems" and opinions of the time would fade away, and we should hear less of the motley view of anti-vaccinational, anti-vivisectional, homœopathic, vegetarian, and total abstaining fanatics. It was on pabulum such as these that the quack of modern time lived and flourished—on the credulity of the classes who think they know. A more general teaching of the elements of biological science would tend largely to benefit the community, and by enlightening, the public would help both to purge and strengthen the ranks of the medical profession.

RECENT RESEARCHES ON THE ACTION OF DRUGS.

THE problem of the antagonism of poisons, which seems destined, for a long time, to be a *questio vexata*, has been re-examined by Mr. J. N. Langley, at Cambridge, in reference to certain statements of Rossbach. The latter affirms that when a tissue has been paralysed by any one alkaloid it can neither be stimulated nor restored to its normal condition by any other alkaloid. In the submaxillary gland, for instance, if the chorda tympani nerve has been paralysed by atropin, no amount of physostygmmin or pilocarpin can, according to him, make it again irritable. He holds that in glands there are two parts to be considered, the nervous and the glandular part, that small doses of alkaloids affect only the nervous part, while large doses affect the glandular part in addition. After atropin has paralysed the chorda tympani, pilocarpin may still affect the gland cells, but they cannot be affected by it if the dose of atropin was sufficiently large to affect the gland cells also. Langley has ascertained certain facts which militate strongly against this view. If a small quantity of atropin be injected, the secretion, which is arrested, can be restored by pilocarpin. If a stronger dose of atropin is injected, the same dose of pilocarpin will no longer restore the secretion. Hence, according to Rossbach, this large dose of atropin has affected the gland cells as well as the nerve. But Langley finds that a still larger dose of pilocarpin will again restore the secretion. Thus, whether the larger dose of atropin acts on the cells or not, the pilocarpin must have been antagonistic to it.

Certain recent researches into the effect of large doses of strychnia have brought to light some most remarkable facts. In poisoning by this agent the convulsions and toxic action are remarkably lessened by artificial respiration. This was first shown by Rosenthal, who asserted that double the ordinarily-fatal dose was necessary, under these circumstances, to cause death. Experiments which, in the main, confirm these statements have been made by Leube, Pauschinger, and Buchheim. M. Richet, however, has recently informed the Académie des Sciences of the startling fact that when artificial respiration is maintained, a dose of strychnine 100 times that which is usually fatal may be administered without causing immediate death, and that the effects are altogether different from those which result from ordinary

doses. The quantity of strychnia which is fatal to a dog of ordinary size is two or three milligrammes. If one centigramme is injected beneath the skin, or into the saphenous vein, of a dog, in the trachea of which a cannula has been placed, the animal is seized in about a quarter of a minute with a violent convulsive attack, which would be fatal were it not for artificial respiration. Under the latter, however, the attack ceases in a few seconds, and the heart, after a period of irregular action, resumes its normal pulsations. Still larger doses of strychnine can be thus injected without causing the death of the animal. The toxic phenomena vary according to the dose injected. There is first a tetanic period, and later a convulsive stage characterised by violent, incessant, spasmodic contractions of nearly all the muscles. A little later, when the quantity of strychnine injected exceeds one centigramme per kilogramme of body weight (say one decigramme, a grain and a half, for an average-sized dog), a stage occurs which may be termed choreic, marked by violent rhythmical shocks, recurring at intervals of three or four seconds, and separated by periods of almost complete resolution. When the dose exceeds four centigrammes per kilogramme of body weight (say half a gramme, or seven grains, to a medium-sized dog), the choreic shocks do not occur; there is a final stage of complete resolution, when reflex action is abolished, spontaneous respiratory movements have ceased, and the heart contracts with frequency but regularly. The pupil, dilated at the onset, becomes strongly contracted. Arterial blood pressure, raised at the commencement of the poisoning, gradually falls, and the rectal temperature varies correspondingly, rising during the convulsions to 105° or 106° F., to fall to 96° during the period of resolution. Dogs and rabbits, to which these large doses have been given, may be kept alive four or more hours by artificial respiration. If the latter is interrupted for a few seconds, say for half a minute, the heart stops, and the animal is dead. Loss of blood, even of a small quantity, will also cause death. In order to ensure success in these experiments, the strychnine has to be injected with a certain slowness, an hour being given for the injection of half a gramme (seven grains). The artificial respiration must be vigorous, and success is more readily obtained with rabbits and small dogs than with larger dogs. If instead of these large doses, very small quantities are employed, say one milligramme per kilogramme of body weight, death occurs rapidly by syncope. The cardiac failure is not at first fatal, but after three or four attacks the animal dies. When the dose injected is fifty times as much these syncopal attacks do not occur, and it can then be ascertained that the pneumogastric has scarcely any action upon the heart. The muscles preserve their normal irritability. The action of the motor nerves is lessened, but is not abolished. Thus the complete absence of spontaneous movements is to be ascribed to the effect of the strychnia upon the spinal cord, rather than to the loss of the functions of the motor nerves, or of their terminations. The animal is in a condition analogous to that produced by chloral or alcohol. We cannot, from these experiments, derive much hope of dealing more successfully with strychnine-poisoning. As the poison is eliminated, and its dose thus lessened, its effect upon the heart increases, and death results from syncope. But in cases in which it is important to prolong life for a few hours, this might be effected by prompt tracheotomy and vigorous artificial respiration.

Bromide of ethyl has been found by M. Rabuteau to be an efficient internal remedy, chiefly as a substitute for chloroform, over which, however, it does not appear to possess special advantages. Given by the stomach, it was found to relieve gastric pain, without affecting the appetite. Inhalations readily relieve convulsive cough, and, introduced on cotton-wool into the external meatus, it relieves the pain of otalgia without causing any irritation. Claude Bernard showed that the vapour of chloroform and of ordinary ether hinder the germination of seeds, and M. Rabuteau has found that it is equally true of bromide of ethyl and of bromide of amyl. He finds also that all the ethers have the same effect. The experiments were made with cress seed. But the property of germination is merely restrained. Seeds kept for thirty-seven days exposed to the vapour of bromide of ethyl or bromide of amyl, germinated, when placed under proper conditions, in two days. The question then presents itself, Have these substances a similar action upon plants which are in full progress of growth? Growing cress was exposed for two hours to an atmosphere saturated with vapour of bro-

mide of ethyl; it then appeared feeble, the leaves hanging down, and it continued in this condition for a day or two, and then revived, but exhibited considerable retardation in its growth compared with other plants of the same age. The leaves of heliotrope become brown, and die in the course of two hours. Acetate of ethyl is somewhat less powerful. Cress lives after it has been exposed to the vapour for three hours, but does not survive an exposure of six hours. Heliotropes are only killed by an exposure of three or four hours. The action of acetate of ethyl is also correspondingly less active in animals.

The effect of salicylic acid on muscular contractility has been studied by M. Livon. Frogs poisoned by this substance present tetanic phenomena. Tracings obtained from the contracting muscles show that the salicylic acid causes an increase of excitability, followed by a considerable diminution and by an irregularity in the latent period. The tetanus which occurs may present two forms. One resembles closely that which results from electrical stimulation, and a second, altogether different, which presents a rhythmical character. In the latter the muscle is in the condition which has been termed "contracture," which continues until the muscle is exhausted, and will no longer respond to faradisation of the sciatic nerve. This exhaustion is apparently not due to any effect of the drug upon the muscles; its action seems to be solely upon the nerve centres. The phenomena of the rhythmical tetanus lead M. Livon to believe that the rhythmical action of the heart is not due to any peculiarity in its muscular structure, but solely to its different mode of stimulation.

The inutility and even harmfulness of salicylate of soda in typhoid fever was well established, both in this country and in Germany, soon after the introduction of the drug. Objections to its use in this disease will not be lessened by a recommendation of it recently made by M. Hallopeau, since he had three deaths in twenty cases. M. Labbé has tried it in erysipelas and found it useless.

Sulphocyanide of potassium has been regarded as a "muscular poison," but this opinion is opposed by some experiments of Dr. J. V. Laborde, the results of which have been described in a series of articles in the *Gazette Médicale de Paris*. He first ascertained that a relative tolerance could be established when the dose does not exceed a gramme; and then, by almost daily administration, he kept an animal under its influence for more than six months. The general health was but little disturbed until the end of the fourth month, when considerable emaciation occurred, and little food was taken. The condition of muscular contractility examined in the thigh or leg at different periods, never presented the least alteration appreciable by any ordinary means of investigation. The cardiac pulsations lessened notably in force and number in accordance with the depression of the nutritive functions. The animal appeared, however, to be in no danger of death, when it suddenly succumbed to a comparatively trivial operation, the intravenous injection of water. From this and many other experiments M. Laborde concludes that the muscular contractility is not primarily or directly affected by the sulphocyanide of potassium.

Euonymin is a drug which, although of some previous repute in America, was introduced to the profession in England mainly by Dr. Rutherford's investigation into its power as a cholagogue. It has been little employed in medicine, but a case in which pseudo-membranous colitis was treated by it successfully has been published by M. Blondeau. The case had resisted many courses of treatment, but disappeared in six days on five centigrammes of euonymin night and morning.

GUY'S HOSPITAL.—On the 28th ult., at the ordinary meeting of St. George-the-Martyr, Southwark, Mr. Robins moved, "That a petition be presented to the honourable House of Commons by the vestry, praying an inquiry, if possible, by a committee or commission appointed for the purpose, into the management of Guy's Hospital, in the parish of St. Thomas, Southwark, an institution founded in the last century by Thomas Guy for the relief of poor sick people, endowed with an income which has now become perhaps nearly £50,000 per annum, for this purpose; and which institution there is great reason to believe is, and has been for some time past, most inefficiently and improperly managed." The motion was seconded by Mr. A. Hawkins, member of the London School Board, and, after a lively discussion, was carried.

THE LANCET.

LONDON: SATURDAY, OCTOBER 2, 1880.

It is much to be regretted that a strong and widespread feeling of dissatisfaction exists at present in the Indian Medical Department, and that its development has been in a considerable degree due to official mismanagement on the part of the authorities in India. When it was decided to be necessary that the dual administrative staff of the medical services should be abolished, instead of promulgating in its entirety a well-considered scheme of reorganisation, the authorities in India published a General Order by which the Indian Medical Service was deprived of a number of administrative appointments, without a hint being given of any intention to compensate it for the loss, except in the case of the actual holders of the posts to be abolished. It cannot be a matter of surprise that this General Order created dismay in the department and called forth energetic remonstrances against the injustice which it appeared was to be inflicted by it. After a lapse of ten weeks the authorities published a second General Order creating a number of administrative appointments, chiefly in connexion with the civil department, which, if judiciously made, might be fairly considered as compensation for those which had been withdrawn. It is difficult to understand upon what principle this second General Order was so long kept back if the new organisation were settled, and if it were not it is still more difficult to conceive how the Indian Government could break up so important a branch of the public service without having made any arrangement for its future management. It is, at best, an example of intense official stupidity. Though the discontent created by the first General Order was, to a considerable extent, removed by the second, it was again brought into action by the manner in which the newly-created appointments were filled up; two of the Surgeon-Generalships were given to Surgeons-Major, and the third to an officer who was made Deputy Surgeon-General only a few days before, and apparently with a view to his promotion. In defence of this course it has been stated that the officers thus promoted were men of long service and of marked ability. But two of them had previously declined promotion to enable them to retain lucrative appointments, and, although there was no regulation on the subject, the custom of the Service has been that such refusal was a bar to all future promotion. At one time in the British Army officers were occasionally, for a similar reason, allowed to decline promotion by brevet, sometimes oftener than once, and when it suited their convenience, or their post was required for some other favoured individual, they were promoted *per saltum* to the place on the list of Generals which they would have occupied had they never refused it. This, however, was found to give rise to so much favouritism and jobbery that it was stopped, and we believe no case of the kind has occurred for the last thirty years. It is to be regretted that such a course was permitted on the present occasion, when even under the most favourable circumstances many cases of hardship must

have unavoidably occurred in connexion with the new organisation. The agitation which arose out of the circumstances above detailed naturally led to a consideration by the officers of the general position of their service, and brought out grievances which, under more tranquil conditions, might have passed unnoticed for many years. These have been discussed in the documents issued by the Indian Medical Officers' Defence Committee, and in our columns and those of our contemporaries, and we now propose to take a brief general view of them and of the remedies proposed for them.

The first grievance to which we shall advert is the difference of relative rank granted to Surgeons and Surgeons-Major in the British and Indian Medical Services respectively. In the former the Surgeon ranks on first appointment as Captain, and the Surgeon-Major of twenty years' service as Lieutenant-Colonel, according to the date of commission; while in the Indian Service they rank respectively as Lieutenant and Lieutenant-Colonel but *junior* of the rank. This is a disparity between officers of the same grades and employed on the same duties which ought at once to be abolished. A step of honorary rank is granted on retirement after twenty years in the British, but only after twenty-five in the Indian Medical Service. This is really a point of very little importance, but it appears to create an invidious distinction between the two classes which might be advantageously removed. In the Indian Service the Surgeon must undergo an examination before he is eligible for promotion; as this ordeal has been discontinued in the Army Medical Department it seems only fair that it should now be given up in the Indian, especially as it frequently involves considerable inconvenience from the necessity of the officer proceeding to the head-quarters of the district for the purpose. The time spent at home on sick leave is not allowed to count as service for retirement. It may probably be necessary to guard strictly against any abuse of sick leave, and to put some limit to the length of time which it might be permitted to cover, but we think the subject deserves the consideration of the authorities, with a view to reduce the hardship involved in such a rule in the case of officers who have lost their health from causes not within their control. The scale of retired pay in the Indian Service demands reconsideration. It is much lower than in the British, and wholly inadequate. In former days, when it was supplemented by the Medical Funds, and when the opportunities of making money were greater, while the expenses of living in India were less, it may have been sufficient, but in the changed state of these matters it is certainly a serious though happily a remediable grievance. We have repeatedly called attention to the niggardly hand with which honours and decorations are bestowed on the Indian medical officers, and in this respect also an equitable adjustment is required. That only one officer of that service should be decorated with the Order of the Bath is far from creditable to the military authorities of India, for we presume that it is solely from the want of a recommendation on their part that such a state of things exists.

It appears to us of importance that a definite rule should be laid down with reference to officers declining promotion on the grounds of personal convenience. This should not be permitted at all, or, if ever sanctioned, under very

special circumstances, the refusal ought to be a bar to any future promotion. It also seems very desirable that a regulation should be made to prevent the promotion of a Surgeon-Major to Surgeon-General without having served in the intermediate grade.

Another important change which appears to be called for is the introduction into the Service of the grade of Brigade Surgeon. This would tend to remove the feeling which has been created of injustice to the officers from the reduction of the number of Deputy Surgeons-General. The arguments in favour of the creation of this grade in the Army Medical Department apply with equal force to the Indian Service, and it is difficult to see how such an important difference in the grades of two departments working together can exist without creating a feeling of discontent in the one from which it is withheld.

There is still another point to which we must refer. It has been stated as a grievance by some of the Indian medical officers that all the Surgeon-Generals of the military branch are to be held by officers of the Army Medical Department, and a claim has been advanced that half of these should be given to Indian officers. But it must not be forgotten that the three Surgeons-General of the military branch withdrawn from the Indian Service have been replaced by three in the civil branch. If, then, the demand for the restoration of half of these appointments were complied with, it could only be done at the expense of the Army Medical Department, and we have not yet seen any proposal to compensate that department for the loss to which it would thus be subjected. If the Indian Service is to be rewarded in this manner, it must be prepared to give up some equivalent in exchange—perhaps one-half of these civil appointments. It has been made subject of complaint, also, that the Sanitary Commissioners are not to be reckoned as equal to Deputy Surgeons-General's appointments till the officer has put in twenty-six years' full-pay service. It has always appeared to us that these officers should have been made from the first Deputy Surgeons-General. They belong to the military branch, and are merely lent to the civil; and it would have been much better if they had been created Deputy Surgeons-General for sanitary duties. We trust this solution of the difficulty may yet be resolved upon by the Government.

The great obstacle in the way of these improvements is, of course, the increased expenditure involved in them. Among the chief reasons for the recent changes were the useless expense of the dual administrative staff, and the necessity for retrenchment so far as was consistent with efficiency. The adoption of the measures above recommended would, however, absorb much more than the amount which has been saved by the newly-introduced system. It is a vital question, therefore, how the financial difficulty is to be met. Probably this might to some extent be effected, as it was in the British Service, by the adoption of the station hospital system. It has been found to work well in the one department, and there seems no good reason why it should not do so in the other. On active service, as has been proved in the Afghan war, it carries with it many advantages, especially with reference to the diminished amount of transport required. The inquiry which the Marquis of RIPON is understood to have directed to be made into the grievances

of the Indian medical officers might, with great propriety, be extended to include the whole working of the Department in India. We have no reason to doubt that, with the advantage of the experience acquired from the several re-organisations of the Army Medical Department during the last twenty years, a scheme could be devised for the efficient working of the Service with a staff considerably less than has been deemed requisite under the old system, and that the increased expenditure necessary to remove complaints and to keep the Service as attractive as it has hitherto proved, might be met by the reductions which could thus be made in the Department, not only without loss, but probably with a considerable gain to its working powers.

It can hardly be said that we are even yet in a position to satisfactorily account for the production of the first sound of the heart. The generally received explanation is that it is composed of two elements, a valvular and a muscular—although physiologists differ upon the exact share taken in its production by the contraction of the heart-muscle, and some even doubt its share at all. A paper was read at the meeting of the Paris Academy of Medicine on Aug. 31st, by M. ROSOLINO, of Athens, in which (so far as we know) an entirely novel and not unreasonable explanation was broached. This observer maintains that the sole cause of the first sound is the vibration of the chordæ tendinæ in the systolic eddy of the blood-stream. He argues that if it were due to the flapping together of the valve-cusps, it should be produced mechanically by simple traction on the cusps by the cords; but experiments on the human and equine heart fail to bear this out. A simple membrane which from being lax is suddenly stretched produces a sound; but the valve-cusps exist under more complex conditions—since they are more or less fixed by the chordæ, which are inserted not only on their free margin, but also on their surface. The cusp is not therefore free to move in its whole extent, like an unattached membrane; and it is rendered tense by the general contraction of the papillary muscles. Nor is the first sound due to the passive closure of the valve by the blood-column. VALENTIN thought this might be the case, and endeavoured to prove it by showing that a similar sound was produced by suddenly distending with fluid a coil of collapsed intestine; but he could not have obtained it had he artificially enlarged the calibre of the intestine previously, and then stretched its walls. If the sound is abolished by hooking up the valve, it is because the procedure also destroys the meshwork of the chordæ tendinæ. Again, M. ROSOLINO has produced a similar sound by projecting a current of water over cords attached at both ends, and disposed like the chordæ tendinæ. He rejects the muscular hypothesis, not from his own research, but by the facts advanced by CHAUVÉAU and FAIVRE. Nor is the theory of its production by the friction of the blood against the walls of the auriculo-ventricular orifice tenable, since in that case the bruit produced in aortic constriction, where this friction would be most developed, should partake of the characters of the first sound instead of a blowing character. The ventricular wall, tense and solid as it is, cannot vibrate like the chordæ, which from their tenacity, their tension, and their freedom from attachment except at the extremities, are in a condition to allow of true vibrations. As stated above,

we are not aware that this explanation has been before offered. It is ingenious and worthy of consideration, but at the same time it must be obvious that in cases of simple regurgitation from dilatation of the cavity, the condition of the chordæ may be almost unaltered, and yet the first sound will be abolished, or rather replaced, by a murmur; and it is difficult to entirely throw over the view that the actual impact of the cusps, and their sudden tension during systole, is not a great element, if not the sole cause of the sound.

THE questions to be discussed by the Council of the Hospital Sunday Fund on Tuesday next, on the report of the Distribution Committee in reference to objections to the grant to the Eastbourne Convalescent Hospital, are very important; but they readily admit of being misrepresented or misunderstood. They are nevertheless also very simple. The Hospital Sunday Fund is a fund raised by all the churches and chapels in the metropolis. Christians and Jews, Protestants and Roman Catholics, vie with each other one day in the year in contributing towards the support of public hospitals, conducted on public principles, and open to all comers without distinction of creed, and on an understanding that once admitted their creed will be respected. Obviously such a fund possesses two characters which, unhappily, are not often blended. It is at once a religious fund, and yet a perfectly unsectarian one, that should be distributed without suspicion of being applied to indirect or sectarian purposes.

It will be seen that in the very nature of the case it is desirable to exclude from the discussions of the Hospital Sunday Fund all merely theological questions—such as the baptism of patients in hospitals, the propriety of urging them to go to the confessional, of holding up to a dying dissenter an image of the Virgin Mary, &c. &c. These are all questions that are clearly coming thickly and quickly to the front. Even a more fundamental question is threatening—namely, whether hospitals are to be considered as medical or as ecclesiastical institutions. It requires very little observation to perceive that a certain religious party is disposed to look upon a hospital as a special field for doing theological work, and that the theological or ecclesiastical purpose transcends any merely therapeutical purpose as the soul transcends the body. It is very clear that if this doctrine is to be pushed the medical profession will have to make it clearly understood that hospitals are for the cure of sick bodies, and not places for disturbing the mind with the petty questions which divide one church from another. And unless we underrate the common sense of the public, the public will insist upon this view being taken, and will refuse to allow hospitals built or supported by public contributions to be used for personal or sectarian purposes.

But though such questions are indirectly involved in the discussions which are to take place in the Council of the Hospital Sunday Fund, and will be far more directly raised unless the party that is trying to convert hospitals from medical to ecclesiastical uses shows more discretion and moderation than it has yet done, they do not essentially arise at the present moment.

The real question to be determined on Tuesday is far more simple and hopeful. It is this: Has the Eastbourne Con-

valescent Hospital “a committee duly constituted”? If not, has it any claim on the Fund? Or has the Council of the Hospital Sunday Fund any power to grant it an award? Of all the laws of the Hospital Sunday Fund, none is more clear and none is more indispensable than Law 4, which reads thus: “Those hospitals and dispensaries [only] which are managed by a committee duly constituted, and which produce their printed reports, with balance-sheets audited for the last three years, shall be *allowed* to participate in the Fund.”

The institution at Eastbourne, finely situated and in many respects exemplary, has not a committee. Were a scandal or an abuse to arise in it, it would be very difficult to appeal to any visible or tangible authority. It is, in fact, not at present a public hospital. By the admission of the deputation which waited on the Distribution Committee on Tuesday, it is virtually a private hospital, reared by the munificence of two or three ladies, and committed by them to four trustees, of whom one only is active and the others do not appear. Such an institution may have all sorts of virtues, and no doubt it does a great amount of good. But it is not a public institution. It cannot be made so until its subscribers are called together and duly elect a committee and other officers. The public and the profession will perhaps be surprised to hear that no meeting of the subscribers of this hospital has ever been held. When such a meeting shall have taken place, the institution will have a strong claim on the Hospital Sunday Fund, and this Fund may trust to the representation of all interests on the committee to be appointed. Such a committee is promised, and that is a great step gained by the discussion which Dr. GLOVER has raised. But until it is appointed the hospital is not a public institution, and any grant made to it by the Hospital Sunday Fund will be made in violation of one of its most proper and indispensable laws.

Annotations.

“Ne quid nimis.”

WORKHOUSE VITAL STATISTICS.

THE statistics of workhouse infirmaries are valuable from a sanitary, medical, and a social point of view. It is to be regretted that such statistics are not more generally available, and that they are not compiled with a greater regard for uniformity than is now the case. A report has recently been published which deals with the statistics of the Shoreditch Workhouse Infirmary for the year ending Lady-day last, prepared by Dr. Forbes, the medical officer. Although the report is open to one or two objections, the value of its figures stimulates the wish that similar information were forthcoming for other kindred institutions. In the first place, however, we are obliged once more to enter a protest against such reports dealing with years ending on any other day than Dec. 31st. The report before us deals with the last three quarters of 1879 and the first of 1880, a manifestly inconvenient arrangement. During the four quarters 2356 cases were treated in the infirmary, showing a further steady increase upon the annual numbers since November, 1872, when it was opened. The admissions, which were 1281 in the first year of the institution's existence, were 1804 last year. The average daily number of inmates resident in the infirmary during the year under review was 447. It is noticed that, although the admissions

were considerably greater than they had been in the previous year, the average number resident showed a decline. It appears that some time since, when the appointment of a resident assistant medical officer was urged upon the guardians, it was suggested that one of the probable results would be a decline in the number of residents through the cases being cured more rapidly. The medical officer in the present report is able to point out the apparent realisation of this probability. Fears have been at times entertained that the development of the Workhouse Infirmary system would tend to encourage and increase the amount of pauperism, and that the infirmary might become the portal to the workhouse. So long, however, as the admission to the infirmary is subjected to proper supervision and classification, a well-conducted and thoroughly efficient Workhouse Infirmary ought to have an opposite effect upon pauperism. Bearing in mind the large amount of pauperism due to ill-health, any system which secures the most skilful treatment of the poor in sickness must tend to reduce pauperism. In the Shoreditch Infirmary the cases of illness admitted from the Workhouse are treated in a different block from that to which out-door cases are directly admitted. This useful classification prevents habitual paupers from being associated with those who are only temporarily pauperised by sickness. Dr. Forbes urges the great desirability of establishing Convalescent Homes in connexion with the Metropolitan Workhouse Infirmary, which, in affording incalculable benefit to discharged patients, would frequently establish recoveries, which otherwise become relapses. Without attaching too much importance to the crude mortality statistics of such an institution as a Workhouse Infirmary, it is worth noting that the recorded completed cases in the Shoreditch Infirmary during the year were 1896, of which 303, or nearly 16 per cent., were deaths, and 1593, or 84 per cent., recoveries. In the absence of other similar statistics with which to compare the Shoreditch figures, we will not venture to offer an opinion upon the rate of mortality that prevailed. It is evident, however, that when 16 per cent. of the cases admitted prove fatal, the proportion of serious cases constantly under treatment must be large indeed; and we know that the average number of all cases under treatment during the year was 447. It would be useful to know what is the medical and nursing strength of an institution with so heavy a charge. With regard to the 303 deaths in this institution, we are told that 21 were of infants under three years of age; 7 were of children aged from three to twenty; 135 of adults aged between twenty and sixty; and 140 were of persons aged upwards of sixty years. No less than 189 of the deaths were attributed to diseases of the respiratory organs. It is satisfactory to learn that although 67 deliveries occurred during the year in the lying-in wards, no death followed parturition, and no case of puerperal fever occurred in the wards. Some interesting statistics are given of the cost of maintenance of patients, from which it appears that it averaged about 5s. 3d. per week, made up of 4s. 7d. for food, stimulants, and necessaries, 4½d. for clothing, and 3½d. for drugs. The total cost of maintenance is remarkably low, and affords evidence of strict economy combined with good management. With respect to the cost of drugs not averaging more than 3½d. per week, we can only express surprise, having regard to the serious nature of so large a proportion of the cases. We trust, however, that neither the guardians nor the medical officer would sanction a dangerous system of paltry economy in drugs. We are glad to see a dietary table, but the efficiency of the diet depends so much upon what is ordered and dispensed as "extras," that it would be useless to discuss it seriously. It is noted that the paid-nursing system continues to work satisfactorily. During the severely cold and foggy weather of last winter it was found necessary to burn gas constantly in order to keep

up the temperature of the wards. Dr. Forbes reports that the rate of mortality was not excessive during that period, and attributes this fact to warmth of temperature maintained in the wards, and to the free use of stimulants. The cost of stimulants (beer, wine, and spirits), nevertheless, during the year was not more than 5d. per head per week. Dr. Forbes' figures are full of interest, and we hope that other Workhouse Infirmarys will follow the example set by the Shoreditch Infirmary.

HOSPITAL REGISTRATION.

WE are glad to learn that an effort is about to be made to inquire into the various systems of registration in vogue in the different metropolitan hospitals. The subject was raised in these columns a few months ago by Mr. Howlett, and the commencement of a new medical year affords a favourable opportunity for renewed consideration of the subject. The present movement has been set on foot mainly by that gentleman, who has received assurances of support from the several hospital registrars. We are informed that a meeting will be held on Wednesday next, the 6th instant, at 8 P.M., at King's College Hospital, to consider the question; when it is hoped that many of those who have formerly held the office of registrar, and who may naturally be expected to take an interest in the matter, will attend, and that some definite action will be taken with a view to secure the introduction of a uniform plan to be adopted at all the hospitals.

PARASITICAL HÆMOPTYSIS.

JAPAN presents, apparently, a fruitful field to the pathologist. We lately chronicled the discovery of a new form of endemic fever by Professor Baelz of Tokio, and now, from the same observer, comes a description of a new form of hæmoptysis, of parasitical origin, the symptom of a disease which Baelz proposes to call "*gregarinosus pulmonum*." The disease is not only undescribed, but it is apparently unknown even to the native practitioners. Its chief symptom is hæmoptysis. Individuals, who are otherwise healthy, cough up bloody sputa, either continuously or at intervals, for many years. The hæmorrhage has no apparent connexion with phthisis or any other discoverable lung affection. Beyond the cough and expectoration, no morbid symptom, objective or subjective, is to be detected, even after the disease has lasted ten years. The affection appears to be a common one, for Baelz has already met with nineteen cases, twelve in the last year, and it is probable that thousands of Japanese suffer from it. All the cases hitherto seen have been in men, and for the most part between the ages of fifteen and twenty-five years. It is met with throughout the whole of Japan, but seems to be somewhat more frequent in the south. The sputa have a characteristic dirty-red aspect, and are thin. The red colour depends solely upon blood. A specific parasite is always to be found in it. This is met with in two forms: (1) as yellowish-brown, ovoid bodies of .13 mm. long, and .07 mm. wide. They have a double contour from a translucent wall .02 mm. thick, which, in different positions, appears greenish or reddish, and at the larger end is a kind of cover, at which the cyst opens. The contents consist of delicate jelly-like material, in which are embedded three or five aggregations of smaller bodies. The latter consist (a) of spherules about twice the size of a white blood-corpuscle, colourless, with sharp outlines. Around these spherules, and more or less enclosing them, is (b) a coarsely granular material, scattered through the jelly, and in it molecular movements may often be seen. When the spherules have left the cyst, they show for a time the same movements, and then become invested with the granular substance, and become motionless. The larger ovoid bodies are clearly

psorosperm cysts, and the young spherules seem to be psorosperms similar to those which Waldenburg and Eimer have found in the intestine and liver of the mouse and rabbit. Since these and other observers have ascertained that the bodies we call psorosperms are only a stage in the development of gregarinæ, Baelz proposes to call the disease gregarinosis pulmonum, and the parasite gregarina pulmonum, or, from its colour, gregarina fusca. No opportunity has apparently occurred for investigating the pathological anatomy of the disease.

PRISON DIETARY.

IN the recently issued second report of the Irish Prisons' Board which was established in 1877 under the provisions of the new Prisons Act, reference is made to the substitution of the English dietary for that formerly in use in Irish prisons. The medical officers do not, it appears, approve of the alteration, and have requested the Executive to submit the entire question to a competent medical commission. We learn with satisfaction, that since the report has been issued the Irish Government have agreed to the proposal and have appointed Dr. Robert McDonnell, Dr. MacCabe, Local Government Board Inspector, and Dr. Grimshaw, Registrar-General for Ireland, to carry out an inquiry into the present prison diet. We pointed out some time since, with regard to the new dietaries, that strong doubts existed as to their physiological sufficiency; and that the urban criminal accustomed to a liberal diet, and generally better housed than his rural brother in crime, finds prison life, as at present regulated, a severe strain on his vital powers, so that should there be any weak spot in his constitution, he breaks down under the pressure. We await with considerable interest the report of Drs. McDonnell, MacCabe, and Grimshaw, gentlemen thoroughly competent to carry out the investigation required in a satisfactory manner.

THE POPULATION OF THE EARTH.

NO stronger evidence of the world-wide influence of civilisation could be well urged than the possibility of the preparation of such approximately trustworthy statistics of the earth's population as are contained in the sixth issue of Boehm and Wagner's valuable publication, "*Die Bevölkerung der Erde*." The necessity for trustworthy vital statistics is gradually being acknowledged throughout the known world, and the area embraced by periodical census enumerations, as shown in a prefatory essay by Herr Nessman of Hamburg, is being constantly and rapidly extended. The joint authors of this valuable compilation, Boehm and Wagner, calculate and show the population of the world to be very nearly 1456 millions of persons, and nearly 17 millions more than it was at the time of the last issue of their publication nineteen months ago. It seems rather startling at first sight to hear that the population of the earth is increasing at the rate of nearly a million persons per month, but a little consideration shows that this is quite possible, since the rate of increase of population in most countries, of which we have trustworthy statistics, exceeds 1 per cent. per annum. Asia is said to contain considerably more than half the population of the globe, or 835 millions, Europe 316 millions, Africa 206 millions, America 95 millions, and Australia and Polynesia 4 millions. Bearing in mind the different areas of the continents, it is evident that America will long be able to absorb, to the advantage of itself and of all other nations, the surplus population of the rest of the world, even if it should exceed 12 millions per annum. In Europe the editors of this work naturally experienced the greatest difficulty in arriving at approximate figures for Russia and Turkey. The population of the Russian empire is given as 88 millions, of which 66 millions reside in Europe and 12 millions in Asia. The

Turkish empire is credited with 25 millions of population, including nearly 9 millions in Europe and rather more than 16 millions in Asia. There is admittedly much doubt as to the approximate accuracy of the estimate of the population of the Chinese empire at nearly 435 millions. The grounds upon which the population of the British possessions in India is estimated at 240 millions are far more worthy of trust; this will, however, be further tested at the census of the British empire next year. There can be no doubt of the increasing value and accuracy of succeeding editions of the "*Die Bevölkerung der Erde*," and if the information is not in all instances above suspicion, it may be readily admitted that no better standard on this large subject is available.

SUDDEN DEATH IN TYPHOID FEVER.

THE occurrence of sudden death in typhoid fever, without any hæmorrhage or perforation to explain it, has been variously accounted for. According to Dieulafoy it is always due to syncope, a reflex result of the intestinal lesion. But the accident has been met with after the intestinal ulceration has cicatrised, and also in typhus, in which there is no ulceration of the intestine. Hayem has ascribed it to organic changes in the heart, degeneration of the muscular fibres, but in some cases described the heart has been found to be healthy. Laveran attributed it to cerebral anæmia, and Huchard to a combination of this with cardiac degeneration. M. A. Marvaud has re-examined the question in the light of some cases which occurred last winter at Algiers. In this epidemic, thoracic complications were especially frequent. Twenty-two cases died out of ninety treated at one hospital, and in ten of these the heart presented ante-mortem clots. In four of these ten cases death was sudden; in three there was slow asphyxia with collapse, and in one death was preceded by free intestinal hæmorrhage. In the four cases of sudden death this occurred while the patients were making an effort. M. Marvaud believes that the pulmonary complications may have assisted in the production of the intra-cardiac coagula—first, by the mechanical obstruction to the circulation; and, secondly, by increasing the tendency of the blood to coagulate. In some cases death is instantaneous, and probably in these the intra-cardiac coagula interfere with the action of the valves, or plug the pulmonary artery. In other cases death follows asphyxial symptoms—quick breathing, anxiety, oppression, cyanosis, chilling of the extremities, small pulse, and collapse.

WOOLWICH AND SANDHURST.

THE annual reports of the Board of Visitors appointed by the Secretary of State for War to inspect the Royal Military Academy, Woolwich, and the Royal Military College, Sandhurst, have just been issued. Under the heading "*Sanitary*" the Visitors report that at Woolwich "the health of the students continues to be good," and at Sandhurst "the general health of the cadets for the past twelve months has been very good." But the documents appended to the reports do not bear out this favourable opinion. At Woolwich the course of instruction is divided into two terms, each comprising about 132 days; the intermediate periods constituting the vacations. The admissions into hospital during the year amounted to 218 in an establishment of cadets fixed at 195. These numbers give the annual proportion of admissions as 1545 per 1000, or not much less than double that occurring among troops in the United Kingdom. This certainly cannot be deemed satisfactory, and considering that the cadets are all young men who before joining have been examined by a Medical Board, and certified "to be free from bodily defects or ailments, and in all respects as to height and physical qualities fit for Her Majesty's Service," there would seem to have been either an unusual preva-

lence of disease, or a great laxity in the admissions into hospital, admitting of what would be considered malingering if it occurred among soldiers. The return for Sandhurst includes only the period from the middle of November to the beginning of July; deducting a month for Christmas and Easter vacations, there remain about 200 days of residence. The admissions amounted to 156 from an establishment of 300 cadets; they were therefore in the annual proportion of 951 per 1000, or considerably above that of the troops, but much under the proportion among the cadets at Woolwich. In both establishments the admissions for accidents, sustained chiefly at out-door games, and especially football, amounted to between one-fifth and one-fourth of the whole. The great excess at Woolwich occurred chiefly in measles, and in abscesses, ulcers, and boils, the cases of the latter group having been forty-two at Woolwich and only six at Sandhurst. A few years ago, in consequence of the prevalence of fever at Sandhurst, a careful examination was made of the sanitary condition of the college, and, if we remember rightly, the whole basement was found to be burrowed with cesspits. These were abolished, and the college thoroughly sewered. We are not aware of the state of the Woolwich Academy in this respect, but the large number of cases of abscesses, ulcers, and boils would suggest the necessity of an inquiry into this matter. The admissions into hospital, exclusive of those from accidents and injuries, occurring in the proportion of 1213 per 1000 in a body of healthy young men between the ages of sixteen and twenty, appear to call for an examination into the sanitary condition of the academy and its general management so far as that bears upon the health of the inmates.

THE CORTICAL CENTRE FOR MOVEMENTS OF THE FACE.

IN a recent issue of the *Progrès Médical*, M. Ballet records a case at La Salpêtrière confirmatory of the views of Charcot and Pitres as to the centre for the movements of the facial muscles being seated in the lower third of the parietal and ascending frontal convolutions. It is certainly very rare to meet with cases of facial paralysis arising from limited central lesions. The patient in this case was a woman seventy-one years of age, who for some time had been the subject of senile tremors. She was admitted into hospital with well-marked left facial paralysis, but with no impairment of motility of the limbs beyond a very slight degree of weakness in the left arm. Sensibility was unaffected. During the same day there appeared conjugate deviation of the eyes to the right, and the face became more strongly drawn to this side. The following day coma supervened, the eyes and head being strongly deviated to the right, and death took place three days later. Post-mortem examination showed a recent clot weighing five grammes in the cortex of the right cerebral hemisphere, occupying the lower part of the ascending frontal convolution and bounding the fissure of Sylvius. On section it was found to have destroyed the inferior frontal fasciculus, and to have encroached upon the corresponding parietal fasciculus, without, however, reaching deeply enough to involve the central grey nuclei. M. Ballet remarks that few cases hitherto published so clearly establish the seat of the psychomotor centre of the face, the majority of such cases being those of facial paralysis associated with brachial monoplegia, with lesions extending beyond the limit assigned to the face centre. In this case, however, the hæmorrhage and surrounding softening were limited almost entirely to the lower third of the ascending frontal gyrus, and had led to a facial "monoplegia" of the opposite side. The paresis of the arm, which increased slightly as the case advanced, was probably due to a slight extension of the hæmorrhage, and

to the pressure produced by this lesion upon the centre for the upper limb, which is in close contiguity to the facial centre.

COLOUR-BLINDNESS AND RAILWAY EMPLOYÉS.

WITH reference to the responsibility of railway authorities in the matter of guarding against colour-blindness among persons employed in moving railway trains, we are informed by the medical officer of one of the largest Indian railways that every European, Eurasian, or native who is appointed to out-door work on the open line has to pass not only a general medical examination, but a special examination with regard to his eyesight. This rule has been in existence for more than ten years, and consists of testing the ability of the candidate to distinguish many shades of colour by day, and coloured lamps by night. It is somewhat remarkable to hear that among the large number of employes appointed and examined during the past twelve years, only one European has been rejected for colour-blindness, whereas natives constantly fail to pass the test, many of them being afflicted with nyctalopia. This rare occurrence of colour-blindness among Europeans in India is in singular contrast to recent evidence of its prevalence in Europe.

IRREGULARITIES AT THE SMALL-POX HOSPITAL, KILMAINHAM.

DR. MACCABE, an Inspector under the Local Government Board for Ireland, on Monday last resumed an inquiry into certain charges brought against the management of this hospital. The charges were made by a former patient, named Lavery, who was admitted last May suffering from small-pox, and discharged cured on the 4th July. When leaving he expressed his thanks to the officials for the kindness he had received; but shortly afterwards complained to the guardians of the South Dublin Union relative to certain irregularities which existed at the hospital. Lavery asserted that in June he saw a wardman take from the hospital five shirts belonging to patients, which he pawned for drink; also that another wardman drank some brandy ordered for a dying patient and substituted water. He also accused the attendants of purloining the bread and meat, and disposing of them for their own advantage. These were very serious charges, but they were corroborated by another patient; and further, one of the attendants, a pauper inmate, acknowledged that it was a practice in the hospital for patients to give half their allowance of stimulants to the wardsmen for looking after them; and that he had known articles of clothing belonging to the patients to be pawned by the attendants. The inquiry has been adjourned, but sufficient evidence has been given to show that there is great room for reform in the management of the hospital.

A RATTLESNAKE BITE.

AN extraordinary account of recovery from a rattlesnake bite has been published in *Land and Water*, by Dr. Arthur Stradling, of H.M.S. *Elbe*, who has apparently been making some experiments, no doubt well intended, but most unwisely ordered, in the endeavour to discover an antidote. He had arranged for the snake—a small *Crotalus horridus*, about eighteen inches long—to bite his right arm above the wrist, and he grasped the creature with his left hand, protected by a thick leather glove. The snake, however, managed to wriggle through his fingers, and bit him on the back of the left forearm, leaving one of its fangs sticking in the wound. Putting it back in the box, he picked out the bit of fang with a pair of forceps and sat down to watch the result! This was at one o'clock in the morning. He had ligatures, ammonia, brandy, and nitric acid at hand in readiness; but the value of the caustic and ligature could not

be great, since he waited for the symptoms of absorption before applying them. He went on waiting for four hours, until 5 A.M. Then he noticed that the lymphatics higher up the arm were swollen and inflamed, and almost at the same moment he became aware of light-headedness, and of a burning sensation traversing his whole frame. There seemed to be great vascular and mental excitement, yet his temperature was down to 96°. After this evidence of absorption he applied the nitric acid to the bite, but almost immediately became irresistibly drowsy, and then unconscious. At 11 A.M., ten hours after the bite, he was found insensible, pale, pupils contracted, feet and legs cold, but with an axillary temperature of nearly 100°; the intercostal muscles, arms, and legs were paralysed; the diaphragmatic respiration was irregular. A medical man on board sucked the bites and cauterised them freely, and gave ether and ammonia every half hour. There was no movement of the body until three in the afternoon, when a tetanic spasm occurred, followed by hiccough and twitching of the muscles about the shoulders. The experimenter then recovered consciousness, slowly regained power over the limbs, and slept for twelve hours. After this he was well, except for prostration. It is hardly possible to conceive an experiment made under more reckless conditions—an experiment with a rattlesnake in solitude, in the middle of the night, and by an observer apparently ignorant of the rapidity with which the action of the poison, once set up, develops. The result teaches nothing new, and it is difficult to understand what, under the circumstances, could be learned from it.

DEATH FROM CHLOROFORM.

WE have to regret another case of death from chloroform inhalation. It took place at the West London Hospital on September 21st. The case was one of epulis of the upper jaw, and the anæsthetic was being carefully administered by Mr. Johnston, the house-physician. The patient had just come under the influence of the anæsthetic when the heart's action suddenly became arrested. The tongue was drawn forward, and artificial respiration, galvanism to the carotid region, and the hypodermic injection of atropine were had recourse to; but the efforts to restore animation, although energetically carried out, proved unavailing.

PERINEPHRITIS IN CHILDREN.

A VERY interesting paper on this subject has been published by Dr. V. P. Gibney, of the Hospital for the Ruptured and Crippled, New York. The paper contains a clinical record of fifteen cases, in addition to a previously published series of thirteen cases, which have appeared in various American journals, by the same author. The present paper is a reprint from the *Chicago Medical Journal and Examiner*. All the cases recovered perfectly, except one in which slight lameness remained. Dr. Gibney maintains that more than ninety per cent. of cases reported as cases of hip disease and cured without lameness or deformity never have been cases of hip disease at all, but cases of perinephritis, perityphlitis, periartthritis, primary traumatic periostitis, of various neuroses of the hip, of subacute rheumatism about the hip, or of acute primary synovitis of the hip; all of which are insignificant as compared with true hip disease, which is chronic and slowly progressive. The clinical pictures in the fifteen cases are very clear, involving generally the following symptoms—rigor, fever, lancinating pains in the lumbar region, constipation, spasm of the psoas muscle, the gait like that of hip disease, and swelling in the ilio-costal space when the pain becomes excruciating. The thigh can be flexed and rotated, but not fully extended without pain; generally the thigh is found flexed. The disease may terminate either in resolution or suppuration. In sixteen cases there was suppuration, in twelve there was not. The average duration of the disease

was three and a half months. In nineteen no exciting cause could be found; in eight a contusion, a strain, or a fall, and in one a nephritis seemed the starting-point. The age of the patients was from one to fifteen years. The chief treatment was rest, fomentations, and early evacuation of pus. The paper is an excellent specimen of clinical and discriminating work. That one medical man should encounter twenty-eight cases is enough to induce medical men to be careful and hopeful in their examination of acute maladies like those affecting the hip-joint.

THE Science College in Birmingham, founded by Sir Josiah Mason, is to be opened to-day (Friday). By its foundation deed the institution is established to provide instruction in mathematics, physics, chemistry, the natural sciences, especially geology and mineralogy, botany and zoology, physiology, with special reference to the laws of health, and the English, French, and German languages. The scheme is also sufficiently elastic to admit of instruction being given in such other branches of knowledge as may properly be included in the term "science," mere literary education being excluded. The course of instruction is designed to prepare students for the degrees of B.Sc. and D.Sc. in the London University.

AT the Quarterly Court of the President and Managers of the Royal Infirmary, Aberdeen, recently held, it was resolved that it be remitted to the Committee of Management to consider and report, after consultation with the medical staff, first, as to the expediency of appointing as resident assistant to the hospital medical staff only such as possess a degree or diploma, or have passed all the examinations for the same; second, as to any changes in the existing regulations of the Infirmary which they would recommend to be made for this purpose. Such report to be submitted to the quarterly meeting of managers.

BY the death of Dr. Wilms, surgeon-general, of Berlin, in his fifty-eighth year, surgery has suffered a great loss. The immediate cause of the lamentable event appears at present somewhat doubtful, it having, on the one hand, been attributed to septic poisoning contracted during the performance of an operation about three months ago, and on the other to the bursting of a bloodvessel; in either case, however, the comparatively early death of the distinguished surgeon must be regarded as another illustration of the perils which environ the practice of the healing art.

MR. G. S. V. WILLS, principal of the Westminster College of Pharmacy, at the opening of the session of the College a few days since, expressed the opinion that the only remedy for the "co-operative society" evil in connexion with dispensing would be the introduction of a new Pharmacy Act. He believes this will be forthcoming before long.

A CORONER'S JURY, at an inquest on a woman found dead on the steps of the Poplar workhouse, expressed their opinion that there was gross neglect on the part of the workhouse authorities, and that no pauper inmate should be employed as night watchman.

THE Hospital Saturday movement has been commenced at Gainsborough, and the first collection has resulted in the creditable sum of £95 4s. 5d., £60 of which has been paid to the Lincoln County Hospital, and £30 to the Leeds Infirmary.

THE Earl of Carnarvon, having consulted Dr. Graham of Madeira, during a visit which that well-known physician has recently paid to this country, has determined to spend the winter in the island.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

St. Giles' District, London (population, 1871, 53,429).—Mr. Lovett's report for 1879 has its chief interest for the evidence it affords of the increasing efficiency of the control exercised by the District Board of Works, and of the supervision maintained by the medical officer of health over this district of central London—a district of which the almost incredible difficulties of sanitary administration rest even more with the character of much of its population than with the unwholesome courts and alleys in which the mass of its more destitute inhabitants are housed. In 1879 St. Giles had a death-rate (22·5 per 1000 population) below the general death-rate of the metropolis (23·3); and with regard to several principal zymotic diseases, the prevalence of which in earlier days formed a deplorable characteristic of the district, the rate of mortality was 2·4 per 1000, as compared with 3·2 in London generally.

The most interesting part of Mr. Lovett's report for the particular year is an account given of an outbreak of true typhus. The disease had been absent from the district since the year 1874, when in the summer and autumn of 1879 it appeared again. The malady showed itself in its *old haunts* in the district, haunts which, happily for the district, have now been swept entirely away by clearances of unhealthy areas effected by the Metropolitan Board of Works under the Artisans' Dwellings Act, 1875. There were two groups of cases, one beginning in August, the other in October, both more or less connected with the autumn movement of hop-pickers. The cases as described by Mr. Lovett present many points of interest with reference to sanitary administration. The reappearance of the disease in its old accustomed haunts—haunts hideously characteristic of the worst form of dwellings of the metropolitan poor and migratory labouring classes, and now swept away. Would that all similar localities could be dealt with in like fashion in the metropolis and elsewhere! The close relation between the groups of cases and the hop-pickers' migration indicates that we want to know much more than we yet know of the conditions under which hop-picking is carried out in the south-eastern counties. It is highly probable, from Mr. Lovett's story, that typhus existed among the hop-pickers of Cobham in October, 1879. The difficulty of dealing with cases of infectious disease, in view of arresting the spread, among migratory people such as the hop-pickers, is most instructively illustrated by these cases. We read of one case of typhus conducted by a brother to Gravesend, and placed there in a train and sent to London. Shortly after the brother himself is seized. He is sent in a fly to Gravesend, then proceeds by train to London, and makes his way to St. Thomas's Hospital, where he died of the fever.

Pembroke Urban Sanitary District (estimated population, 15,000).—Dr. Protheroe Saer reports a lower mortality in this district during 1879 than had occurred in any of the several years that the Public Health Act has been in force. The death-rate was 16·79 per 1000 of the estimated population, and the birth-rate 32·8. Diseases of the heart and blood-vessels stood first in order among the causes of death; phthisis pulmonalis second; bronchitis, pneumonia, and pleurisy third, and infantile convulsions fourth. Dr. Saer discusses, with a view of showing to what extent these causes of death may have been influenced in their incidence by local conditions of unwholesomeness which are removable, and it is obvious these are not wanting in Pembroke. He comments also, in regard to infantile convulsions, on the absence of due care in the nursing of infants too commonly observed. The mortality from the chief zymotic diseases was very low in Pembroke during 1879, the total number of deaths being only 15, as compared with an annual average of 58 during the five preceding years. Dr. Saer attributes this marked decline in the mortality from these diseases to the measures adopted for their prevention from time to time by the Sanitary Authority. We shall be glad if this prove to be the case, for there appears to be still much to be done in the

way of sanitary amendment in Pembroke, and we shall hope, the Sanitary Authority continuing its efforts, to find even greater declension in the mortality from these diseases, and corresponding falling off in the general mortality and in the sickness of the place. Indeed, Dr. Saer looks forward (somewhat prematurely, we think) to a possible immunity from the diseases in question when certain measures of drainage and water-supply which have been determined upon by the Sanitary Authority are carried out. But pending these greater measures there is evidently much detailed work to be done in Pembroke with regard to nuisances. Indeed, the impression left on our mind by the report is that the Sanitary Authority is negligent in the performance of its duties as to nuisance prevention, which if not efficiently carried out may frustrate the best schemes of water-supply and drainage, so far as the public health is concerned. At least so we interpret the references to nuisances in this report, which have been reported more than once by the medical officer of health.

THE METROPOLITAN WATER-SUPPLY.

Lieut.-Col. Bolton's report on the state of the metropolitan water-supply for August shows that the water of the Thames at the various intakes of the companies was bad from the 1st to the 3rd of the month, when it became pure, and continued so to the 31st. The water in the river Lea was also good during the greater part of the month. The water of the Thames, however, although good, was slightly coloured by organic matter, principally arising from vegetation brought down by the flood-waters in the early part of the month. Filtration failed to free the water from the colour referred to, but it is stated to have been generally efficient, so far as freedom from turbidity is concerned. Dr. Frankland's report states that the water delivered by the water companies from the Thames was of "very bad quality," and "quite unfit for dietetic purposes, owing to the large quantity of organic matter which it contained." The water from the Lea, "though efficiently filtered, was no better than Thames water"; but the deep-well water "was of its usual excellent quality for dietetic purposes," and that sent out by the Colne Valley Company was also excellent.

A SANITARY SPASM: EDMONTON.

Last week we had to record proceedings of the Edmonton Local Board against a builder for using improper materials for mortar, the bye-laws of the Board notwithstanding. This week we are glad to have to record further proceedings of this Board against builders for infringement of their bye-laws. Two firms were summoned before the magistrates, and in both cases fined the full penalty, for having disregarded the bye-laws of the Board with reference to the foundations of certain houses. The Local Board wished to withdraw the cases on a promise of amendment, but the magistrates very properly would not allow this. It is not easy to understand how this unusual activity of the Edmonton Local Board has been brought about. Edmonton would have escaped a heavy penalty in badly-constructed buildings if this activity had been displayed some time ago, when there was quite as great need for it as now. But better late than never; and let us hope that this is not a mere passing spasm. With everything in its favour, by the negligence of the Local Board, Edmonton has now for several years been given up as a prey to cheap builders.

THE SEWERAGE OF KANTURK.

The Local Government Board for Ireland have recently been in communication with the Kanturk Board of Guardians with reference to the sewerage of this town, their attention having been directed to the matter by information received from one of the residents. Their correspondent stated that a sewer coming from the workhouse discharged its contents in the centre of the town, and that it was a nuisance dangerous and abominable, containing for the most part the filth from a hospital in which typhus fever of a malignant type is at present raging. Also that the water in the river, which is contaminated by the sewage, is used by people in the vicinity for washing and other domestic purposes, and that some bakers use it in the process of preparing their bread. The river, however, has several other sewers passing into it, one being from a public cemetery, and mostly all discharging into the river invariably at the nearest available point. Further, that the entire sewerage is bad, and that the inhabitants have not been compelled to

make efficient connecting-drains between their houses and the main sewers. This was a strong indictment against the guardians as the sanitary authority; but we regret to find that they admitted all the statements made, and evaded the difficulty by requesting the Local Government Board to send down their engineering inspector to report on the present system of sewerage of Kanturk.

POLLUTION OF THE THAMES.

The Corporation of Windsor were summoned before the Petty Sessions held in that town last week by the Conservators of the Thames for passing into the river sewage imperfectly purified. The Corporation effects the purification of the sewage of the town by Professor Hillé's process, but at the particular time submitted to the consideration of the Court it was held that the effluent from the purification works conveyed to the river was not such as to render it fit for mingling with the stream; and the Court fined the Corporation £5, allowing £5 5s. as costs. We are glad to note this indication of activity on the part of the Thames Conservators in carrying into effect their powers for securing greater freedom from pollution of the river.

SLAUGHTER-HOUSES AND COW-SHEDS IN THE METROPOLIS.

The Kensington Vestry have printed two reports—one by Dr. Dudfield of an inspection of the licensed slaughter-houses in their district, another by Mr. Wm. Bouteher, the chairman of the General Purposes Committee of the Vestry—of an inspection by the Committee of the licensed cow-sheds. In both inspections defects and negligences were discovered which indicate that the disservice of the sanitary administration of slaughter-houses and cow-sheds from the ordinary sanitary administration of a district is much to be regretted. The imposition of this duty upon the Metropolitan Board of Works does not seem to secure either efficiency or certainty in its performance, and complicates the sanitary administration of a district.

At a meeting of the Widnes Local Board the chairman, referring to the prevalence of fatal diarrhoea among young children in the district, made the following statement:—"The habits of the people were such that he really did not feel much surprised at the extent of such disease. In cases where fruit and vegetables had been ordered to be destroyed, and had been thrown into the ashpits at the back of shops by the occupiers, no sooner had they been emptied than shoals of children descended upon the places, and ate both the vegetables and fruit with avidity; and not only so, but offal which they picked out of such places."

The chairman does not appear to have understood that this statement convicted the Local Board of the grossest negligence with reference to the removal and deposit of refuse.

Dr. Blaxall, of the Local Government Board, met the Sanitary Authority of Newtown, Montgomeryshire, a few days ago, and conferred with them on the measures to be taken to arrest the spread of scarlet fever, of which a serious outbreak has occurred in the district.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

Notwithstanding the recent moderate temperature, the rate of urban mortality declines but slowly. In twenty of the largest English towns, estimated to contain in the middle of this year seven and a half millions of persons, or nearly one-third of the entire population of England and Wales, 5204 births and 3466 deaths were registered last week. The births exceeded by 69 and the deaths by 191 the average weekly numbers during 1879. The deaths, however, showed a further decline of 75 from recent weekly numbers, and were equal to an annual rate of 24.1 per 1000, against 25.4 and 25.0 in the two preceding weeks. The lowest death-rates in the twenty towns last week were 20.5 in London, 21.6 in Plymouth, 21.7 in Oldham, and 21.8 in Birmingham. The rates in the other towns ranged upwards to 32.9 in Liverpool, 35.3 in Sunderland, 35.9 in Hull, and 37.7 in Norwich. The high rates in these four last-mentioned towns were mainly due to excessive zymotic fatality. During the twelve weeks ending last Saturday, the death-rate in these twenty towns averaged 23.4 per 1000, against 24.0 and 18.3 in the corresponding periods of 1878 and 1879.

The deaths referred to the seven principal zymotic

diseases in the twenty towns, which had been 1190 and 1009 in the two preceding weeks, further declined to 9.2 last week; of these, 611 resulted from diarrhoea, 119 from scarlet fever, and 72 from other forms of fever, principally enteric. The annual death-rate from these seven diseases averaged 6.3 per 1000 in the twenty towns; it ranged from 3.5 and 3.7 in Plymouth and London, to 12.6 and 17.0 in Salford and Norwich. Diarrhoea fatality showed a further general decline last week; the annual death-rate from this disease did not exceed 2.0 in London, while it averaged 6.4 in the nineteen provincial towns. Among the nineteen towns, the diarrhoea death-rate ranged from 3.5, both in Portsmouth and Plymouth, to 8.9 in Salford and 9.8 in Hull. Scarlet fever showed the largest proportional fatality in Norwich, Sunderland, and Bristol. Enteric fever showed a generally increased fatality last week, and exceeded that which prevailed in any previous week this year; the highest death-rate from this disease occurred in Norwich, Salford, Portsmouth, and Leeds. Small-pox caused five more deaths in London, but not one in any of the nineteen large provincial towns. The number of small-pox patients in the Metropolitan Asylum Hospitals, which had been 104 and 116 at the end of the two preceding weeks, declined again to 105 on Saturday last; 6 new cases of small-pox were admitted to these hospitals during the week, against 7, 13, and 27 in the three previous weeks. The Highgate Small-pox Hospital contained 7 patients on Saturday last.

The deaths referred to diseases of the respiratory organs in London, which had been 124 and 153 in the two preceding weeks, further rose to 174 last week, but were 4 below the corrected weekly average; 107 resulted from bronchitis and 41 from pneumonia. The annual death-rate from lung diseases was equal to 2.5 per 1000 in London, against 3.9 in Liverpool.

HEALTH OF SCOTCH TOWNS.

In eight of the largest Scotch towns, having an estimated population of rather more than a million and a quarter persons, the annual death-rate last week averaged 18.9 per 1000, against 18.2 and 20.3 in the two preceding weeks; this rate was no less than 5.2 per 1000 below the average rate in the twenty large English towns. The rates in the eight Scotch towns ranged from 11.7 and 18.1 in Perth and Dundee, to 23.1 and 24.4 in Leith and Paisley. The fatal cases of the seven principal zymotic diseases in the eight towns were 153, against 129 and 163 in the two preceding weeks; they included 53 from diarrhoea, 45 from scarlet fever, 23 from diphtheria, 16 from whooping-cough, 9 from fever (principally enteric), 7 from measles, and not one from small-pox. The annual death-rate from these seven diseases averaged 6.2 per 1000 in the eight towns, and was almost identical with the rate from the same diseases, 6.3, in the twenty English towns. The zymotic death-rate in the Scotch towns last week ranged from 0.0 and 2.1 in Perth and Paisley, to 6.7 and 8.9 in Glasgow and Leith. The fatal cases of diarrhoea in the eight towns, which had been 63 and 69 in the two previous weeks, declined to 53 last week, and were equal to an annual rate of 2.1 per 1000, while in the twenty English towns the diarrhoea death-rate averaged no less than 4.2. The largest proportional fatality from diarrhoea in the Scotch towns occurred last week in Dundee and Leith. The deaths from scarlet fever in the eight towns, which had been 18, 22, and 36 in the three previous weeks, further rose last week to 45, of which 25 occurred in Glasgow, 16 in Edinburgh (against 8 and 15 in the two previous weeks), and 3 in Leith. The largest proportional fatality of scarlet fever last week was recorded in Edinburgh and Leith. The 9 deaths referred to fever showed a marked decline from the number in the previous week, and included 6 in Glasgow. The 23 deaths from diphtheria considerably exceeded the numbers in recent weeks; 11 were returned in Glasgow, 7 in Dundee, and 4 in Edinburgh. The deaths attributed to acute diseases of the lungs (bronchitis, pneumonia, and pleurisy) were 68 in the eight towns last week, against 65 and 61 in the two preceding weeks; the annual death-rate from these diseases was equal to 2.7 per 1000 in the eight towns, against 2.2 in London.

HEALTH OF DUBLIN.

The excessive mortality in Dublin showed but a slight decline last week. The annual death-rate in the city, which had been equal to 34.7 and 39.3 in the two preceding weeks,

was again equal to 38.5 last week. During the past twelve weeks of the current quarter the death-rate in the city has averaged no less than 34.5 per 1000, against 20.5 in London and 20.8 in Edinburgh. The 232 deaths in Dublin last week included 71, or nearly 31 per cent., which were referred to the seven principal zymotic diseases, showing a decline of seven from the number returned in the previous week; 44 resulted from diarrhoea, 14 from scarlatina, 5 from whooping-cough, 4 from measles, 2 from small-pox, and 2 from fever. The annual death-rate from these diseases was equal to 11.8 per 1000 in Dublin, whereas it did not exceed 3.7 in London and 6.6 in Edinburgh. The 44 fatal cases of diarrhoea in Dublin exceeded the number returned in any previous week of this year, and were equal to an annual rate of 7.3 per 1000, while the death-rate from diarrhoea in London did not exceed 2.0. The deaths from scarlet fever showed a considerable increase upon those returned in the two previous weeks; while those from measles, whooping-cough, and fever were less numerous. The proportion of infant mortality continues to show a marked excess in Dublin.

HEALTH MATTERS GENERALLY AT HOME AND ABROAD.

THE EXETER CONGRESS.

The Congress of the Sanitary Institute at Exeter may be regarded as, perhaps, the most successful of the several congresses in which that youthful body has indulged. In the principal addresses delivered, the President (Earl Fortescue) avoided the mistake of bringing matters home to the feelings of the Congress and of Exeter people by devoting his attention to matters of sanitary history and the municipal government of London. Mr. Rawlinson, C.B., went wide afield for illustrations of sanitary progress and stagnation, but made amends by giving us three useful degrees of sanitary comparison, teaching us that Belgravia is bad, Whitehall is worse, and Somerset House worst of all. This should be interesting to architectural students wishful to penetrate the mysteries of construction in its sanitary aspects. Dr. B. W. Richardson startled the Congress with a brand-new view of woman as the sanitary teacher and administrator, "because it was an office which man could never perform"; but, alas! in the classical example he held up for imitation (the wife of Ischomachus the Jew), it appeared that she was instructed by her husband. He failed to reconcile the difficulty, that if man could not perform, how could he teach? Professor de Chaumont discoursed on the signification which the Institute attached to the term "preventive" or "public medicine," and capped the story of the wife of Ischomachus with the more familiar stories of Hygeia and of Minerva as deities of health.

THE UNHEALTHINESS OF PUBLIC INSTITUTIONS.

Mr. Henry C. Burdett read a further paper at the Exeter Congress on the unhealthiness of public institutions, illustrating his subject by three examples of comparatively new buildings, a hospital, a convalescent institution, and a lunatic asylum. In each of these cases the greatest ignorance had been displayed by the architects in the sanitary arrangements of the several buildings, and soon after their occupation this was made obvious by the manifestations of disease among the inmates, and costly reconstructions had to be entered upon. Mr. Burdett suggested a deputation from the Congress to the Local Government Board on the subject. But he had previously said, and his statement was confirmed by Mr. Robert Rawlinson, that that Board is itself a victim in its own office of the evils he denounced. If the Local Government Board is unable to protect itself and its officers against architectural blunders, how will it be able to protect others?

MORTUARIES.

Mr. Burdett communicated also to the Congress a very instructive paper on Mortuaries in their public-health aspects. This paper gave an excellent summary of the question in this country, both historically and legislatively; and contained in an appendix a statement of the existing public-health provision, so to speak, of mortuaries, both in the metropolis and the provinces. Mr. Burdett made several valuable suggestions to meet the difficulty of providing a mortuary where the local authority is unwilling to act.

SANITARY PROTECTION.

A Sanitary Protection Association has been established in Newport, Rhode Island, on the basis of the Society started in Edinburgh by the advocacy of Professor Fleaming Jenkins, and having for its object the mutual sanitary insurance of its members. It seeks also, after the fashion of the Tottenham Sanitary Association, to incite the municipal authorities to give greater regard than they appear yet to have given to the general sanitary welfare of the place. The Association proposes to provide its members, at moderate cost, with such advice and supervision as shall insure the proper sanitary condition of their own dwellings; to enable members to procure practical advice, on moderate terms, as to the best means of remedying defects in houses of the poorer class in which they are interested; and to aid in improving the sanitary condition, and consequent good repute of the city, by following such course as, in the opinion of the Council, may seem calculated to promote this object. A novel feature of the operation of the Association is that one of its members has placed at its disposal one hundred dollars, half of which is offered as a prize to the person, not the owner of the house occupied, who shall put his or her premises in the most satisfactory condition by Jan. 1st next, and keep them so until June 1st; and half to the house-owner who shall do the most between Sept. 1st, 1880, and June 1st, 1881, towards improving the sanitary condition of any occupied dwelling.

DIPHTHERIA IN RUSSIA.

It is reported from Poltava that the measure which has been found most efficacious in arresting the spread of diphtheria has been the disinfection of infected houses with burning sulphur. But the peasants, supported by the priests, object to this process. They regard the measure as impious and contrary to the rites of religion. Moreover, they hold it to be foolish. They can understand treating the patient medically, but not the house. "Cure the sick if you like," say they, "but what have our houses to do with the sickness?" Again, they are apathetic as to the deaths of children. "Many die," some exclaim, "but see how many more are left." The peasantry in some places have resisted the intrusion of a "disinfectant," and in one village they seized upon a sister of charity, who was with difficulty saved by the intervention of the police from being burnt alive, a fire having already been kindled for the purpose.

The dearth in Samara has been followed by diphtheria, which is reported to have spread widely in the province.

YELLOW FEVER.

The 22nd September was given up to rejoicings in Memphis because the city had escaped this summer from the ravages of yellow fever. Triumphal arches were raised, and the civic societies and trades marched through the chief streets, forming a procession three miles in length, large crowds assembling to witness it and take part in the general gladness. The governors of Kentucky, Tennessee, and Arkansas were also present. Although the form which the public rejoicing assumed may appear somewhat strange to the English reader, it is impossible not to sympathise with it and the feeling from which it sprang.

HOW DISEASES ARE SPREAD.

Two men, patients at Kilmainham Small-pox Hospital, were summoned at the instance of the South Dublin Union Guardians last week for having left the hospital for an entire day while in the convalescent stage of the disease, and fined in the mitigated penalty of forty shillings each.

At a public meeting held on the 13th of September, at Westgate-on-Sea, a committee was appointed, to be called the "Westgate-on-Sea Sanitary Association," for the sanitary protection of the visitors and inhabitants of this rising health-resort. Professor Erasmus Wilson, F.R.S., was appointed chairman; Mr. W. Orchardson, R.A., vice-chairman; and Mr. Arthur Flint, L.R.C.P., hon. sec. and treasurer.

The want of a public mortuary in Mile-end New Town was painfully manifest last week, when a coroner's jury, on proceeding to "view," found the body lying in a small squalid room, in which were sleeping three persons, who had to be roused to enable the "twelve" to discharge their nspectorial function.

It is proposed to build a new water conduit in New York, whereby the supply will be augmented from 100,000,000 gallons per day to 250,000,000 gallons. The estimated cost is 10,000,000 dollars.

A committee has been appointed by the Holborn Board of Guardians to inspect the disused Small-pox Hospital at Hampstead, with a view to acquiring the building for workhouse purposes generally.

THE GENERAL BOARD OF HEALTH, EGYPT.

THE General Board of Health, Egypt, is a body of which we rarely hear in this country except when, by the imposition of quarantine restrictions on ships in Egyptian ports or passing through the Suez Canal, it excites the ire of English shipmasters and shipping firms. The Board consists of two divisions, one of which concerns itself with the internal sanitary arrangements and service of Egypt; the other, known as the International Sanitary Council, controls those sanitary arrangements, such as the administration of quarantine, which affect other countries in their relationship with Egypt. On this Council sit delegates of all the Powers which have representatives at the Khedive's Court. A similar council forms part also of the General Board of Health of the Ottoman Empire, and the Egyptian Board is believed to have been constituted after the pattern of the Turkish Board. There is some obscurity about the functions of these councils. It is believed that when first established the duties of the several delegates was simply to watch the material interests of their respective countries as liable to be affected by the action of the General Board, particularly in the imposition of quarantine upon their shipping and the crews trading to one country or the other, both ships and crews being at this time regarded as extra-territorial. But be this as it may, the international councils of the two boards appear to have acquired or assumed functions very different from those presumed to have originally attached to them, and the Egyptian Board at least, according to our contemporary the *Egyptian Gazette*, is regarded locally as a body constituted "to prevent the spreading, through Egypt, of epidemics to Europe from the East." We have heard something of this sort before, and have a suspicion that the notion, if not originated, took form at the International Sanitary Congress of 1866, when the Egyptian General Board of Health was regarded as the advanced sanitary post for protecting Europe from the invasion of cholera by way of the Red Sea route and the Holy Land of Mahommedanism—the Hedjaz. At any rate, France, Italy, Greece, and other maritime countries of Europe partial to quarantine, seem to hold the view of the functions of the Egyptian International Sanitary Council expressed by the *Egyptian Gazette*, and, so far as those functions relate to quarantine, that view may be colourable. But even as regards quarantine, it would appear that the practice of the Council falls miserably short of its assumed or professed international functions. For our contemporary, representing English opinion in Alexandria, and in reality in Egypt generally, does not hesitate to affirm that the quarantine maintained under the Council's authority is more injurious to the persons quarantined than beneficial to Egypt or to Europe at large. In fact, it is averred that such danger as Europe has to guard against from disease travelling by way of Egypt is a danger not to be controlled by measures of quarantine, but depending upon the generally insanitary state of the country; and our chances of protecting ourselves from this danger must be proportionate to the extent we can influence the Egyptian Government to adopt measures of internal sanitary reform. It would seem that the foreign delegates of the International Council have not hesitated to interest themselves in the internal sanitary arrangements of Egypt, but our contemporary urges that they and the Council, as a Council, should have a voice in them. It may recommend, but has no power or means to enforce its recommendations being carried into effect. "Till the International Sanitary Council has a thoroughly effective control over the whole of the hygienic arrangements in Egypt," says our contemporary, "we cannot hope for any reasonable security against the ravages of an epidemic, and Europe has no protection whatever against the importation of disease through

Egypt." In other words, the International Council should be merged in the General Board of Health, the board acting as a whole in all sanitary matters, whether home or international.

Underlying this suggestion is the distrust of the efficiency of any sanitary measures which may be adopted in Egypt except these are controlled by Europeans. This is an old story. France has particularly urged the necessity of all the important administrative posts in the quarantine service being filled by Europeans, if the quarantine service is to be properly performed. The *Egyptian Gazette* sees a like necessity in the general sanitary administration of the country. The question of merging the International Sanitary Council in the General Board of Health is a diplomatic one; but the appointment of efficient officers rests with the Egyptian Government. This has not shown itself unwilling to take advantage of skilled medical European talent; and it has among the native medical practitioners men who have been trained in European schools, and who have the highest qualifications. It may be questioned whether these men are in number sufficient to fill all the administrative sanitary posts which it is desirable should be filled by individuals possessing high qualifications, and it would no doubt be well to supplement them by high-class men of other than native origin. To what extent this may be a matter in which foreign governments think themselves called upon in the interest of Egypt, of Europe, or of the European residents in Egypt, to advise the Egyptian Government, we do not pretend to say, but we have no doubt that a larger importation of European skill, medical and other, in the sanitary administration of Egypt, and the admission of the delegates of foreign representatives to the councils of the General Board of Health on the general sanitary administration of the country, would be of immeasurable benefit to Egypt, and so far as the sanitary state of that country concerns the Continent, to Europe also.

Correspondence.

"Audi alteram partem."

THE IMMEDIATE TREATMENT OF STRICTURE OF THE URETHRA.

To the Editor of THE LANCET.

SIR,—In your journal of Sept. 18th Mr. Holt states that he has not replied to my criticisms on his operation, as he considers I am "perfectly incompetent to form any opinion as to the value of the operation and its results," my experience being limited to a few cases. When I mention that I was for *five years* attached to the Westminster Hospital as Demonstrator of, and afterwards Lecturer on, Anatomy, and that I witnessed the operations performed by Mr. Holt and his colleagues, I am afraid your readers will not accept Mr. Holt's explanation. Mr. Holt and his colleagues certainly convinced me, in the most unequivocal way, that the operation was *not* "free from every danger," as stated by Mr. Holt in his book. We do not as yet know how many deaths have occurred after the operation, as only a few have been published; but on looking over a list I have of fatal cases of Mr. Holt's operation, I find I have credited Westminster Hospital with five deaths, only one of which, I believe, ever appeared in print—a fact which I commend to Mr. Lane's notice. When Mr. Wood stated that he had seen two fatal cases at King's College Hospital under Mr. Partridge, he forgot to mention that Mr. Henry Smith had had a death, and Sir Wm. Fergusson one also, I believe; at all events, that eminent surgeon abandoned the operation on account of its *fatal results*. The operation was tried in Paris, and discarded on account of the deaths and unsatisfactory results which followed it. In America Gross, Otis, Mastin, and others, have abandoned it in favour of internal urethrotomy, for reasons which they have stated. In this country Sir H. Thompson, Mr. Wood, Mr. Croft, Mr. B. Hill, Mr. Annandale, Mr. Coulson, Mr. F. Jordan, and Mr. Lund all practise internal urethrotomy in preference to the so-called immediate treatment, which they have given up. In London the operation is now only performed in some three hospitals out of fourteen. It is only

suitable for *selected cases*, as proved by its advocates, who excuse it for killing a man if he had "false passages" or "albuminous urine." Holt's operation is fatal if there be renal disease, in proof whereof I need only refer to the case of a man "with a dropsical affection," who, for urgent reasons, was submitted to it by Dr. Lyster. Internal urethrotomy, on the contrary, is not barred by such complications, as proved by a patient of Mr. Symes', of Briton Ferry, upon whom I performed it, who was suffering from a desperate traumatic stricture, œdema of the legs and scrotum, and albuminous urine. The man wrote to me not long ago to say that he was well, at work, and able to pass his instrument. As regards the *permanent results* of each operation, I can state, from a personal examination of patients, in hospital and private practice, years after they had been operated on by Sir H. Thompson, Mr. Holt, Mr. B. Hill, Mr. Heath, and the late Mr. J. D. Hill, that the tough, irregular, often non-dilatable cicatrices following Mr. Holt's operation, contrasted very unfavourably with the soft, supple, dilatable splices inserted by Sir H. Thompson by means of internal urethrotomy. I have to thank Mr. Christopher Heath for kindly proving that, even in his able hands, the rate of mortality following Mr. Holt's operation was *more than double* that of internal urethrotomy as practised by his colleagues.

I remain, Sir, yours, &c.,

Portman-square, Sept. 28th, 1880.

W. F. TEEVAN.

To the Editor of THE LANCET.

SIR,—I had been looking forward for some reply to the criticisms made upon Mr. Barnard Holt's method of treating stricture of the urethra, and have, therefore, read with pleasure the letters from Mr. Holt and others in THE LANCET of September 18th and 25th.

My own personal experience of the operation has hitherto been very favourable, though not extensive, but I was led to adopt it by the praises I heard bestowed upon it by two such good practical surgeons as the late Mr. De Morgan and the late Mr. Maunder, whose estimate of the operation may have interest and value for many of your readers. Anyone who knew Mr. De Morgan well must remember how difficult it was to get a decided opinion from him, and how well matured his judgment was on subjects upon which he expressed himself unhesitatingly. Upon the splitting operation of Mr. B. Holt I heard Mr. De Morgan on more than one occasion speak in the highest terms, and he used to say that he had never known any serious danger arise from it. Mr. Maunder, too, thought most favourably of the operation and practised it frequently and successfully.

To the condition of the urethra which may obtain many years after the operation the following case testifies:—A gentleman, lately home from India, who admits to having lived a fast life, and tried himself in many ways, is now under my care for hydrocele. He tells me that eleven years ago he was operated upon by Mr. Barnard Holt, and that for eight months afterwards he continued to pass a large-sized bougie at intervals. From that time till the present he has never passed any instrument at all, and when asked if he had since had any contraction of his stream, or other sign of returning stricture, he replied in a surprised tone, "No! I was quite cured eleven years ago, and have had nothing whatever the matter with my water since."

Such a result may be equalled possibly, but cannot be surpassed, by any method of internal urethrotomy.

I am, Sir, yours, &c.,

HENRY MORRIS.

Mansfield-street, Portland-place, W., Sept. 28th, 1880.

To the Editor of THE LANCET.

SIR,—In the correspondence in your columns relative to the comparative value of the splitting operation for stricture *versus* the internal cutting operation, it is to be noticed that the surgeons who are in favour of Mr. Holt's plan of treatment say very little or nothing of their experience with the urethrotome. In your last issue Mr. James Lane states that he has "never practised it." Mr. Heath is silent on this point, and Mr. Macnamara confines himself to a statement of a few difficult cases and a general praise of the operation.

These remarks in favour of Mr. Holt's operation have, no

doubt, been called forth by the ungenerous and unfair criticism of some gentlemen who, as Mr. Lane has shown, must know nothing either of the practice of the operation, its after-treatment, or effect.

The question is not, is Mr. Holt's operation a safe one or a serviceable one, but rather, is it the best treatment by operation? This cannot be decided by the statements of gentlemen who have only experience of the one or the other, but not of both.

Now, the splitting operation is one method, Mr. Holt's, and stands by itself. On the other hand, by the term urethrotomy many operations are included, some of them differing altogether from others, both in utility and method of procedure. I can well understand surgeons getting satisfied with Mr. Holt's operation and remaining there until time has proved one form of urethrotomy superior to all others.

I have seen Holt's dilator used in very many instances, both in this country and in Paris, where M. Dolbeau used it frequently; indeed, in 1872 I never saw him employ any other method. The only fault that can be found with this operation is that, as I have seen, a very obstinate discharge results, defying all treatment. I think this has also occurred in Mr. Lane's practice, and I recollect Mr. Juler telling me of a similar case or cases. One very bad case of stricture resulted from an attempt to forcibly dilate; but here the operation seems to have been badly performed and abandoned. My experience differs from that of Mr. Heath, inasmuch as I have found that strictures forcibly dilated and then neglected by the patient, as so many are, after they are divided, resist gradual dilatation with soft instruments far more than those operated on by internal urethrotomy; the former resembling a traumatic stricture; the latter, having a cicatrix or cicatricial splice in one place only, is much more amenable to treatment.

Such accidents as the instrument passing into a false passage, and then used, as related by Mr. Heath, causing two deaths, half of the whole number quoted, could not have occurred by the use of Mr. Teevan's urethrotome, unless the precautions enjoined by that surgeon be wilfully neglected.

I have seen various urethrotomes used, but none give such results as that devised by Mr. Teevan, while the risk is almost nil. Many and many times I have witnessed the operation by this instrument, and have also used it myself in some dozen cases; but I never saw any complication arise but once, and that was hæmorrhage, soon checked. In this case there was too great haste used, and too little precaution. However, the case did well, and twelve months afterwards he was passing a No. 20 French size. If this urethrotome be passed, and urine is seen to flow along it, it is quite impossible for any sacrifice of life to occur from cutting or splitting false passages. Without doubt, Mr. Holt's operation is of great value, and far superior to all the old, and the majority of the new, urethrotomies; but until the surgeon has had a full trial of Mr. Teevan's instrument he should not decide that Mr. Holt's operation is the best for the patient.

I am, Sir, your obedient servant,

HORACE MANDERS, F.R.C.S.,
Late House-surgeon, St. Mary's Hospital
and St. Peter's Hospital, &c.

Yorktown, Surrey, Sept. 29th, 1880.

TREATMENT OF HÆMOPHILIA.

To the Editor of THE LANCET.

SIR,—The interesting history of a fatal case of hæmophilia, under the care of Dr. Thorowgood, in the West London Hospital, related in your impression of Sept. 4th, has prompted me to give some particulars of a case of successful treatment in a severe attack of this distressing complaint I witnessed some years back; as the facts impressed themselves on my memory, I am the better able to dispense with the omission of notes taken at the time, which I unfortunately neglected. It was in a patient of Mr. Sloman's, of Farnham, whom I was assisting at the time.

A stout, healthy lady, between fifty and sixty years of age, was suddenly attacked in bed at night with profuse bleeding from the nose. I was sent for, and the patient, whose indomitable pluck and steady coolness under a full knowledge of the danger she was incurring, contributed

much to the fortunate issue, told me that a brother had died in a few days from uncontrollable bleeding following some very trivial skin wound, and that an aunt had frequently suffered from copious bleeding consequent on very inadequate exciting causes.

The patient was treated in the routine manner—astringents syringed into the nasal fossæ, ice, iron, and ammonia internally, and finally plugging the nares; but all to no purpose. The bleeding, if it ceased for a time, soon came on with redoubled energy; the patient at intervals vomited quantities of dark blood.

I was with the patient two nights, who, notwithstanding the increasing pallor, anæmia, and weakness, preserved her spirits wonderfully. After forty-eight hours of this continuous bleeding, it was evident that unless the hæmorrhage could be stayed death would speedily ensue, and as a last resource in a sort of empirical way we determined to try the effect of diminishing the blood-pressure by opening a vein in the arm. The state of the patient, while it nerved us to adopt any probable means of staying the flow, made recourse to this particular remedy without previous experience an anxious proceeding. Mr. Sloman opened a vein in the bend of the left arm with some difficulty, owing partly to its small size, and partly to the presence of much superficial fat. The nasal bleeding stopped as soon as a little dark blood had flowed away. After making sure that no further loss was taking place, the vein was closed. The hæmorrhage did not return, and from thence forward the patient made a protracted, but perfect, recovery.

In two other cases which I can call to mind—a gentleman of thirty and a girl of seventeen years, both with well-marked hæmorrhagic diathesis, and with hereditary history of the complaint—I have tried venesection, and in both cases success has been immediate and complete. Erichsen advises the application of continuous cold to the bleeding surface, if possible, combined with pressure, and mentions several cases where this plan has been successfully tried. Next to the constant loss the locality whence it comes is most important, and as it generally proceeds from sources difficult of application of mechanical pressure, in the majority of the cases one hears of, the remedies, internal and otherwise, used seem perfectly valueless, and the patients, if they recover, do so in spite of the means to help them. I have a family of which two members, females, are bleeders. In one of these patients a slight attack from nose and mouth passed off after twelve hours or so; but in the event of an attack lasting longer, or being very serious from the amount of loss or condition of the patient, if the bleeding surface was difficult to reach, I would open a vein at once, and would trust to this measure alone locally, but if compression could be used I would try this means first, with the addition of hot water, at a temperature of 50° or 60° C., to the bleeding surface, as has been found so useful in uterine hæmorrhage. May there not be a connexion between the hæmorrhagic diathesis and marsh miasm? In all the cases I have been able to investigate either the parents or the patients themselves have lived for some long time in an aguish district, or have had ague themselves. Perhaps some of your readers could throw light on the matter.

I am, Sir, yours very truly,

HENRY FINCH.

Colchester, Sept. 4th, 1880.

ENTERIC FEVER IN INDIA.

To the Editor of THE LANCET.

SIR,—All those who aim at precision in diagnosis must be thankful to Dr. Ranking (*vide* THE LANCET, July 31st) for his opposition to the idea that enteric fever in India is only a form of malarial fever. It is reasonable to suppose that a tropical climate may to a certain extent modify the course of the disease, but it cannot do away with its essential characteristics, either clinical or pathological. In India there may frequently be some difficulty in distinguishing between remittent malarial fever and enteric fever. There is difficulty in Europe in diagnosing some obscure tubercular cases from enteric fever. On this account, however, no physician in Europe classes enteric fever as a mere form of tuberculosis. A very great obstacle to the exact differentiation of enteric fever in India is the disregard of systematic and repeated temperature-taking. A person is said in a lax way to be suffering from "fever;" and if diaphoretics and quinine fail to restore the patient, opprobrious epithets such

as "malignant" are applied to the fever, and finally the thermometer is brought into very vigorous use. The course of the affection having been neglected in its beginning, routine thermometrical observations are taken when the time for diagnosing has long passed away and that for guessing has arrived.

Dr. Ranking goes on to say that natives suffer more from enteric fever than Europeans, or at least more than those Europeans who take proper sanitary precautions. As I do not know what Dr. Ranking's data are, I do not for a moment mean to dispute his statement, but as the subject is such an important one, I feel in duty bound to say that my experience does not make for a like conclusion. I have had considerable experience among the villagers in the Deccan; and as the medical arrangements in several of the Famine Relief Camps in the Maratha country were under my supervision, I had daily opportunities for observation. One camp, which may serve as a specimen of the rest, had on an average four thousand inmates. These people were of both sexes, all ages, and represented the usual castes met with in the Deccan, with the exception of Brahmans and Parsees. The adults suffered from extreme debility or actual disease. Many of the children were healthy orphans. There was a large staff of natives in good health, performing menial offices in the camp, and living under the same circumstances as the sick and feeble. The overcrowding was unavoidably very great; even in health the majority of the people would have been dirty in their habits, and when admitted for famine relief weakness and disease had made them too apathetic to attempt to observe the merest appearance of decency, far less cleanliness. The camp was in use for a year, and consequently the ground was thoroughly impregnated with organic matter. The drinking water was neither filtered nor boiled. No case of enteric fever was diagnosed during life. More than two hundred post-mortem examinations were made by myself on persons of both sexes and all ages. The first hundred bodies were selected as those of people who had died from gastro-enteric affections. The appearances of enteric fever were never found. On the contrary, an atrophy of Peyer's patches seemed to be a usual result of long privation. The people, in short, were placed in the most favourable circumstances for imbibing enteric poison, and yet the specific fever was wanting. Analogous observations were made on the absence of certain diseases that would probably have occurred in Europe under like circumstances. Ulcerative and gangrenous stomatitis were of frequent occurrence, in fact, almost endemic, but no case of diphtheria was observed. Though many autopsies were made of the bodies of persons who had died with sores of long standing, no case of amyloid kidney was seen. Most of the people had suffered for two or three years from want of proper food, clothing, and shelter, and yet phthisis was almost entirely absent. I do not wish to be understood to imply that enteric fever does not occur among natives. I merely wish to indicate that my experience tends to make me think that it is not frequent.

I should add that I have had many opportunities in Scotland of studying the disease both clinically and pathologically.

I am, Sir, yours, &c.,

E. D. MACKELLAR, M.B. Glasg.

Poona, Sept. 2nd, 1880.

EFFECTS OF THE INHALATION OF PURE NITROGEN GAS.

To the Editor of THE LANCET.

SIR,—On August 16th I was called by a coastguardsman to come at once to Mr. Fleuss, who had been walking under water at Fishbourne Creek, and had met with an accident. On arrival I found the patient in bed, wrapped in blankets; surface cold; temperature in axilla 96°; pulse 100, small and weak; heart sounds normal but weak; left lung normal; right lung slightly dull on percussion, and fine crepitation heard all over. I was shown a quantity of blood which he had spat up, and whilst I was in the room he spat up about an ounce of bright arterial blood; later, frothy and mixed with mucus. The conjunctiva of both eyes was intensely injected, and round about the eyes and lids purpuric, ecchymosed spots appeared. Was quite sensible and clear; no headache or nausea; no symptom of carbonic-acid poisoning.

History of the accident.—The apparatus with which Mr. Fleuss was experimenting on this occasion was not his patent diving-dress, but was a new invention for the purpose of entering smoke or mines. Mr. Fleuss proved by his having remained under water for nearly three-quarters of an hour that this dress could be equally adapted for going under water where protection from cold is not necessary. I have Mr. Fleuss's permission to describe the apparatus, which is patented. It consists of a cylinder containing oxygen under pressure, a bag into which the oxygen escapes, a purifier containing caustic soda to filter the expired air of its CO_2 , and a tight-fitting respirator or mask covering mouth, nose, and ears, with glass covers for the eyes. This mask is attached to the purifier by two valved pipes, one an expiring pipe and the other an inhaling pipe. The expired air passes through the filter, is robbed of its CO_2 , it then mixes in the bag with oxygen, and is ready to be reinhaled. Mr. Fleuss had been under water for some time, had walked across the bed of the river from one side to the other, and had turned to walk back again. He says he wished to try the experiment of using up all the oxygen in the bag before introducing a fresh supply, instead of allowing the flow of oxygen to be constant (as is the rule in using either this or the diving apparatus). Thinking he would have ample warning of the diminution of the oxygen, and of when it would become necessary to introduce a fresh supply, he turned off the oxygen at the cylinder. All this time the expired air was passing through the caustic soda. Having proceeded under water about half-way across the river, without warning and without any feeling of oppression, giddiness, nausea, or any other symptom, he suddenly lost consciousness, and not answering the signal communicated by the line, was immediately brought to the surface by his friends, who were accompanying him in a boat. What had occurred was as follows:—At the moment the oxygen was turned off the bag contained one-sixth of a cubic foot of the mixture of exhaled breath, with its complement of added oxygen. This mixture was rebreathed, and again passed through the filter until all the oxygen was used up, at which moment the next inhalation was one of pure nitrogen gas, with the effects described.

Mr. Fleuss informs me that in experimenting on himself he can tell in a moment if CO_2 has passed the filter; if this occurs he turns on more oxygen, which so far dilutes the poison as to cure the feeling of CO_2 inhalation, and gives ample time to get to the surface. It would seem that as long as any oxygen is present the excess of nitrogen is not felt, nor is any warning given of the need of a further supply; but the instant all the oxygen is used, or the proportion of oxygen falls below a certain point, the next inhalation causes such excessive arterial tension as to produce immediate loss of consciousness, and even rupture of loosely-supported capillaries. Dr. Richard Neale, in advocating in THE LANCET of Aug. 28th the purification of vitiated air in confined spaces by means of a "chemical lung," points out a modification and further application of Mr. Fleuss's patent, which is already in successful operation.

Your obedient servant,

Ryde, Isle of Wight, Sept. 1880. CHANNING NEILL, M.D.

CHIAN TURPENTINE.

To the Editor of THE LANCET.

SIR,—Having received the following account of Chian turpentine, and the probable supply of it this year, from Mons. D. Spadavo, French consul at Chio, I think it may prove interesting to the medical profession, and therefore send it to you for publication. I may add there is now some genuine Chian turpentine of this year's importation offered in the London market, for which a high price is asked:—

"I am happy to give you the information you require relating to Chian turpentine. This drug has not been collected in our island for many years, and I believe that the greatest quantities of Chian turpentine sold as such in England were mere falsifications, or another kind substituted for it. Chio may possess about a thousand turpentine trees, some exceedingly old—up to eight or nine hundred years, and varying from half a yard to ten or twelve yards in circumference. These trees when well cultivated may give from two to three kilogrammes of turpentine [a year?]

"The turpentine is collected by incisions made in the

trunk of the tree about April, and which are renewed every year.

"The fruit of this tree, when ripe, is collected and pressed in the same way as they do olives; it gives a magnificent oil, very much liked by the inhabitants, and often employed instead of butter. As soon as the fruit begins to get ripe the flow of the turpentine ceases; this happens about the middle of August.

"This year the inhabitants have been surprised to receive orders for the collection of turpentine, as it has been asked for in England and bought at the rate of six shillings the oke (or 1600 grammes). The island has not produced over 700 or 800 kilogrammes this year, as many have not been informed in time to incise the tree.

"Owing to its cheapness the possessors of these trees do not give themselves too much trouble in collecting it clear, and they let it flow on the sand, which is taken with it. We have not the means to get it cleared, and are obliged to send it as it is collected."

I am, Sir, yours, &c.,

New Cavendish-street, Sept. 28th, 1880. WM. MARTINDALE.

CONIUM IN CANCER.

To the Editor of THE LANCET.

SIR,—Permit me to draw the attention of yourself and readers to what is to me, at least, a new experience.

About a month ago I amputated at our infirmary a very large scirrhus breast in the first stage of ulceration. The extensive wound which was left open (as I have always done of late years) was dressed with a weak solution of carbolic acid on lint; this was continued for a week. The patient had many symptoms of uterine cancer, and had much vaginal discharge, with pain. At the end of a week, having procured a supply of fresh extract of conium, I put her under three doses a day of fifteen grains each. Within twenty-four hours of beginning the drug the nurse observed that the lint dressing on removal was of a bright-green colour—in fact, the colour of the mixture the patient was taking. Thinking it might be connected with the carbolic-acid dressing, we discontinued it, and dressed the wound with lint and water only. The dressings came away coloured as before, and have continued so up to the present. The wound is closing very rapidly, the colour of lint now partaking of a yellow or apple green. During the first few days a piece of lint moistened with the mixture, and compared with the lint removed from the wound, was scarcely distinguishable from the latter, except by the pus. The secretions are unaffected in colour or in any way. I may add that the vaginal discharge has ceased, and the uterine pain and symptoms have all but disappeared. Be this the result of the full doses of conium or not, I feel inclined to give this drug a full and fair trial in all cases which may in future come under my care, in both internal and external disease, in full doses; procuring, of course, fresh extract.—I am, Sir, yours faithfully,

Chelmsford, Sept. 20th, 1880. JAMES NICHOLLS, F.R.C.S.

* * As may be ascertained on reference to Pereira's *Materia Medica*, the use of conium, as a reputed remedy for tumours and cancers, is as old as anything in therapeutics. Pliny says "it reduces all tumours." Avicenna extolled its use for tumours of the breast and testicle. Storck and others recommended it for cancer as far back as 1762. Bayle recorded forty-six cases of cancerous disease cured, and twenty-eight ameliorated by hemlock. There is, therefore, no novelty in the treatment, but many years ago it was common, but unhappily unsuccessful.—ED. L.

THE SERVICES.

WAR OFFICE.—Surgeon W. Maunsell Collins, M.D., from the Scots Guards, to be Surgeon in the Royal Horse Guards, vice H. F. L. Melladew, M.D., promoted; Brigade-Surgeon Joseph Coleman Hornsby Wright, M.D., has been granted retired pay, with the honorary rank of Deputy Surgeon-General; Surgeon-Major Channey Graves Irwin, M.B., from half-pay, to be Surgeon-Major.

ADMIRALTY.—The following appointments have been made:—Fleet Surgeon Michael W. Cowan to the Royal Marine Division at Portsmouth; Staff Surgeon Charles L. Ridout to

the *Tourmaline*; Staff Surgeon Septimus Lexton to the *Duncan*, for temporary service. Fleet Surgeon J. Caldwell to the *Nankin*; Staff Surgeon A. B. Trousdell to the *Duke of Wellington*, for Portsmouth Dockyard; Surgeon A. T. Corrie to the *Flora*; Surgeon W. Thompson to the *Rambler*. Staff Surgeon Henry Hadlow has been promoted to be Fleet Surgeon, with seniority of the 20th ult.

PARIS.

(From our own Correspondent.)

ALTHOUGH the medical journals have not yet taken cognisance, as the lawyers say, of the smells of Paris, the agitation which has been carried on for the last two months in the lay press has already borne useful fruit. The real cause of the nuisance is now known to reside in the *depotoirs* surrounding Paris, and especially in one of these establishments, for transforming the metropolitan nightsoil into chemicals, which is situated in the plain of St. Denis. A writer in the *France*, M. Charles Laurent, speaks of it as follows:—"Everything agrees in pointing out a well-known factory in the plain of St. Denis as the sole origin of the bad smells which infect Paris. This factory collects all that is unearthly from the city, in order to extract chemicals and fat. It diffuses in the neighbourhood such a strong smell of rotten cabbage that even in the coldest weather 'young ladies' (*sic*) who have recently crossed the Channel are seized again with a kind of sea-sickness."

Now that public attention has been forcibly called to the insanitary condition of the town generally, it would be well if some influential organ would protest against the disgraceful condition of several of the Paris hospitals. The Hôpital Laennec, for instance, is very little better than a slaughter-house for incurables. The wards situated upon the ground floor are especially badly kept. Odours which emanate from the closets impregnate the atmosphere, and culminate in an almost insupportable stink. Close to the small dungeon which is used as a speculum-room, a few days since I noticed with surprise on the clothes of a woman some lively specimens of the *Cimex lectularius*, and on expressing my astonishment to one of the pupils, he informed me that the insect has its habitat at Laennec. He furthermore volunteered the statement, which is probably strictly true, that a few months' residence at that institution is sufficient to tuberculise the strongest inmate.

M. Jules Guérin, who, in his public capacity, may be summed up as a scientific obstructionist, does not set a very high value upon M. Pasteur's experiments; and he does not hesitate, moreover, to proclaim his scepticism. At a recent meeting of the Academy of Medicine he promised to show that what is true in the recent communication of M. Bouley is a matter of common knowledge (*court les rues*), and that what is new is absolutely false. If M. Jules Guérin's adverse opinion were not almost sufficient in itself to stamp M. Bouley's discoveries with interest, it might be observed that the epigram he has applied to them is as old as the judgment is unjustifiable.

Those who are passing through Paris at the present moment will do well to visit the Hôpital Laennec. There is now a case of generalised scleroderma, under the care of M. Legroux, which will well repay the trouble.

Obituary.

THE HONOURABLE JOHN IMRAY, M.D.

WE much regret to have to record the death of this distinguished West India practitioner, which occurred in the island of Dominica, on Sunday, the 22nd August last, of dysentery.

Dr. Imray, who was closely connected with Dr. Porteus, one of the most celebrated Bishops of London, was born in the north of Scotland on January 11th, 1811; and he received his medical education in Edinburgh, where, in 1831, he obtained the diploma of the College of Surgeons. He soon afterwards settled in Dominica, in which island his

elder brother, Dr. Keith Imray, who was well known in the profession in those days, was then practising. By skill and hard work Dr. Imray soon became the leading physician in Dominica, and he retained this honourable position until a few years ago, when he retired from the active exercise of his profession.

In 1838 he published in the *Edinburgh Medical Journal* an article on Epidemic Yellow Fever, and three years afterwards contributed to the same periodical a long paper entitled, "On the Nature, Causes, and Treatment of Yellow Fever." These articles deservedly attracted considerable attention, and his clear and accurate description of a disease which was then but little understood caused him to be considered an authority on the subject. He was, in fact, the first English practitioner who drew attention to certain important pathological characteristics of this fatal disease, and the learned Dr. Copland frequently quoted him in the article on Yellow Fever in the celebrated "Dictionary of Medicine." It may here be mentioned, as an important fact in the present day, that Dr. Imray's views in regard to the non-contagiousness of yellow fever underwent an entire change, for of late years he was impressed with the idea that the disease occasionally, if not always, manifested contagious properties.

In 1848 he published in the *Edinburgh Medical Journal* an able article on the "Characters of Endemic Fever in the island of Dominica," and subsequently he published several articles in the pages of this journal, his last being on the "Treatment of Tetanus by Opium and Hydrate of Chloral in Combination." In addition to writing these valuable papers, he was the author of the "Memoir on Yaws," published, in 1873, in Dr. Gavin Milroy's "Report on Leprosy and Yaws in the West Indies." This "Memoir," which gives evidence of much learning and deep reading, gained for Dr. Imray the distinction of being held to be the first living authority on frambesia.

When it is remembered that a medical man, practising in a small island in the tropics, was able to make for himself a reputation as an authority on several diseases, he must be considered to be a man of more than ordinary intellect; but when, in addition to this, such a man is able to carve out for himself a name as an able botanist, to leave his mark as a successful politician, and to be famed throughout the tropical world as the most enterprising and successful agriculturist in the West Indies, he must be held to be remarkable; and, indeed, Dr. Imray was a remarkable man, and one that the profession has need to be proud of.

For nearly half a century he was the friend and correspondent of Sir William Hooker, and his son, the present director of the Royal Gardens at Kew; and many plants have been named in his honour by Lindley, by the Hookers—father and son, and by other botanists. He was also a well-known and able contributor to the pages of the *Gardeners' Chronicle*, the *Technologist*, the *Journal of Applied Science*, and *Nature*.

At the time of the International Exhibition of 1862 his efforts, as chairman of the Dominica Committee, caused the island's show to eclipse far richer colonies; and to him the jurors awarded two medals, one for special services, and the other for his valuable collection of the native woods.

His introduction into Dominica of the cultivation of limes and of the Liberian coffee, whilst enriching himself, helped to bring forward once more the ancient prosperity of the island; and it is already proposed by an admiring public to erect some permanent memorial to one who has proved such a benefactor to the colony.

In the politics of the country Dr. Imray until lately took a prominent part, and as a leading member of the Executive Council, he was the trusted and honoured adviser of all the Governors. As chairman of the Board of Health he, on several occasions, prevented the introduction of contagious diseases from the neighbouring colonies; and the establishment of the Roscar Infirmary, of which institution he was the medical officer for over thirty years, was mainly due to his exertions and monetary aid.

In private as well as in public life he was the type of the English gentleman. Upright and honourable in all his dealings, his word once passed was his bond; and never from the time of his landing in the island to the day of his death was he known to have committed a wrong act. Always of a religious disposition, he was a prominent member of the Anglican Church, and at its disestablishment in the island he subscribed very largely for its maintenance.

His private charities were innumerable, though for the

most part secret, and as a necessary consequence his death was bewailed by the poor throughout the length and breadth of the island.

To his immediate friends—he was unmarried and without relatives in Dominica—his death came as a terrible blow; for his kindly disposition, his flowing wit, and his highly cultivated mind, had raised up in those who had the privilege of his friendship an affection the depth of which was unknown until the good old doctor was no more.

Medical News.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Sept. 23rd:—

Fowler, Charles Henry, East Kirkby, Lincolnshire.
Hakim, Pherzeshá M., Bombay.
Mody, Nanabhooy C., Bombay.
Perkins, George C. Steele, Exeter.
Wallace, Robert Smith, Arnold, Notts.

The following gentleman also on the same day passed his Primary Professional Examination:—

Cockell, Edward Seaton, Guy's Hospital.

THE Hospital Sunday collections at Yeovil on the 26th ult. amounted to about £105.

THE Convalescent Hospital for the county of Hertford, at St. Leonards-on-Sea, will be opened by the Princess Christian on October 21st.

At the annual meeting of the Royal Albert Asylum for Idiots and Imbeciles held at Newcastle on Wednesday, Mr. Joseph Cowen, M.P., said that he had ascertained in connexion with an inquiry in which he had been associated, that there was collected in London alone, by voluntary subscriptions, for charitable purposes, nearly £6,000,000 a year. If to this sum were added the amount paid as poor-rates, there would result a total of something like £8,000,000 contributed in the metropolis annually towards the relief of suffering, distress, and poverty.

SUPERANNUATION.—The following Poor-law Medical Officers have received superannuation allowances:—Mr. Arthur J. Nunn, late of the Alderbury Union, £20 per annum; Mr. A. G. Roper, late of the Croydon Union, £100 per annum.

MEDICAL MAGISTRATES.—Dr. Edward Davies, of Wrexham, has been nominated by the Lord Lieutenant as a Magistrate for the county of Denbigh. Dr. Walker, of Brierley Hill, has been placed on the Commission of the Peace for the county of Stafford.

BEQUESTS.—The West Norfolk and Lynn Hospital has received a legacy of £100 from the late Daniel Gurney, Esq., of North Runcton, Lynn. By the will of Mr. Francis Adams, late of Bristol, £250 is bequeathed to the General Hospital and to the Royal Infirmary of that city.

Medical Appointments.

Intimations for this column must be sent DIRECT to the Office of THE LANCET before 9 o'clock on Thursday Morning, at the latest.

BLAKE, J. F., L.R.C.P.Ed., L.F.P.S.G., has been appointed Medical Referee on Sanitary Subjects to St. Margaret's and St. John's Ratepayers' Protection Association.
BULLOCK, H., F.R.C.S.E., L.S.A.L., has been reappointed Medical Officer for the Cranford District of the Staines Union.
CALLCOTT, J. T., M.B., has been appointed Deputy Medical Superintendent of the Durham County Asylum.
CLAPP, R., L.R.C.P.L., M.R.C.S.E., has been appointed Assistant Medical Officer to the Barnwood House Hospital for the Insane, vice Warren, resigned.
CREERY, J., M.B., has been appointed House-Surgeon to the Derry County Infirmary.
D'ALTON, P. R., L.R.C.S.I., has been appointed Medical Officer to the Oranmore Dispensary, Galway Union.
EDWARDS, D., L.R.C.P.Ed., M.R.C.S.E., has been appointed Medical Officer for the Llanbryn-mair District of the Machynlleth Union.
ERSON, E. G. L., L.R.C.P.Ed., has been appointed Medical Officer for the Lindley-cum-Quarmby District of the Huddersfield Union, vice Ellerton, resigned.
FERGUSON, H. L., L.R.C.S.I., has been appointed Assistant-Surgeon to the National Eye and Ear Infirmary, Dublin.
GAFFNEY, T., L.R.C.P.Ed., L.R.C.S.I., has been appointed Medical Officer to the Keadne District of the Boyle Union.

HANDS, A., L.R.C.P.L., M.R.C.S.E., has been appointed Medical Officer to the Wednesfield District of the Wolverhampton Union, vice Broom.

HARDY, J. G., L.R.C.P., has been appointed Junior Assistant Medical Officer to the Durham County Asylum.

KIRSOPP, T., M.B., M.R.C.S.E., L.S.A.L., has been appointed Resident Medical Officer to the York Dispensary, vice Spencer, resigned.

LAYCOCK, G. L., M.B., has been appointed additional Assistant-Physician to the West-end Hospital for Diseases of the Nervous System.

LINE, W. H., M.B., has been appointed Demonstrator of Anatomy at Carmichael College.

MACNAMARA, R., jun., L.K.Q.C.P.I., L.M.R.C.S.I., Anatomical Demonstrator Royal College of Surgeons, Ireland, late House-Surgeon Alnwick Infirmary, and Surgeon 2nd Northumberland Artillery Volunteers, has been appointed Supernumerary Colonial Government Surgeon to the Island of Trinidad, West Indies.

PRIDEAUX, T. E. P., L.R.C.P.L., M.R.C.S.E., has been appointed Medical Officer to the First and Second Districts and the Work-house of the Wellington Union, vice Kidgell, resigned.

PRINGLE, J., M.R.C.S.E., has been appointed Medical Officer for the Holme District of the Howden Union.

RUTHERFORD, R. L., L.K.Q.C.P.I., has been appointed Senior Assistant Medical Officer to the Durham County Asylum.

SMITH, T. O., M.B., B.Ch., has been appointed Medical Officer to the Kinnetty District of the Parsonstown Union, vice Dudley.

SWINSON, G. N., M.R.C.S.E., L.R.C.P.Ed., has been appointed Medical Officer to the Third District of the Royston Union.

TICHEURST, C. S., M.R.C.P.Ed. &c., has been appointed Medical Officer of Health to the Petersfield Rural District for three years, at a salary of £73 10s. per annum, vice T. Moore, F.R.C.S.E., resigned. Also Medical Officer and Public Vaccinator for No. 2 District of the Petersfield Union, and Surgeon to the Petersfield Union Infirmary, vice T. Moore, resigned.

Births, Marriages, and Deaths.

BIRTHS.

BARK.—On the 20th ult., at Aston-road, Birmingham, the wife of Ernest Bark, L.R.C.P.L., of a daughter.

CONSTANT.—On the 14th ult., at Ferndale-park, Tunbridge Wells, the wife of Surgeon-Major F. G. Constant, M.D., 12th Bengal Cavalry, of a son.

FLOYD.—On the 14th ult., at Rectory-place, Woolwich, the wife of John Floyd, M.R.C.S.E., of a daughter.

HARRIS.—On the 24th ult., at Cold Harbour-lane, S.E., the wife of Henry Harris, M.R.C.S.E., of a daughter.

MCAUGHTAN.—On the 29th ult., the wife of Thos. McNaughtan, M.D., of Blackpool, of a daughter.

NAPIER.—On the 28th ult., at 3, Royal-terrace, Crosshill, Glasgow, the wife of Dr. A. Napier, of a son.

THURSTAN.—On the 23rd ult., at The Hollies, Windmill-road, Croydon, the wife of Paget Thurstan, B.A., M.B., of Lombard-street, E.C., of a son.

WEATHERLY.—On the 20th ult., at Portishead, Somerset, the wife of Lionel A. Weatherly, M.D., of a daughter.

WILSON.—On the 22nd ult., at 7, Pleasant-row, Newcastle-on-Tyne, the wife of Adam Wilson, F.R.C.S.Ed., of a son.

MARRIAGES.

ADAMS—WROTH.—On the 23rd ult., at the Parish Church, Begbury, Devon, by the Rector, the Rev. F. Farrer, John Adams, L.R.C.P.L., of Aldersgate-street, E.C., to Ellen Sparrow, eldest daughter of John Wroth, Esq., of Coombe, Begbury, Devon.

BARKER—DELMEGE.—On the 9th ult., at St. Peter's Church, Dublin, Arthur Edward Barker, Esq., F.R.C.S.E., of Harley-street, London, to Emilie Blanche, youngest daughter of Julius Delmege, of Fitz-William-square, Dublin.

BEAUMONT—CLARKE.—On the 25th ult., at St. Saviour's Church, Walthamstow, Essex, Charles G. Beaumont, Esq., M.D., of Shirley, Hants, to Lucie, eldest surviving daughter of the late Seymour Clarke, Esq., of Northcotts, Walthamstow.

BETTS—FITZGERALD.—On the 25th ult., at the Friends' Meeting House, St. Martin's-lane, Westminster, Edward George Betts, M.R.C.S.E., son of John Betts, of Holloway, to Charlotte Mary, eldest daughter of Alexander Fitzgerald, of Millbank-street, Westminster.

HAMILTON—RINGWOOD.—On the 28th ult., at Christ Church, Leeson-park, by the Rev. Henry J. Ringwood, B.A., Curate of Fullamore (brother of the bride), assisted by the Rev. James Hamilton, B.A., Rector of Pomeroy, co. Tyrone (brother of the bridegroom), and the Rev. William Turbill, Rector of Drumree, Portadown, Archibald Alexander Hamilton, M.B., B.Ch. Univ. Dub., youngest son of the late Thomas Hamilton, Esq., of Grange, Moy, co. Tyrone, to Annie Elizabeth, eldest daughter of the late Rev. H. T. Ringwood, M.A., of Wilson's Hospital, Westmeath.

KEYWORTH—GWYNN.—On the 25th ult., at St. Peter's, Regent-square, George Hawson Keyworth, M.B., of Wem, Shropshire, to Gertrude Mary, only daughter of the late Rev. Thomas Gwynn, M.A., of Great Marlow, Bucks.

DEATHS.

CLEMENT.—On the 20th ult., at his residence, Woodville, Watford, Herts, Augustus Ward Clement, M.R.C.P.L.

HUTCHINSON.—On the 19th ult., at Scarborough, Richard Scholes Hutchinson, M.D., late of Nottingham, aged 77.

TAYLOR.—On the 18th ult., at Naini Tal, India (killed by a landslide), Leonard Taylor, C.S. Assistant Commissioner, fourth son of David Taylor, M.R.C.S.E., of Kennington-park-road, S.E., aged 27.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET OFFICE, September 30th, 1880.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radiation in Vacuo	Max. Temp. Shade	Min. Temp.	Rain fall.	Re- marks at 8.30 A.M.
Sep. 24	30.14	N.W.	57	56	79	66	53	..	Foggy
" 25	30.16	W.	62	57	104	71	55	..	Overcast
" 26	30.09	N.W.	64	61	71	67	56	..	Foggy
" 27	30.30	E.	60	59	88	73	58	..	Foggy
" 28	30.48	N.E.	57	56	71	68	54	..	Foggy
" 29	30.50	E.	55	54	75	65	53	..	Foggy
" 30	30.42	E.	56	54	..	59	51	..	Foggy

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Local papers containing reports or news-paragraphs should be marked.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

Lectures, original articles, and reports should be written on one side only of the paper.

We cannot prescribe, or recommend practitioners.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET to be addressed "To the Publisher."

A STRANGE SUGGESTION.

A DUBLIN newspaper, in recommending the Catholic University Medical School to the favour of medical students, says that it should be given the preference by Roman Catholic parents, not only on account of the security they must feel in having their children conducted through the mysteries of that dangerous study by Roman Catholic masters, but also in consideration of the vast patronage of the Roman Catholic hierarchy and priesthood in the matter of medical appointments in almost every part of Ireland. We are aware that the majority of Poor-law medical appointments in Ireland are decided by the religion of the candidate, and not by the professional merit he may possess. We regret the fact, and deplore also that any journal should strive to induce students of medicine to join an institution by advocating its claims on such questionable grounds. The *Dublin Evening Mail*, in referring to this matter, recommends competitive examinations as the only remedy to prevent the disgraceful touting and the sectarian hugger-mugger which attend the bestowal of Poor-law medical appointments in Ireland. This proposal is worthy of consideration, but at the same time the natural pociivities of the Irish people cannot be altogether ignored.

COATED PILLS.

To the Editor of THE LANCET.

SIR,—For several years I have been in the habit of using coated pills for all general purposes, both in private and very extensive colliery practice, without finding them to differ at all in their action from pills prepared from similar formulæ in my own surgery. Doubtless there are films and films; but if the particular film with which a pill is coated be inert and sufficiently soluble, I think I may venture to say that it is a harmless and elegant innovation, and that nothing but advantage is likely to result from its adoption. Moreover, in many instances I have found that a coated pill recommends itself to those patients one meets with who say, "Oh, I cannot take pills." I have a patient at present under treatment who would shudder at the sight of an ordinary pill, and vomit before it could pass the fauces; but who, when pills are coated, will freely swallow two at once.

Yours truly,

Sept. 27th, 1880.

O. U. I.

To the Editor of THE LANCET.

SIR,—My experience (an extensive one) of the use of coated pills has been entirely in their favour. Practitioners, patients, and assistants all praise the "sugar-coated pills." My medical friends speak with equal commendation of those supplied by good firms. The early education of general practitioners is now so altered that I fear some of us do not know good drugs and careful dispensing from their counterfeits. I shall be very happy to give Dr. Milne a list of the formulæ I have found so useful.

Yours truly,

Great Charlotte-street, S.E., Sept. 1880.

HENRY WILLSON.

DOCTORS AND DEATH CERTIFICATES.

MR. E. A. CARTAR, coroner, at an inquest held lately in Deptford, was told by the mother of the deceased child that it had been attended by an assistant for convulsions. On applying to the principal for a certificate of death, he said it would cost her 3s. 6d. She said, "Am I to understand that unless I pay 3s. 6d. you will call in the coroner?" He replied, "Certainly." There are some statements which are so incredible that the best way is simply not to believe them, and this is one of them. But it seemed to be credited by the jury. For our part we withhold credence from it till it is admitted or explained by the doctor implicated.

Double Qualification will find most of the information he is in search of in Hardwicke's "Medical Education and Practice."

Mr. Robinson should address his inquiry to the gentleman named.

"LEGALISED QUACKERY AND LOW CHARGES": ANOTHER DEFENCE.

To the Editor of THE LANCET.

SIR,—The letter of your correspondent, L.R.C.P., in yesterday's issue, deserves a more prominent place in your journal. Since we cheap dispensary doctors are accused by your leader writers of (to speak plainly) deliberately defrauding our patients, the type in which a refutation is printed should, on the "Audi alteram partem" system, be at least equally large, and the position in the journal somewhat prominent. I also want to add my testimony, based on two years' exclusive experience, to that of my colleague, "L.R.C.P."

Firstly, I want to point out that there is a possibility of acting honestly to patients, and still to have low charges. I assert that the average price of the drugs in a six-ounce mixture does not exceed 12., even if such drugs as quinine and iodide of potass, morphia, &c., are used. Let any medical man turn to his day-book, and by the aid of the price list of a good druggist compare the money value of 100 consecutive bottles of medicine. I do not believe it would come to more than 8s. 4d.

Again, let any gentleman really interested in this question go to the out-patient department of a general hospital. Let him there take the letters of fifty medical patients and of fifty surgical patients, and let him cast up the money value of the prescription, and it will not exceed 3d. per pint (or a week's supply). I exclude cod-liver oil, which costs a little over 1s. 2d. per ounce.

Again, let any gentleman take the published numbers of patients attending at a public dispensary, let him also take the published accounts of money spent on drugs, and he will find that it does not exceed 3d. per head per week. It is, therefore, evident that if you charge even so low as 1s. per week, there is a gross profit of 9d.

My own experience is that at a dispensary where the gross receipts during the quarter for January 1st till March 31st of this year exceeded £400, the drug bill was a little over £60, a sum coinciding remarkably with the figures quoted by my colleague "L.R.C.P."

It being now demonstrated that the thing can be honestly done, the question is, How is it that these private dispensaries are often disreputably conducted?

The greatest difficulty is to find able men, willing to work, and honest enough to do what is right by the patient at the outset, even in the early days, before the business pays. Moreover, everyone could not do it. What is required is experience similar to a hospital physician's, business capacity of no mean order, punctuality, and a little capital to bring it out, and, above all, you must be fond of the work, which is to all intents and purposes that of a physician at a hospital. For, indeed, when the attendance is numerous (at my place of business, I have reason to believe that I see on some days over two hundred people), you get the out-patients' department of the hospital repeated on a small scale, with this important difference, that the medical man is adequately paid for his work. I cannot help thinking that he also takes a greater interest in the individual cases, as each case has a direct money interest for him.

There are many other questions involved. I will, however, not trespass upon your space any more, except in this respect—namely, the question of ethics involved, and I maintain that "what a medical practitioner charges can never be a question of etiquette provided he deals honestly with his patients."

Yours obediently,

Sept. 26th, 1880.

M.D. Lond.

Ichabod.—Our correspondent will see that we have gone fully into the question of the grievances of the I.M.D. It appears unnecessary under the circumstances to publish the letter with which he has favoured us. *Provident Dispensary* is quite right. The confusion referred to is an inadvertence.

Mr. J. F. Nicholls.—See reply on page 404.

CHESTER WORKHOUSE.

To the Editor of THE LANCET.

SIR,—The attention of the guardians of this union having been called to a paragraph appearing in your publication of the 4th inst., containing certain statements as to the condition of their new workhouse buildings and the drainage, they direct me to inform you that the said statements are utterly untrue. I am, Sir, your obedient servant,

WM. KEARTLAND,

Chester Union, Chester, Sept. 21st, 1880.

Clerk to the Guardians.

PROFESSOR GOLDWIN SMITH ON DOCTORS.

WE cull the following from the *San Francisco Western Lancet*:—"At the annual dinner of Trinity Medical School, Toronto, Mr. Goldwin Smith, responding to a toast, spoke of the singular fact that quacks obtain much sympathy from the masses, who regard them as persecuted men of genius. He also said that there was no body of men—and he made no exception—to whom the world owed greater gratitude than it did to physicians. There was no body of men from whom society received so much, and to whom it paid so little. He thought a man setting out in the medical profession must have almost the spirit of a missionary. He must set out for the purpose of doing good, and not for reward. He was the slave who always worked. The lawyer had his vacation. Even the clergyman might leave his little flock for a time in the wilderness and take his holidays. But the medical man had no moment to call his own. He was at the common call at all hours, and he had often to deal with humanity in its most repellant states. But still he reaped a rich reward in doing boundless good, and had the regard of the sick man as his best friend in the very best sense."

G. G. J.'s knowledge of the individual in question appears to be equal to our own. Every registered practitioner is entitled to recover fees, according to his qualification or qualifications.

Mr. Joseph Schleman.—Any of the more sheltered southern suburbs.

CHANGE AS A MENTAL RESTORATIVE.

To the Editor of THE LANCET.

SIR,—I have been reading some articles on this subject by Dr. Granville, and feel inclined to make a suggestion, which may have occurred to some of those who read Dr. Granville's interesting papers.

I quite agree with Dr. Granville that, valuable as change is to many invalids and overworked persons, it is worse than useless for a doctor to tell a patient vaguely that he "requires a change." A month or two at the seaside, or on the Continent, or in a sea voyage, or in India, a run up to the hills, may be the change indicated; but in many cases it requires to be supplemented by a change of occupation, and not by thorough idleness. Most patients can best find out what that change should be, and need not be advised by the medical attendant; others will consult the doctor, or at any rate will thankfully receive any suggestions that he may have to offer.

Dr. Granville's suggestion is a shrewd one, that the family physician should consider what subjects have been especially taken up by other members of the family, past and present, in order to make use of any hereditary tendencies which might be of some practical service. It struck me that there is one subject which must be of immense interest to all patients if properly introduced to their notice, and that is religion. I do not mean that the doctor should become the spiritual adviser of his patient, or "preach" to him. If he does so, he will in most cases disgust his patient, and lose all influence over him. I mean that a doctor might in many cases in which he meets with a patient whose brain has been overworked with business and anxieties connected with the world we live in, or a patient whose brain has lost all its tone, so to speak, by having devoted itself exclusively to amusement until he has not an object of interest left in the world,—in a number of such cases, I say, that a doctor may find sufficient stimulus to the brain in questions which concern another world and another existence. The subject of religious thought is nowadays by no means a narrow one, and must possess considerable interest to everyone who has time to devote to it, and the number of books on the subject well worthy of attention, and written from every stand-point, are very numerous. The class of people to whom one could recommend such study, I fancy, might be easily induced to take it up. The overworked man of business, whose health seems to have been hopelessly lost by his efforts to do his duty, must feel disappointment in this world; but he may be induced to hope that a future world exists, and may be more satisfactory to his nature. The wealthy young man, who at last discovers that amusement when indulged in to excess ceases to please, or even causes disgust, is often unable to turn his attention to more serious pursuits. There is not enough stimulus; he does not need to gain a livelihood; he cannot hope to succeed, or some such reason occurs to him, and prevents him from even making an attempt. But there is something so new in the idea of another world and another existence, which might tempt him to read books, weigh arguments, and an interest might be created which would act as a stimulus to the brain, and at last bring back an interest in the life which he had considered worse than lost to him. In order to accomplish this, the doctor, whom I am supposing to be in the place of adviser, must use great tact, and be extremely careful to make the patient understand that he is inviting his interest to an attractive study, and not preaching him a sermon. He should have the names of a few good books to recommend as a beginning, and should be ready to suggest the name of some one who would be willing to assist him. This person could most naturally be a clergyman, who should be prepared to help in the same spirit as the doctor began. I would suggest that in most cases it would be better not to advise the study of Christianity in the first instance. Such people as I have described have very often anything but pleasing remembrances of early Christian teaching, and too often Christian theology is of a gloomy and repelling kind. Let our patient take a wider view of the subject first, and turn his attention to non-Christian systems. Four very interesting little works have been written

on non-Christian systems; those on Mahomedanism and Buddhism are especially interesting. Other larger works may easily be found. These books cannot fail to interest, and may arouse a desire to know more about Christian theology and Christian philosophy than can be obtained from reading ordinary religious works. Books on Church History and writings of rationalistic authors, with the answers given by the best of the orthodox school, are examples of what might be found of an interesting nature. Once prevail on such a patient, however hopeless his case might be before, to believe that another existence is in store for us after this life, and that it will be of a much happier and very different kind to this imperfect existence we are living now, and I believe we should have a stimulus capable of arousing his interest. Then, and only then, will sea-air, change of scenery and people, and perfect quiet be of the service we want. They will assist us when once we can make our patient to see that life is worth living, and we may find the strange but satisfactory result that the hope of another world has changed the present life from a misery into a pleasure; for health of the mind will often produce health of the body when all other treatment has failed.

Yours truly,

E. DOWNES, L.R.C.P. Lond.,
Medical Missionary of Kashmir.

August, 1880.

Gratis.—We cannot recommend such a course as our correspondent advises, but would earnestly dissuade him from it. Where would the profession land if every practitioner announced in a handbill his specialty, and proclaimed what he thinks his superior knowledge? We would urge "*Gratis*" to believe that if he only learns to labour and to wait, his good knowledge will be found out both by the public and by his professional brethren, when a pleasure and a respect will accrue to him which are not to be had by advertising.

Mrs. C. L. Murray.—The wife of a medical man, who is disabled by sickness, should apply to the Secretary of the Royal Medical Benevolent Fund.

A Constant Subscriber.—It is the rule generally followed.

EFFECTS OF AN EXCLUSIVE MEAT DIET.

To the Editor of THE LANCET.

SIR,—In answer to the query of "*Dietetic*," I may point out the fact that the diet of the ganchos of South America consists almost exclusively of meat, and of a kind not containing much fat; they eat occasionally a little maize or roasted mandioc (Cassava manihot); but for weeks together they live entirely upon meat, and certainly enjoy excellent health. I do not remember having seen any trace of scurvy amongst them. But I can give a case more to the point in my personal experience. While I was a prisoner in Paraguay, during the Brazilio-Paraguayan war, my captors gave me literally no other food during two months than meat (about half a pound to a pound per diem) and water, and for the next month a similar diet, but with less meat, and about thrice a week a very thin cake, certainly not weighing more than an ounce, of cassava meal. I suffered much from thirst, for very little water was given to the prisoners, but still more from a craving for vegetable food. Nevertheless, my health was excellent the whole of the time. I became, of course, as lean as a starved greyhound; but when I was rescued by the expedition sent by the Government of the United States for that purpose—under the fortunate mistake that I was a subject of the Republic—I was really as well as I had ever been during a singularly healthy life.

As to the effects of beef-tea and Liebig's extract, it is much to be regretted that they are still regarded by the public and by a few amongst ourselves as food instead of stimulants; and I would suggest that their injurious effects when used in the former capacity are due to the fact that their main constituents are the debris of worn-out cells, kreatine, inosine, kreatinine, and urea—excretive matters that the blood would normally have got rid of, and that beef-tea, except in the absence of uric acid, differs but little from healthy urine. I published some years ago a paper in THE LANCET, giving analytical proof of this.

Yours truly,

Stourport, Sept. 27th, 1880.

G. F. MASTERMAN.

A. S. G.—As Malta belongs to Great Britain, British qualifications confer the right of practice. But, in other cases, in order to practise there, it is necessary to pass the Medical Board of the Island. Even graduates of Malta have to do this. According to Hardwicke, in his work entitled "*Medical Education and Practice*," there is an excellent opening in Malta for one or two well qualified British practitioners. The prevalent diseases there include an endemic remittent fever common in the Mediterranean islands.

Mr. Henry Love.—Application should be made to the Registrar of the University and the Secretary of the College.

A CORRECTION.

To the Editor of THE LANCET.

SIR,—In your article in last Saturday's LANCET on the Cork Fever Hospital Inquiry, it is stated that Dr. Macnaughton Jones "was supported in his argument upon the nature and uses of pilocarpin by Dr. Gavin Duffy, of Dublin,"—a misprint, which I would ask you kindly to correct, for the name of,

Your obedient servant,

GEORGE F. DUFFEY, M.D.
Fitzwilliam-place, Dublin, Sept. 28th, 1880.

MEDICAL ADVERTISERS ABROAD AND AT HOME.

THE Secretary of the Board of Examiners of the Medical Society of the State of California has been directed to notify certain medical gentlemen in San Francisco—licentiates of the Board—that their advertisements in the Sunday papers, their handbills, and local signs, are unprofessional according to the code of ethics and the medical law, and that the Board requests them to withdraw the same. We get many things from America; would that it were possible to import an energetic Board to stop medical advertising amongst us!

Astonished.—The habit is a bad one; but it is to be rectified by remonstrance and friendly discussion.

A QUESTION OF TREATMENT.

To the Editor of THE LANCET.

SIR,—I am anxious to get some hints for the successful treatment of the following case. Will you kindly afford space to my letter?

The patient, a fairly healthy-looking man, of about twenty-six, is suffering, and has suffered for the last ten years, from a copious eruption of acne pustulosa on the chin and lower part of the cheeks. This eruption is accompanied by spots and patches of soreness upon the mucous membrane of the side of the tongue and lips. These spots are whitish in colour and semi-transparent. Excessive soreness is a marked feature of the spots upon the mucous membrane. The sides of the tongue present some thickening and slight furrowing, but not to any great extent. The patient's general health is very good, the only motive that induced him to apply to me being his anxiety to get rid of the local inconvenience. For various reasons I must exclude syphilis as the *fons et origo mali*. For some weeks I have administered the following with marked benefit: Iron and citrate of ammonia, one drachm and a half; iodide of potassium, one drachm; tincture of calumba, one ounce; chlorate of potash, two drachms and a half; glycerine, one ounce; water to eight ounces; one ounce to be taken three times a day. Much to my annoyance, on administering the above without the chlorate of potash, the spots and soreness of the tongue have returned with their former intensity, although the skin eruption continues to improve under the altered medicine. Can any of your correspondents give me any suggestions as to the local and general treatment of the case in reference to the tongue? Such is the soreness of the organ caused by this eruption that the patient is seriously inconvenienced both in speaking and eating. For local application I have used the glycerinum boracis of the Pharmacopœia, but without much benefit. The patient has some chronic soreness and redness of the edges of the eyelids, but no marked indications of the strumous diathesis. Any suggestions in reference to the treatment of the case will be highly valued. Perhaps some of your readers will be good enough to state their experience in cases of a similar description.

I am, Sir, yours faithfully,

September, 1880.

J. B. C.

A SELF-SUPPORTING DISPENSARY AT LEWISHAM.

WE are obliged for a copy of the Rules of a Self-supporting Dispensary at Lewisham. We take deep interest in any reasonable scheme for accommodating good medical practice to the means of the working classes, and we shall be glad to hear of the success of this particular experiment. We do not like to speak too critically, lest such experiments should be discouraged. It seems to us that the monthly fees for children—2d. (up to three, more than three are not to be paid for)—are too low. Another great omission is that of any rule for excluding unfit persons.

FOUL DUSTBINS.

To the Editor of THE LANCET.

SIR,—At an inquest held a few days ago on the body of a child who died at Lisson-street, Marylebone, the coroner, Dr. Hardwicke, commented strongly on the serious injury to health occasioned by the present system of allowing dustbins to remain in London and its environs for lengthened periods without being cleaned out. Perhaps you would bring your influence to bear on this matter, which certainly appears to me to require looking into.

An uncleaned dustbin, with its festering mass of decaying animal and vegetable refuse, particularly in hot weather and in crowded districts, is a grave evil, as anyone who has given the slightest attention to the matter of hygiene will allow, and the present system of having them emptied once in a fortnight is simply absurd. Of course, those who are addicted to cleanly habits can have their dust receptacles attended to oftener by entering into a private contract with the dustmen; but those whose means are straitened or who cannot afford this luxury, must be content to endure their pestilence-breeding bins, with all the foul odours and health-depressing influences attached to them, until such times as it may please the dustmen to give them a dirty clean out, the visits of these gentlemen being, like those of the angels, "few and far between" in the poor and crowded districts of this great city.

I have frequently been told by members of the working classes that it is no unusual thing for the dustbins in their neighbourhood to remain unattended to for months at a time; and when they appeal to the dustmen in charge of any passing cart, they are either laughed at, or met by a volley of abuse for their pains.

Surely such a state of things, which is easy of remedy, should not any longer be permitted!

Yours truly,

G. STANLEY MURRAY, M.D.

Meadowside, Putney, Sept. 20th, 1880.

MANUAL OF HYGIENE FOR INDIA.

THE following is the official notification of the prize offered by the Government of India for a "Manual of Hygiene," to which we have referred in a previous number of THE LANCET:—

"£100 PRIZE.—A prize of £100 is hereby offered by the Government of India for the best 'Manual of Hygiene' for the use of the British soldier in India. The work must be in clear and simple English, without theories, and thoroughly practical, showing the ordinary causes affecting health, the special dangers to health to which British soldiers are exposed in India, and more particularly during their first years in the country, and the best means by which these dangers may be averted. The work which, if accepted, will be printed at the public expense, and become the property of the State, must not cover more than 50 or 60 pages of print of small pica octavo size. Competing primers must be sent to the Secretary to the Government of India, in the Military Department, Calcutta, so as to arrive not later than the 31st March, 1881. Each should bear a motto, and have a sealed envelope attached, with the same motto outside, and the name of the author within. The prize will be adjudicated by a Committee, consisting of the Surgeon-General, Her Majesty's Forces in Bengal and Principal Medical Officer, Her Majesty's British Forces in India, the Sanitary Commissioner with the Government of India, and an Officer of the Quartermaster-General's Department to be appointed by his Excellency the Commander-in-Chief; but the Government of India will not award the prize unless a manual is produced in all respects suitable for the purposes for which it is required.

"ALLEN JOHNSON, Colonel,

"Simla, 16th July, 1880."

"Sec. to the Government of India.

J. C.—The letter contains no data upon which an opinion as to the nature of the case can be formed.—1. Our correspondent would have been perfectly justified in expressing to Mr. P. during the consultation, and to the friends in Mr. P.'s presence after the consultation, an opinion different from that of Mr. P.—2. There was no objection to his expressing an opinion of the case to the consultant.—3. We cannot see from "J. C.'s" letter sufficient reason for communicating with the coroner.—4. If the uterus was anatomically examined after death, and proved to have contained an ovum recently, a certificate stating the cause of death to be abortion would be false. Unless such proof was discovered, the certificate cannot be said to be false.—5. We cannot say whether the case should be reported in THE LANCET or not until we see the notes.

Mr. George Shaw.—The Students' Number of THE LANCET, Sept. 11th, gives the particulars required in full.

EXAMINATIONS AND THE EXAMINING BODIES.

To the Editor of THE LANCET.

SIR,—As one about leaving a large metropolitan medical school, may I be allowed to say a few words on the subject of examinations and diploma-granting bodies. I have, more especially during the last two years, had opportunities of mixing with men on the point of going up for their diplomas, have worked with them in the wards, in the outpatient department, and seen their ratio of marks at the test examinations, and so claim to have a more intimate knowledge of students than examiners or teachers at hospitals can possibly gain. I wish to speak now more especially of those who come to the hospital, and do as little work as possible, simply the compulsory appointments, take the easiest examination they can find, and then launch out into practice. Now, I say are there not many of these men who fail at the test examination of their hospital, and others who go up under protest and are plucked, three months after will leave London, and return full-blown physicians and surgeons (in the broad acceptance of the term), to the astonishment of their fellow-students? Given a man is through in Surgery at the College, I assert it is simply a matter of £ s. d. to obtain a medical qualification. Why do men leave London for an extra diploma, when studying at a metropolitan school, when what they require is within walking distance? Simply because the examinations are easier, and carry certain advantages with them; for it is an advantage to a general practitioner to style himself "Dr." The majority of the British public never will understand medical qualifications; there are too many of them. Now with 22,000 men on the Register, and still largely on the increase, I say it is high time something was done to make the test more equal. If questions of a difficult character are shown me as set for the written papers, I assert the answers many examining bodies require are of a very low standard. I am sure many men holding the senior appointments at hospitals will bear me out when I say it is terribly unjust, in these days of keen competition, to those who have worked hard to gain a good knowledge of their profession to see the number of men who slip through these loopholes, and at the same time know it is utterly impossible in the first instance for the public to discriminate between the two.

It is not for me to suggest a remedy; but I say it is the duty of examiners and the leading members of our profession to do something, instead of sitting mute and helplessly waiting for a Conjoint Scheme to be passed.

I am, Sir, your obedient servant,

September, 1880.

ALPHA.

Dr. Sargent, (Shadwell).—See the General Order of the Local Government Board respecting the appointment and duties of the vaccination officers. Section 10 of the Schedule attached makes provision for "tracking fugitives," as our correspondent terms it.

F.R.C.S.—We know of no recent means: only the old method of microscopical examination of the blood-corpuscles, and measuring their size.

Mr. James Startin.—In an early number.

GUY'S HOSPITAL.

To the Editor of THE LANCET.

SIR,—I would not have intruded on your space, but to make a remark on the concluding paragraph of Sir Thomas Acland's letter, published this day, is, I think, a necessity. He appeals to old Guy's men to rally together on October 1st, and to "judge for themselves whether there is any hindrance in respect of medical science, or observation, or practice in the way of the students or their teachers." Perhaps not. But are the treatment and necessities of the sick inmates secondary to these? I have always believed that these were of primary importance. Do not the bickerings of the governors tend to show the public that Sir Thomas Acland's view is one that finds favour in the board-room?

Yours truly,

AN OLD GUY'S MAN.

Sept. 25th, 1880.

COMMUNICATIONS, LETTERS, &c., have been received from—*Dr. Cavafy*; *Dr. Hughlings Jackson*; *Dr. Donkin*; *Mr. S. Gamgee, Birmingham*; *Mr. T. Holmes, London*; *Prof. Clay, Birmingham*; *Mr. MacCormac*; *Mr. G. J. Symonds*; *Dr. H. A. A. Nicholls, Dominica*; *Mr. R. Hart*; *Mr. Schlemman, London*; *Mr. S. B. Mason, Pontypool*; *Mr. N. Grattan, Cork*; *Mr. H. Morris, London*; *Mr. Wootton*; *Mr. Walter Fergus*; *Dr. Blomfield, Lynn*; *Mr. Wilson, London*; *Dr. Bayes*; *Mr. Walford*; *Dr. G. F. Duffey, Dublin*; *Mr. Oran*; *Mr. O'Callaghan*; *Mr. W. Pye, London*; *Mr. C. MacDowall*; *Mr. S. Walker, Middlesbrough*; *Messrs. Parke, Davis, and Co., Detroit*; *Mr. Clarke, Somerset East, S. Africa*; *Mr. G. Mee, London*; *Dr. Lloyd, London*; *Dr. P. Tytler, Cheetham*; *Mr. Lindeman*; *Mr. Roth, Brighton*; *Mr. J. D. Campbell, London*; *Mr. Masterman*; *Mr. H. Love, Alresford*; *Dr. J. Cameron, Epworth*; *Dr. Lyon, Glasgow*; *Mr. Nicholls, Chelmsford*; *Mr. Walker, London*; *Dr. A. Clark, London*; *Mr. H. C. Burdett, London*; *Mr. J. M. Wilson*; *Mr. Warrington Haward*; *Mr. J. Robinson, Liverpool*; *Mr. F. Green, Settle*; *Mr. Turner*; *Mr. Crackle, Old Beach*; *Mr. Williams, Lincoln*; *Mr. Owens*; *Mr. Elliott, Manchester*; *Mr. Cornish, Manchester*; *Mrs. Phillips*; *Mr. Vitali, London*; *Dr. M'Naughton, Blackpool*; *Messrs. Christy, London*; *Mr. Reece*; *Mr. Orchard, Notting-hill*; *Mr. Kempton, London*; *Dr. R. Lewins, London*; *Astonished*; *An Old Guy's Man*; *Anti-puff*; *A Constant Reader, Dublin*; *Diogenes*; *G. G. J.*; *F.R.C.S.*; *A Poor Assistant*; *M.D.*; *Out*; *Provident Dispensary*; *W. G. C. K.*; *Kensington*; *Madras Retired*; *A Twenty Years' Subscriber*; *Veritas, Sheffield*; *Another L.R.C.P. Ed.*; *S. S. S.*; &c. &c.

LETTERS, each with enclosure, are also acknowledged from—*Mr. Whalley, Bradford*; *Mr. Robertson, Glasgow*; *Mr. Feeld, London*; *Mr. Blair, Alnwick*; *Mr. Cane, Helmsley*; *Mr. Jeffries, Chesterfield*; *Mr. Sheehy, Messrs. Wilson and Son*; *Dr. Strickleham, Kildsgrove*; *Mr. G. Brown, London*; *Mr. Lewis, Dover*; *Dr. Heelis, Hampstead*; *Mr. Buckell*; *Mr. Morris, Bourne*; *Mr. Elmslie, Westbury*; *Mr. Burgess*; *Dr. Brady, Derby*; *A. B. C., Eastbourne*; *M.R.C.S., Leicester*; *Lex*; *G. G., Stockton-on-Tees*; *Medicus, Newcastle-on-Tyne*; *Medicus, London*; *F.R.C.S.*; *A. B., Gloucester*; *Fides, London*; *R. G.*; *P. E. H.*; *B. B., Lambeth*; *Veritas*; *Y.*; *Medicus, Talke*; *W. Q.*; *Medicus, Nottingham*; *P.*; *F.R.C.S.*; *Senega*; *Omega*; *Thanet, Hounslow*; *X. Y. L., Lowestoft*; *T. F. B., Newcross*; *M.R.C.S.*; *P.*; *Holloway*; *Surgeon, Brighton*; *E. F., Brasted*; *Delta, Reading*; *Beta*; *Medlands*; *J. F. C.*; &c.

THE PUBLISHER regrets that he cannot accede to a request which has been made to allow the distribution of THE LANCET from the Printing-office, in order to insure early delivery. No parcel of less than 500 copies is sent direct from the Printer's. The general Subscribers are supplied through our special agency, and the trade and casual sale is met at the office in Bedford-street.

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Kentish Mercury, La Escuela de Medicina, Builder, Pharmaceutical Journal, Chemists' Journal, San Francisco Western Lancet, Science, Society Times, Deutsche Medicinal-Zeitung, Barmouth Advertiser, Concours Medical, Bullettino della Commissione Speciale d'Igiene del Municipio di Roma, Medical Herald, Birmingham Daily Gazette, Liverpool Echo, Dominican, Brierley Hill Advertiser, Birmingham Daily Mail, &c. &c., have been received.

Medical Diary for the ensuing Week.

Monday, Oct. 4.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS. — Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPEDIC HOSPITAL.—Operations, 2 P.M.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; on Tuesday, 9 A.M.

Tuesday, Oct. 5.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 3 P.M.

Wednesday, Oct. 6.

NATIONAL ORTHOPEDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL. — Operations, 1½ P.M., and on Saturday at the same hour.
ST. THOMAS'S HOSPITAL. — Operations, 1½ P.M., and on Saturday at the same hour.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
KING'S COLLEGE HOSPITAL. — Operations, 2 P.M., and on Saturday at 1 P.M.
LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL. — Operations, 2 P.M., and on Saturday at the same hour.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN. — Operations, 2½ P.M.
OBSTETRICAL SOCIETY OF LONDON.—8 P.M. Specimen: Dr. Poole (Sidelup) will show a Girl with Double Congenital Dislocation of the Hips.—Paper: Professor Stephenson, M.D. (Aberdeen), "On the Rotatory Action of the Forceps."—And other communications.

Thursday, Oct. 7.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL. — Operations, 2 P.M., and on Friday at the same hour.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M.

Friday, Oct. 8.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
QUEKETT MICROSCOPICAL CLUB.—7 P.M. Conversation and Exhibition of Objects.
CLINICAL SOCIETY OF LONDON.—8½ P.M. Surgeon-Major Curran, "On a Case of Mutilation of the Face by a Bear."—Dr. Gowers: "A Family affected with Locomotor Ataxy."—Mr. Spencer Watson, "On a Case of Eyeball Tension treated by Sclerotomy."—Dr. Stephen Mackenzie, "On a Case of Elephantiasis of the Leg treated by Elastic Bandaging."—Dr. Lees and Mr. Bellamy, "On a Case of Traumatic Epilepsy treated by Trephining."

Saturday, Oct. 9.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

An original and novel feature of "THE LANCET General Advertiser" is a special Index to Advertisements (on page 2), which not only affords a ready means of finding any notice, but is in itself an additional advertisement.

Advertisements (to ensure insertion the same week) should be delivered at the Office not later than Wednesday, accompanied by a remittance. Answers are now received at this Office, by special arrangement, to Advertisements appearing in THE LANCET. Terms for Serial Insertions may be obtained of the Publisher, to whom all letters relating to Advertisements or Subscriptions should be addressed. Advertisements are now received at all Messrs. W. H. Smith and Sons' Railway Bookstalls throughout the United Kingdom. The postal arrangements relating to the distribution of THE LANCET will be considered from time to time in the interests of subscribers. Tables of Contents, with the Index of Advertisements, for each Number can be had on application to the Publisher. A First Issue is made each week at seven o'clock on Friday morning, for the Wholesale Houses only. A large Colonial Edition is also published for despatch the same day.

Agent for the Advertising Department in France—J. ASTIER, 67, Rue Caumartin, Paris.

Introductory Address

ON THE

MOTIVES AND METHODS OF MEDICAL STUDY.

Delivered at the commencement of the Winter Session at University College,

By J. BURDON-SANDERSON, M.D., F.R.S.,
JODRELL PROFESSOR OF PHYSIOLOGY.

GENTLEMEN,—The duty has been imposed upon me of occupying you, for half an hour or a little more, with words and thoughts which I must do my best to make useful to you. My subject is prescribed to me by the occasion. It relates to the fact that you are entering on the study of medicine—a calling which you have chosen, probably, on various grounds. Some, perhaps, because external circumstances favoured or compelled your becoming doctors; some, I hope, for the better reason that you have a liking for it.

There are two equally noble dispositions of mind which tend to render the profession of medicine attractive: one is the desire to lead a useful life—a life conducive to the happiness of others; the other, that mental quality which makes it a chief delight to investigate the phenomena of nature—to discover their order and relation to each other. These two tendencies may be called the practical and the scientific. They are alike noble, because each is equally exclusive of selfishness, and furnishes a man with a motive above and beyond the immediate object of making a living. To those who have chosen physic as merely the least disagreeable way of earning money within their reach, all that I can say is that medicine is a poor trade for an honest man; there are many others much more to the purpose. But to all who are actuated by either of those higher motives I have mentioned—to those who are either, in their measure, seekers after truth, or whose aim is to be useful to others, the assurance may be freely given that they will not be disappointed.

Let me first speak of the profession as a means of doing good to others. In this respect there is no other like it. Our work, though sometimes rough and requiring to be done in a rough way, is always beneficent. When in out-patient, dispensary, or union practice we have to come into daily relation with hundreds of men and women whose ailments we feel to be in great measure the fruits of their moral degradation, we are apt to find year by year our sympathies becoming weakened, and our work done rather for the sake of duty than for love. But even here abundant scope is given us for brotherly kindness. The patients in our hospital wards are not mere numbers, although for convenience we are in the habit of calling them so, but men and women whom we are trying to help out of their sad calamities. Our relations with them, however, are not to be compared with those which subsist between doctor and patient in private, and particularly in general practice. It is the general practitioner to whom above all other men the privilege is granted of really serving the sick. No one comes between him and his client. He is not only the healer, but also the adviser in questions concerning the nearest and dearest interests of his patients. Such powers of good doing (or, if they are abused, of evil doing) are not entrusted to anyone else in the community, and involve a great responsibility. There are some, I trust, among you who are beginning the study of medicine to-day to whom this responsibility is attractive. If that has been your motive in choosing your profession, you could not, I venture to say, have had a better.

But there is another noble reason for choosing the medical profession, one which has attracted to it some of its brightest ornaments. That motive is the love of science—or what is the same thing, the instinct of investigation, the desire to search out the secrets of nature; and I wish to show you to-day that this is also a worthy motive. I wish to show you that although the investigation of nature's secrets is not the business of the doctor, but rather the curing of human ailments, the instinct of investigation is a splendid motive for choosing the medical profession. And in order to do this I must ask your attention for a few moments to the relation

which subsists between the art of medicine, the business of doctoring, and the science which belongs to it, and has sprung out of it.

Whenever in the discharge of your future functions as doctors you have to find out what is the matter with a patient, in order that you may advise how he is to be cured, you will be guided in your conclusions by what is called clinical experience—i.e., by a collection of information about sick people and their ailments, which you carry about with you in your memory—information which you will have partly acquired by your own observation, but for the most part derived from the recorded observations of other people. As you go on in your professional life your store of this invaluable commodity will become richer and richer. If you have learnt any new practical expedient which is of value, you perhaps record it for the use and benefit of others, but, as a rule, clinical experience is like good deeds, its value ceases with the life of its possessor. A man can leave but a very small percentage of his hard-earned practical knowledge to those who come after him; yet, small as it is, it is by the accumulation of such contributions in the course of the last two centuries (for we need not go further back than Sydenham) that the modern art or method of medicine has grown; it is, in a word, the sum of the recorded experience of all the practitioners of medicine and surgery who have lived, since the necessity and advantage of systematically observing cases was recognised. The medical art is still progressing, and will continue to progress by this same method of slow accumulation. The mass of the knowledge which guides practice is still obtained almost exclusively by the comparison of new cases with old ones; but it has always been recognised by thinking persons that, sooner or later, medicine, in common with all other arts of civilised life, must gradually enter on a new era—that she, like the other arts, must seek a foundation for her practice in the application of what are called principles; in other words, that she must eventually depend upon a science, just in the same way as, for example, the art of navigation already depends on astronomy, or as the art of agriculture will some day depend on a knowledge of the physiology of plants. Much of the past history of medicine consists of the records of vain attempts to force on this result prematurely. It would be easy to show you how in the last century and in the first half of the present, system followed system, how theory after theory had its day or its decade, until some forty or fifty years ago it was discovered that all these theories were vitiated by a common fallacy—by the misconception that the functions of living beings are excepted from the operation of the general laws of nature, and in particular that the living and suffering human body is, as it were, a dynasty of itself, an *imperium in imperio nature*, the affairs of which cannot be discussed as if they were subject to the universal powers of matter. Until it was understood that, in so far as we know anything about him, man is part and product rather than purpose of the universe, there could be no science of medicine, as you will see at once if you place before your minds what are the subjects that medicine has to deal with, and what it is that constitutes a scientific knowledge of them.

Medical science means the knowledge of the causes of disease, and the mode of their operation—that is, the disorders they produce in the machinery of the living body. It includes also another closely related subject of scientific investigation, that which relates to the nature of remedies and the mode of their operation. As to the method of acquiring so much of this knowledge as can be acquired by you without encroaching on the time which must be given to the primary purpose for which you come here—the learning the technical part of your profession—I will speak immediately. My present purpose is to address myself for a moment to those who possess the scientific instinct, and have found out for themselves that truth is one of the two best things which exist in the world, and to try to show them that our science (I mean the science of medicine) is, irrespectively of its uses to mankind, as attractive in itself as any other branch of natural knowledge.

I have already given you a short definition of its scope, and I can make that definition even shorter. The purpose of all science, as you know, is the discovery of the relation of cause to effect, of agent to action. It is that which makes the difference between scientific knowledge and the knowledge we possess of matters about which we do not take the trouble to think. The subject of medical science is not merely human suffering and its causes, but these two in

relation to each other. The problems with which it deals are, therefore, as truly scientific as those of the other natural sciences, the difference between them being of degree, not of kind. Our knowledge about the way in which our bodies are acted on by things outside of us that do us harm—i.e., by the causes of disease or by the remedies which counteract them,—although it has grown with amazing rapidity in the course of the last generation, is scanty as compared with what it might be and with what it certainly will be a generation hence. The reason why I think so is that at the present moment new discovery as to the nature and causes of disease is being pressed forward in all parts of the world by every possible means. The processes of disease as they present themselves in the wards of hospitals, and the changes those processes leave behind them after death, are being observed with more minuteness and completeness than ever, while at the same time observations are being largely made on animals, having for their object to investigate the natural processes of disease by comparing them with those which are produced artificially or experimentally. In both of these directions, by both of these methods, the clinical and the experimental, men are striving after new discovery with an earnestness which has had no parallel at any previous period. In all the centres of medical learning new institutions are coming into existence—scientific observatories they might be called,—having for their sole object to investigate the nature and causes of disease. Earnest men are at work, year after year, unravelling some previously inextricable entanglement, or projecting the dry light of science into some dark and foggy corner. The progress is slow, and will probably continue to be slow for many years. The end must be gained by hard work and by that perseverance to which difficulties serve only as encouragements.

In speaking thus of the progress of discovery and of the hopes we entertain of the advancement of the science of medicine, I am sure you will not think that I am unduly occupying your attention with a matter with which it would be premature for you to concern yourselves. There is no fear whatever of your being beguiled into too early and too earnest a devotion to scientific study. Every influence which will surround you as students will be opposed to it, for it does not pay as a preparation for your future career as practitioners, and still less in the examination-room. I may therefore quite fearlessly say all that can be said in its favour. The purpose I have in view in doing so is to assure any of you who have the time and capacity for scientific study that it is not necessary to go out of your own subject—the science of medicine. You need not become zoologists or botanists, or even physiologists (excepting in so far as physiology is the threshold of medicine) in order to find the fullest scope for your powers of investigation. With equal ability and equal labour there is as much to be done in the way of new discovery in the science of medicine and surgery—that is, in the investigation of the cause and operation of disease-producing agents, and the mode of action of remedies, as in any other field of inquiry which can be selected, with the additional inducement that what is done for medical science is also done for humanity.

For it cannot be doubted that the possession of better knowledge as to the causes which produce disease and as to the conditions essential to the preservation of health, will enable the doctor to advise the community much more effectually than he can as yet on all matters concerning their bodily welfare. At present there are innumerable questions which concern the influence on the bodily health of the conditions under which we live, such as water-supply, food, climate, dwellings, and others, on which we find ourselves compelled to keep silence because they demand for their solution a more exact knowledge of the relations between man and the external world than as yet exists. Naturally enough, the public mistake our reticence for ignorance, and seeking for guidance elsewhere, accept any folly that may be presented to them, provided it is dogmatically asserted and has the semblance of a scientific theory. Considering that the external conditions of life influence human action at every turn, it is evident that if we knew more about the way in which these conditions act we should gain thereby a much more general influence. In the sick-room, the fact that the doctor is better informed than the patient and his friends, or is believed to be so, confers upon him for the time a power which is almost divine. But as regards the apparently simpler and more frequently recurring questions which relate to the ordinary *juvantia* and *lædencia* of daily life, we cannot claim the same superiority

of knowledge; and it is for this reason that in these matters the public are well content to do without us.

The moral of this is, that *if we want the power we must work for the knowledge*. It is without doubt most desirable as well for ourselves as for the community, that the medical profession should hold the position which belongs to it, and be looked up to as the source of knowledge in all matters medical; but this end is to be attained, not by scheming for political influence, but by showing that we are accomplished in our own science. The necessity for this is rendered every day greater by the gradual change which is now in progress in the higher education of this country. The relative number of laymen who are sufficiently acquainted with subjects allied to medicine to form an intelligent opinion on medical subjects and to detect the ignorance of pretenders, is year by year increasing. If, therefore, we are still to be leaders of the public in matters which concern their material interests, we must keep at least as far in front of them as we have done hitherto; and in my judgment the only way in which we can keep in front is by maintaining, alongside of that practical efficiency which has always distinguished the English medical practitioner, a high standard of scientific culture.

So much for the motives. Let us now consider the methods of medical study.

Everyone is familiar with what is meant by the three R's of elementary education. In like manner there are three P's in medical learning—Physiology, Pathology, and Practice, which comprehend all that you can desire to carry away with you as permanent acquisitions when you leave this place.

The relation of these subjects to each other is very simple. It arises from the consideration that as practice is to be the business of your lives, it must be in so far the end of your studies that the other subjects must derive their special interest for you from their connexion with practice. My object is to show you to the best of my power how much knowledge you may expect to acquire of these subjects, and how you may best acquire it in such a way as to retain it for good; for the first principle that ought to guide a man in study is to learn nothing to forget it. There are of course some facts which we are obliged to learn for a temporary purpose, just as we study a page of Bradshaw's Guide Book when about to make a journey; but in general nothing is worth acquiring that we do not intend to keep hold of.

Let me ask your attention first to the subject of Practice. The first thing to be said is, that the art of Medicine is one which requires much labour and long time to acquire. No man can hope to acquire it during the four years of his student life so as to be at the end of it an accomplished doctor. But the hospital offers you opportunities of learning the methods of practice which, whether you use them or not, will never recur in your after-life. As regards these opportunities, a great change has taken place, particularly in London, during the last half century—a change in the bringing about of which University College Hospital has played a principal part. Fifty years ago the hospital student had to teach himself everything. The only opportunity he had of learning how to examine a patient was by what was expressively called “walking the hospital”—that is, by perambulating the wards at the time of the daily visit. According to this plan, if the physician or surgeon took the trouble to think aloud, those more fortunate students who were next the bedside, if attentive and intelligent, learned something, but the rest nothing; and consequently, when this was the only mode of instruction, a man entered on his profession, in the majority of cases, with no better preparation for practice than the useful though ill-digested information he had picked up during his apprenticeship. Unfortunately, it still happens that some men—even University College men—begin their life-work ignorant of its duties; but for this they have to blame their own neglect, not want of opportunity.

You begin your hospital studies crammed with information as to the topography of the dead human body, which you have learnt in the dissecting-room, and with a certain, probably very inadequate, acquaintance with the living processes of which it was once the seat, but either entirely “green” as regards sick people and their ailments, or furnished only with such general notions as you may have picked up by occasional visits to the out-patient rooms or wards. The first thing you have to learn is how to observe the symptoms or signs by which diseases are

recognised, contenting yourself in the beginning with a very imperfect understanding of their meaning. Some of these signs are very simple, such as the frequency of the pulse, or the temperature of the body, requiring for their observation only attention and care; others are much more difficult, either because the eye or the ear requires to be educated to appreciate or distinguish them (as in the case of the sounds of the chest), or because they require acquaintance with particular modes of manipulation (examination of the urine), or skill in the use of certain instruments (e.g., the laryngoscope or the ophthalmoscope). Now, the plan of learning all matters of this kind used to be to blunder on by yourself until you succeeded. In this way no doubt some men learned better, but this advantage we are content to forego, considering that in consequence of the increased complexity of the technical procedures now in use, such a method would be impracticable.

Skill in any art is most easily and quickly attained by a combination of seeing with doing. Accordingly, the method by which you are taught the art of observing the signs of disease, which is the "beginning of wisdom" as regards medicine and surgery, consists in a combination of demonstration (that is, of showing how the thing has to be done) with what may be called "clinical drill" (that is, doing it under direction). The "clinical drill" consists of two sorts of exercise—one in which you make your observations in presence of your teacher and of your fellow-students, and state *viva voce* the results at which you have arrived; the other in which you make your observations by yourself, and hand the results to your teacher in writing: the two being complementary to each other as regards their respective advantages. The one teaches you promptitude, the other accuracy.

But to observe accurately and promptly is, as I said just now, only the beginning of medical wisdom. The next step in your preparation for practice is to concentrate the knowledge you have gained by the observation of signs, on the two practical questions you have to answer in respect of every sick person you have to treat—What is the matter with him? and What is to be done? This concentration we call, technically, making a diagnosis. How do you learn this? By methods analogous to those I have already described, in so far that your part of them is a combination of seeing with doing. In place of the very simple demonstrations given to a few men, by which you have learnt the art of observing symptoms, now come the clinical or bedside lectures, in which the physician investigates, before a much larger number, a complete case, *ab ovo usque ad mala*, and finally makes the diagnosis, and explains to you exactly the grounds of his conclusion, occasionally perhaps asking this man or that to verify some important matter of observation. The drill consists in this, that those students who have advanced sufficiently are asked to do by themselves what they have seen done, stating the facts and the conclusions they derive from them as regards diagnosis and treatment, for criticism. At the same time that you have learnt all this about internal diseases, you have acquired by similar methods a knowledge of the signs and diagnosis of injuries and other surgical affections, and have become more or less masters of the handicraft of surgical treatment; so that you now know not only how to find out what is the matter with a patient, but how to act on that knowledge.

A man so trained might be regarded as thoroughly equipped for professional life. But yet practical people will tell you that there is something wanting. And now let me say what that is. In University College Hospital there are numerous appointments which involve, along with residence in the hospital, more or less of the *responsible charge of patients*. It is wise to make the attainment of one or more of these positions (which I need scarcely say are bestowed exclusively as the reward of merit) from the beginning of your course the first object of your ambition, for a student who closes his medical career as house-surgeon to the hospital possesses what is of more substantial value to him than all the prizes, medals, or other distinctions he may have gained before—viz., the opportunity of learning how to face the actual difficulties of practice while still protected from the heavy responsibility of professional life. Unfortunately, these advantages cannot be placed within the reach of all who deserve them.

This is all that time will allow me to say about the method of learning medical practice. Let me now turn to the more difficult task of endeavouring to tell you in what way so much acquaintance with the science of medicine as lies within your reach is to be acquired. I will begin by stating

more definitely what I have perhaps already implied, that I believe it to be quite possible to practise medicine well without any knowledge excepting of that practical kind which I have just described to you—that is, the knowledge how to examine a patient properly, and how to apply the accredited remedies *secundum artem*. I believe it to be possible for an intelligent man, provided that he has learned sufficient descriptive anatomy to know his way about in the human body, to learn what he absolutely requires for practice by practice alone; and I would go further and say that if he had had efficient bedside teaching he would be much more useful to the public than a man who, without this, had gone through the most elaborate scientific preparation. It is possible (to quote the words in which Mephistopheles scoffs at medicine) to have "durchstudirt die gross' und kleine Welt," and in the end to be for practical purposes a fool.

I have already given you some general reasons for thinking that notwithstanding all this, it is desirable that you should know something of medical science, and I will now add another which is very cogent. No man, however practical the bent of his mind, refrains from speculating as to the nature of diseased processes. The most ignorant practitioner finds explanations of his patients' ailments in imaginary disorders of internal processes, such as those of digestion, secretion, and the like. Now, it is clear, that in so far as such speculations influence practice at all, they must influence it injuriously, and it is also clear that the only way in which they can be neutralised is by the furnishing of the mind with genuine knowledge. I may therefore assume that, if for no other reason, merely to guard himself from being misled by empty theories, everyone would desire to know something of the other two subjects I mentioned just now—viz., of Physiology and Pathology,—and the only question is how much of them you ought to try to know, and how they are to be learnt.

In entering on the study of human anatomy you make acquaintance with a subject which was before strange and even repulsive to you—the dead human body. By hard work in the dissecting-room the anatomical conception of the body as a system of bones, muscles, bloodvessels, nerves, viscera, becomes more and more familiar to you—and you know your anatomy. When you turn from anatomy to physiology and pathology, you have again before you the human body, but in a totally different aspect, which is quite as strange to you as the other was before. What you have to do with now is not the shape or appearance of the body, but only with its visible motions and with the invisible changes which go on in it and constitute its life. Now these visible motions are those of the muscles, and of the levers and pulleys which they act upon, or of the heart and of the liquid which it drives along a system of elastic tubes, or others analogous to these, all of which resemble those of machines. The invisible changes are, first those of organisation, changes which are associated with the development and growth of the organism and its parts; and, secondly, the innumerable and complicated molecular processes, unconnected with the formation of new structures, of which our bodily life in its essence consists—viz., the nutrition of the tissues, the secretion of glands, the contraction of muscles, the excitation of nerves and nerve-cells. This being so, it must be clear to you what sort of study the science which investigates these processes or changes in health and disease must be. It has to do almost exclusively either with the actions of machines or of molecules. It requires, therefore, of those who intend to pursue it, first, a knowledge of the nature of such actions; and, secondly, of the complicated structural conditions under which they are carried out in the living organism.

This being so you will see at once that to many of you the fact that your education, though otherwise excellent, has been of such a nature as to leave you in ignorance of the laws which govern the material world outside of you, is a serious obstacle in the way of your learning the science of medicine. And for this reason I would most strongly recommend you, if you know nothing of natural science, particularly of physics and chemistry, to set to work to learn the elements of them before you attempt to understand the much more difficult physics and chemistry of the living human organism. The knowledge of these subjects that you want in order to enter on the study of the science of medicine need not be extensive, but must be thorough and genuine, for it is not intended to be learnt and then forgotten, but to be retained and used. What you require, therefore, is to have appropriated as your own the explanations which science gives of the more simple relations which exist in the

inorganic world, in order that you may be prepared to understand the more complicated ones which present themselves in living beings. And this kind of knowledge experience shows to be directly proportional to the time and labour spent in acquiring it, and therefore, labour and time being limited, inversely proportional to its extent—i.e., to the number of things you attempt to learn.

The science of medicine—that is, all that you have to learn in addition to the technical knowledge you require for practice—relates, strictly speaking, only to diseases and their remedies, comprising pathology and pharmacology; but these subjects, as we have seen, are so inseparable from the larger subject—physiology—that the three must be considered as one, to the learning of which the same principle is applicable as to the study of the preliminary subjects. Your object should be not to store your memory with facts as they are called—these being often only dogmatic statements—but to understand the natural order of phenomena. This understanding you may gain by reading, and still better by attending lectures and demonstrations, but experience teaches that the knowledge so obtained does not become real until you have begun to observe for yourselves. The notions that you acquire without this are not only soon forgotten but, even during the short period that they are still sharply defined in the memory, are not believed in, and consequently the knowledge which is built up of such notions has something in it of the nature of sham. Now in the medical department of the college we have always done our best to guard against this, by developing to the utmost of our power the practical side of our teaching. It was in University College that the first course of practical physiology ever given in England was organised by Dr. George Harley, twenty-eight years ago, under the auspices of my illustrious predecessor in the chair of physiology. Since that time we have endeavoured year by year to advance in the same direction, notwithstanding many difficulties. One of the greatest of these was want of space—a difficulty which, I am happy to tell you, is now removed. In the new Science Wing we have been provided with magnificent working rooms, of such size that we can offer to each individual student a separate working place. In entering to-day on the occupation of these working rooms, it is right that we should express our gratitude to the Council, and to the generous contributors to the building fund, who have given us so noble a proof of their appreciation of the value of scientific teaching and research; and not least to the architect, Professor Hayter Lewis, to whose skill and foresight we owe so much in adapting the building to its purpose. This purpose is primarily practical instruction; but in addition to this the new laboratories will offer advantages not to be obtained elsewhere in London to all who desire the opportunity of working for the advancement of medical science by new investigation. To all such we bid welcome in the terms of our motto—"Cuncti adsint," venturing to hope, that however insignificant the means at our disposal may be, as compared with those of which Medicine can avail herself in other countries, our new physiological school may at some future time lay claim to the credit of having at least kept the lamp of science burning in expectation of the coming of a better day.

I have only a few more words to say. All of you know that since we last met on an occasion similar to the present we have lost one of the truest friends and most illustrious ornaments of this college—Dr. Sharpey.* I have already told you how the practical teaching of physiology was initiated by him. I wish to give those of you who never saw him some idea of what he was, and at the same time to give expression to my own feeling of veneration for his memory—of regret that we have lost him.

I cannot give you a true notion of Dr. Sharpey's scientific character without referring to the share which he took in the development of the science which he taught here. In 1836, when he was appointed professor, the sum of knowledge which existed as to the mechanical and chemical processes of the animal body was a mere rudiment of that which we now possess; but during the twenty years which followed that date, its growth was like that of infancy—it was more rapid beyond comparison than it had ever been at any previous period, more rapid than it can be again. This growth began with the revelation of the previously unknown organisation of plants and animals, which was the fruit of the discoveries of Schwann, and of the anatomical researches of Henle, Bowman, and Sharpey himself, and closed with the achieve-

ments in vital physics and chemistry of Helmholtz, of Ludwig, of Bernard.

The invitation of Dr. Sharpey to take a position so important as the chair of Anatomy and Physiology in this place had an influence in promoting the study of what afterwards came to be called Physiological Anatomy, which could hardly be exaggerated. The subject was new, and an expositor was wanted, and he was singularly fitted for the position which he was called to occupy both by nature and by education. By nature he was a man of extraordinary vigour, both mental and bodily, and at the time of his advent to London was in the strength of his youth with the best years of his life before him. He had prepared himself for the work of teaching by devoting several years to the study of anatomy in the schools of France, Italy, and Germany, and had cultivated his mind to the utmost by intercourse with the most active intellects of his time. He had already acquired a great reputation as an anatomist and comparative anatomist, and had an unrivalled acquaintance both with the literature of his time and with the writings of the older anatomists and physiologists, as well as with the historical development of the subject he was about to teach.

A man possessed of so wide a range of knowledge and endowed with so remarkable a judgment as he was, could not fail to be a great teacher. The excellence of his teaching consisted in its being the spontaneous outflow of a richly furnished intellect. To this were added other more personal qualities, which rendered it specially adapted to its purpose and to the audience whom he had to address. No man more thoroughly sympathised with the student or understood more instinctively his requirements; and consequently his lectures, while they satisfied those who sought for full knowledge, set forth the subjects taught with such clearness that even the least capable found it difficult to avoid learning something.

I must not dwell longer on the intellectual endowment of the dear friend whom we have lost. We shall not see his face or hear his voice again. We shall no longer have the opportunity of drawing for information on the exhaustless stores of his memory, or of profiting by his sage counsels. But to those of us who knew the moral excellences of his character, his inflexible devotion to duty, his perfect truthfulness his unwillingness to think evil of others, his ready sympathy with every noble and generous sentiment—his bright example, though he is gone, will still speak. Let us strive to follow it.

An Address

DELIVERED AT

KING'S COLLEGE

After the Distribution of Scholarships and Prizes at the Opening of the Winter Session,

By GEORGE JOHNSON, M.D., F.R.S.,

PROFESSOR OF CLINICAL MEDICINE AT, AND SENIOR PHYSICIAN TO, KING'S COLLEGE HOSPITAL.

LADIES AND GENTLEMEN,—The first duty that I have to perform in addressing you is a very pleasant one: I have to offer my hearty congratulations to those students who have been successful in obtaining scholarships, prizes, and other marks of distinction. Although many years have elapsed since the last occasion on which, in this room, I was amongst those to whom similar honours were awarded, I retain a lively recollection of the pleasure experienced while receiving them in the presence of near relations and friends. I can, therefore, very heartily sympathise with you on this occasion.

And now, exercising the privilege usually granted to advancing years, let me offer you a few words of advice. I beg of you not to consider these scholarships and prizes as the end and object of your labours; rather they are to be looked upon as incentives to yet further and more prolonged exertion. By the success which you have hitherto achieved you have shown that you possess an amount of intellectual capacity and of industry from which in after years much more will be expected; and in proportion to the pleasure and satisfaction which your friends have experienced in your

present success and distinction would be their disappointment and sorrow if in the future any of you should, unhappily, fall short of the hopeful anticipations which your past career has excited. If you go on as you have begun, persevering in habits of steady conscientious industry, a more or less prosperous and useful career may confidently be predicted for you. Our experience of the past leads us to anticipate that men who have distinguished themselves, as some amongst you have done, will rise to eminence in their profession—that they will not only become skilful, trustworthy, and therefore trusted practitioners, but that they will become teachers and leaders. It may fall to the lot of some of you to be enabled, by diligent and sagacious research, to throw light upon some of the as yet obscure phenomena and processes of disease, to advance our knowledge of the causes of sickness and mortality, and to add to and improve the means of prevention or of cure. If such should, happily, be the result of your labours, you will have the satisfaction of feeling that, not only have you gained deserved credit for yourselves and for your school, but you have conferred a lasting benefit upon mankind.

I may assume that there are some present who have been unsuccessful competitors for prizes or other distinction as there are unquestionably some who have not been competitors at all. To each of these classes I have a few words to say. My experience has taught me that there are some men of intelligence and steady industry, who, apparently from a want of the power to arrange their ideas in a methodical order, or to give a clear expression to them, fail in competitive examinations. Now while we cannot but condole with such men in their disappointment, we may encourage them to persevere by reminding them that the labour of preparing for even an unsuccessful competition is rewarded by an increase of knowledge, and that the facility of quickly arranging ideas and giving expression to them in a written or a *vivâ voce* examination is often much increased by practice. Let them not, therefore, despair of greater success in the future than they have met with in the past.

With regard to those students who refrain entirely from competition, while there are some who perhaps want the ability, and others who lack the industry which is requisite to ensure success, there are some men of unquestionable ability and industry to whom competitive examinations appear to be distasteful. I have known and could now point to some of these quite exceptional men who have proved their ability and their industry by the attainment of great success, as able and skilful practitioners, and even eminent teachers, but who never, during their student career, competed for a prize or a scholarship. Most of this class of non-competitors whom I have known have been men of ample means, for whom even the most valuable of our scholarships have had little or no pecuniary attraction; but for those less favourably circumstanced, whose friends may perhaps find a difficulty in defraying the expense of a complete and prolonged medical education, it becomes a positive duty to endeavour to lighten the burden of parents or guardians by a diligent effort to win a scholarship.

And here again I could point to several instances in which the gaining of our senior scholarship, with perhaps another from the University of London (an object of ambition which I trust that many of you are keeping in view), has enabled a persevering student to prolong his education in London, and ultimately to secure a permanent position here, which without such early pecuniary fruit of his own industry would have been unattainable.

I am not unmindful of the fact that for the first time, at a distribution of prizes in this College, we have here present a number of young men who are on the threshold of their medical studies; and to them in particular I now desire to address a few words of welcome, of counsel, and of encouragement.

No one who is interested in the career of a medical student can contemplate the weighty consequences to himself, to his family and friends, and lastly to mankind, of the manner in which he spends the four or five years during which he has to prepare himself for the practice of his profession, without a feeling of anxiety. And this anxiety is not lessened by the consideration that in this great city young men are exposed to many temptations, more or less perilous, the tendency of which, if yielded to, is to impair their moral and intellectual powers, and so to hamper and hinder them in the prosecution of their studies. The best safeguard against these dangers, next to those high principles and that sense of duty which we may hope that all have had instilled into

them at home and at school, consists, I believe, in an immediate and persevering application to the work prescribed for them by the curriculum.

The student who has arrived at that stage of his progress in which he has learnt to take delight in his work is happily safeguarded against many dangers that beset the idler, for whom it is proverbial that the author of all evil is always preparing some work of mischief.

The subjects to which your attention will first be directed are anatomy, physiology, and chemistry, and in order to obtain such a knowledge of these large and complex sciences as will form a secure basis for that acquaintance with disease and its preventive and curative treatment, which is the final and supreme stage of your medical studies, you will need to devote to them all the time, the attention, and the ability that you have at your command. The ablest and the most gifted amongst you will not find that he has any time to spare if he sets himself in earnest to master the many details and the underlying principles and laws of these extensive and important sciences; nor, on the other hand, need the duller and least brilliant student despair of a large measure of success if only he has inherited or acquired that essential qualification for the highest success in any great or useful calling—a habit of steady, persevering industry.

To borrow an illustration from the now veteran Thomas Carlyle, "All work of man is as the swimmer's. A waste ocean threatens to devour him; if he front it not bravely it will keep its word. By incessant wise defiance of it, lusty rebuke and buffet of it, behold how it loyally supports him—bears him as its conqueror along."

Every teacher of experience could point to numerous illustrations of the lesson inculcated by the fable of the hare and the tortoise—I mean examples of the brilliant and apparently highly-gifted idler being surpassed in the race of life by the comparatively dull but plodding and steadily industrious man. It would, of course, be unreasonable and absurd to deny that individuals and races of men differ immeasurably in the kind and degree of their inherited or acquired mental powers, but my argument is that without industry the most brilliant man will fail in any high pursuit, and that the greatest works of so-called genius have not been accomplished without great labour—*nîl sine magno labore natura mortalibus dedit*. The skilful artist who, with a few apparently easy and careless touches of the pencil, puts upon his canvas a beautiful scene of nature or a striking likeness of a living human face, has acquired this marvellous power of rapid execution only by long-continued study and by the diligent practice of the mechanical details of his art.

Again, the musician who thrills and delights an audience by his brilliant performance has obtained this admirable facility, this consummate skill, by years of laborious study and practice. An eminently-skilled musician must no doubt possess an innate highly and delicately-organised brain and nervous system. I have had frequent opportunities of observing the extreme nervous sensibility of eminent musicians,—a sensibility which, with a capacity for the intense enjoyment of their delightful art, carries with it also an exceptional liability to acute suffering. One phase of this subject is strikingly and amusingly illustrated by Hogarth's picture of "the enraged musician," who is represented as driven to distraction by the discord of street noises.

So of the poet, if the saying *nascitur non fit* be true, he must be born and cannot be made a poet; it is equally true that the greatest and most successful efforts of poetic genius are the results of the prolonged and diligent culture of inborn intellectual power. It has been said of Milton by an eloquent Hunterian orator¹ that if in the full maturity of his genius he—

"fed on thoughts that voluntary move
Harmonious numbers."

He had acquired this power, he had earned this facility, this spontaneous activity, by the industry with which in early life he had accustomed himself

"to build the lofty rhyme."

It would not be difficult to prove by numerous extracts from the dramatic works of Shakespeare that the most admirable productions of his unrivalled genius are the result of careful painstaking study and elaboration. As an illustration I select one passage, which has a medical as well as a literary interest. You are aware that there exists an early version

¹ Hunterian Oration, by Joseph Henry Green F.R.S.

of the play of "Hamlet," published in 1603, and that this was followed by a later edition, "enlarged," as the title-page states, "to almost as much again as it was." A comparison of the two editions affords many interesting illustrations of the manner in which the great dramatist had elaborated and improved upon his original rough sketch. The passage to which I refer is that in which Polonius describes the origin and progress of Hamlet's supposed madness. In the earlier edition Polonius says—

"He straightway grew into a melancholy,
From that into a fast, then into distraction,
Then into a sadness; from that into a madness,
And so, by continuance and weakness of the brain,
Into this frenzy which now possesses him."

In the revised edition we have the well-known lines:—

"And he repulsed, a short tale to make,
Fell into a sadness, then into a fast,
Thence to a watch, thence into a weakness,
Thence to a lightness, and by this declension
Into the madness wherein now he raves,
And we all wail for."

The improvement in this later version of the passage, the result of careful observation and study, is very obvious and striking. In the revised work such repetitions as "melancholy" and "sadness," "frenzy" and "madness," are avoided, and we have condensed into a few lines the perfectly correct medical doctrine that a great sorrow often causes in succession sadness, loss of appetite, wakefulness, weakness, "lightness," or slight and transient delirium, and at length raving madness; these phenomena occurring, as our daily experience teaches us, exactly in the order in which they are mentioned by Polonius.

More than one lecture might be given, and much has been written and published to illustrate Shakespeare's medical knowledge, more especially his unequalled mastery and marvellous exposition of psychological phenomena. Without doubt his powers of observation and imagination, and his command of language were incomparably great, but even these vast mental endowments would not have enabled him to produce such masterpieces of dramatic art as "Macbeth," "Othello," "Lear," and "Hamlet," without an industrious use of his unequalled intellectual powers.

If then it be true, as it appears to be, that for the attainment of success in the practice of the so-called *fine arts* of painting, music, and poetry, diligent study, and persevering industry are requisite, they are not less so for the acquirement of that scientific knowledge and practical skill which are essential for the successful practice of medicine and surgery.

The skill and the manual dexterity which enable the surgeon to perform successfully a difficult operation, guiding his knife safely amidst delicate tissues and vital organs, are not to be acquired without prolonged study and much practice. Nor, again, is that knowledge of the interdependence, or physiological relationship between various tissues and organs—their action and reaction upon each other in health and in disease—which often enables an experienced observer to base a diagnosis on a single phenomenon—it may be the character of the pulse, the visible throbbing of an artery, a patch of degeneration in the interior of the eye, the sound of the cough or of the voice, or the expression of the countenance—such knowledge, I say, can be obtained only by long and patient clinical observation and research.

One piece of advice I am anxious to impress upon you, which is this: whatever line of practice you may hereafter—whether by natural taste, inherited opportunities, or other favouring circumstances—be led to adopt, whether you become consulting physicians or surgeons, or so-called general practitioners, or whether you take up some such important special department of practice as obstetrics, the care and treatment of the insane, or ophthalmic or aural surgery, it would be an error and evil for you too early in your professional career to devote yourselves to the exclusive study and practice of any one department of medicine or surgery. The more general is your knowledge of disease, the more thoroughly you have become practically skilled in the use of every means of physical diagnosis, the better qualified will you be hereafter to undertake any special department of practice.

As a physician I gratefully acknowledge my obligation to my surgical colleagues for the lessons they are continually teaching me; but more especially I am indebted to my old master and friend and colleague, the late Sir William Fergusson, under whom I had the advantage to serve as dresser and house-surgeon. Then, on the other hand, I

venture to say that the most eminent and skilful of surgeons finds himself rather helped than hindered in his daily practice by an acquaintance with many details which are usually considered to come within the province of the physician.

I have often said, and I repeat now, that some of the best practitioners whom I have the happiness to know are what are called "general practitioners"—men equally at their ease and equally skilled in setting a broken bone or conducting a patient safely through the crisis of a fever. These men are usually the confidential family advisers in all emergencies; and while pre-eminently the friends of the poor, often associating on equal terms, as their intelligence and culture entitle them to do, with the best families in their neighbourhood. There are few positions in the profession of greater honour and usefulness than this.

Then, *per contra*, some of the worst and least trustworthy practitioners, although perhaps highly patronised by an indiscriminating public, have been men with an unmerited reputation for some small speciality. A large proportion of the public adopt and act upon opinions with regard to special departments of practice the exact opposite to those which we believe to be reasonable and right. Instead of assuming, as we do, that for a complete knowledge and successful treatment of any one class of disease a general acquaintance with the whole range of pathology is requisite, they appear to suppose that skill in one department of practice implies ignorance of every other. As an illustration of this, the late Dr. Latham related the following anecdote to Sir Thomas Watson, from whom I heard it:—

Dr. Latham, as many of you are aware, was a very eminent, learned, and accomplished physician of St. Bartholomew's Hospital, but he happened to have published more on diseases of the heart and lungs than on any other medical subject. A patient of his, who had recently recovered from some pulmonary affection, one day addressed him thus: "I feel that as regards my lungs I am quite well, and now I think of going to consult Dr. Watson about my general health." To which Dr. Latham replied: "Yes, I see; in your estimation, then, Dr. Watson is an 'architect,' and me, I suppose, you look upon as a bell-hanger." It is our wish—the wish of myself and my colleagues—that all of you who are now entering upon, or who have already made some progress with your medical training here, should aim at qualifying yourselves to be architects and not mere bell-hangers in the profession.

In the study as in the practice of any profession or calling it is well to keep steadily in view a high standard of excellence, and, by continued effort, to endeavour to attain it.

"We live by admiration, hope, and love,
And, even as these are well and wisely fixed,
In dignity of being we ascend."

In our great metropolitan cathedral you have seen or you may see the fine and impressive monument to Nelson, in which Britannia is represented pointing the upward gaze of two young midshipmen to the great admiral as a model to be admired and imitated. In like manner, and with a like purpose, let me direct your attention to a former professor of medicine in this college as happily a living example of a truly great physician. I refer, of course, to Sir Thomas Watson, as a man not only learned in the science and skilful in the practice of his profession, but a gentleman in the fullest sense of the term—remarkable not less for the courtesy and consideration uniformly shown to his professional brethren than for the care and skill bestowed upon his patients. His published lectures on the Principles and Practice of Physic have for the last forty years continued to instruct by their practical wisdom, and to charm by their lucid and scholarly style. And now at an age of more than fourscore years he enjoys the well-earned and cheerfully rendered respect and esteem of the entire profession, and of all classes of the public from the Sovereign downwards. He possesses "that which should accompany old age, honour, love, obedience, troops of friends." That, gentlemen, is the high standard of excellence towards which I would urge you all to strive, and to which it may be that happily for yourselves and for mankind some of you may attain.

And now I propose to conclude this brief address with a quotation from the discourse by which Sir Thomas Watson prefaces his course of lectures on medicine. The passage which I am about to quote will be familiar to many of you, but to most of the younger part of my audience it will probably be new, and it may serve, by its eloquent and impressive language, to convey to them a just idea of the real

nobility of our profession and of the principles by which we should be guided in the study and practice of it. In the earlier part of the lecture the professor sketches the general plan and outline of his course, he indicates the purpose and the limitation of teaching by lectures, and after referring to the duties and responsibilities respectively of the teacher and of the student, he concludes his lecture thus:—

“But with all its responsibilities, both for teacher and for learner, the profession which you and I, gentlemen, have chosen, or which circumstances have prescribed to us, is a noble profession, and worthy the devotion of a lifetime. If you fit yourselves now for its high functions, and pursue it hereafter in earnestness and truth, it will probably conduct you to an honourable competence, and it will assuredly prove a salutary school of mental and of moral discipline. Trials, no doubt, and difficulties, belong to it, but it has also privileges and immunities peculiar to itself. Affording ample scope and exercise for the intellect, it is conversant with objects that tend to elevate the thoughts, to temper the feelings, and to touch the heart. I have already reminded you how it brings beneath our minute and daily notice that most remarkable portion of matter with which the human spirit is here mysteriously tabernacled, and which, apart from that singularly interesting thought, awakens increasing wonder and admiration the more minutely we investigate its marvellous construction. The sad varieties of human pain and weakness with which our daily vocation is familiar should rebuke our pride, while they quicken our charity. To us are entrusted in more than ordinary measure, opportunities of doing good to our fellow-creatures, of showing love towards our neighbour. Let us beware how we idly neglect, or selfishly abuse, a stewardship so precious, yet so weighty. The profession of medicine having for its end the common good of mankind, knows nothing of national enmities, of political strife, of sectarian divisions. Disease and pain the sole conditions of its ministry, it is disquieted by no misgivings about the justice or the honesty of its client's cause, but dispenses its peculiar benefits, without stint or scruple, to men of every country and party, and rank and religion, and to men of no religion at all; and like the quality of mercy, of which it is the favourite handmaid, ‘It blesseth him that gives, and him that takes,’ reading continually to our own hearts the most impressive lessons, the most solemn warnings.

“It is ours to know in how many instances, forming, indeed, a vast majority, of the whole bodily suffering and sickness are the natural fruits of evil courses, of the sins of our fathers, of our own unbridled passions, of the malevolent spirit of others.

“We see, too, the uses of these judgments, which are mercifully designed to recall men from the strong allurements of sense and the slumber of temporal prosperity, teaching that it is good for us to be sometimes afflicted. Familiar with death in its manifold shapes, witnessing from day to day its sudden stroke, its slow but open siege, its secret and insidious approaches, we are not permitted to be unmindful that our own stay also is brief and uncertain, our opportunities fleeting, and our time, even when longest, very short if measured by our moral wants and intellectual cravings.

“Surely, gentlemen, you will not dare without adequate and earnest preparation to embark in a calling such as this, so capable of good if rightly used, so full of peril to yourselves and to mankind if administered ignorantly or unfaithfully. And even when you have made it, as you may, the means of continual self-improvement and the channel of health and of ease to those around you, let not the influence which you will thus obtain beget an unbecoming spirit of presumption; but remember that in your most successful efforts you are but the honoured instruments of a mightier Power—that, after all, ‘it is God who healeth our diseases and redeemeth our life from destruction.’”

MEDICO-CHIRURGICAL SOCIETY OF GLASGOW.—The society met on the 1st inst., for the election of office-bearers for the session 1880-81. The following is the result:—President: Dr. George Buchanan. Vice-Presidents: Dr. D. Taylor (Paisley), Dr. J. B. Russell. Council: Dr. Alex. Robertson, Dr. A. L. Kelly, Dr. Bruce Goff (Bothwell), Dr. Geo. Willis (Baillieston), Dr. Geo. Mather, Dr. H. C. Cameron, Dr. Robert Forrest, Dr. Lapraik. Secretaries: Dr. Joseph Coats, Dr. W. L. Reid. Treasurer: Dr. Hugh Thomson.

ABSTRACT

OF

Introductory Lecture

ON THE

EDUCATION OF THE GENERAL PRACTITIONER.

Delivered at St. George's Hospital, Oct. 1st, 1880,

By JOHN CAVAFY, M.D., F.R.C.P.,

ASSISTANT-PHYSICIAN TO THE HOSPITAL.

AFTER some preliminary remarks on various changes in the staff, especially the loss sustained by the resignation of Mr. Pollock, the lecturer proceeded as follows:—

I have endeavoured to consider on what subject your attention may for a short time be occupied, without being fatigued or repelled; and I have chosen the old topic of medical education. It is of the greatest importance to all of us, and of perennial interest; and though it is as old as the medical schools in which it is carried out (or rather as old as medicine itself), it is as new as the latest modification in teaching and examination which the exigencies of modern times have required.

Premising that what I am about to say is not intended to have any reference to the training required of candidates for university degrees, I purpose to consider, shortly, what form of education should be given, and what subjects should be taught to those who intend to practise the whole of the medical art—i.e., general practitioners. To this class, so far as knowledge goes, I hope we all belong, whether we be physicians, surgeons, or specialists. For there is now a far closer connexion, a greater approach to unity, between the various branches of our profession than appears to have obtained in the good old times. The surgeon of the present day is not simply the possessor of a special form of manual dexterity; he is rather a physician who operates. Again, a physician cannot, I hope, be defined as a practitioner who is ignorant of surgery; while those who ultimately confine their practice to special departments will be the first to acknowledge that this limitation would be next to impossible, were they not previously possessed of a wide general knowledge of their profession. In short, the science and art of medicine are logically one and indivisible; and there is no strict line of demarcation between the various subdivisions which have become established as matters of social convenience.

The general practitioner, who possesses the advantage of being concerned with the whole of his profession, may fairly be taken to be the typical “doctor” of our day. He has developed rapidly within a comparatively recent period from the imperfect or larval condition of the old apothecary; and although he may be said now to have passed through his last metamorphosis and to be a complete imago, as it were, traces of the earlier and less perfect state (such as the selling of medicines) may be still occasionally observed in him. Both his general and professional education, however, have improved enormously, and there can be no doubt that so far as social position and influence are concerned, the practitioner of our own day holds a far higher place than that of the old apothecary, from whom he has sprung. We now find among general practitioners men of the highest general and professional cultivation, often possessing university degrees, sometimes men of profound learning; members, in short, of a liberal profession.

In the old days, when general and professional education were not attainable with the same facility nor to the same degree as now, it might fairly be said that the apothecary was a nondescript tradesman. His surgery was called “the doctor's shop,” a term which probably survives in remote country districts. In this shop knowledge, it is true, was one of the commodities sold to the public; but pills and potions, powders, plasters, and ointments, “doctor's stuff,” in short, formed the chief portion of the stock-in-trade. His knowledge, however, if limited, was often excellent of its kind. It was gained during a long apprenticeship, followed by a brief period devoted to the process known as “walking

the hospitals." As "he who runs may read," so no doubt he who walks may learn; and in one way or another the apothecary (the word, by the way, means "a shopkeeper") became possessed of much knowledge, which he was fond of calling practical, and of a number of useful knacks which stood him in good stead. So far as science is concerned, anatomy, and the little that was known of physiology, were not dead letters to him. He knew a little chemistry, and perhaps more botany. But that which he knew best was not science at all, but the exercise of his art. He could set a fracture, reduce a dislocation (nearly always), and conduct a case of labour which presented no great difficulties. He could handle his lancet with a skill and freedom which gave great satisfaction to his full-blooded patients. He could make pills, not so well perhaps as a modern pharmacist, but probably better than most of those in this room; his plasters were evenly spread, and his mixtures cunningly compounded with due attention to sweetening and colouring ingredients. He had a very fair clinical acquaintance with common illnesses, which he treated according to a tolerably uniform plan of purgation; and, it must be admitted, with a fair measure of success. He was further credited with skill in the art of managing his patients—an art to which the practitioner of our day continues to attach much importance. I have never quite understood what this means; but I presume it must refer to some trick of manner, or mode of address, which he expressly adopted, and perhaps varied according to circumstances; a shake of the head, a frown, a smile, an assumed look of wisdom, an air of grappling with a mental problem: all these things are not without influence on patients when judiciously employed, and may still be tested by anyone who cares to do so. If we add to the above attainments a modicum of common-sense (a variable quantity), I think we shall have completed the equipment of the old-fashioned surgeon and apothecary. It must be admitted, I think, that so far as practice is concerned he was not badly off; what he knew, he knew thoroughly; he had learnt it by doing; by seeing, hearing, touching for himself; and constant practice had given him dexterity and confidence.

Now, if we take the practitioner of the present time, and compare his attainments and the manner in which they have been acquired, we are at once struck with three things.

The first is that he has been taught a vast number of subjects which were never dreamt of by the old apothecary, probably because they did not exist in his day. The student now learns many branches of natural science which have only come into existence as it were yesterday, which have developed with unparalleled rapidity during the present century, and which are still in a state of active, almost violent, growth. The whole of modern chemistry and physiology, histology, pathology, and morbid anatomy have arisen as more than rudimentary sciences only within the most recent times.

In the second place, the purely professional subjects, medicine, surgery, midwifery, and all those subdivisions which are called specialties, have attained a development which has practically revolutionised the medicine of past times; but which has also enormously increased the difficulty of imparting to the student more than mere rudiments, especially if we include such comparatively new subjects as medical jurisprudence and hygiene.

The third point which strikes us is that the manner of learning has of necessity changed. It is related of Sydenham that on being asked by a beginner in medicine what books he should read, he replied: "Oh, read Don Quixote, it's a capital book. I read it myself, often." Probably Sydenham meant that the medical literature of his time might be neglected entirely without disadvantage, but he may also have intended to disparage reading altogether as opposed to observation. What would he say now could he come among us? Would he continue to consider Don Quixote as forming a sufficient medical library, or would he admit the inevitable, and, however reluctantly, himself compose a text-book for students? Whatever conclusion he might come to, the fact remains that the student of the present day gains, and must gain, much of what he knows or thinks he knows by

"poring over miserable books."

This cannot be avoided with the multiplicity of subjects to which the student is expected to "give his mind," as it is called, and on which he is periodically invited by examiners to "do papers." It is, indeed, in this process of doing papers that the value of mere information, as distinct from real knowledge, is chiefly shown. A candidate may

fill sheet after sheet with creditable matter, and yet remain ignorant of the most elementary points when the actual things themselves of which he has been writing are brought under his notice. Let me give you one or two examples. At a recent examination in natural philosophy, the candidates were asked to describe a vernier, an instrument for estimating fractional measurements. The written answers were admirable descriptions of the apparatus in question. At the *vivâ voce* examination, among other things, the students were shown a vernier. Not one of them knew what it was. Again, at another examination, a gentleman showed the widest acquaintance with his subject (a branch of natural science) so long as he was confined to writing about it. "He did a good paper," as the phrase goes; but he failed to recognise one of the simplest tissues when this was shown him under the microscope.

In neither of these two instances (and similar ones no doubt occur to many of my hearers) can we say that true knowledge had been acquired. Knowledge is familiarity with things. Information may be no more than a memory for words. Knowledge once acquired is fixed and permanent. Information is deciduous, and is often finally got rid of in the examination room.

Now it is sometimes complained, with some show of justice, that we furnish you with too little knowledge and too much information; that we enable you to pass examinations, but that after these are done with the successful candidate is sometimes singularly incompetent even in rudimentary practical points connected with his profession. He may be a graduate in medicine of a university, and yet he may introduce a pessary into the rectum; he may have gained medals and prizes, and yet be unable to prescribe, to apply a bandage, to make a splint.

I believe that there is a certain measure of truth in the assertion, but I also believe that the difficulty has been recognised, and is in a fair way to be removed. It is, in part, due to the short time which is now devoted to the study of medicine, a time which is too largely taken up by the collateral sciences. Our old-fashioned apothecary occupied at first no less than seven years in the study of his profession—five years of apprenticeship and two of hospital study; and although later this time was shortened, there still remained five full years devoted to learning, the things to be learnt being fewer and simpler by far than those the modern student is supposed to master.

Now, instead of five years, we have less than four as the minimum time required to obtain a qualification. Of this short time about half is taken up by subjects preliminary to medicine. Their mere number is appalling: osteology, chemistry, anatomy, physiological chemistry, histology, practical chemistry, botany, materia medica, all these have to be attended to by the student in his first year, while physiology and a second course of anatomy occupy the second winter session. If we add the time given to dissection, to pharmacy, and to attendance on surgical practice, we must admit that the strain is very severe upon all who have not an exceptional brain-capacity, and I am not aware that the hats of medical students are bigger than they used to be. The new student is not unnaturally bewildered by the multiplicity of subjects to which his attention is invited, subjects entirely new to him, and for which he has not been in any way prepared by his previous training. It is no matter for wonder if the result is often unsatisfactory and confusing, and if the student, rushing as he must do from one subject to another, finds that he is left with a mere nebulous cloud of information, when his mind is not actually dislocated by the violence of his intellectual antics.

That we have to do with a real difficulty, with no fanciful hardship, has, as I have said, been recognised, and various suggestions have been made as to modifications which it would be desirable to introduce in the scheme of our teaching. These are: to abandon some subjects altogether, to teach others with less elaboration, or to remove instruction in certain topics to a period anterior to the commencement of professional study.

The last plan has met with the support of the Medical Council, and the first of the licensing corporations to adopt it has been a learned body which will not be suspected of any tendency to rash reforms—the Royal College of Physicians. In March, 1880, new regulations were issued, according to which the licence will be granted to those who begin their professional education after this date, on passing three examinations, instead of two, as heretofore. Another examination! This sounds like the imposition of an addi-

tional burden on the already over-weighted shoulders of the student, but we shall see directly that it is an excellent measure of relief.

The subjects of the new first examination are—chemistry and chemical physics, materia medica, medical botany and pharmacy, and, lastly, osteology. The range of the subjects is defined in schedules issued by the College. Now comes the important point. Candidates may present themselves for the examination immediately after registration as medical students on producing evidence that they have "received instruction" in the subjects in question, the mode and duration of such instruction being, with a wise latitude, left unspecified. It is therefore possible for a student to pass this examination before he begins regular work at a medical school.

Now, from the mere point of view of saving time, the gain to the student who can do this is immense. Taking lectures only, I find that there is a gain of 168 hours (or twenty-eight working days of six hours each) which would otherwise be passed in attendance on them. While if we add, as we should do, the time given to practical chemistry and pharmacy, and, further, the time occupied in reading text-books, we may estimate the whole time gained as three months at the very least. But there is another advantage of more importance than any mere saving of time—the freeing of the mind from the strain and worry caused by the necessity of devoting a nearly equal attention to a large number of novel subjects, and the possibility of immediate and exclusive concentration on the all-important subjects of anatomy and physiology. Probably some time must elapse before these advantages become sufficiently known and appreciated to be generally adopted by intending students of medicine; but the benefit is so distinct and unquestionable that their recognition cannot be long delayed; and then we shall have to inquire as to the best mode of imparting the necessary instruction, and the best time for doing so.

I think physics and chemistry, perhaps botany as well, might be sufficiently taught at school, where the last year of scholastic life might be profitably occupied by instruction in the above sciences to those who are intended for the medical profession. With existing arrangements, there may perhaps be a little difficulty about this at first; but the days have gone by in which a head-master viewed with jealousy and distrust the introduction of a modicum of scientific teaching as a part even of the recognised school curriculum. Natural science is taught already at many of our chief public schools, and it will probably become the rule rather than the exception to find the subjects comprised under this term occupying much of a boy's time during the last year of his pupilage, if not earlier.

It may be that this cannot be done without abandoning to some extent the last touches of that classical training which has hitherto been held to soften the manners of boys. If this were true, it would perhaps be matter for regret. But "every schoolboy knows" that, with occasional exceptions, he and his fellows are hardly to be taken as examples of very profound scholarship. Of Greek I will say nothing; but taking Latin only, we find that the attainments of the average boy are not much more than the ability to construe a simple Latin author (*with* a dictionary), to write perhaps a few halting verses. He may have an imperfect acquaintance with Horace and Virgil, and will know some scraps of Roman history. Most probably he will have completely mastered those curious facts concerning Balbus, which were insisted upon in my own boyhood; but neither the schoolboy nor his teacher will seriously consider these simple accomplishments of sufficient importance to entirely prohibit attention to the graver matters with which science is concerned. For my part, I would willingly see the teaching of Greek and Latin extended and perfected, especially in the direction of comparative philology; but if we are forced to choose between what is usually learnt of them now and what *might* be taught of natural science, Balbus must go to the wall! Surely the faculties of observation, of sustained attention, of concentration, of accuracy, must be trained as effectively by a lesson in natural science as by the recitation of a few rules of grammar, or the uncouth translation of a phrase or two from a classical author; and if, at the same time, a boy became interested in his work (as he would in the hands of a skilful teacher), is not this awakening of curiosity, of a desire for knowledge, better than the apathetic indifference, or the hatred tempered by fear, with which so many boys undergo the usual classical training?

The remaining subjects comprised in the first examination

are purely technical, and might be studied during the period which elapses between a boy's leaving school and his registration as a medical student; or after registration, if entry at a medical school were to take place at the beginning of the summer session. Materia medica, botany, and pharmacy are taught at this time, and it would be easy to arrange that there should be a summer course of osteology. Practical chemistry is also taught during the summer session; so that to a student beginning his work on the first of May, the only subjects with which a previous familiarity would be requisite are theoretical chemistry and physics.

But with regard to botany, materia medica, and pharmacy, my belief is, that with the exception perhaps of the last-named, they have lost much of their importance. All necessary knowledge of drugs, and more, may be acquired during the instruction in practical pharmacy which we must still admit to be needful so long as doctors dispense their own medicines. This work, however, is gradually passing into other hands, those of the chemist and druggist. Many practitioners now prescribe but do not dispense; and when they do, often have a private dispenser. Besides, it is becoming daily more common for mixtures, tinctures, pills, all the compounds in short of the Pharmacopœia, to be bought ready made. All that remains necessary is to weigh and measure the requisite quantities. There is, I believe, an impression with some that the study of anatomy tends to burden the memory with a vast number of minute numerical and topographical details, tiresome and difficult to acquire, easily forgotten, and inapplicable to any useful purpose beyond the passing of examinations. But I do not see any possibility of altering the instruction in this subject which is now given. Anatomy has been studied and taught for centuries; hence its teaching both in method and in matter is more nearly perfect than that of any other branch of medical study, and there is no doubt of its value as a mental discipline. Then it forms a body of knowledge which is complete in itself; an organic whole; consequently it is not possible to omit any part as of less importance than the rest without serious damage to the whole fabric. Such a course would be paralleled if, in teaching a child the alphabet, we were to omit those letters, such as x and z, which occur infrequently and are used sparingly in the formation of words. Complicated and unimportant relations of parts; weights and measures of minute organs; all these, and much that is similar, are mere pedantry, and should be abandoned.

Microscopical anatomy, however, might, I think, be much simplified. If a student is acquainted with the main points of the minute structure of the simple tissues and of the more important organs he knows enough, even if much be omitted that has been brought to light by the labours of modern observers.

The importance of physiology cannot, I think, be exaggerated, although it will be long before it can be taught as fully and completely as it should be. It is, as Dr. Michael Foster pointed out in his recent admirable address at Cambridge, closely related to, or rather identical with, pathology; as he says, the two can no more be separated than meteorology can be divided into a science of bad weather (the normal condition) and a science of good weather. No step can be taken in pathology without constant reference to physiology. How can we understand, for instance, the heat, redness, pain, and swelling which form the grosser characteristics of inflammation (a process which underlies nine-tenths of the phenomena of disease), without reference to the capillary circulation, to the vaso-motor system of nerves, to the contractility of colourless corpuscles? Again, is it not self-evident that the high temperature which characterises the process of fever can only be understood or studied by a constant comparison with the conditions which govern normal animal heat? If it be said that all this has no immediate bearing on the recognition and treatment of disease, I would answer that no one who has the care of a patient can avoid forming some kind of conception as to the malady he is suffering from; and that he who possesses a knowledge of pathology and physiology will be more likely to draw correct conclusions than he who is ignorant of all but bare practice; often

"Most ignorant of what he's most assured."

Whether we like it or not, medicine as an art is becoming daily more and more dependent upon science, and it is difficult even to understand some modern discoveries of immediate practical importance without a fair knowledge of physiology and physiological methods. Of this I can give you an instance. Of late years the attention of investigators has

been much attracted to the pathology of contagion. The researches of Klein and Sanderson in this country, of Klebs, Chauveau, Pasteur, and many others abroad, have rendered it extremely probable that all communicable diseases are, if not immediately caused by, inseparably connected with, the development within the animal body of extremely minute vegetable organisms of the very simplest possible type. We do not yet actually know this with certainty in all cases, but it is quite beyond doubt in many; and in one instance, the splenic fever of cattle (which is communicable to man as what is called malignant pustule), the whole life history of the minute fungus, the *Bacillus anthracis*, is known with tolerable accuracy. It has been removed from the bodies of affected animals, cultivated in simple chemical nutritive fluids, and has then reproduced the original disease in animals inoculated with it. According to a recent report of Dr. Greenfield, the bacillus, if cultivated in a succession of chemical nutritive fluids, gradually loses its virulence, until, in about the fifteenth generation, it no longer produces any effect on inoculation. But there is a point midway between the fatal activity of the first and the inertness of the last generation, when the bacillus still produces the disease, but in a mild modified form, which is no longer dangerous to life. It is well known that one attack of any of the contagious diseases to which I have referred almost always protects against another; and it is therefore probable that inoculation with the mild form of the virus of splenic fever will protect cattle from the severe and fatal disease. I need not point out the hope this holds out to us that we may ultimately be able to control, in this or in some similar way, the majority of the acute contagious diseases which afflict mankind. If we should ever succeed in this, let it be remembered that so great an advance is due, not to clinical observation, not to the accidental discovery of some new drug or novel mode of treatment, but to the researches of the physiologist and experimental pathologist; to the botanist, and probably also to the chemist, who will help us by the study of so familiar, but so recondite, a process as putrefaction. The above research is an example of what we may hope will be gained by the application of purely physiological methods of investigation to disease; but we must not forget that we have already received from this source the antiseptic treatment of wounds, to which the great and beneficent art of surgery owes many of its most brilliant successes.

For the learning of medicine (I use the word in the widest sense) the two years which are left after the primary examination is over are not enough, because a lifetime is not enough. Experience and practice can only be acquired in the course of time. But if the two years are properly employed it is possible to master the elements of diagnosis, prognosis, and therapeutics, sufficiently to make future experience bear fruit. And here there is no flaw to be found in our teaching; what with dresserships and clerkships, work in the wards and in the dead-house, it is the student's own fault if he does not learn. You may get your information how you like, from lectures or from text-books, but your knowledge can only come to you by the constant exercise of your own faculties of observation and reasoning. It is our aim and our duty as teachers to enable you to leave us with your faculties so cultivated as to make your future experience worth having, for you will admit that all experience is not of equal value. The experience of a blind man is worth less than that of one who can see, and may do no more for him if he attempts to walk by it than lead him into a ditch. It is our endeavour to open your eyes, to furnish you with as true a conception of disease as is possible with our present knowledge, and to give you something of a critical faculty. If you possess this you will be able to estimate with fairness the value of many apparent novelties in your art, you will know when to accept and when to reject. But if you are without this power of discrimination you will be either at the mercy of every *ignis fatuus* which arises, or you will be at the other extreme, wrapped in impenetrable scepticism and unable to take advantage of real improvement.

If, on leaving us, you are unacquainted with "the routine duties of general practice," common sense and common attention will teach them to you in a very short time; if you do not know "the art of dealing with patients," try to do without it. I am very much mistaken if you will not find sympathy sufficient to replace it. You will, at the end of your career with us, know a great deal more than your medical forefathers; you will know it, I hope, thoroughly,

not as information merely; and it is far more important that you should know as much as you can learn of medicine, than that you should be specially trained in the exercise of those secondary arts, over which a few months' professional life will give you a sufficient mastery.

EXTRACTION OF A REVOLVER BULLET FROM THE SKULL.

BY SAMPSON GAMGEE, F.R.S. ED.,
SURGEON TO THE QUEEN'S HOSPITAL, BIRMINGHAM.

(Concluded from page 538.)

UNDER the heads of Diagnosis, Extraction of the Bullet, and After-treatment, I purpose concluding a concise history of this case.

Taking into account the inflammatory swelling on the left side of the neck and face, and the alleged firing of the revolver into the right ear, the patient's tranquil state twelve hours after admission was very remarkable. The revolver was a six-chambered one; three cartridges remained in it; and the statement, that two shots had been fired at someone, was borne out by finding two bullets on the floor of the room in which the patient was said to have shot himself. Reliable witnesses testified to hearing the third shot fired, but that bullet could not be found. Where the patient fell a good deal of blood was found on the floor, and it poured distinctly from within the right ear when he was brought to the hospital, and for some time afterwards.

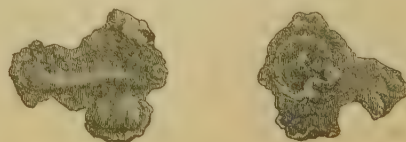
When on the third day I examined the case under ether, the perfect integrity of the meatus was noteworthy. So soon as I penetrated the dilated passage with my little finger, the roughened and uneven edges strengthened, almost to demonstration, the presumption that the bullet had passed in; but it was only after considerable difficulty that I obtained this mark on the porcelain bulb of the Nélaton Garibaldi probe:—



The mark was distinct and shining black, and I preserved it as a fixed diagnostic sign; determining to use another porcelain probe for subsequent exploration.

It was now clear to my mind that we had to deal with a compound fracture of the temporal bone and an impacted bullet. The patient was calm, and wished that an endeavour to save his life should be made. In his then state, death was inevitable; and if extraction could be effected without much violence there was a bare possibility of recovery.

If any attempt was to be made, now was the time. To wait for symptoms of cerebral mischief was to throw away the only chance, small though it might be. My colleagues in consultation obtained an independent lead mark on the porcelain probe which they used, and unanimously approved my proposal to attempt the extraction. I soon seized the bullet with the fine long American forceps, but very firm traction made no impression. Having inserted the edge of my left index finger-nail between the outer edge of the bullet and the bone, I followed it with the point of a steel elevator, and prised the bullet out from what, as seen by these exact representations, was evidently the uneven bony bed in which the bullet had moulded itself.



The weight of the extracted bullet (126 grains) accurately corresponded with the weight of one of the bullets left in the revolver.



These figures show one of the bullets with, the other without, its metallic cartridge; all the illustrations being of natural size.

The extraction was effected without violence, once the elevator was placed under the foreign body and worked with my left hand, while the right index-finger acted as a fulcrum. Nothing was introduced into the ear, and little blood was lost. Free vent was afterwards allowed for discharge, which was collected in absorbent antiseptic pads, specially prepared by Messrs. Southall Brothers and Barclay. As the discharge was fetid, the pads acted agreeably as deodorisers, and their downy softness was so comfortable, that the patient's repeated wish was for more pads. At first ice was applied to the head by an ordinary ice-bag; but, as the temperature rose, a continuous current of iced water cooled the head through one of Galante's syphon tube caps, which, fortunately, Mr. Salt had just previously brought over from Paris. The effect of this appliance was very speedily to reduce the temperature two degrees; but though there was unremitting care under the immediate supervision of my house-surgeon, Mr. Westwood Moore, cerebral compression ended in death forty-two hours after the operation.

Birmingham.

A CASE OF STRANGULATED CONGENITAL HERNIA IN A CHILD FOURTEEN MONTHS OLD; OPERATION; RECOVERY.

By WILLIAM MONTAGUE BALL, M.B.

THE chief points of interest in this case consist in the early age of the patient and in the closure, after the operation, of the internal abdominal ring to a sufficient extent to prevent re-descent of the intestine.

On Feb. 22nd, at 8 P.M., the child, a fine little boy, fourteen months old, was brought to my house, very pale, and evidently in pain. The mother stated he had been ruptured since birth, but that, having been always able to "put it back," she had neglected the advice of procuring a truss; that morning, however, the bowel had come down during a fit of crying, and she had not been able to return it. She also said he had been sick several times.

Upon examination I found a swelling extending along the right inguinal canal into the scrotum, tense, tender, and with no impulse on crying. Having tried taxis for a reasonable time, both in and out of a warm bath, I left the child for the night, after giving it a small dose of opium, slung up in a kind of hammock, with its hips much elevated and an ice-bag on the tumour.

The next morning, at eight o'clock, still being unable to effect reduction, I asked my friend Dr. Sydney to administer chloroform, and finding the hernia still irreducible, proceeded to operate in the usual way, using Lister's steam-spray and his antiseptic precautions. On reaching the sac it was found distended with a small quantity of dark-coloured fluid; the intestine was a good deal congested and showed evidence of strangulation. The seat of stricture was at the internal abdominal ring. Owing to the child being very fat considerable difficulty was experienced in dividing the stricture to a sufficient extent to allow of the bowel being returned; eventually this was accomplished and the wound brought together with catgut sutures, and dressed antiseptically. The child was ordered to be fed on milk and lime-water, and half a drachm of tincture of catechu was administered. In spite of astringents the bowels acted copiously within twenty-four hours, and the child vomited once during the night. The dressings were removed in forty-eight hours, and the wound was found to be quite healthy and closed at the lower end. Temperature 100° 2' F.

Feb. 26th.—Patient passed a very restless night, moaning

and crying a great deal. Wound again dressed, the deeper portion connected with the abdominal cavity quite closed, the more superficial part, however, had gaped somewhat, owing doubtless to the difficulty of keeping so young a child from wriggling about, notwithstanding it was confined in a box-splint. The abdomen was very tympanitic and very tender. Temperature 103°; pulse 180. Bran poultices to be constantly applied and one grain of compound ipecacuanha powder with a quarter of a grain of calomel to be given every four hours. This treatment was carried on for some days, the opium keeping the child free from pain; and although but little hope was entertained of recovery, eventually the tympanites disappeared and tenderness over the abdomen ceased.

The wound on the fifth day was found to be suppurating freely, and so was dressed with carbolic oil in gauze. A sinus extending four inches in the direction of the right hypochondrium formed and had to be pressed out twice daily. After the first movement of the bowels, they acted once or twice daily during the progress of the case. The child was able to take the breast throughout its illness.

March 28th.—Wound quite healed and patient allowed to crawl about with a pad-and-spica bandage.

April 3rd.—A truss was applied and the child able to run about once more.

July 10th.—I saw the child running about, and the mother tells me it has been quite well ever since, and that there has been no appearance of any return of the rupture, although the truss has occasionally been left off for some time. I presume that during the attack of peritonitis which succeeded the operation, enough coagulable lymph was thrown out to procure a sufficient closure of the internal abdominal ring to prevent any re-descent of the bowel.

Hounslow.

GUNSHOT WOUND OF THE MEDIAN NERVE.

By EDWARD LAWRIE, M.B.,

PROFESSOR OF SURGERY, LAHORE MEDICAL SCHOOL.

IN the early part of May this year a boy named G. C.—, aged ten, was accidentally struck in the right arm by a charge of small shot. Several pellets were removed by his medical attendant from underneath the skin in the neighbourhood of the elbow, but none appeared to have penetrated more deeply. A good deal of superficial inflammation followed, and the boy lost the use of his forearm and hand. It is not clear from the account of the friends whether this paralysis was immediate or came on gradually. He suffered great and increasing pain in the arm and corresponding side of the neck and body, and was brought to me July 27th, 1880. I found a very peculiar drop of the right wrist and loss of power of the forearm, together with exalted sensibility in the palm of the hand. There was much glandular and lymphatic enlargement, which obscured the diagnosis, but thickening of the median nerve was satisfactorily made out about the middle of the arm, and I therefore cut down upon it. When exposed, the nerve was more than twice its proper size, and I was about to stretch it when I detected a hard body in its interior. Instead of stretching, a longitudinal incision was made into its substance and a pellet found and removed. As the operation was performed antiseptically, the wound healed by first intention; the boy rapidly recovered power in the forearm and normal sensation in the hand, and was discharged cured on August 6th, 1880.

Lahore.

THE PARKES MUSEUM OF HYGIENE.—This museum was reopened last Monday (after the usual vacation) in connexion with the introductory *conversazione* of the Medical School at University College. There was a good attendance of gentlemen and students, who manifested much interest in the collection of sanitary appliances, to which several additions have recently been made, including concrete and stoneware goods from the Poole pottery district. Messrs. Tonks and Son have added to their contribution a model of a new ventilator, called "the architrave ventilator," designed by Mr. Mark H. Judge, for the purpose of making an architectural feature of the provisions for ventilation. The Parkes Museum will continue to be open free on Tuesdays, Thursdays, and Saturdays.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum, et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. THOMAS'S HOSPITAL.

OMENTAL HERNIA; TWO OPERATIONS; RECOVERY.

(Under the care of Mr. MASON.)

The patient was about twenty-six years of age, and for two years previously had suffered from nausea and vomiting after taking solid food. In the right femoral region was a swelling of a doughy character, and somewhat painful to the touch. Eight months ago Mr. Mason operated and removed a piece of omentum about the size of a walnut, using the actual cautery. The antiseptic spray was not employed, and dry dressings only were applied. The temperature remained normal throughout, and an excellent result seemed imminent, but the sickness by degrees returned, due, doubtless, to the formation of fresh adhesions, and the operation was a failure. Six months later a second operation was performed under the antiseptic spray. A careful incision was made down to the sac, which was opened, and a further piece of omentum was removed. Catgut ligature was used. A gland was also taken away, and an attempt was made to effect a radical cure by transfixing the margin of Gimbernat's ligament and Poupart's ligament with a harelip pin, and drawing the edges together with a catgut ligature. There was no rise of temperature at any time after the operation. There was, however, for a time some tenderness in the femoral region. In the meanwhile the patient was relieved from the distressing vomiting after meals, and it was hoped that the relief would be permanent.

Remarks.—Amongst the points of interest associated with the case is the fact that two operations were performed on this patient, one in which the antiseptic spray was not used, and the other in which antiseptic precautions were strictly carried out. In both instances there was no rise in temperature, suggesting that in some cases at least an equally satisfactory result obtains whether the so-called antiseptic or the more simple method of dressing is employed. In several other cases done without "strict" antiseptic precautions, union took place as nearly as possible by first intention, even when the sac had been opened.

METROPOLITAN FREE HOSPITAL.

A PIECE OF BREAD IN THE LARYNX; IMMINENT ASPHYXIA; TRACHEOTOMY; RECOVERY.

For the notes of this case we are indebted to Mr. H. T. Groom, M.R.C.S., house-surgeon.

John K—, aged two, was admitted on August 5th last, to all appearances dead. The mother, who was in great distress, hurriedly explained that the child had been eating some bread a minute or so before, and that a piece suddenly went "the wrong way." The little patient's face and lips were of a bluish tinge. Neither pulse nor heart could be felt, nor could the latter be heard with the stethoscope, and breathing had actually ceased. On making an attempt at artificial respiration, however, a spasmodic movement of the diaphragm took place, but no air entered the lungs. There were a few bread-crumbs in the mouth, and these were cleared away. Nothing else could be seen or felt, and it was deemed useless to waste time in the endeavour to take anything away from the larynx. Accordingly, tracheotomy was at once performed by Dr. Byrne, by means of the trocar and cannula made for that purpose. The trocar was withdrawn and the result anxiously awaited. Artificial respiration was kept up, and in about twenty seconds the first voluntary inspiration took place. In a few seconds more there was a stronger one, and again two or three more, when the child gave a cough, and out from his mouth "popped" a piece of bread about three-quarters of an inch in diameter. Gradually the child improved, and coughed some more crumbs

through the tube. The mouth of the tube was then closed up; and it being found that the child breathed quite naturally it was withdrawn, and a piece of wadding was placed over the wound. The child was then taken up to the ward, but in a few minutes was found in a state of collapse, and breathing very faintly. Brandy and water was administered and slowly he revived. There was a great deal of rattling in the throat; and as bread-crumbs constantly were exuding from the wound, an emetic of sulphate of zinc was given, in the hope of bringing them away. Vomiting shortly took place, but with the exception of a quantity of frothy mucus, nothing of any consequence came away. The boy shortly after fell into a heavy sleep, which lasted for some hours, and on waking drank freely of some milk. From this time forward he progressed quite favourably towards convalescence; the wound healed rapidly, and only a slight attack of bronchitis occurred, which yielded to the usual remedies. He was discharged cured on August 21st.

SOUTH STAFFORDSHIRE HOSPITAL.

A CASE OF DISLOCATION OF THE FOOT BACKWARDS FROM A BICYCLE ACCIDENT; REDUCTION; RECOVERY.

(Under the care of Mr. NEWNHAM.)

For the notes of this rare and interesting case we are indebted to Mr. W. H. T. Winter.

Chas. R—, aged nineteen, was riding a bicycle on July 10th when the machine turned over. In jumping off to save himself he caught his foot between the treadle and the crank. He felt a wrench, there was great pain, and he was unable to walk.

On admission into the hospital it was found that the foot was dislocated. In the injured limb, as compared with the sound one, the malleoli were farther apart than natural. The anterior margins of the lower ends of the tibia and fibula were distinctly made out, and there was a hollow beneath them over which the extensor tendons of the toes were stretched. There was no fracture of either the tibia or the fibula. The long axis of the foot was apparently shortened and turned a good deal outwards. The sole looked downwards, outwards, and backwards. The astragalus could not be distinctly made out. The heel was abnormally prominent, and there was a considerable hollow between the tendo Achillis and the tibia. The sustentaculum tali was farther backwards than it should have been. Voluntary motion of the foot was completely abolished and passive motion was almost impossible.

The patient was put under ether, and the dislocation reduced by flexing the foot and rotating inwards, rotation outwards having failed.

Some swelling followed, and was treated with cold lotions. The boy could walk well in seventeen days, and put the ankle-joint through all its movements.

SALFORD ROYAL HOSPITAL.

TWO CASES OF FRACTURE OF THE BASE OF THE SKULL IN CHILDREN AGED SIX YEARS.

(Under the care of Mr. WALMSLEY.)

FRACTURE of the base of the skull at such an early age as six years is a rare occurrence. In the second case there was paralysis of the facial muscles of the left side.

For the following notes we are indebted to Mr. D. T. Evans, house-surgeon.

CASE 1.—Thomas T— was admitted into the hospital on the 5th of July last, having fallen downstairs a distance of about 8 ft. He was somewhat unconscious when seen, and there was copious bleeding from the right ear, followed on the following day by the discharge of sero-sanguineous fluid in large quantities.

On the 7th bilateral convulsions appeared, recurring at intervals during the day, and on the 8th the discharge from the ear was more profuse, the convulsions appeared more frequently, and about mid-day he died. The post-mortem examination revealed, in addition to a fracture across the middle fossa of the base of the skull, and of the petrous portion of the temporal bone, a fissured fracture of the frontal bone, extending to the coronal suture on each side. In addition there was a large clot of blood effused between the bone and the dura mater at this point.

CASE 2.—James G.—was admitted on the same day as the previous case—namely, July 5th—in an unconscious condition, having fallen off a swing. There was free and copious bleeding from the left ear, with paralysis of the facial muscles on the same side. On the following day the child had recovered consciousness, but remained somewhat stupid for some days longer. The serous discharge from the ear, which had been very profuse, ceased on the 7th; and on the 11th of July—the sixth day after admission,—the child was bright and sharp. He left the hospital on the 10th of August perfectly well, the facial paralysis, however, still remaining. It may be noted that the hearing on the left side was not affected by the injury.

ABSTRACTS OF INTRODUCTORY ADDRESSES.

ST. THOMAS'S HOSPITAL.

INTRODUCTORY ADDRESS BY DR. ORD,
PHYSICIAN AND LECTURER ON MEDICINE TO THE HOSPITAL.

THE address was devoted to the subject of Medical Education, chiefly from the point of view of the parent and the student, partly from the point of view of the Medical School. Beginning with the question as to whether boys who were intended for the medical profession should pursue any special course of education while at school, the lecturer answered this question most decidedly in the negative. The use of a school education was to fit men for the general purposes of life, to train them to take their place in society. To this end boys should be brought up in large schools, with a healthy public opinion, in which by their reaction on one another they tended to acquire moral symmetry. Their studies should include the classics, as well as modern languages, history, geography, mathematics, and natural philosophy. After a few words in defence of the Classics, the lecturer proceeded to indicate the position to be occupied by natural sciences in the teaching of the boys. "Of two things I am certain—that they ought to form a part of the school schedule, and that they ought to be taught without reference to the special use of any one of them in the particular direction of the path which the boy is to follow in his later life. They should be taught, on the contrary, for their general usefulness, so far and in such a way that the man may be able to apply them in the many conjunctions of life in which a knowledge of them can be helpful. So, for instance, that the man may be able to read his barometer or thermometer, may be able to judge of the quality of his instruments, may be able to see that they are in proper working order; that, for another instance, he may be able to avoid grave physiological errors in the management of his own health, in the sanitary regulation of his house and household, matters requiring elementary knowledge of chemistry, physiology, and physics, and not a little that he may be able, during the intervals of his statutory labours, to enjoy in an intelligent way the manifold varieties of natural objects. To secure such kind of knowledge in this department, it is imperative that the teaching be practical and that the boy make many of his own experiments. Teaching by books and diagrams only is as absurd a waste of time as it would be to try and make a boy read Virgil properly by giving him a grammar and a dictionary. The phenomena must be seen, the apparatus handled. Let the boy make his own oxygen, learn to use his pneumatic trough, see the effects of rubbing his stick of sealing-wax with his silk necktie, dissect for himself the heart or eye of a sheep—all, of course, under skilled inspection;—let him then be helped to reason on the causes or laws of what he has seen. Only in this way can the interest, without which no study can be healthily pursued, be excited. Who among us does not remember the infinite weariness and distaste inspired by the diagrams of his first botanical lecture? Yet many of us may have seen boys and children charmed by a talk over a few flowers gathered in a country walk and pulled to pieces at some resting-place; may have seen their curiosity awakened, their interest attracted, as the parts of the flower were indicated and their uses explained; and may have watched these children go on to search for more flowers and to observe for themselves, or return with eager questionings. There is much truth in

these words of Goldsmith:—'Might natural philosophy be made their pastime in school, by this means it would in college become their amusement. At first it would be sufficient if the instruments and the effects of their combination were only shown; the causes should be deferred to a maturer age, or to those times when natural curiosity prompts us to discover the wonders of nature.'

"There is one use of the studies of observation which offers opportunities at present, in my opinion much neglected, of establishing a sort of co-operation between them and the study of language. There was, when I was at school, a practice still existing, and much countenanced by the authority of tradition, of making boys write essays and verses by way of exercising them in composition. From my school days upward I have judged this practice to be both imperfect and fallacious. It has been condemned by Milton in such terms as these: 'A preposterous exaction, forcing the empty wits of children to compose themes, verses, and orations, which are the acts of ripest judgment, and the final work of a head filled by long reading and observation with elegant maxims and copious invention.' He might have added, that they are a premium and incentive to imposture and plagiarism in the many, while they thus distinctly foster abnormal development in the few. If we remember, as I believe all must admit, that description must follow and complete observation, we shall see that we have in these studies a valuable means of training boys in accuracy of language and simplicity of composition. Let boys be made to describe, in the fittest and fewest words, the natural processes or objects which they have been observing. Instead, then, of regarding what are called synonymous words as words having the same meaning and to be used, as the poets use them, according to the convenience of sound or rhythm, they will learn to attach to each word its own true meaning, and will come to see that for their word-painting they have a dozen various shades or tints where their gradus would tend to make them believe they had but one. I would rather have a boy write such descriptions of a mineral, a plant, or a phenomenon as would give his reader a clear idea of it, than the most eloquent essay on the Beautiful or the most polished set of verses.

"His school career finished, the prospective student should not at once proceed to a hospital, but spend some months in preparatory training. There are grave moral objections to the plunge from the restraint and supervision of school life to the almost unrestricted freedom of a hospital. And there are great advantages in giving him now preliminary instruction in some of the elements of medical practice, and in science related thereto. A revival in modified form of the old system of apprenticeship is advocated. The course to be taken by the student will vary according as—(1) he proposes to go to Oxford or Cambridge for his degree; (2) to the University of London, in which case it is most desirable that he pass the Preliminary Scientific Examination before entering the hospital; and (3) if he propose to take only the diplomas of the London or other colleges. In any case he should spend some time in a good chemical laboratory, and some time in learning practical pharmacy and dispensing, the latter either with a good general practitioner, or in a provincial hospital or infirmary.

"In relation to proper hospital study the extent to which it is desirable that the London medical schools should teach the sciences preliminary to medicine requires discussion. It is probable that though this work is fairly well done, it would be better done if some common college were established in which these subjects might be taught, as at Edinburgh, to large classes, the hospital schools restricting their teaching to pure Medicine and Surgery, with perhaps Anatomy and Physiology.

"As regards study in the wards and out-patient rooms, this must not commence until anatomy and physiology are fully mastered. In the beginning, and throughout this final study, the student must bear in mind the necessity of making himself practically acquainted with, and skilled in the use of, all means and instruments of investigation. These increase yearly in number and perfection, the scientific toys of one generation becoming the indispensable armament of the next. With their aid he will test and analyse the group of many symptoms presented by each case, leaving, so far as he can know or suspect, no single symptom or possible condition unregarded. And then will come the use of his higher analytical power and judgment to give each symptom its due weight and real meaning, rejecting one by one the possibilities which may be indicated by separate symptoms

but are excluded by the whole group, until he has come to his diagnosis. In treatment, as well as in diagnosis, he will need a large amount of instruments and drugs. According as his diagnosis shall have been accurate and profound, so will his treatment be rationally directed in the main to the removal of the ultimate causes of each disease. All this he will begin to learn when he enters the wards. If he be true to himself, he will be still learning this when he is old."

QUEEN'S COLLEGE, BIRMINGHAM.

INTRODUCTORY ADDRESS BY MR. BARTLEET,
PROFESSOR OF PHYSIOLOGY IN THE COLLEGE.

THE winter term of Queen's College, Birmingham, was commenced on the 4th inst, by the usual inaugural address and the distribution of prizes, the address being delivered by Professor Bartleet.

Professor BARTLEET, in the course of his address, referred to the address delivered by Professor Huxley at the opening of the Mason College, and said that they who were so deeply interested in practical science would heartily welcome any new organisation for scientific teaching, and desire that no rivalry should exist between the two great institutions, save that of which could do the most good. After Professor Huxley's profound, scholarly, and eloquent address, he might well be allowed to pass by the time-worn, though still important subjects of education, of medical politics, or economics, and address himself, as he felt duly bound, to his fellow-students of Queen's College, old and young; those *in statu pupillari*, and those who had graduated, not only in medicine, but in age and honours. Some of them would be springing at a bound from the position of pupilage to the greater freedom of college life; some might be closing that day the wholesome restraint of home ties. The very fact of tying themselves down to a special life work should induce serious thoughts—thoughts more serious when it entailed the responsibility of the life and death of others. He purposed briefly to show what they must expect and what they must not expect from the profession. They certainly must not expect wealth. To accumulate riches was not the lot of many in the medical profession. The prizes were few and of moderate value. A moderate competence might be obtained by a man who practised his profession competently, reputably, and honourably. Nor must they expect to gain honours by those social positions and dignities usually attractive to men—the bench, the mayoralty, association with the party in power, and real or unreal dignities of all kinds. In a busy manufacturing and commercial district wealth and distinction usually went together, and here, in addition, politics and position were inseparable. Members of the medical profession were usually not wealthy, and commonly had but little time to devote to work outside the profession—indeed, they had so much unpaid work to do that they rarely were, at all events, allowed any of the distinctions which were the legitimate and commendable aim of good citizens. To some extent they were valued by others at the rate at which they valued themselves, and it would add to the dignity of the profession if their services were gratuitous to those who could not afford to pay, and they charged those who were at a rate proportionate to their means. Many members of the profession felt acutely the scant recognition gratuitous services received at the hands of the public. They felt acutely, sometimes bitterly, the apparently studied indifference to their claims, and the hardship of its members being rarely recognised as doing a public work. It was often alleged that the physicians and surgeons of the hospitals and the professors of medical schools gained direct advantages from their official positions, and that such posts were coveted and assiduously sought for if vacant. Allowing that to be true, and as far as direct gain was concerned it was far less than was supposed, did they not sometimes see competition for a seat in the town council or on the board of guardians, or even in the Imperial Parliament? At least they did before a paternal caucus settled all those matters comfortably for them. Did the gentlemen who filled these useful, important, and honourable posts so ably perform their duties solely from love for their fellow citizens? Did none of them enjoy the work itself or appreciate the prestige attaching to official positions? Did none of them look forward with laudable ambition to the well-deserved honours that fell to the lot of men who, at some sacrifice,

had undertaken public work? His jeremiad might be summed up in a single sentence: "In Birmingham no work is considered public work that is not at once municipal and political." But even this dark side had a silver lining. If they did not realise a fortune they might gain a competence, and that without some of the anxieties and responsibilities attached to commerce. If they did not gain the applause of the many they could gain the love of the few. If they did not gain high places amongst men they would, if they deserved it, gain that which such dignities did not always bring—the verdict of a self-approving conscience; the knowledge that by God's help and God's providence, the breadwinner had been given back to a desolate family, the wife restored to a heart-broken husband, the infant had had the blessings of a mother, and the fondly-loved child had been renovated in health and strength. Was not that better than wealth, better than a life of ease, better than transient honours and dignities? And there was something else they would gain—they would gain an entrance into the medical brotherhood—no slight gain when they considered the fidelity and self-sacrificing affection to one another. Alluding to the different branches of the profession, he pointed out that the widespread desire for extending higher education and the growing importance attached to scientific studies would afford a larger occupation to teachers of science. Speaking of the practising part of the profession, he pointed out the advantages of the general practitioner over the specialist, and cautioned them against thinking they were too good to be general practitioners. The general practitioner was the backbone of the profession, the man prepared to cope with difficulties of every kind in every department of general and special practice, honoured in his district as those in special practice rarely were. In conclusion he gave some good advice to the students as to their studies, urging them to work.

LEEDS SCHOOL OF MEDICINE.

INTRODUCTORY ADDRESS BY MR. CHAS. J. WRIGHT,
LECTURER ON PHYSIOLOGY, AND SENIOR SURGEON TO THE LEEDS
PUBLIC DISPENSARY.

THE lecturer said the preliminary examination which medical students had to undergo was a fair test of the general education which was an essential for every man who aspired to a position in an honourable profession; but he trusted the day was not far distant when other subjects, in addition to those now demanded, would be relegated to preliminary studies, instead of, as at present, being left to overcrowd the but too limited time at the disposal after the curriculum was commenced. Such subjects, for instance, as experimental physics, biology, botany, and inorganic chemistry—the last-named even now often included in the subjects of preliminary examination, and thus excused after registration—all useful as a mental discipline, most invaluable as an aid to future study, but liable to interfere with due attention to other subjects after medical studies begin.

"And this not merely as a discipline. To tell or show a man a thing is 'not to teach him to observe, but to make him a mere recipient of another's observations,' and we are perhaps at times rather apt to forget this fact in our teaching. But, it may be said, may not some of these studies in physical science be carried on during a twelvemonths' pupilage with a practitioner, or at some small provincial hospital, prior to entering at a medical school, thus combining a training in natural science with an insight into the routine of prescribing and the art of compounding drugs? Many of the examining boards permit one of the four years enjoined as the minimum for medical study to be spent in this manner, allowing for not more than twelve months from the date of registration. This is a modification of the old system of apprenticeship, long since abolished as a necessity; which, although it may in some cases have had its advantages, was an arrangement in which these were more than counterbalanced by its evils. Opinions in the present day are divided as to whether a certain period (twelve months) should be spent—say in the surgery—in this manner before attending lectures. Where a man is young, and has the good fortune to reside with one who has the time, ability, and inclination to aid his pupil, it is possible that much information as to the management of patients, and of a practice generally, may be acquired, and time be profitably spent in gaining a fair knowledge of 'Osteology,' which is always of the greatest use before commencing to dissect, or to attend

lectures on anatomy. But experience leads to the conclusion that, if a tyro has the choice—it is better not to commence lectures too early, but to do so as soon as the elementary studies (and examinations) are disposed of, and to leave the residence with a practitioner until at least the 'Primary' Examination (in Anatomy and Physiology) are passed. After that he will devote his whole energies to his hospital work, and may, when opportunity offers, most usefully combine therewith the duties of an assistant to some surgeon, who can allow a certain time for the school and hospital. The suggestion that at least two years should elapse between the passing of the 'Primary' and Final Examination, which has been already acted upon as a stipulation for the Licence of the London College of Physicians, is, I think, an admirable one, and one which favours the view I have advanced.

"Then, gentlemen, you will find, when once launched upon your career, that examinations are very numerous. A recent proposal of the Royal College of Surgeons (which, however, has been for the present abandoned) to institute an examination in anatomy at the end of the first year, in addition to the usual one after the second winter session, originated no doubt in a plausible motive—viz., that of being an incentive to good steady work during the first winter session specially, which is not always, unfortunately, utilised to its fullest extent. It would, however, had it been established, have added unnecessarily, and to my mind without corresponding gain, to the burdens of more especially the provincial students, unless indeed it could be held at each individual school." Touching upon the subjects which the students would have to master, he urged them not to neglect that department of anatomy which was too apt to be overlooked—the contemplation of the prominencies and outline of the body and limbs in a normal condition, and the changes which they underwent in movement, with the relation of arteries and viscera to the surface, so that in examination and operation they might know where to look for them. He also suggested the cultivation of the habit of making themselves familiar with the normal before proceeding to the study of the abnormal conditions, not only with regard to limbs and viscera, but in commencing the use of the various aids to diagnosis which were now so complete and numerous. With regard to physiology, he observed that though it had made vast strides of late, there were still connected with it very much of what had been denominated "unknown territory." After expressing his regret at the restrictions imposed upon physiological researches by the Vivisection Act, and alluding to some of the advantages which had resulted from experiments on living animals, Mr. Wright traced the history of the Leeds School of Medicine, and concluded as follows:—The increasing requirements of examining boards had resulted in the gradual widening of the subjects to be taught, and that had recently been aided by the development of colleges of arts and sciences in our large towns, and especially in those where provincial schools of medicine had for years existed, and by the extension, by scholarships and endowments, of the facilities for placing a sound literary and scientific education within the reach of many who had hitherto failed to acquire it. Of the seven provincial schools in this country, four were already incorporated with colleges of that kind, and the large centres of population in which the other three were situated each possessed one in a more or less complete stage of development. The Manchester Royal School of Medicine had for some time been incorporated with Owens College, and but a few months ago they had witnessed the foundation by Royal Charter of the more stately Victoria University, having its seat in the city of Manchester, and which, though it had not obtained the power to grant medical degrees, now commenced its foundation with every prospect of a glorious future. They might, he trusted, look forward to the not very distant date when their own Yorkshire College might be enabled to comply with the terms of affiliation, and thus be constituted a college of that University. Might he venture to express a hope that the date was not distant when some closer union might be effected between the Yorkshire College and their own School of Medicine? It was impossible to contemplate either the present or the future of their school, or to reflect upon possible changes in their administration, without a pang of remorse at the very great loss they had this year sustained in the death of one who freely gave so much of his time, means, and energies in his devotion to the interests of all the three institutions he had named. So far as the Yorkshire College was concerned, it was not too much to say

that it was to a large extent due to John Deakin Heaton (as its chairman of council) that many of the early obstacles to its formation were surmounted; while as regarded the Infirmary and School of Medicine, his long service of conscientious and disinterested labours, extending, as regarded that school, over thirty-seven years, were so fresh in the minds of all who knew him, that they needed no words of his.

At the conclusion of the address, prizes were awarded as follows to the students:—

Winter Session, 1879-80.—Anatomy (Junior): Certificates, H. J. Robson and T. J. Walker. Anatomy (Senior): Medal, John Dacre; certificate, W. J. Waddington. Physiology: Medal, J. Dacre; certificates, Arthur Bowe and A. A. Ward. Lecturer's Prize: J. Dacre. Practical Physiology and Histology: Medal, J. Dacre; for summer examination, 1879, March, certificate, J. H. Naylor. Chemistry: Medal, H. Child; certificate, H. J. Robson. Surgery: Medal, J. W. Deardon; certificate, F. H. Mayo.

Summer Session, 1880.—Botany: Medal, G. I. Wells; certificate, H. Child. Materia Medica: Medal, Robert Smailes; certificate, J. H. Naylor. Practical Chemistry: Medal, Herbert Child; certificates, J. J. Mountain and J. N. Hawkin. Midwifery: Medal, John Dacre; certificate, A. A. Ward. Practical Physiology and Histology, &c.: Medal, Herbert John Robson; certificate, J. N. Hawkin. Pathology: Prize book and certificate, F. H. Mayo. Forensic Medicine: Medal, J. W. H. Brown; certificate, Frederick Wilson.

LIVERPOOL ROYAL INFIRMARY SCHOOL OF MEDICINE.

INTRODUCTORY ADDRESS BY DR. WATERS,
LECTURER ON MEDICINE.

AFTER a reference to the advantages to medical students offered by the Liverpool Royal Infirmary, and the proposed establishment in the city of a college for higher education, to be called "University College," the lecturer proceeded to set forth the difficulties which would be encountered by those entering upon the study of medicine. He then spoke of the relative importance of the different subjects of the curriculum:—"Amongst the most important of these, anatomy stands out prominently. It may be safely said that no man can become a sound or successful physician or surgeon without a knowledge of this science. It lies at the root of all your studies, and you will find in this school the amplest means and opportunities for acquiring a practical knowledge of it. The science of anatomy, in the ordinary sense of the term, may be said to be perfect. It is true that with regard to minute investigation much may remain to be discovered, but in reference to ordinary anatomy our knowledge is complete. You will find the study of it not only essential to you in order that you may pass your examinations, not only in reference to the study of disease and accidents, but also of the highest value as a training for the mind, and of the greatest importance to you in any original inquiries in which, as physicians or surgeons, you may hereafter engage. Physiology is another subject of special interest and importance to you. Unlike anatomy, it is an imperfect science. Still, much is known of the functions of the animal economy, and every year is rendering our knowledge more complete and precise. The study of physiology possesses a fascination which few other studies possess. It is daily becoming more generally taught in our schools, and the knowledge of it is, therefore, becoming more diffused. It is looked upon now as almost a necessary part of the education of both sexes. I consider this introduction of the study of physiology into our schools as of the highest importance. As a training for the mind it is of great value, but as inculcating a knowledge of facts which have the most direct bearing on the well-being of society it cannot be too highly esteemed. To you as practitioners of medicine it is essential, for if you would wish to estimate the amount of derangement which disease produces you must know how far that derangement is a departure from the normal state. A knowledge of chemistry will aid you greatly in your study of physiology. It will help you to understand many of the phenomena of organic life, and will often guide you in the treatment of disease.....It is in the wards of your hospitals,

at the bedside of the patients, that you can alone learn to recognise and treat disease; and there is too great a tendency on the part of students to neglect the clinical part of their work, and especially in the early days of their attendance at their hospitals. Those who are unacquainted with the difficulties which beset the progress of medicine are apt to imagine that the advances made in it are not commensurate with those which are made in other sciences. Now let us for a moment consider this point, for I am one of those who believe that, in proportion to the difficulties which surround the investigations of medicine, the discoveries in medical science and the advances in medical art have been as great as those which have marked the history of any other science or art. I should wish to be in no wise misunderstood. I do not for a moment under-estimate the difficulties which attend the investigations of the physical philosopher, and I admit most willingly, for instance, that the precision which characterises the labours of the chemist, and the exactitude with which the predictions of the astronomer are fulfilled, demonstrate the high degree of perfection to which their respective sciences have been brought. But the subjects to which medicine relates immeasurably transcend those of the physical philosopher. The investigation of the phenomena of life is surrounded by difficulties such as the physicist never meets with. The unchangeable nature of inorganic matter gives rise to one unvarying result whenever inorganic matter is acted upon by the same cause. But organic matter is ever varying, ever unstable, and in that highly complex body which is the subject of the physician's operations there are so many circumstances beyond the mere physical, so many varieties of individual constitution, so many peculiarities, so many influences of a mental or a moral nature, that it becomes a problem, very different from that which the chemist or the astronomer is called upon to decide, when the physician has to consider the effects which the same cause will produce on different persons, or on the same person at different times. Were the science of life as perfect as that of chemistry, were we even thoroughly acquainted with the laws which regulate diseased action, there would still remain great difficulties in the treatment of disease. We should still have to study the peculiarities of each individual and carefully select the remedies appropriate to the case, and herein lies the great difficulty of therapeutics, but herein also lies its point of greatest interest. It is this which gives its great peculiarity to medicine—the ever-varying condition of those who are subjects of the physician's care; the manifold phases which the same disease presents in different persons; and, lastly, but by no means least, the different effects which the same remedy may produce in different individuals and in the same individual at different times. And in judging of the progress of medicine, these are circumstances which should always be taken into consideration. Some of the best original work ever done has been done under circumstances apparently the most unfavourable; and, therefore, let no man imagine that, although located far from the busy centres of intellectual or practical life, he may not, whatever be his calling, and especially if it be medicine, contribute something to the stock of human knowledge. *Non nobis solum nati sumus.*"

The prizes to the successful students of the winter and summer sessions were then distributed as follows:—

Lyon Jones Scholarships.—Mr. F. C. Larkin, Mr. J. W. Ellis, Mr. A. Barron, Mr. A. H. Wilson.

Winter Session.—Third-year subjects (Medicine, Surgery, and Pathology): Mr. R. Honeyburne, silver medal; Mr. F. J. Laimbeer, bronze medal. Second-year subjects (Advanced Anatomy and Physiology): Mr. A. H. Wilson, Terr gold medal; Mr. W. C. Garman and Mr. T. P. Lowe, bronze medals; Mr. G. Jones, first hon. certificate; Mr. J. R. L. Dixon, second hon. certificate. First-year subjects (Elementary Anatomy and Physiology and Chemistry): Mr. W. O. Travis, Bligh gold medal; Mr. Joseph Walker, bronze medal; Mr. F. C. Larkin, first hon. certificate; Mr. H. A. Bredin, second hon. certificate. Histological Prizes: Mr. A. H. Wilson and Mr. A. H. Clemow.

Summer Session.—Senior subjects (Medical Jurisprudence and Obstetrics): Mr. J. W. Ellis, bronze medal; Mr. R. Williams, hon. certificate. Junior subjects (Botany, Materia Medica, and Practical Chemistry): Mr. Joseph Walker, silver medal. Comparative Anatomy prize: Mr. F. H. Barendt. Extra prizes in Obstetrics: Mr. J. W. Ellis, first prize; Mr. R. Bredin, second prize. Students' Debating Society's prizes: First essay, Mr. W. C. Garman; second

essay, Mr. J. R. L. Dixon. Debating prizes: 1. Mr. Nevins; 2. Mr. J. G. Brown. Reports of Medical Cases, Mr. Laimbeer; Reports of Surgical Cases, Mr. Ellis. Prize for Specimens, Mr. A. Barron.

SHEFFIELD SCHOOL OF MEDICINE.

INTRODUCTORY ADDRESS BY DR. C. NELSON GWYNNE,
LECTURER ON PRACTICAL PHYSIOLOGY AND HISTOLOGY, SHEFFIELD
SCHOOL OF MEDICINE.

DR. GWYNNE began his address by an urgent appeal to the students to commence earnest work immediately, and not put it off till the second or third year of their studies. He drew attention to the special advantages afforded by the Sheffield School of Medicine. He then spoke of the latitude and grandeur of the science of medicine, and gave examples of its intimate relationship with the Physical Sciences, with Psychology, and the Arts. He next devoted a portion of his address to giving advice to the students as to the method of conducting their studies. He specially recommended the study of Physiology, and gave a short historical account of the advances made in that department since the discovery of achromatism. He went on to say:—

"When you have completed your second year of study, your chief attention ought to be directed to your hospital work. Let your attendance be regular, and never omit to take copious notes of the cases you have selected for your special attention. Don't endeavour to cope with a large number of cases at once, but, while giving a general attention to the clinical remarks made beside the bedside of every patient, choose out two or three medical, and as many surgical cases, for your special observation. Now is the time to acquire accuracy and method in the examination of your cases. Never yield to the temptation of making a quick diagnosis, based on some suggestive symptom, and jumping at a conclusion without having first gone through every step that leads up to it. First acquaint yourself with the previous history of your patient, and to gain this, let your questions be short, pithy, and to the point. Avoid all discursive conversation and unnecessary details. Next examine his general present condition, and let the skin, the digestive system, the urine, the circulatory system, the respiratory organs, the temperature, &c., all receive the attention they in each instance deserve. When you have gone through this general examination, the *locus* of disease will be pretty sure to suggest itself, and will demand further special investigation. Once acquire a certain method in examining your cases, and you will soon find yourselves in every instance intuitively, and with rapidity, following out the same method, and the result will be accuracy in your diagnosis and that confidence in yourselves, which is almost indispensable to the successful physician.

"Many of you may hereafter be called upon to carry out the duties of the 'Public Health Act,' and you will find them, in any case, multifarious and difficult; but a little time bestowed upon the subject now will enable you with much greater ease to accommodate yourselves to the duties that devolve upon you. There is little doubt but that all the licensing bodies ought to make the subject an integral part of their regular curriculum.

"After the student has entered on his second year, the question of paramount interest to him is the *choice of a diploma*. In regard to this you are in a certain sense unfortunate. You are commencing your professional studies in a transition period. We have not yet been divorced from the imperfect system of the present, nor yet wedded to the new system of the future. It is still reserved for only a comparatively small number to proceed to a respectable English medical degree. It is still competent for you to settle down and practise both in medicine and surgery, on attaining to the membership of the English College of Surgeons, if you elect to be satisfied with it. It is next door to impossible for you to acquire an English medical degree, except the few of you who have the pluck and energy to aspire to the degree of what is called the 'London University'—a university in nothing but in name—a sterile *alma mater* which adopts the children she never nurtured, without a staff of paid professors, without laboratories, without, in fact, any of the paraphernalia requisite for imparting knowledge or for adding to the aggregate of scientific discoveries. And when I say this, I am aware that the high standard required for its degrees has had a healthy influence on medical education

throughout the country; I am aware, too, that many of those who hold the degree of the London University hold a foremost position in the scientific world, and that others are progressing towards the attainment of that position; but, beyond stimulating their energies and testing their capacities, what has the London University done for them? It manifestly fails in the most valuable duty of a university—viz., in teaching.

"The possession of a certain amount of knowledge in a student is not the main desideratum; it is more important to form his habit of mind and to direct his method of investigation. The student who has attained to his degree after a four years' period of study is, however he may estimate himself, but a child in knowledge, and being but a child, the fashioning of his mind for a progressive life-long student-ship, the laying down a sound groundwork for future labours, is vastly more important than to foster precocity, and, in many instances, after-idleness, by cramming his brain with numberless facts and a variety of details. We hear far too much at the present day of examining boards, and far too little of university teaching. In these remarks I do not include Scotland and Ireland, for I am well aware that the Universities of Edinburgh and Dublin have never neglected the duties they owed to medical education. But in England, unfortunately, owing to a variety of causes, it has been different, and it is only lately that, with an energy that deserves all praise, the University of Cambridge has determined to revive the teaching of medicine in its walls, and to roll away the reproach that so long attached to it, of snubbing and neglecting a study that directs to the alleviation of human suffering the most universal scientific investigations. The exertions of the University of Cambridge in the south we are soon likely to see emulated in the north. The want of a university for the north has at length been recognised, and the Victoria University has received its charter and entered upon its mission—a university in deed as well as in name, with splendid lecture halls, museums, and laboratories; with a staff of paid professors, and every requisite necessary for the acquisition of new knowledge; with colleges to be affiliated with it in each of the large neighbouring towns, our own included. Untrammelled by an ancient history, or by old associations with pedantry and prejudice, it starts buoyant with health and hope, soon, if I mistake not, to lead the van, and leave behind in the race older but more lagging competitors.

"We have waited too long in the hope that successive governments would legislate for us, and put medical education in this country on a better and more uniform footing. 'The gods help those who help themselves.' It is time that we set to work and bring about our own reformation. It will be a long time before we have in this country an equivalent to the German 'Staats Examen.' With the Government imposing implicit confidence in the General Medical Council, and with the well-known proclivities of that Council, we may fairly predict that we will not in this generation witness much advance towards such a denouement. Perhaps if we were fortunate enough to be under a system of government that fostered science things might be different; but unfortunately the sciences and arts in this country alone, of all great nations, are left to struggle as best they may for existence, and are destined to receive official snubs much oftener than the assisting hand. I need not remind you of the army and naval medical services, which are, thanks to the persistent efforts of the profession, ably backed up by the medical journals, only just emerging from behind the cloud of disfavour under which official mismanagement has placed them. Since, then, we may have to wait a long time for the establishment of a one-portal system, it is manifestly our duty to make the best of things as they exist. If among all the different corporations that granted medical and surgical diplomas there existed a healthy rivalry; and if their aim was in each instance efficient teaching, and to make a high standard of acquirements necessary for attaining to their diplomas, rather than merely to secure a preponderance in numbers; if, I say, such a state of things could be brought about, and there are not wanting signs of it already, it would be quite unnecessary to agitate for a one-portal system. There is no doubt but that, in any case, certain changes would have to be made. Among them, I would mention the making of it obligatory on the general practitioner to acquire a medical as well as a surgical diploma. Again, the establishment of a uniform standard for the preliminary examination would be most desirable, and the entrusting the conduct

of the examination to bodies in no way connected with the licensing bodies. It would also be very desirable, and a great boon to the students, to institute a preliminary scientific examination, which would include such subjects as botany, zoology, and chemistry, and thus lighten the already over-crowded curriculum. With the many advantages connected with the one-portal system, however, there is combined also a grave disadvantage; that is, that the great majority of general practitioners would be quite content to practise on the licence conferred on passing the 'Staats Examen,' and would not care to go to the additional expense and labour to obtain a degree from one of the universities or the old corporations. Such a result would naturally react upon these bodies and tend gradually to diminish their popularity and enfeeble their energies.

THE ARMY MEDICAL SCHOOL AT NETLEY.

THE winter session of the Army Medical School was opened at Netley on Monday, the 4th inst. An unusually large number of surgeon-probationers were present—viz., sixty-nine for the Army Medical Department, twenty-six for the Indian Service, and five for the Royal Navy, making an exact total of one hundred. The introductory discourse was delivered by Professor Longmore, C.B., his subject being principally a discussion of the question of applying the antiseptic method to the treatment of wounds in military practice in the field. In the course of some preliminary remarks the lecturer adverted to the fact of the Army Medical School having been opened by Lord Herbert at Fort Pitt, Chatham, in October, 1860, so that twenty years had now passed since that event took place; and he mentioned that during these twenty years as many as 1588 surgeons had passed through the School prior to receiving commissions in one or other of the branches of the public service. Of this number 804 had entered the Army Medical Department, 568 the Indian Medical Service, and 216 that of the Royal Navy. The following statistics regarding the surgeons who had joined the Army Medical Service were of interest:—Out of 804 surgeons there remained at the present time 583 in active employment—thus showing a loss by casualties of different kinds during the twenty years amounting to 221, or something over 27 per cent. These 221 casualties were made up of 115 surgeons lost by death, 76 who had left the service for various reasons, and 30 retired on half-pay. A circumstance was alluded to by the lecturer which it is difficult to believe would have remained unremedied if the subject had been represented so as to be understood by the officials of the War Department under whose direction the establishment exists. It appears that there is only accommodation in the rooms where the practical hygienic studies are conducted for thirty-six gentlemen at one time, and that, in consequence the professors are compelled to divide the 100 probationers into three sections, so that only one-third of the instruction can be given to each probationer that was originally intended to be given, or that would be given, during the four months the session lasts, if there were sufficient accommodation for the whole number. Surely, means might be found for putting a stop to such a short-sighted arrangement as this appears to be! The lecture was attended by the whole of the staff of Netley, as well as by the probationers, and at the conclusion the officers and their friends adjourned to luncheon in the spacious mess-room at the officers' quarters.

UNIVERSITY COLLEGE, LONDON.—The examiners for the medical entrance exhibitions have recommended Mr. P. J. Edmunds, Mr. J. W. Carr, and Mr. J. H. E. Brock for the exhibitions of £100, £60, and £40 respectively. Mr. E. H. Thanes also obtained the number of marks qualifying for an exhibition.

ST. MARK'S OPHTHALMIC HOSPITAL, DUBLIN.—At a recent meeting of the governors it was stated that as the public account of this institution had been largely overdrawn, and there being no assets for the necessary expenditure, a number of the beds must be closed and admission refused to future applicants, unless immediate help was obtained from the public, so as to enable the hospital authorities to clear off the present debt, and to carry on the future work of this charity.

THE LANCET.

LONDON: SATURDAY, OCTOBER 9, 1880.

It is now fully twelve months since rumours were afloat that great changes were contemplated in the nursing department of Guy's Hospital by the governing body, without any consultation with the medical staff, and people wondered at the folly and shortsightedness of the authorities, who, upon so important a question, should attempt the introduction of measures dealing directly with the sick without a previous understanding being arrived at with those responsible for the care of the patients. But no sane person could then have foreseen that the changes referred to would have been carried out in spite of repeated and earnest remonstrance from the whole of the medical staff. As months rolled by and events occurred to give support to the arguments vainly raised by the staff, there were still some who thought that the governing body—all-powerful as they are—would view the question in the proper light, and would respect the grounds of opposition to their proposal which were so strenuously urged. No sign, however, came from the governing body, who a few months ago repeated their adhesion to the course they followed, and offered to the staff the compromise of two seats upon a weekly committee in which the medical vote would always be in a minority! The contention that the nursing department should primarily be under the control of the medical authorities has been ignored, and in a document (printed in another column) addressed to the Guardians of St. Saviour's parish, in response to a strong remonstrance from the Board, the Governors have appealed to the public, and, in doing so, have shown how great is the variance between them and the staff on this matter. The Governors have been praised for the "dignified silence" they have so long kept, but they would have consulted their dignity better had they long since listened to the remonstrances addressed to them, and not waited until their action (or inaction?) had called forth the indignation of a vestry board, followed up by the resolve to petition Parliament to inquire into the management of this great charity. We have no means of knowing whether the reply to St. Saviour's Guardians was supported by the whole body of Governors. It comes forth with the signature of the President, and must be held to represent the views of at least a large majority among them. It has seldom happened that so important a body has had to defend itself in such a manner for the policy pursued in the face of a resolute opposition. This policy is upheld to the utmost in the defence, and it closes with a scarcely veiled allusion to something worse to come if this policy is not suffered to be carried out. Never has the subordinate position held by the medical staff in a large hospital been more clearly manifested, and if good is to come of this long-continued scandal it will be by such a fundamental change in constitution as shall once and for ever free the medical staff from the humiliating conditions under which they are suffered to give their services to the sick, and to enhance the reputation of the institution.

It seems strange to read in this document that the Governors have always adopted the doctrine of the subordination of the nursing to the medical staff as a fundamental principle of hospital management; for during the months that have elapsed since the question came to the front, they have violated this principle by declining to accede to the reasonable demands of the medical staff upon the question of nursing. They say that conciliation was offered and rejected by the staff, who are depicted in this appeal to the public as swayed with one sole desire, born of unfounded prejudice—namely, the removal of a matron whom they disliked. It is hardly worthy, and certainly not dignified, of the Governors to impute such motives to their medical staff, who have waged war less against the matron than against the system of which she is the representative; and an admission is made which goes a long way to explain the determined and continued opposition of the staff. The Governors admit that "it was unfortunate that the opinions of the staff were not fully ascertained before any new rules were drawn up." Most unfortunate, truly! Such a statement only emphasises the more plainly the absolute impotence of the staff at Guy's Hospital in matters of management. It would have been at least courteous to have consulted them, and if concurrence rather than opposition in the new measures had been expected, such consultation would doubtless have taken place. It seems as if opposition were anticipated, and the strange belief were encouraged that the medical staff would quietly submit to any regulations dictated to them, although these would strike at the very matters in which they were most interested. They were not then suffered to know anything of the revolution which had been prepared for them in the department which most directly concerned the welfare of their patients; and the new *régime*, which led to the dismissal of many efficient and tried nurses, was instituted without their sanction and almost without their cognisance. It was not to be expected that a body of gentlemen, whose high personal characters, no less than their professional abilities, are guarantees of their honesty of purpose, fearful of the future of the great hospital in which they served, should have addressed many an urgent remonstrance to the governing body to reconsider the course they were taking. They knew well that the nursing department was capable of improvement, and would gladly have undertaken the task of inaugurating a new system; but they were not suffered to have a voice in the matter, and when they saw in what directions the so-called "reforms" were leading them they did all they could, and protested with one voice, against the evils they were powerless to avert. Their protestations and arguments fell on deaf ears. A policy had been planned out, and it was determined to carry it at all costs.

The Governors, in their elaborate defence, formulate the "rules," which they aver have proved so obnoxious to the medical staff, but we believe that it is not so much the rules themselves as the spirit in which they have been interpreted and the manner in which they have been enforced, that are the real grounds of dissatisfaction. It is absurd to think that objections could be raised, for example, to improved punctuality in attendance of nurses, their greater comfort, the introduction of trained nurses on night duty, the training of probationers, or even the adoption of uniformity

of dress among the nursing staff. If these were the real points against which the medical staff have raised their voice, they would deserve but little sympathy. But the Governors do not state how it came to pass that women who for years had been trusted and had proved themselves worthy of the confidence imposed in them, were turned adrift on trivial pretexts; nor how persistently the advocates of reform depreciated the "old" system to magnify the new; nor how palpably wanting in tact, judiciousness, and forbearance was the management they extol and support. The full details of the controversy have not been made public, but it cannot be imagined that the medical staff would persist, at the risk of misrepresentation and of wrongful imputations, in a unanimous opposition, did they not see with their own eyes how grave was the condition into which their hospital was drifting. The Governors say that friendly co-operation with the staff ceased from the first promulgation of the rules, and that they have failed to discover in what practical directions the staff have reason to complain of the improved system; and they seem to regard the fact that the wishes of the staff have been complied with in the times and attendance of nurses, as a great concession obtained "at some sacrifice of important considerations." What are these "important considerations"? Can they possibly outweigh the paramount necessity of the personal intercourse between the medical men and the nursing staff which ensures that the directions of the former shall be efficiently carried out by the latter? The public attacks upon the matron, to which the Governors allude as the only reply vouchsafed by the medical staff to these changes, were called forth by the inconsiderate zeal of that lady's friends, who have done their best to alienate the staff from her, and who would have served her better had they counselled courteous deference rather than covert opposition.

In the face of their treatment of the medical staff, it hardly becomes the Governors to appeal to the sympathy they have practically shown in the support of the school attached to the hospital—a school of world-wide celebrity. Of what use is it, if, whilst giving with one hand, they raise the other to deal a deadly blow at the interests of the school they profess to support? Still more unworthy of a governing body are the words that close this document, for they hint at the means still left them to compel acquiescence from the recalcitrant staff. They point out that the paramount end of a hospital is the relief of suffering, with which no "professional objects or struggles for power" should be suffered to interfere; and they add, with significance: "Keeping this end steadily in view, but also having special regard to other interests and feelings, the Governors have patiently persevered in efforts to avert consequences which have been for some time obviously impending; but they are not at liberty to evade the responsibilities of their position under an Act of Parliament, however painful their duty may be."

One word as to the duty of the staff. They have striven long and hard to gain their point, and this is all the encouragement they get. The one course, which to some unreflecting persons would seem the only possible one now, is, from many and obvious considerations, not open to them. They must continue in their office, and do their work in the treatment of the sick and the cause of medical science and

education; but they must not lose heart, or fancy that in doing so they are humiliated, or that in process of time their views, if reasonable, will not be adopted. They must labour strenuously to seek such an alteration in the constitution of the hospital as may for ever prevent the recurrence of so lamentable a state of affairs as that in which Guy's Hospital has been plunged for a whole year. Hard as the task will be, it is forced upon them by the conditions which impel them to remain at their posts; and we confidently believe that this long and painful controversy will bear its fruit in causing the inauguration of a system in which all questions of management concerned with the direct care of the sick shall be controlled by the medical authorities themselves. The constitution of Guy's Hospital is antiquated and effete, and it is time to appeal to Parliament to have it altered in conformity with the more enlightened modern spirit. It is from no class motive that we advocate such a change, but from full knowledge of the benefit which the sick poor would derive therefrom, and of the certainty that the hospital would thus be enabled to do its work more efficiently than under a system which practically places the whole management in the hands of one man, controlled only by a governing body composed of laymen, who are unable to understand or appreciate the proper functions of a responsible medical staff. The correspondence which was made public in *The Times* of Thursday last, between Mr. BRYANT and the President and Treasurer of Guy's Hospital, renders it only too painfully evident that all hope of an amicable settlement of this vexed question without an appeal to Parliament is now at an end. The position taken up by Mr. GIBBS is one of open defiance to the remonstrances of the medical staff. Meanwhile the rights and demands of the Faculty cannot be set aside or allowed to remain unsatisfied. The effrontery of the President's reply to Mr. BRYANT is evidently the outcome of ignorance, the sort of ignorance that induces or permits laymen to forget that a hospital is essentially a *medical* charity; in short, an institution in which the medical element must be naturally and inevitably paramount. The Governors of such an institution are simply persons of social position and repute entrusted with the guardianship of the property and general interests involved. The administration must in the nature of things be carried out in the spirit of the prime movers of the charity—viz., the medical men whose art and skill it is the sole object of the charity to bring within reach of the poor. It is an obvious perversion of the principle of hospital management to assume that the establishment is foremost, and the medical element accessory. As a matter of fact and principle, the establishment is simply an adjunct and agency of the medical department. It follows that the hospital must be administered for the medical faculty, and the nursing with every detail not purely financial ought to be subject to their approval or control. This is the point to make plain, and now that the issue is fairly and fully raised the Governors of Guy's Hospital must be prepared to see it carried to the highest tribunal and there confirmed. The time for compromise has passed.

It is very easy to disparage the institution of Introductory. And occasionally, it must be admitted, the institution seems a prosy and dull thing. There is a want of

aim and point and applicability in what is said. The Lecturer refers to nothing in particular, or to circumstances infinitely remote from the actual experience of the audience; or, if the speaker adheres to his subject, he does it with so little faith and freshness as to excite the interest neither of his hearers nor of his readers. When a batch of such Addresses has to be editorially considered, woe betide the unlucky speakers! How could an editor rise from the ordeal of reading such a series in a charitable frame of mind, and say else than that the whole institution of Introductorys should be abolished, and the student left to wade or plunge in *medias res* according to the lights of nature, with any stray instructions he could pick up from parents, friends, or fellow-students? It is in no such mood that we find ourselves undertaking to criticise the discourses of those who have this year discharged the much-feared duty of speaking introductory words to students beginning a new session, or, it may be, the very process of medical education itself. We find ourselves in a mood to praise the institution of Introductorys. Clearly the position of a young man on the threshold of the great Temple of Medicine is one needing sympathy and advice. He little knows what is before him: what tasks of mind; what dry labour; what multifarious details; what demands on his patience; what subtle temptations to be idle, to put off work to the end of sessions, till the approach of examinations, or to choose work that is easier or more inviting, instead of work that seems drier and less interesting—to be in the hospital or in the operating-theatre when he should be in the dissecting-room; or, worse temptations still, to be fast, or free, or forgetful of the restraints that are constituted by home and the presence of dear friends.

A man is only once in his life in the position of beginning medical study. And he is presumably placed in entirely new circumstances with new opportunities for going wrong and being selfish, and happily new occasions for doing work bravely, unselfishly, with reference not only to his own future success, but to the family convenience and the family fame. It is a supreme moment with a medical student at which he needs direction, and this direction should be in the Introductory which he hears, and the other Introductorys which he may read. And if the students take our advice, they will this year read them all. They are all pertinent, and they are all parallel. They show a common judgment on the part of teachers as to the present state of medicine, and the present way of learning it. The note which has been struck is so tuneful, so harmonious, that the medical work of the session should be happier and more hopeful, and altogether better for the Introductorys of 1880.

We scarcely know how to do detailed justice to the individual addresses—an inability which we have already atoned for by advising students to read them all, that they may be struck with the *consensus* of the advice given them. The different points insisted on by separate lecturers are not so noteworthy as the remarkable agreement on certain great principles underlying all existing views of medical education. Perhaps the Address of Dr. BURDON-SANDERSON is the most complete and scientific exposition of the motives and spirit which should actuate a medical student; of the foundations on which he should build his medical knowledge; and of the general nature of that knowledge as far as it has yet

been disclosed in response to laborious inquiry. But Dr. CAVAFFY'S Address is scarcely less valuable or complete. The fundamental idea of both Addresses is this—that the Medical Art is growingly becoming an affair of sound and minute knowledge, daily becoming more and more dependent upon science, that proficiency in it is not to be gained by any routine reading or “walking the hospitals,” but only by the minute study of what Dr. BURDON-SANDERSON terms the three “P.’s,” Physiology, Pathology, Practice. Dr. SANDERSON’S list of “P.’s” must even be extended if it is to include all that he and others think indispensable in the knowledge of an accomplished practitioner of medicine. There should really be four “P.’s,” thus, Physics, Physiology, Pathology, Practice. Not different from this was the view of Mr. WALTER PYE at St. Mary’s, who said that medicine at the present day was advancing, not as it had been for the last two hundred years, simply by the accumulation of clinical experience, but by striving as far as possible to reduce its practice to the condition of that of an exact science; and very practical and much needed was his advice to younger students to get their first professional examination over as soon as possible, and till that was done not to attempt to do any clinical work in the wards, an irregularity which leads to much grief and failure in examinations. Dr. GEORGE JOHNSON, at King’s College, spoke with authority on the importance of use and cultivation even for the highest natures, MILTON and SHAKESPEARE being brought into court as illustrations, and characteristically and effectively wound up in the classical words of Sir THOMAS WATSON. Dr. ORD very properly insisted that boys meant for the medical profession were not to have a school education different from others, and while vindicating the classics insisted on the introduction of medical sciences into school courses. Dr. DONKIN, at Westminster, claimed respect for accumulated clinical experience while insisting on the value of modern invention and research. Not the least valuable part of this lecture was the keen exposure of the very spirit of quackery, as illustrated in homœopathy and in exaggerated specialism.

Students entering such a profession as ours should do it humbly and yet proudly, humbly because of the limitations of their own capacity to deal with the knowledge that is waiting to be used and appropriated by them, proudly because of the lofty aims of their profession and the long roll of great and good men which have adorned it.

THE Metropolitan Hospital Sunday Fund stood very high in the estimation of the public before, but the meeting of Tuesday last confirms its claim to public respect. It is not difficult to secure an agreement of the various religious bodies in support of a philanthropic object; but to preserve that agreement while delicate questions of difference of creed have to be touched, and respect for the creed of poor patients has to be vindicated, is not so easy a matter. It looked at one time as if the admirable harmony which has characterised the proceedings of the Council in past years was in jeopardy; but good sense and high principle prevailed, and the meeting ended, if not in a perfect resolution, at least in one which maintains the fundamental laws of the constitution of the Fund, and the harmony of the members of the Council.

This happy result is due very much to the firmness and intelligence with which a few members of the Council have vindicated the laws of the Fund, and the principle that in all hospitals, even in those in which a high ecclesiastical element and purpose is most apparent, the religious opinion of patients must be respected. The Distribution Committee, led by Sir SYDNEY WATERLOW, cannot be congratulated on its appearance in this matter. In the first instance it was found napping most carelessly, and overlooking an obvious disqualification—namely, the want of a duly constituted committee—in a hospital claiming a grant. When it was made clear—when, in fact, it was confessed—that the hospital had not a committee, the Distribution Committee made light of the objection, and was disposed to override the rule, and give the grant on its own authority, and in violation of two rules of the Fund—first, that which requires that all hospitals sharing in the benefits shall have a committee; and, secondly, that which requires that any award, before being considered final, shall be sanctioned by the Council. Fortunately, the Distribution Committee determined to submit its views in the form of a report to the Council. Here evidently they thought to have an easy vote in favour of overlooking the absence of a committee, and making very light of the admitted instances in which very strange doctrines, and resort to the confessional, had been urged on patients. Professor MARKS, the Rev. Dr. RIGG, Dr. ALLON, and others, insisted in the firmest manner possible on the necessity of a committee, both as a condition demanded by the laws of the Fund, and as the only possible way of securing respect for patients and their religious creeds and convictions. The Rev. Mr. KITTO was disposed to think that the proselytising action complained of was the mere uncontrollable indiscretion of nurses or sisters, but the objection founded on the want of a committee, he admitted, was insuperable. The Distribution Committee then modified their resolution so as to postpone the granting of the award until the Lord Mayor shall be satisfied that a committee had actually been appointed in a constitutional way. All parties were anxious for a unanimous vote, and accordingly this resolution was accepted, though both the Council and the hospital would have been placed in a more dignified position if the claim had been rejected for this year and until the hospital had put itself fully into line with the rules of the Fund. The resolution, however, recognises the great principle that until an institution has a committee, it is not a public institution, and has no claim on a fund raised by a great public and unsectarian effort.

It is to be hoped that we shall hear no more of hospitals without committees. If such hospitals apply again to the Fund, there will be no excuse either for them or the Distribution Committee overlooking their disqualification. The strong assertion of the Committee principle by the Hospital Sunday Fund is a great gain, and will tend to stop many abuses, amongst others the tendency to use hospitals for ecclesiastical purposes. Patients should have the comforts of religion, but they should be absolutely protected from its controversies; and it would be simply shocking if bigotry, after being driven out of churches, were to find a place of refuge in hospitals.

Annotations.

"Ne quid nimis."

THE COMING SESSION IN EDINBURGH.

ON Monday the dissecting-rooms in the University New Medical Buildings were opened for the purpose of enrolling students, but work will not be begun until next week, since a few painters, &c., are still in possession. The chief hall is 108 ft. long, 39 ft. wide, and 27 ft. high, is well lighted, and ventilated. A second room measures 39 ft. in length, and 20 ft. in breadth; while annexed to these we find the lavatories, cloak-, bone-, and demonstration-rooms, together with assistants' private studies. The lecture-theatre, which is being pushed forward rapidly, will accommodate 500 students, and altogether the anatomical department seems constructed in a most efficient and comfortable style. The convenience of the student is also being seen to in the hospital, where it has been found necessary to enlarge the University Class-room of Clinical Medicine attached to the Infirmary. This was originally built to contain seats for 120 men, but the overcrowding last year was so great that the managers agreed to have it rebuilt at an estimated cost of £1200. The new class-room should be completed about the end of the month, and is expected to hold 300 students. The Government intend to proceed with the new class-room in the Botanic Gardens shortly. The extra-mural dissecting-rooms have also been opened, and there can be little doubt that the energy displayed by the lecturer in Minto House has acted as a healthy stimulus, contributing in no small degree to the activity seen in the rapid completion of the University buildings.

BLOOD FORMATION IN BIRDS.

OUR knowledge of the origin of the blood is almost entirely dependent on comparative physiology. Some light has been thrown upon the subject by the observation on the mammalia, to which we have from time to time called attention. The formation of blood in birds has now engaged the notice of one of the most distinguished workers in this field, Professor Bizzozero, who has published, in connexion with Dr. A. Torre, an abstract of the results obtained. The former had previously shown that, in certain mammalia, if anæmia is produced by venesection, the spleen becomes the seat of active formation of red blood-corpuscles. The object of the recent investigation was to ascertain whether this is also true of birds, in which hitherto almost nothing is known of the mode of origin of blood-corpuscles. The observers have found that, just as in mammalia, in the red bone-marrow of birds (fowl, pigeon, crow, dabchick, finch, wild duck, swallow, sparrow) there are numerous lymph-cells and red blood-corpuscles, in addition to the connective-tissue cells, bloodvessels, &c. The lymph-cells differ much in size, number of nuclei, &c. Especially noteworthy are certain lymph-cells which contain in their protoplasm numerous rod-shaped or oval corpuscles, highly refracting, like fat, but readily distinguished by chemical reagents. Such lymph-cells are abundant, both in the bone-marrow and the circulating blood, and their protoplasm appears to be particularly mobile. The red corpuscles of the marrow differ from those of the blood in that they possess no typical form, but are of different shapes, and seem, on comparison, to represent stages in the development of red blood-corpuscles. Spherical bodies are also seen, consisting of a large rounded nucleus, enclosed in a layer of thin coloured protoplasm. Near them are similar but larger bodies, still oval and somewhat flattened, with smaller nuclei and a larger quantity of enclosing protoplasm, and adjacent again are other nucleated cells of the size and form of typical red blood-corpuscles, distinguished

from them only by clearer protoplasm and delicate circumference. Two structures found by Bizzozero in the marrow of the mammal are wanting in that of the bird—the giant cells with central multiplying nuclei, and the cells containing blood-corpuscles in their interior.

The distribution of bloodvessels is nearly the same in the marrow of the bird as in that of the mammalia. Small twigs spring at acute angles from axial arteries, and divide into fine capillaries at the periphery of the marrow. From these arise a dense network of broad veins, limited by very delicate but distinct walls, which run centripetally, and open into an axial trunk. Fine sections of the hardened marrow show that all the cells which contain corpuscles with hæmoglobin lie within the veins, so that we must assume that only within these does the development of red corpuscles take place. Another peculiarity of the veins is the very large number of white corpuscles which they contain.

That the three cell forms above described are really stages of the development of red corpuscles can also be proved experimentally. When the bird has been rendered very anæmic by venesection, such cells are found in great numbers, not only in the marrow of flat bones, but also in that of some of the long bones. If a .75 per cent. solution of chloride of sodium be injected into the femoral artery, and the blood issuing from the "vena nutritia" of the tibia be examined microscopically, the corpuscles in question may be observed in numbers in this blood, while they can scarcely be discovered in that of the body generally. When sections of the marrow under these conditions are examined, it will be found that the peripheral part of the lumen of the vein consists almost always of layers of lymph corpuscles, so that the remainder of the lumen, occupied by the red blood-corpuscles, is very small. In the spleen of the birds rendered anæmic no transitional stages could be found, nor have these forms been found in the spleen of healthy animals. Thus it appears that the only organ in which their formation can be traced is the bone-marrow.

THE MIDDLESEX HOSPITAL.

At the opening of the session on the 4th inst. the distribution of prizes took place in the new theatre, A. H. Ross, Esq., M.P., presiding, in the unavoidable absence of H.R.H. the Duke of Cambridge. The customary introductory lecture did not take place, but the proceedings were opened by a brief and appropriate address from Mr. J. W. Hulke, F.R.S., who concluded his remarks by formally handing over the new buildings to the governors of the hospital. After the ceremony, a conversazione was held in the new buildings, which were decorated by Mr. Lichfield, and many works of art and scientific appliances exhibited by Messrs. H. Graves and Crawford, Messrs. Doulton, Hawksley, Murray and Heath, Meyer and Meltzer, Kröhne and Sesemann, Baker, Collins, and others. The new buildings comprise a spacious lecture-theatre, capable of seating 300 students, a lecturer's-room, and a dissecting-room, the site occupied by the old theatre being utilised for the latter, the result being a large and well-lighted room, admirably adapted for its purpose. In the evening the annual dinner was held in St. James's-hall, under the presidency of Dr. A. P. Stewart, one of the consulting physicians to the hospital. Amongst those present were Mr. Ross, M.P., Mr. Bell Sedgwick, Captain Bedford Pim, Professor Flower, Dr. Greenhow, Mr. Nunn, and the whole of the hospital staff. There was a very large attendance, about 120. The toast of the "Army and Navy" was proposed by Professor Flower, and responded to by Captain Bedford Pim, and Mr. Ross replied for the "Houses of Parliament." "The Middlesex Hospital" was given by Dr. Greenhow, and replied to by Mr. Bell Sedgwick. The chairman gave the "Middlesex Hospital Medical School," which Mr. Hulke acknowledged. Dr. Coupland proposed

the "Past and Present Students," responded to by Messrs. Oscar Clayton and P. T. Thane respectively. The "Health of the Chairman" was given by Mr. G. Critchett, and the toast of the "Middlesex Minstrels" by Mr. Nunn, replied to by Mr. G. A. Critchett, under whose direction the musical arrangements had been carried out. These included an original composition by Mr. Casson, entitled "Floreat Alma Mater," as well as selections from "Trial by Jury," and were admirably rendered by the "Minstrels." Herr Ganz presided at the pianoforte.

ANTHRAX.

AN important communication was made to a recent meeting of the Académie de Médecine by M. Bouley. M. Toussaint lately announced the discovery of a method of preventing anthrax in sheep. It was proposed to inoculate them with the blood of an animal suffering from the same affection, defibrinated and freed from bacteria by filtration. In order to test the correctness of the statements of the practicability of this method, M. Bouley obtained from the Minister of Agriculture twenty sheep, of which sixteen have been inoculated with the defibrinated and purified blood from a case of anthrax. Four of these animals immediately died with grave symptoms of anthrax, and the twelve others presented symptoms of illness so severe that it was thought at one time all would die. These results indicate no immunity from the effects of inoculation, but rather an innocuousness of the liquid employed. Successive and minute filtration, heating to 50° C., or the addition of a small quantity of carbolic acid, do not remove all the bacteria from the blood. They simply lessen their number to a very minute proportion, and if animals resist inoculation with blood so treated, it is because the germs of the disease are given in too small a quantity to cause fatal accidents.

The varying resistance of sheep of different races appears to be rather a question of susceptibility to dose than of absolute indifference. Some time ago M. Chauveau found that in inoculating with infected blood a series of sheep, there were always some which resisted, while others succumbed. He soon found that the refractory animals were always foreign—from Barbary. He found, however, that an inoculation of blood which would kill one of the indigenous sheep did not leave the foreign sheep unaffected. They presented mild symptoms, such as slight fever, swelling of the lymphatic glands, &c. If the dose of poison was increased these animals also perished. If, however, one of these Barbary sheep was repeatedly inoculated at intervals, the effects became slighter and slighter after each inoculation, and the animal ultimately became indifferent to the poison. Moreover, lambs born of ewes which were inoculated in this manner during the latter period of gestation seem to have acquired a greater immunity than that possessed by the ancestor. It is suggested that Barbary sheep, thus rendered secure, should alone be pastured on land in which the germs of the disease abound.

It is important, however, to remember that facts lately ascertained by Dr. Greenfield seem to show that animals very susceptible to the poison may have their susceptibility greatly lessened by inoculation with poison which has been rendered feeble by passage through the system of a rodent. The facts discovered at the Brown Institute, that the virulence of the poison can be thus lessened, and that it can thus be employed for successful inoculation, is one of the highest importance.

The disease is attributed popularly to effluvia from the land on which the disease occurs, but its origin seems to have been satisfactorily ascertained by M. Pasteur. He has proved that the germs of the disease—that is, the bacteria—are transported to the surface of the soil by earth worms. Having collected the excremental dirt thrown out by

earth worms on the surface of the soil in a locality where a cow dead of anthrax had previously been buried six feet deep, he obtained by cultivation a prodigious quantity of bacteria, which, being inoculated, readily produced the malady.

DEATH FROM CHLOROFORM.

ANOTHER case of death from the administration of chloroform is reported, this time from Hull. The patient was a man fifty-nine years of age, who was undergoing a second operation of lithotomy by Mr. Nicholson. Chloroform was administered on both occasions, and at the first sitting no ill effects were observed from the drug. When the fatal event happened the stone had already been crushed twice, and Mr. Nicholson was about to proceed to a third crushing, when his attention was called by his assistant to the patient, who appeared to have fainted. About two drachms and a half of chloroform had been administered. Artificial respiration was maintained for half an hour, but the heart did not act again. At the post-mortem examination this organ was found to be weak and flabby, especially the right ventricle. The examination of the bladder showed that it would have been necessary to have repeated the lithotomy several times before all the stone could have been removed. The coroner's jury returned a verdict of death from an administration of chloroform and weakness of the heart; that the chloroform was administered with all due precaution, and that the operation was conducted in a careful manner.

THE TERMINATION OF NERVES IN MUSCLE.

A MEMOIR on the interesting subject of the mode in which nerves terminate in muscle is contained in the part of the *Archives de Biologie* that has just been issued. It is from the pen of M. Foettinger, who has been engaged upon the subject for four years, and who has conducted his researches partly in the laboratory of M. Edouard v. Beneden in Liège, and partly in that of M. Engelmann in Utrecht. The muscles of insects were selected in preference to those of other animals, since the details of their structure are more easily recognisable under the microscope than those of other groups of the animal kingdom. The best preparations were obtained from the *Chrysomela cærulea*, a beetle which is common on various labiate plants, especially on the mints, from *Hydrophilus piceus*, *Lina tremula*, and the *Passulus glaberrimus*. The animals were placed in strong alcohol for some days, and the isolated fibres of the legs or trunk examined with various powers. Each fibre or primitive fasciculus presents several nerve-endings. In *Chrysomela* nine were sometimes found in the length of one millimetre, though this was an unusual number. In *Passulus* as many as five were found in one millimetre and a half, and in *Hydrophilus* six were found in one fibre. There seems to be no very definite rule either as to the part of the muscular fibre on which they are placed, or as to the number of muscle elements intervening between two of them. Sometimes their position is linear; at others they appear to be placed on opposite sides of the muscular fibre, whilst taking five of them successively it was found that the number of muscular elements between the nerve-endings was 23, 13, 21, and 14. These are usually conical in form, a nerve running to the summit of each cone. The cone itself is composed of granular matter, with nuclei interspersed through it, and it sometimes appears as if the granular matter was obscurely segmented into portions surrounding each nucleus.

The nerve-endings or terminal plaques, as M. Foettinger calls them, are situated on the surface of the fibre, and their free surface is covered with a thin, structureless, transparent membrane, continuous with the sarcolemma of the muscular

fibre on the one hand, and with the sheath of Schwann investing the nerve fibre on the other. The drawings which accompany the memoir exhibit the plaques as simply applied to the muscular fibre, no processes or fibrillæ penetrating it. He has noticed the interesting fact, which, however, had been previously noted by Arndt and Frédéricq, that in insects at least, contraction always begins in the muscular fibre at the plane of the cones, and at these points exclusively, and this fact may be shown to have an important bearing on the subject of *vis insita* of muscle. For since in microscopical specimens the transverse markings of the muscle are always found much more closely approximated just beneath the nerve-ending than elsewhere, it is reasonable to suppose that if a nerve-paralysing agent like curara were administered to the animal, and if the effect of his agent were really, as is usually admitted, on the intramuscular portion of the nerve, the transverse markings should not present the approximation in question beneath the cone alone, but at any part of the contracted fibre indiscriminately. Unfortunately insects cannot be rendered motionless by curara. The point may perhaps be worked out with better success with the muscles of mammals.

THE HOLDEN TESTIMONIAL.

THE ceremony of presenting Mr. Holden's portrait to Mrs. Holden took place on Friday last in the great hall of St. Bartholomew's Hospital, in the presence of a large assembly of ladies, governors, and past and present students of the hospital. Mr. Savory, in presenting the portrait, alluded in eloquent terms to the long and valued services which Mr. Holden had rendered to the hospital, its medical school, and to the profession at large. Mr. Holden acknowledged his deep appreciation of the gift, and requested, on behalf of Mrs. Holden, that the treasurer and the governors of the hospital would accept the portrait as a gift from herself, and that they would allow the portrait to be placed in the committee room in company with the portraits of those who had in former years rendered distinguished service to the hospital.

THE MEDICAL NIGHT SERVICE IN PARIS.

We regret to learn that a difficulty of a sort sufficiently familiar here when charitable aid rubs shoulders with aid which individuals have to provide for themselves is beginning to trouble the course of the newly-organised medical night service in Paris. The physician who is called upon to make a night visit receives a fee of five francs, paid by the Administration in the case of indigent persons, and presumably by the persons receiving the aid in the case of the well-to-do. It is found, however, that many of the well-to-do evade payment of the fee, and that to meet the unanticipated deficit thrown upon the administration, its yearly credit will have to be increased from 50,000 to 60,000 francs. In order to put some check upon this abuse the Commissioners of Police have been instructed to give particulars as to the recovery of fees from those able to afford them who have recourse to the medical night service.

FATTY TUMOUR BENEATH THE SCALP.

MR. SYDNEY JONES writes us:—"The following case, on account of its rarity, seems worthy of being put on record. A boy, aged twenty months, was sent to me on September 21st, 1880, by Dr. Torr, of Old Kent-road, with a tumour of scalp as big as the half of a good-sized orange. It was first noticed at two months old, and was then the size of a small marble, and had increased, of late rapidly, to its present size. It occupied the median line, was over the sagittal suture, and extended backwards to the situation of the posterior fontanelle. It gave a sensation of fluctuation; firm

pressure upon it did not cause any diminution, nor any head symptoms or other inconvenience; but the child's crying seemed to make it somewhat tighter and more prominent. The margin was raised, and harder than the rest of the tumour. On the 28th of September, with a grooved needle I removed small particles which showed, under the microscope, pure fat. On September 30th I transfixed the tumour longitudinally, and removed it. It was adherent in places to the scalp, and was peeled off the pericranium, to which it was accurately moulded. It weighed $2\frac{1}{2}$ oz. It consisted of pure fat; the margin was more dense than the rest, and curiously crenated. The child did well; the wound being dressed antiseptically."

WESTMINSTER HOSPITAL.

THE staff and some of the past and present students of the Westminster Hospital Medical School dined together at the Langham Hotel on Friday last, after the opening of the session earlier in the day. Dr. Octavius Sturges occupied the chair. Among the visitors was Dr. Magrath, Provost of Queen's College, Oxford, who had previously distributed the prizes at the afternoon gathering. In returning thanks for the toast of his health, he expressed his great interest in medical education, and his high estimate of the part his University is playing, in giving a sound preliminary training; unfortunately, he was unable to say that it did more than this.

"CASTRATION FOR HYSTERIA."

UNDER the above title a French journal gives an account of a case which was presented to the Berlin Medical Society some months ago, and which has scarcely attracted the attention in this country which its significance deserves. Dr. Israel presented to the Society a young woman twenty-three years old, cured of severe hysteria by "Battey's operation," of which she bore the cicatrix. The patient had suffered for some years from obstinate vomiting, accompanied by severe ovarian pains. She became extremely weak and anæmic. Many surgeons advised the operation, and she gradually arrived at the conviction that castration was the only remedy for her sad state. The operation was performed under chloroform "with all antiseptic precautions." During the first three days after the operation there was extreme tenderness in the lower part of the abdomen, and the ice was obliged to be constantly applied. At the same time there was retention of urine, which only passed off at the end of twelve days. A week after the operation the vomiting had ceased, and the pain in the ovarian region had disappeared. The patient's cure remained permanent. One detail, however, of this beautiful illustration of the value of "oöphorectomy" remains to be mentioned, and it is not unimportant. The operation was a pretended one. A superficial wound only was made! The result certainly justified the means.

THE MEDICAL SOCIETIES.

THE following are the dates at which the respective London Societies commence their sessions: Obstetrical on October 6th; Clinical, 8th; Medical, 18th; Pathological, 19th; Medico-Chirurgical, 26th. We trust that the forthcoming session will be productive of much activity in these bodies, which may be regarded as the centres of London medical science.

THE NINE ELMS ACCIDENT.

THE case of Watson, the engine-driver, has been noticed in THE LANCET as being one of trephining for a punctured wound of skull. His head symptoms progressed very favourably, and the wound, treated antiseptically, was rapidly healing. Some old lung mischief, however, was relighted by the damage to which he had been subjected,

and rapidly assumed extensive and fatal proportions. He died on Sunday, the 3rd of October.

REMOVAL OF THE ENTIRE SCAPULA.

MR. BELLAMY informs us that he removed the scapula at Charing-cross Hospital, on Saturday, Oct. 2nd, for an enchephaloid growth, involving the whole bone. The hæmorrhage was but trifling, owing to the perfect command obtained over the subclavian artery, by compression, through a primary incision in the integuments. Up to this date the patient has been progressing most favourably.

CIRCULARS have been issued by the hon. secretary of the Medical Society of London, Mr. Malcolm Morris, requesting Fellows of the Society who have seen cases of arsenical poisoning by means of wall-papers &c., to forward the notes of such cases to 63, Montague-square, and at the same time to communicate the names of any professional friends who may be interested in the inquiry.

FROM statistics published by the society for promoting the use, as food, of the flesh of the horse, ass, and mule, it would appear that hippophagy is steadily increasing in Paris. In 1866 the aggregate weight of such flesh consumed was 171,300 lb.; in 1879 the quantity had risen to 1,982,620 lb. In the French provinces also the practice seems to be growing in favour.

MR. THOMAS DOLAN, F.R.C.S., has undertaken to give the first course of lectures in connexion with the Halifax centre of St. John Ambulance Association. The lecturer took for his subject on Oct. 1st "The Outlines of the Anatomy and Physiology of Man."

"CONTAGION" has been chosen by Dr. E. Symes Thompson as the subject of the Gresham Lectures this year, to be delivered at the College, Basinghall-street, on Oct. 12th and three following days.

AT the annual meeting of the Faculty of Physicians and Surgeons of Glasgow, held on the 4th inst., Dr. Robert Scott Orr was elected President, and Dr. Robert Perry, Visitor of the Faculty.

MISS PYNE, late of the Edinburgh Royal Infirmary, has been appointed Lady-Superintendent of the Westminster Training School for Nurses and Matron of the Westminster Hospital.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

A METROPOLITAN POLICE-COURT.

AT a recent meeting of the Fulham District Board of Works, Dr. N. C. Collier, the medical officer of health, presented a report on the prison-cells of the Hammersmith Police-court. The report was prepared at the request of a jury, who had held an inquest on a prisoner named Marchant, who had died in Clerkenwell prison, after having been confined in the cells at the Hammersmith Court. The request had been conveyed to Dr. Collier by the coroner, Dr. Hardwicke. Dr. Collier's report showed that the woman Marchant was retained in the police-cells at a time when some sanitary alterations were being carried out; but whether she contracted the fever of which she died at that time could not be stated. There are only five cells for the reception of all the prisoners taken to the court. Each cell contains an area of 481 cubic feet, which is not more than

sufficient accommodation for two persons, whereas as many as eight prisoners are at times confined in a cell. There is literally no ventilation except a small iron grating over the door, which is quite inadequate for the purpose. With eight persons confined in a cell, there would be only 96 cubic feet of air space for each prisoner. The amount allowed under prison regulations is not less than 200 cubic feet for each prisoner. It seems strange that better accommodation should be allowed to prisoners after they are convicted than before trial, when by law they are, for the time being, innocent. In each cell, close to the door, there is a watercloset. This amounts to positive indecency when several persons are confined together in a cell. The urinal and closet accommodation to the court is very unsatisfactory, the former being so badly constructed that it is impossible to avoid indecent exposure. Here is an apartment termed the "strong room." It contains an area of 6655 cubic feet. It is used at times for the reception of as many as 94 prisoners and 60 constables. This gives only 79 cubic feet of air space to each person. Such an amount of overcrowding is highly prejudicial to health. The court itself is quite inadequate for the purpose for which it is used. It contains an area of 199,821 cubic feet. On one day when Dr. Collier had the number of persons counted, there were 350 in attendance at the court at 11 A.M. The ventilation is from the roof, and is certainly insufficient, and the ventilation starlight is never lighted. Dr. Collier expressed the opinion that the atmosphere of the court is such as to be highly prejudicial to the health of those persons who are constantly exposed to it. The whole sanitary condition of the place is highly unsatisfactory, and the accommodation of the court quite inadequate for the requirements and the great and increasing population of the district. The Board directed that a copy of the report should be sent to the Home Secretary.

FREE HOSPITALS FOR CASES OF INFECTIOUS DISEASE.

The *East London Observer* raises the question of free hospitals for the reception of cases of infectious disease. It puts the case in the following striking manner:—"The common sense of the case may be put in a few words. We will instance a man living in one or two rooms in a house filled with other lodgers. He is attacked by fever. If he is promptly removed to hospital there may not be another case in the same house, but if financial considerations have to come into the account, the removal to hospital may be delayed or not take place at all, with the probable consequence that the disease may be communicated to others who are really too poor to pay for their treatment, and who may not only be temporarily but permanently pauperised as the result of their affliction. Would it not be better in such a case for the first person attacked to feel free from any anxiety on the score of payment for hospital accommodation, so that he might, without delay, enter the hospital and avoid the danger of becoming a centre of infection in a thickly-populated neighbourhood? To haggle with a man about cost of maintenance in such a case is a penny-wise-and-pound-foolish policy, and to seek to wring from one who, under ordinary circumstances, has his energies fully tasked to supply food and raiment for his family, payment for hospital treatment, is, to our thinking, an injustice. The individual who, attacked with infectious disease, at once seeks the shelter of the hospital, is really doing a service to society. Why, then, should he be fined for the consideration he shows for others, by removing himself—the centre of infection—from their midst?" Clearly our contemporary is right. The greater the facilities which can be given for the admission of cases of infectious diseases into hospital, the better control shall we have over the spread of contagion among the community at large.

BARMOUTH.

Barmouth is a beautiful summer resort on the Welsh coast, and, like too many of these resorts, has been so satisfied with its natural advantages as to hold it perfectly unnecessary to supplement them with artificial ones. The air, the sea, and the soil might well be left to themselves, so far as wholesomeness is concerned, if it were not for the town; and here comes the rub. Barmouth is as other towns, and Barmouth people as other people—that is to say, they have a natural proclivity to create dirt, and when it is created to live amidst it. Barmouth the locality is delightful; Barmouth the town is offensive, and, if it is to maintain a decent reputation for habitability, must mend its ways.

The place, indeed, has become so bad that even its own citizens are raising their voices against it. This, indeed, gives great promise for amendment, for improvement is hopeless unless the citizens take it in hand. Local government is the central feature of sanitary administration, and local government means government by the inhabitants. We have before us the *Barmouth Advertiser*, which tells a most unsavoury story of the sanitary shortcomings of the town—a story which, we should imagine, would cause a rapid thinning of the long list of "visitors" printed in another part of the same journal. The journal professes to give only "a few of the most obvious abominations of the place." The few include foul drains, fouler sewage tanks, filthy deposits of refuse (and even the rare spectacle of a dead donkey among this will, we imagine, scarcely prove seductive to visitors), filthy pigsties, &c. If these be the few, what will the many be? Let Barmouth look to its sanitary state before the next summer comes.

"WASTING CESSPOOLS."

Chertsey is in difficulty with the Thames Conservators as to the disposal of the sewage of the place. Hitherto this has been passed into the river, but now the local authority is forbidden to do this, and has to seek some alternative method of disposal of the liquid filth. It proposed to effect this by establishing a system of "wasting cesspools" so-called; in other words, providing for the construction of cesspools which would admit of the filth hitherto passed into the Thames *soaking into the subsoil beneath and amidst the houses*, and from which a considerable amount of the drinking water of the town is collected in shallow wells! This astounding proposition, emanating from a so-called sanitary authority, was brought to the knowledge of the Local Government Board, and Mr. Netten Radcliffe was despatched to the spot. On inspection of Chertsey, he appears to have found that the filth to be withdrawn from the Thames, and proposed to be added to the filth deposited in the subsoil beneath the town, could not make that much filthier than it had already been made by privy pits and cesspools, and that "a wasting cesspool"—that is, a cesspool which shall permit the escape into the soil of everything that can flow from it—is the standard method of sewage disposal adopted in the place. Mr. Radcliffe had an interview with the rural authority as to their heretical proposition, and we now learn that they have set it aside, and that, influenced by the Local Government Board, they have determined to construct a proper system of sewerage for Chertsey.

THE LOWER THAMES VALLEY SEWERAGE.

The Local Government Board still keeps silence as to the Lower Thames Valley Sewerage scheme, and the Corporation of Kingston has got restless at being kept so long in doubt about the matter. At a recent meeting of this body the question of the present position of the Corporation with reference to the scheme was considered, and a deputation appointed to wait upon the President of the Local Government Board with regard to the following subjects:—1. The penalties about to be incurred under the Thames Conservancy Act, 1857 and 1864, and the Thames Navigation Act, 1866. 2. The uncertainty prevailing with reference to the decision of the Local Government Board as to the application to sanction the scheme of the joint board. 3. To ascertain whether the Local Government Board is prepared to concur in releasing the borough from the joint board. 4. To ascertain whether the Local Government Board is prepared to sanction the carrying out of a scheme for dealing with the sewage of the borough, either separately or in conjunction only with the districts immediately adjoining.

INFECTION!

A postman of Lambeth has been attending his wife ill of small-pox in the periods of absence from his duties. What is to be done? Here is a man distributing contagion with his letters, to say nothing of a promiscuous dissemination as he passed along the streets. Some members of the Vestry suggested prosecution, others, and happily a larger number, thought there were probably other considerations than punishment in view, and that the intervention of the magistrate would hardly mend matters, particularly if the postman lost his employment. No doubt it is undesirable to have individuals attending upon cases of small-pox de-

living letters among us, but if the community must have safety from danger of this kind, it must ensure the persons immediately concerned from want and from loss. Hitherto local authorities have, as a rule, considered the cost of precautions involving these considerations is a greater evil than the contagion from which safety is sought, and so long as this feeling prevails we must not hope to be able to shut out chances of contagion of the nature in question. At any rate, the magistrate's intervention would merely add another evil to the original one, without helping much to the removal of the latter.

THE METROPOLITAN CEMETERIES.

A Parliamentary Return has been printed giving several interesting details respecting the metropolitan cemeteries. It shows the acreage of the several cemeteries, the number of funerals that have taken place in each before 1852 and since 1852, the number of dwelling-houses situated within 200 yards of each cemetery, the number of persons permitted to be interred in one grave, and the drainage of the cemetery.

A DEVONSHIRE "WATERING-PLACE."

It is reported that the water-supply of Paignton, a health-resort in Devon, has been found to be derived in part from a duck-pond, which acts also as the sewage receptacle of a farmyard and house. The report, as a contemporary says, will doubtless be read with interest by the surviving visitors to that place.

The Vestry of Mile-end Old Town have had under consideration the offensive state of the water of Regent's Canal in their district. A case was mentioned of a house abutting on the canal, the owner of which had been thrice ill with fever, and whose medical attendant had threatened refusal of certificates of illness to his friendly society unless he removed from the vicinity of the canal.

The Local Government Board has directed the attention of the Stepney guardians to the fact that 13 per cent. of the births in their district are not accounted for in the returns of their vaccination officer, and requested an explanation of this large amount of arrears.

The Local Authority of Aberdeen have been taking measures to prevent the letting of underground rooms as living apartments, in contravention of the provisions of the Public Health (Scotland) Act, 1867.

Mr. J. Lawrence Hamilton, L.R.C.P. Ed., M.R.C.S. Eng., is a candidate for the post of medical officer of health and public analyst for Marylebone, vacant by the death of Dr. Whitmore.

It is reported that an outbreak of enteric fever has occurred in Rochdale, suspected to have arisen from the dissemination of the infection in milk, and that the disease is spreading.

The Commissioners of Sewers of the City of London have, at the suggestion of Dr. Sedgwick Saunders, determined to appoint additional meat inspectors.

The Local Government Board for Ireland have sanctioned a loan of £8000 to the Armagh urban sanitary authority for waterworks for that town.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

English urban mortality showed a marked decline last week. In twenty of the largest English towns, estimated to contain in the middle of this year a population of seven and a half millions of persons, or nearly one-third of the entire population of England and Wales, 5070 births and 3060 deaths were registered last week. The births were 115, and the deaths 215 below the average weekly numbers during 1879. The deaths showed a further decline of no less than 406 from recent weekly numbers, and the annual death-rate per 1000, which had been equal to 25.4, 25.0, and 24.1 in the three preceding weeks, fell last week to 21.3, a lower rate than has prevailed in any week since the middle of July. The lowest death-rates in the twenty towns last week were 12.5 in Plymouth, 16.6 in Bristol, 16.7 in Portsmouth, and 18.1 both in Birmingham and Sheffield. The rates in the other towns ranged upwards to 26.4 in Salford, 28.2 in Liverpool, 28.9 in Leicester, 30.0 in Hull, and 31.7 in Sunderland. The high rates in the three last-mentioned towns were

mainly due to excessive zymotic fatality. During the thirteen weeks ending last Saturday, the death-rate in these twenty towns averaged 23.2 per 1000, against 23.8 and 18.3 in the corresponding periods of 1878 and 1879.

The deaths referred to the seven principal zymotic diseases in the twenty towns, which had been 1009 and 912 in the two preceding weeks, further declined to 657 last week; of these, 399 resulted from diarrhoea, 108 from scarlet fever, 57 from fever (principally enteric), and 50 from whooping-cough. The annual death-rate from these seven diseases averaged 4.6 per 1000 in the twenty towns, and ranged from 1.4 and 1.9 in Plymouth and Portsmouth, to 9.8 and 11.6 in Sunderland and Leicester. Scarlet fever showed the largest proportional fatality in Sunderland and Norwich, and enteric fever in Norwich and Leeds. Ten of the 16 deaths from diphtheria in the twenty towns occurred in London. The 399 fatal cases of diarrhoea showed a decline of 212 from the number returned in the previous week and were equal to an annual rate of 2.8 in the twenty towns. The death-rate from diarrhoea, which did not exceed 1.6 per 1000 in London, averaged 3.9 in the nineteen provincial towns; the highest death-rates from diarrhoea last week were 7.7 and 9.6 in Hull and Leicester. Small-pox caused two deaths in London, one in Liverpool, and not one in any of the eighteen other towns. The number of small-pox patients in the Metropolitan Asylum Hospitals, which had been 116 and 105 at the end of the two preceding weeks, further declined to 95 on Saturday last; 22 new cases of small-pox were, however, admitted to these hospitals during the week, against 27 and 6 in the two previous weeks. The Highgate Small-pox Hospital contained 8 patients on Saturday last.

The deaths referred to diseases of the respiratory organs in London, which had been 124, 153 and 174 in the three preceding weeks, further rose to 199 last week, and exceeded the corrected weekly average by 10; 121 resulted from bronchitis and 51 from pneumonia. The annual death-rate from lung diseases was equal to 2.8 per 1000 in London, and to 5.4 in Liverpool.

HEALTH OF SCOTCH TOWNS.

In eight of the largest Scotch towns, having an estimated population of rather more than a million and a quarter persons, the annual death-rate last week averaged 18.8 per 1000, against 20.3 and 18.9 in the two preceding weeks; this rate was 1.5 per 1000 below the average rate in the twenty large English towns. The rates in the eight Scotch towns ranged from 17.0 and 17.6 in Greenock and Glasgow, to 21.5 and 23.4 in Edinburgh and Perth. The fatal cases of the seven principal zymotic diseases in the eight towns, which had been 163 and 153 in the two preceding weeks, further declined last week to 134; they included 51 from diarrhoea, 33 from scarlet fever, 18 from diphtheria, 17 from fever, 9 from whooping-cough, 6 from measles, and not one from small-pox. The annual death-rate from these seven diseases averaged 5.4 per 1000 in the eight towns, and was 0.8 above the average rate from the same diseases in the twenty English towns. The zymotic death-rate in the Scotch towns last week ranged from 3.9 and 4.5 in Perth and Aberdeen, to 7.1 and 7.5 in Leith and Aberdeen. The fatal cases of diarrhoea in the eight towns, which had been 69 and 53 in the two previous weeks, further declined to 51 last week, and were equal to an annual rate of 2.1 per 1000; in the twenty English towns the diarrhoea death-rate last week averaged 2.8 per 1000. The largest proportional fatality from diarrhoea in the Scotch towns occurred last week in Edinburgh and Dundee. The deaths from scarlet fever in the eight towns, which had been 45 in the previous weeks, declined to 33 last week, of which 17 occurred in Glasgow, 12 in Edinburgh, and 3 in Dundee. The 17 deaths referred to fever showed an increase of 8 upon the number in the previous week, and included 7 in Glasgow, 3 in Edinburgh, 3 in Paisley, and 2 in Greenock. Of the 18 deaths reported from diphtheria, five less than in the previous week, 11 occurred in Glasgow, and 3 in Leith. The deaths attributed to acute diseases of the lungs (bronchitis, pneumonia, and pleurisy) were 76 in the eight towns last week, against 61 and 68 in the two preceding weeks; the annual death-rate from these diseases last week was equal to 3.1 per 1000 in the eight towns, against 2.5 in London.

HEALTH OF DUBLIN.

Excessive mortality again prevailed in Dublin last week. The annual death-rate in the city, which had been equal

to 39.3 and 38.5 in the two preceding weeks, was equal to 36.0 last week. During the thirteen weeks which ended on Saturday last the death-rate in the city averaged no less than 34.6 per 1000, against 21.3 in London and 21.5 in Edinburgh. The 217 deaths in Dublin last week included 63, or 29 per cent., which were referred to the seven principal zymotic diseases, showing, however, a further decline of 8 from the high numbers returned in the two previous weeks; 33 resulted from diarrhoea, 10 from fever, 9 from scarlet fever, 4 from measles, 6 from whooping-cough, 1 from small-pox, and not one from diphtheria. The annual death-rate from these diseases was equal to 10.5 per 1000 in Dublin, whereas it did not exceed 3.3 in London and 7.5 in Edinburgh. The 33 fatal cases of diarrhoea in Dublin showed a decline of 11 from those returned in the previous week, and were equal to an annual rate of 5.5 per 1000; the death-rate from diarrhoea in London did not exceed 1.6 last week. The 10 deaths from fever, including typhus and enteric or typhoid, exceeded the number in any week since the beginning of June. The deaths from scarlet fever were considerably less numerous than those in the previous week, while those from measles and whooping-cough showed but slight variation. Last week's return exhibited but a slight decline in the rate of infant mortality in Dublin.

HEALTH MATTERS GENERALLY AT HOME AND ABROAD.

STREET IMPROVEMENTS AND ARTISANS' DWELLINGS, METROPOLIS.

An important communication on Street Improvements and Artisans' Dwellings in the Metropolis to the following effect has been addressed by the Home Secretary to the Metropolitan Board of Works. Sir William Harcourt states that he had anxiously considered the applications with reference to the various improvement schemes, and especially with reference to Sir R. Cross's letter of the 19th December, 1879. He fully appreciated the difficulties which the Board of Works had to contend with, and while he was most anxious to assist them and facilitate the carrying out of improvements, he at the same time could not forget that he was specially charged by the Act to protect those who could not protect themselves, and to take care that no extensive displacement of persons of the working-classes should be effected until provision was made for their being housed elsewhere. The Board themselves had suggested that the matter should be brought before Parliament next year in the shape of a Bill to amend the 33rd section of the Metropolitan Street Improvement Act, 1877, and obtain a full inquiry by a Select Committee into the whole matter, especially whether powers should not be given to the Board to erect suitable buildings on the various sites, instead of only having the power to lease them, which led to so much delay and difficulty; and while the law remained as it was, the Secretary of State was willing to adopt the suggestion by Sir R. Cross in his letter on the 19th of December, 1879, that if the Board would proceed by stages he would be ready to consider an arrangement whereby successive portions of the land might be cleared as soon as in each as houses had been erected sufficient to provide a number equal to the number displaced. Therefore, in answer to the letter of the Board on the 20th June last on the subject of the Newport Market Improvement Scheme, the Secretary of State was of opinion that the Board should at once take steps to acquire the whole of the property known as Newport Market site, and that the sites in Coppice row and Old Pye-street, intended to be appropriated, but not yet actually appropriated for working men's dwellings, could not be accepted by the Secretary of State as a provision for suitable accommodation. The Secretary of State was willing that the buildings on the Newport Market site should be taken down in successive sections, and to Section 1 being taken down immediately, but after that he could not permit any further demolitions until by the erection of additional buildings, either on Section 1 or on some other suitable area (to be approved by him), working men's dwellings had been provided sufficient to give accommodation for a number equal to the number of those displaced from Section 1, and the same rule must be applied to the other sections successively. If the Metropolitan Board of Works acceded to that arrangement, it would be convenient that they should at once submit to the Secretary of State for his approval a division of the area into sections. With reference to the

Tooley-street Improvement Scheme, the Secretary of State authorised the pulling down of the block of houses there which had been vacated by their inhabitants. As regards the Gray's-inn-road Improvement Scheme, he must withhold his consent to the displacement of seventy-seven persons until the Board are in a position to assure him that the plot, part of which it was proposed to let for the erection of labourers' dwellings, and which it was said would accommodate 300 persons, had actually been let for that purpose. The Home Secretary agreed to the Clerkenwell Improvement Scheme.

SANITARY ORGANISATION IN RUSSIA.

The zemstvo of Korsown, in the government of Simbirsk, have decided to establish a new sanitary organisation of their district. To this end they have decided to divide the district into eight sub-districts, to be administered by the delegation of the province in conjunction with the Medical Council and sanitary detachments. The staff of each sub-district will consist of a physician, a midwife, and several assistant medical officers. Each township, it is proposed, shall have attached to it an assistant medical officer. The general management of the organisation will be devolved upon a mixed body of medical and lay representatives of the district—some honorary, others appointed by the zemstvo. Honorary members will be required to pay twenty-five roubles yearly, and will have the privilege of entry into the hospitals and ambulances of the district. They will be expected to inform immediately the Medical Council of the appearance of any epidemic in their locality, and to keep a watch over its general sanitary state. Two general meetings will be held in the course of the year—one in February, the other in July, and special meetings will be convoked in the event of the appearance of any epidemic. The attention of the general meetings will be given to the means of augmenting the pecuniary resources of the organisation, the supervision of the public health, measures to be taken against epidemics, the introduction of vaccination, the amelioration of hospitals and ambulances, the relief of the poor, medico-topographical studies and vital statistics, the regulation of medical fees and the fees of midwives, and the general sanitary requirements of the district. A general meeting of the medical men of the district will also be held yearly, at which all will be required to be present. The purchase of instruments and drugs will rest with the Medical Council. The funds necessary to cover the expenses of the organisation will be derived from the following sources: the zemstvo, the rural townships, the Imperial Government for the treatment of soldiers, the provincial delegation, private donations, and the annual subscriptions of members.

THE HEALTH OF INDIAN GAOLS.

We learn from *The Indian Medical Gazette* that Dr. Lethbridge's report on Bengal gaols for 1879 reveals an appalling tale of sickness and mortality. In an average population of 18,483, 947 were constantly sick; there were 23,368 admissions into hospital and 1752 deaths, of which 341 were caused by cholera. These figures give rates per mille of 51, 153.4 and 94.8, which are almost unprecedented in the recent history of Bengal gaols. The Lieut.-Governor has expressed his conviction that the chief cause of the increased sickness was the adoption of the diet scale proposed by the Prison Conference and recommended by the Government of India. Steps are being taken to remedy this, "but it is terrible to reflect," says our contemporary, "that so much suffering and death have been caused by a mistake which ought in these days to be impossible."

The sanitary condition of Preston has been the subject of a long discussion by the Town Council. It was stated that four years ago 400 houses were, on account of their unwholesomeness, closed by the Health Committee, and now others are being dealt with in a similar manner. The authorities would appear to be determined to do their work thoroughly, for the inspectors have, it seems, been ordered to "make an inspection of every house in the town."

From New York we learn that yellow fever had broken out on board the British barque *Ermagh*, bound from Port de Paix for that city. Two of the crew had died from the disease, and had been buried at sea, and the vessel had to be towed into port from want of hands to work the ship.

The last received number of Medical Reports issued by the Imperial Maritime Customs, China, contains two important papers, one on "Cholera Epidemics in Japan," by Dr. D. B. Simmons; the other, entitled "Additional Notes on Filaria Sanguinis Hominis and Filaria Disease," by Dr. Patrick Manson. To both these papers we shall refer in detail hereafter.

Mr. John Gay appeals, through *The Times*, for wood pavement for the foot-paths of our roads as well as the carriage-ways. It would be "less noisy, damp, and chilly," and so enhance much the comfort of that large section of wayfarers, the walkers.

The Warsaw section of the Red Cross Society has founded in the environs of the city a Maison des Invalides, which is to be opened on the 21st February, 1881.

A medical congress has been summoned in the province of Tchernigow, to discuss the measures to be taken against the spread of diphtheria.

MANIFESTO OF THE GOVERNORS OF GUY'S HOSPITAL.

On Sept. 30th, at the ordinary meeting of St. Saviour's guardians, held at the workhouse, John-street West, Blackfriars-road, Mr. J. Mitson presiding, the following communication was received from the governors of Guy's Hospital, in acknowledgment of a resolution with reference to the recent proceedings in that institution sent to them by the board of guardians:—

"Extract of proceedings held at a general court of governors on Wednesday, Sept. 29th.

"Read, a memorial from the guardians of St. Saviour's, dated September 10th, and resolved that the following answer be sent thereto:—The governors of Guy's Hospital acknowledge the receipt of the memorial of the guardians of St. Saviour's Union. The governors must observe that they cannot recognise any responsibility on their part to the guardians of St. Saviour's, Southwark, nor can they undertake to enter into any correspondence, however friendly, with any similar body; but they think it important to the interests of the great institution over which they preside to make known what they conceive to be the truth, that they request attention to the following observations:—The governors fully appreciate the interest taken by the guardians in the good name and high position of Guy's Hospital, and their sense of the benefits which it has conferred on the large population which the board represents. The guardians state that 'they have heard with real concern that the governors have determined to make the physicians and surgeons subordinate to the nurses.' The governors are not aware of the source from which the guardians can have received such information. They can only state for themselves that the subordination of the nurses to the express orders of the physicians and surgeons in all matters involving or affecting medical or surgical treatment is, in their opinion, a fundamental principle of hospital management; that they are determined to maintain that principle; and that no suggestion for a departure from that principle has reached them from any person in or out of the hospital.

"The general arrangements for the supply of persons fit to be trained as nurses, for the health and training of such persons, and for assigning to them their posts in the hospital, involve questions of great complication and difficulty, including the domestic relations and duties of nearly 150 women of various social ranks, which call for much tact and judgment in administration. In all the alterations which have been made, the sole aim of the governors has been the increased welfare of the patients, and during all the discussions between the medical staff and themselves their object has been to 'conciliate,' without any desire to assert unduly the power placed in the hands of the court as the controlling authority of the hospital.

"Last autumn the late matron resigned her office after thirty-four years of approved service; and Miss Burt, who had for six years discharged with great credit the offices of superintendent of the Leicester Infirmary and of the Training Establishment for Nurses, was invited to undertake the duty. She entered on her duties on Nov. 1st, 1879, and at once, under the instruction of the treasurer, proceeded to

deal with those points on which improvements had been for a long time past admitted to be necessary. It was unfortunate that the opinions of the staff were not fully ascertained before any new rules were drawn up. It was, however, still more unfortunate that a prejudice had been raised throughout the hospital against the matron a month before she came—viz., on Sept. 26th. The rules which had been prepared for the guidance of the nurses were, in consequence of the alarm raised in the wards, misinterpreted as soon as they were issued.

"The rules were intended to secure more punctual attendance in the wards, to remove all excuse for doing any work in the wards not directly beneficial to the patients; to provide orderly and comfortable meals for the nurses; to prevent the nurses leaving the wards for recreation at undesirable hours; to distribute the work done in the wards so as to secure a thorough training of probationers of whatever social rank; to diminish the menial work of the trained nurses, which had been a serious hindrance to their proper duties in former times; to provide for the night nursing by fully-trained nurses, and, consequently, to require that trained nurses should take their share of night work, a point on which, through misconception, there has been much controversy; a uniform dress for the several classes was also prescribed.

"No new measures had been introduced which in any way diminish the authority of the head nurse (or sister, as she is called in the Act of Parliament which in 1724 established the hospital), or encourage nurses to act on their own responsibility, irrespective of the medical authorities; nor is there any justification for the suggestion that the orders of anyone of the medical staff with respect to a patient under his care are not, and have not been, implicitly and immediately obeyed.

"The governors observe the importance attached by the guardians to the 'spiritual life of the patients,' but no rules whatever exist in relation to it which can, as the guardians suppose, override the medical treatment of the patients, or in any way affect the efforts of the medical staff. In this respect things continue on precisely the same footing as heretofore. The following is the only new practice adopted in religious matters. Short family prayers are read from a manual issued by the Christian Knowledge Society, at which the day nurses attend before they go to breakfast and to their morning duty, and after they come off in the evening. The night nurses also after coming off duty attend the short daily service in the chapel, which has always been held there. Friendly co-operation between the staff and the executive authority appears to have ceased from the first promulgation of the rules, and although the governors have endeavoured to the best of their ability to remove misunderstandings, and by careful and protracted inquiry to discover in what practical matters the staff have reason to complain of the general competency and conduct of the nurses, they have not been able to make the discovery. They have only met with what seem to them exaggerated inferences from a few particular occurrences, repeated over and over again, or general denunciations of the abstract principle of some supposed new system alleged to have been introduced.

"The governors have endeavoured to comply with the wishes of the medical staff as to the allocation or retention of nurses in particular posts, and as to the regulation of their hours, so as to suit the convenience of the physicians and surgeons, though at some sacrifice of important considerations. But these and other overtures of conciliation have been met by renewed acts of opposition, either in the form of collective protests or of attacks in the public journals, and by peremptory demands for the dismissal (as the only condition of peace) of an officer whose intentions and acts the staff, in the opinion of the governors, wholly misapprehend, who earnestly desires their assistance and advice, but with whom they refuse to communicate, notwithstanding repeated entreaties to them to meet her personally.

"The governors are not aware of any obnoxious rules or arrangements which need modification, but if at any time any such need should arise, the weekly committee appointed by the governors will give the medical staff, through the representatives they have been requested to select, the opportunity for making their requirements known. If, however, the medical staff do not attend—still more, if they refuse to attend—the weekly committee, it is not possible for the governors to deal with requirements which the medical staff do not afford them the obvious means of dealing with.

"The guardians may rest assured that the governors are not unmindful of the reputation of the eminent men whose researches have gained celebrity for the school attached to Guy's Hospital. The governors, acting on the recommendation of the late and present treasurer, have given very substantial proof of the interest they take in the school by the expenditure of many thousands of pounds within the last few years. But, important as the advancement of medical research may be, and undoubtedly is, in a professional and even in a national point of view, it must not be forgotten that the primary object of a hospital is the alleviation of the ever-present sufferings of the sick poor. The welfare of many charitable institutions might be imperilled if an impression should gain ground in the public mind, however ill-founded, that any professional objects or struggles for power stood in the way of cordial co-operation among all classes of persons entrusted in various degrees with responsibility for the successful attainment of this paramount end. Keeping this end steadily in view, but also having special regard to other interests and feelings, the governors have patiently persevered in efforts to avert consequences which have been for some time obviously impending. But they are not at liberty to evade the responsibilities of their position under an Act of Parliament, however painful their duty may be.

"H. HUCKS GIBBS, President."

THE HOSPITAL SUNDAY FUND.

DECISION IN THE MATTER OF THE EASTBOURNE CONVALESCENT HOSPITAL.

ON Tuesday the Lord Mayor presided over a meeting of the Council of the Hospital Sunday Fund, held in the long parlour of the Mansion House, to receive and, if advisable, adopt the Special Report of the Distribution Committee upon the case of the Eastbourne Convalescent Hospital. The question, which was raised at a previous meeting, and the discussion of which has excited no small interest, was one which, it will be remembered, related to the expediency of making a grant of money to this hospital, in which it was alleged that an objectionable system of proselytising had been and was being carried on amongst the patients. The whole matter was referred to the Distribution Committee to consider and report upon, and the result of their deliberations was embodied in the brief report presented to the General Council on Tuesday. Amongst those present were Alderman Sir S. H. Waterlow, Mr. Alderman M^rArthur, M.P., Professor Marks, Rev. Canon Spence, Mr. Few, Rev. R. J. Simpson, Rev. M. S. A. Walrond, Mr. W. R. Tidd, Mr. J. Boodle, Dr. Glover, Mr. Pitcairn, Rev. J. Toulson, Dr. Sedgwick Saunders, Sir F. Lycey, Rev. Dr. Kennedy, Rev. Dr. Allon, Rev. Dr. Rigg, Mr. Gervase Smith, Bishop Claughton, Bishop Beckles, Rev. Dr. Finch, Sir R. Alcock, Mr. Jabez Hogg, Rev. J. F. Kitto, Mr. A. Willett, Dr. Stewart, Mr. Custance (sec.), &c.

The minutes of the previous meeting having been read and confirmed, the secretary, Mr. Custance, submitted the report of the Special Distribution Committee, recommending that the Lord Mayor be asked to pay the award originally made to the Eastbourne Convalescent Hospital.

Alderman Sir S. H. WATERLOW said that as Chairman of the Distribution Committee it devolved upon him to ask the Council to accept the resolutions come to by that committee, and, in conformity with the substance of those resolutions, to ask the Lord Mayor to pay the award which the committee had originally recommended in the case of the Eastbourne Convalescent Hospital. Before making this request in formal terms, he trusted that he might be excused if he said both for himself and, he believed, for all the members of the Distribution Committee, that he felt it would be very unwise on any future occasion to call upon the members of the Distribution Committee to make inquiries into the detailed method by which religious consolation was administered within the walls of hospitals and convalescent homes to which grants were made by the Council of the Hospital Sunday Fund; for this was a duty which they would not be able to discharge with any kind of satisfaction to themselves or to other parties. He felt that the Hospital Sunday money was collected from persons of every shade

of religious opinion—from Jew and Greek, from High Church, Low Church, and Nonconformist,—and all of these were naturally in close sympathy with the forms of their own worship, and with the hospitals and convalescent homes under their control, whatever might be the form of the religious consolation therein administered. However, the Council having requested the Distribution Committee to make inquiry in this case, they had devoted themselves to the task—they had heard Dr. Glover, and had listened to the remarks of the deputation which waited upon them from the hospital. And here he felt bound to say what he had not said in originally moving the adoption of the committee's report—viz., that the Eastbourne Convalescent Hospital was managed with greater economy than any other hospital or dispensary to which a grant was made—more economically upon the basis by which the Distribution Committee arrived at the relative cost of management of each of these institutions. The Eastbourne Convalescent Hospital came out under 2 per cent. lower than any other hospital. On the other side, he was bound to add that the Eastbourne Hospital was not managed by a committee of the character contemplated by the Council in Rule 4 of their rules, which said that "Those hospitals and dispensaries only which are managed by a committee duly constituted, and which produce their printed reports with balance-sheets duly audited for the last three years, shall be allowed to participate in the fund." The committee, when making their grant, had not, he feared, been so careful as they should have been in their inquiries upon this head. They felt they should have communicated this to the Council. However, the authorities had promised that there should be a properly constituted committee before another year had passed. In answer to a question put by a member of the Council, Alderman Sir S. H. Waterlow said that the patients of the hospital were practically London patients, and he proceeded to say that he had, on his own account, gone down by express train to visit the hospital, had been admitted and conducted over the institution, and the impression left upon his mind was that the work of the hospital was being done as well as it could be done. The patients were simply required to attend a short morning and evening prayer; and he found, moreover, that the gates of the garden were left wide open, and the patients allowed to go out to any place of worship they liked. In conclusion, Alderman Sir S. H. Waterlow moved that the resolutions of the committee be received, and that the Lord Mayor be asked to pay the award originally granted to the Eastbourne Convalescent Hospital.

The Rev. CANON SPENCE seconded the motion, concurring with the remarks made by Alderman Sir S. H. Waterlow, which he believed were characterised by good sense and feeling. The adoption of this resolution would do a great deal to persuade the public that their Fund was a reality, and that it was intended to benefit, not one, but all religious denominations.

Professor MARKS, dwelling upon the expediency of observing respect towards the private opinions of patients in matters of religion, said he had gathered an impression which had been confirmed by an article he had read in THE LANCET, that in this institution advantage was taken of persons being in a weak state of mind and body, to induce them to leave the one church to which they were attached, and join another. This was a very wrong proceeding. It was contrary to the wishes of the Board and—although he was a Jew who said it—it was he believed contrary to Christian practice. He spoke of this, because it was a matter to be inquired into. They afforded accommodation to persons of all religious denominations who were unfortunate enough to be obliged to enter, but certainly the bodily weakness of a patient should not be employed as an opportunity for urging his acceptance of any other than his own actual religious opinions.

Mr. FEW was of opinion that the Council were not to ask about these matters. Nothing of a religious character was done at this hospital without the sanction of the bishop. He regretted extremely the remarks which had been made, and believed that the Council would find themselves in a most unpleasant pass if they were to go through the hospitals for the purpose of inquiring how they were conducted. He hoped the motion would be adopted, that the public might be assured that the Council did not concern themselves in these questions. If their movement was to succeed, they must—although he was sorry to say it—discard wholly questions relating to the soul.

The Rev. Dr. ALLON heartily agreed with the principles

just expressed, but disagreed with the application of them which was attempted to be made. They had nothing to do with the internal religious management of any hospital, except to see that the regulations of every hospital contained a clause exempting patients from coercion in religion. If this affair was passed over, and a sufficient guarantee not given that it should not occur in the future, he for his part could not consent to give another collection to the fund; and he believed that he spoke for many other Nonconformist ministers. (Hear.) But there was something else to be considered. They had no power to make this grant. They could not make it except in direct violation of their own fourth rule.

Alderman Sir S. H. WATERLOW, in reference to this objection, called the attention of the Council to the circumstance that for two years past they had made a grant to the Hospital of St. John and St. Elizabeth, although the mode of government of that institution still differed somewhat from that prescribed by the rules.

The Rev. Dr. RIGG said that such procedure lent probability to the complaints that grants were made to hospitals not under committee management. It was a grave question how far they had a right to make a grant in this case, for here they were dealing, not with an actual Catholic institution, but with an institution professedly of the National Church, where it was said that there existed *in petto* the principles of Catholicism. The defence of Mr. Few, that nothing was done without the sanction of the bishop, was a very weak one. Their proper course was not to make a grant to this hospital until it was placed under a committee.

The Rev. M. S. A. WALROND contended that the bishop had given a particular sanction in this case, after a particular investigation. As regarded the religious tone which prevailed in particular institutions, this was generally known to the patients at the time that they entered. Letters to hospitals were very frequently given by ministers, and if a dissenting minister sent one of his congregation to a High Church Home, he had no right to expect that the patient would receive dissenting religious instruction.

Sir FRANCIS LYCETT, opening up a question on the subject of Mr. Carter's pamphlet, the "Guide to Heaven," said to have been placed in the hands of patients in the Eastbourne Hospital,—

Alderman Sir S. H. WATERLOW rose to a point of order. He explained that that matter had been investigated by the committee, and that it had been made clear that the authorities had condemned the sale of the book. It was in 1876—nearly four years ago—that a copy was sold to a patient; the person who sold it had been sent away, and the chaplain who permitted the sale of it had since left the hospital. The authorities had expressed their entire disapproval of the transaction, and a stringent rule had been made upon the subject.

The Rev. F. KITTO asked Alderman Sir S. H. Waterlow whether, to the satisfaction of the Distribution Committee, there was any proved case of religious coercion? Was it approved by the governing body? If a case had occurred, it might have been an isolated one, in which event, he thought, the Council might be going a little further than was necessary in such circumstances.

Alderman Sir S. H. WATERLOW said it was proved that a copy of the book referred to was sold. The sale, so soon as discovered, was repudiated by the authorities.

The Rev. F. KITTO: In what way are the Council going to undertake to regulate the religious zeal of all servants, and all visitors of all hospitals to which we are going to make a grant?

Dr. GLOVER: Through a committee.

The Rev. F. KITTO said that no committee could possibly undertake such a charge. The committee could not say that in isolated cases the rule would not be infringed. A single servant might bring about a position of conflict with the Fund. They should all set themselves strongly against religious coercion, but they ought not to withhold a grant from any institution because a particular servant might have erred against the rules.

The Lord Mayor was about to put the question to the meeting, when

Dr. KENNEDY rose, and said that he had been a member of the Council from the first, and what had always seemed to him to be one of the pleasantest characteristics of their proceedings was the entire absence of anything like sectarian feeling on the part either of the Church or the Dissenting community. But after the speech of Mr. Walrond it was quite impossible for him and others to co-operate with the

Fund if the principle of that speech were to be adopted—viz., that they had no right to interfere with the religious instruction of hospitals, unless in cases where such instruction interfered with the bodily condition of the patients. And this, he might say, he did not understand; for it was not to be supposed that if Professor Marks, for instance, were given leave to instruct a patient in the principles of Judaism such instruction would act in an unfavourable way upon the physical system of the person instructed. Professor Marks had laid down the true principle to be observed, and if that principle were not observed, then the sooner the Fund were broken up the better. The principle he referred to was, that while the Council were not to interfere with the religious instruction of any institution which received assistance from the Fund, they were to require that no hospital should encroach upon the religious liberty of any of its patients. However, in any case it was not competent for them to make this vote, on account of the non-existence of any such committee of management as the rules of the Council required.

The LORD MAYOR said, that the motion having been modified he would ask to be allowed to put it to the meeting as it now stood, believing that its adoption would end a painful discussion.

The motion, as modified, read as follows:—"That the resolutions of the Distribution Committee be received; and that the Lord Mayor be asked to pay the grant originally proposed to be made to the Eastbourne Convalescent Hospital, as soon as he shall be satisfied that a properly constituted committee has been appointed."

The motion in this form was adopted with unanimity, and the meeting separated.

THE SERVICES.

INSPECTION OF THE ARMY HOSPITAL CORPS.

Sir William Muir, K.C.B., Director-General of the Army Medical Department, visited Aldershot on Tuesday last and made an official inspection of the dépôt of the Army Hospital Corps, and of the classes of officers and men who have undergone instruction in bearer column drill. The class of officers numbered twenty-eight of the young surgeons who have recently passed through Netley with several officers of older standing. The class of non-commissioned officers and men was 100 strong. After the parade movements, which, owing to the wet weather, were of necessity very brief, the Director-General proceeded to the training school class-room, where the officers were examined by Surgeon-Major Sandford Moore in military law and the interior economy of a regiment. On the termination of the inspection, which Sir William Muir pronounced very satisfactory, the Director-General and his staff were entertained at luncheon by Surgeon-General Fasson and the officers of the Army Medical Department in their mess-room.

MEDICAL OFFICERS FOR INDIA.

Surgeon-Majors Caleb S. Wills, C.B., James Hector, K. W. Cummings, E. O'Sullivan, H. J. O'Brien, Charles Haines, J. Fraser, with Surgeons W. H. Garde, D. Leckie, and Isaac Emerson, embarked for service in India in H.M. troopship *Serapis* on the 3rd inst.

The following medical officers are mentioned in despatches for good service in the action of Palkao Shana, in July, 1880, by Major-General Hills, V.C., C.B.:—"Surgeons W. R. Murphy, 19th Bengal Lancers, and P. F. O'Connor, 1st Punjaub Cavalry, deserve special thanks for their care of, and attention to, the wounded on the field, often at much risk to themselves, from straggling and skulking Afghans."

We regret to report the death, on August 25th, at Peshawur, East Indies, of Surgeon W. A. Daubeney, Bengal Medical Service. Dr. Daubeney had only very recently arrived in India, and after a short time spent at Allahabad was ordered up to Peshawur, where he committed suicide a few days after his arrival.

The cholera in India has, we are happy to say, nearly disappeared amongst the troops. Our advices received by the mail of Monday last report that with the exception of a few

sporadic cases at Lucknow and Allahabad, the European Army is free from that disease.

Alfred Allen, M.D., has been appointed Acting Surgeon to the 1st Lincolnshire Corps of Light Horse, Volunteers.

ADMIRALTY.—The following appointments have been made:—Fleet-Surgeon W. A. Lloyd, M.D., to the *Nankin*; Fleet-Surgeon D. O'Connor, and Surgeons A. R. Joyce and J. A. McAdam, to the *Superb*; Fleet-Surgeon J. F. Mitchell to the *Lord Warden*; Staff-Surgeon S. Sweetman to the *Brilliant*; Staff-Surgeon J. D. A. Harvey to the *Royal Adelaide*; Surgeon J. Jennings to the *Asia*; Surgeon H. M. Levinge, M.B., to the *Belleisle*; Surgeon F. R. Loftie to the *Hercules*; Surgeon W. M. Long to the *Agincourt*, additional; Surgeon D. B. Bookey to the *Cambridge*; Surgeon John Hunter to the *Flamingo*; Surgeon A. W. Russell to the *Zephyr*; J. A. Spencer to be surgeon and agent at Rutland, Arranmore, Cruit, and Cruit Head.

Correspondence.

"Audi alteram partem."

CHIAN TURPENTINE IN CANCER.

To the Editor of THE LANCET.

SIR,—Professor Clay tells us, in your number of last Saturday, that he "feels justified in stating that uterine cancer may be removed by Chian turpentine."

In THE LANCET of the 19th of June I wrote, that having treated eight cases with Chian turpentine, I had found no effect whatever from its use. In the article of Saturday Mr. Clay has thus alluded to some of the cases to which I referred. He says: "In an institution in this town the impure drug was first used, when, after a trial of the pure drug for about three weeks, letters appeared in a medical journal, declaring that the remedy was of no benefit in the treatment of cancer." Mr. Clay infers, therefore, that sufficient time had not elapsed for the admittedly pure drug to have produced any well-marked beneficial result.

That the professor is wrong in his facts with regard to the turpentine used in the Women's Hospital by my colleagues and myself, the subjoined letter from Mr. Lawson Tait, will, I think, abundantly prove. But for the sake of argument, admitting him to be right, allow me to remark that in the only four cases of which he had given any detailed account, and upon which his advocacy of the remedy seems (see THE LANCET, March 28th) to be chiefly based, most clearly marked and surprising results were recorded as having been observed in an even shorter period.

His first case was one of "scirrhus of the cervix and body of the uterus, in which hæmorrhage was excessive, pain of the back and abdomen agonising, and the uterus was so extensively destroyed by the cancerous ulceration that its cavity readily admitted three fingers." Mr. Clay tells us that in four days "she was greatly relieved from pain, the os was quite contracted, and would scarcely admit the finger, and the surrounding swelling or cancerous infiltration of the cervix much reduced."

In his second case, in which "the os and cervix were enlarged from carcinoma, to the size of a hen's egg, the os dilated, and the cavity of the cervix filled with epithelial growths, sacral pain severe, and hæmorrhage had been continuous for six weeks." On the seventh day "the pain was entirely relieved, the hæmorrhage stopped, and the patient in excellent spirits." The turpentine acted upon the growth with great vigour in this case, "literally melting it away in four or five weeks."

The third case, one of epithelioma of os, cervix, and body, in a woman of fifty-two. "The mass larger than a cricket-ball, almost filling the vagina." On the fourteenth day "the swelling of the os and cervix was diminished, and the tumour, rough and shrunken, did not project so much."

In the fourth case, an epithelial cancer, "the size of a goose's egg,"—"so rapidly diminished that by the sixteenth day it had almost entirely disappeared."

Now, Sir, with these results before me—results utterly unequalled in the annals of therapeutics—results well-marked, definite, and unequivocal—and all in sixteen days, I may be excused for feeling sorely disappointed when the

same drug, the same formula, and under (as far as possible) the same conditions, I found my own results simply negative. However, I have up to this time deliberately and conscientiously persevered in the use of the drug, and I have now a large number of patients who are taking it. My cases, which have all been open to the observation of my colleagues, include the three classes referred to by Mr. Clay, "scirrhus," "epithelioma," and "ulceration after previous operation." I grieve to have to say that in no case has there been relief of pain, suppression of hæmorrhage, or diminution of the diseased tissues. In short, I may repeat emphatically the conclusion expressed in my letter of June 19th, that "in no case has the progress of the cancer been checked or in any way affected by the use of Chian turpentine."

In conclusion, let me add that although I have inquired carefully as to the effect of the treatment in the hands of others, I can hear of no successful case, except the one published in THE LANCET of July 3rd, by Dr. Drury, who, however, in answer to my questions this week, writes that his patient is dead "having succumbed to a dysenteric attack." Dr. Drury offers no hypothesis as to the causation of the "dysenteric attack," but expresses himself "quite satisfied with Chian turpentine." I am not! Now, Sir, the utter discrepancy between Mr. Clay's results and my own is so remarkable, that I am willing to believe that it must be due to some circumstances which, in spite of all my care, have been overlooked; I shall therefore be glad if he will allow me to place a case or cases entirely and completely under his management, in order that all possible sources of fallacy may be excluded! Or, on the other hand, I, or one of my colleagues, will, with his permission, watch any of the many cases now under his care in the Queen's Hospital.—I am, Sir, your obedient servant,

J. HICKINBOTHAM.

DEAR HICKINBOTHAM,—In answer to your inquiry I may say that I have, both in hospital and in private practice, been consulted in quite a number of cases, nearly approaching twelve, which have been under Mr. Clay's treatment by Chian turpentine, and in Mr. Clay's own hands, without in any instance benefit of any kind having been derived. These include cancer of breast, vulva, rectum, and uterus. Besides these, I have, as you know, tried the drug in a large number of hospital cases, many of which you have seen, without in any instance having observed benefit of any kind from it, not even the relief of pain, in a single instance.

The drug used had been approved by Mr. Clay, having been submitted to him by Messrs. Southall; and it is not true, as stated by Mr. Clay, that the right drug had been used for only three weeks. The sample first supplied, and which had not been submitted to Mr. Clay, was hardly used at all, for most of it was wasted in futile efforts to make the sulphur pills.

Yours truly,

LAWSON TAIT.

Great Charles-street, Birmingham, Oct. 4th, 1880.

THE IMMEDIATE TREATMENT OF STRICTURE OF THE URETHRA.

To the Editor of THE LANCET.

SIR,—As bearing upon the discussion that is now taking place in your columns on Holt's operation for stricture by divulsion, permit me to quote the following paragraph from a lecture of mine, published over two years ago:—"I have practised this operation (Holt's) on something like seventy cases. I never met with any difficulty in performing the operation; I have never had a fatal result; it has never been followed by serious hæmorrhage or other distress, such as extravasation of urine; and though I cannot speak as to the ultimate result in anything like the majority of my cases, I know of many patients upon whom I operated eight and ten years ago who are living in complete comfort and, to all intents and purposes, are rid of those urgent symptoms which necessitated this mode of treatment."

Since this was published I have increased the number of my cases thus operated on to over one hundred, my conclusions remaining the same.

I therefore regret that I cannot agree with Sir Henry Thompson and other speakers at the Cambridge meeting in their estimate of this plan of treating strictures.

The large number of bad cases of stricture presenting

themselves at the Liverpool Infirmary furnish varieties which require corresponding modifications in treatment, and these modifications include internal urethrotomy as well as simple dilatation. I do not limit myself to any one plan of treating strictures; I see good in several.

There appears to be a hesitation on the part of some of your correspondents in making the assertion that internal urethrotomy is never followed by a fatal result. Are we to infer that it is never fatal in their hands?

I am, Sir, yours truly,
REGINALD HARRISON.
Liverpool, October 2nd, 1880.

THE PERIOD AND INFLUENCE OF INFECTION.

To the Editor of THE LANCET.

SIR,—In a discussion at the Sanitary Congress, and in the course of various inspections of the dwellings of the poor in different towns, I have been struck with the necessity for a clear and authoritative definition of the period after an infectious or contagious disease during which it is desirable that a patient should be isolated to avoid risk to his neighbours. In the case of children this is, of course, of the highest importance. At present great pressure is brought to bear upon parents by teachers with the view of securing the attendance of children at the schools inspected by Government. If one medical attendant proves obdurate he often loses a patient, as another more pliant doctor is summoned, who at once sanctions the raising of the quarantine. Let me give a typical example. It came under my notice last week. A laundress with a family has a child suffering from scarlet fever. Her medical attendant insists upon her giving up washing till all danger of contagion has passed. She submits to this for a brief period, and then getting impatient she dispenses with the attendance of her old medical man, and calls in another. The second comes proves more amenable to her arguments. Washing is renewed, and the child is despatched to school. After a brief interval the child is once more in bed with renal dropsy. Yet the medical attendant who did his duty loses his patient and his reputation, the cry being "Don't send for Dr. A—, he will keep your child in the house for six weeks, but call in that nice Dr. B—, who will send the patient to school within a fortnight." There is therefore great need for the College of Physicians to lay down a definite period for each of the infectious diseases during which it is desirable that a patient should be isolated. By fixing a maximum and a minimum time for each some discretion will be left to the medical attendant, and great scandal and dangers to the public health will be prevented.

I should like to ask in this connexion if surgeons object to have cases of typhoid fever in the same wards or in the same building with cases of recent operation? If so, on what ground is this objection based?

I am, Sir, yours, &c.,
HENRY C. BURDETT.

Seamen's Hospital, Greenwich, S.E., Oct. 2nd, 1880.

IRELAND.

(From our own Correspondent.)

At a meeting of Convocation of the Queen's University in Ireland, to be held this week, a resolution will be proposed to the effect that the dissolution of the Queen's University in Ireland, as contemplated by the University Education (Ireland) Act, 1879, would be a grievous infraction of the vested rights of the graduates of the University, and injurious to the best interests of academical education. Further, that an earnest appeal should be made to the present Parliament and to the Government to reconsider the position of the University, and that the Committee of Convocation be instructed to take steps by deputation or otherwise to give effect to this resolution.

The report of the President of Queen's College, Cork, for the Academic Session 1879–80 states that the previous session was in every respect the most prosperous the College had seen; but that not only had this prosperity continued,

but there had been a substantial increase in the number of students this year over last year. In 1849 the College opened with 70 matriculated and 45 non-matriculated students, or a total of 115; in 1879–80, being the thirty-first session, there were 271 matriculated and 29 non-matriculated, or a total of 300 students in attendance. Anywhere this would be considered as a successful result; but taking into account the exceptional condition of the south of Ireland as regards wealth, the needs for University education, and the low condition of preparatory education, not to speak of the difficulties arising out of religious views, the position already attained by so young a university college is eminently satisfactory.

The inquiry into certain irregularities in the management of the Kilmainham Small-pox Hospital terminated on the 30th ult., and Dr. MacCabe's report will be duly forwarded to the Local Government Board. Evidence was given generally corroborating the charges brought by the patient Lavery, to which reference was made in THE LANCET last week; and it was shown that the guardians, from economical motives, did not employ paid nurses, the sick being looked after by pauper inmates. Keeley, the wardmaster, who was principally implicated, although summoned did not appear, and the matter will be brought under the notice of the Local Government Board. Dr. MacCabe, who conducted the inquiry, suggested that some better arrangements should be made as to the keeping of the patients' clothing, the providing a hospital uniform, a better system of cooking, and the prevention of the abuse of stimulants.

The Committee of Management of the Cork Fever Hospital have held a very close and searching inquiry into the various matters affecting the management of the institution, which were disclosed at the recent public investigation. The proceedings were private, but the report of the committee is expected shortly to be forthcoming.

WE have received the following from the Hon. Secretary of the South of Ireland Branch of the British Medical Association:—

At a special meeting of the branch, convened to express an opinion on the recent investigation into the charges preferred against Professor H. Macnaughton Jones, the following resolutions were unanimously adopted:—

1st. "That this meeting of the South of Ireland Branch of the British Medical Association heartily sympathise with Professor Jones in the trying ordeal which he had to undergo in defence of his professional character in the recent investigation held in the Royal Cork Institution; and we beg to congratulate him on the triumphant vindication of his professional conduct on the occasion in question."

2nd. "And that we express in the strongest manner our condemnation of the recent proceeding, where a member of our profession was put on his trial before the public for alleged malaproxia and mismanagement in the treatment of a patient submitted to his care in the Cork Fever Hospital, whereas the only thing chargeable to him was having utilised the most recent medical knowledge at his command for the treatment of what was apparently a hopeless case; and we believe that such an attempt to interfere with a physician's skill and discretion is unfair, unconstitutional, and opposed to the best interests of the public, who benefit most by the progress of medical science. While thus expressing our opinion on the mode of procedure, we cannot fail to recognise the patience and great intelligence which was paid to the case by the Hospital Committee."

3rd. "That the hon. secretary be directed to forward the foregoing resolutions for publication to the *British Medical Journal*, THE LANCET, *Medical Press and Circular*, and the Cork local papers."

D. B. O'FLYNN, M.A., M.D.,
President of the Local Branch.
T. GELSTON ATKINS, B.A., M.D.,
Hon. Secretary.

PARIS.

(From our own Correspondent.)

M. DUJARDIN-BEAUMETZ entertained the Academy of Medicine last Tuesday with an account of his experiments in "xylotherapy." He finds that different kinds of wood possess different degrees of "æsthesiogenic" power, when

applied to the skin of an anæsthetic member. The experiments in question were, of course, made upon a few hysterical women; and the conclusions arrived at are of as much scientific value as are generally such deductions. "When a disc of wood is applied to the skin of these patients the following phenomena are observed after a variable time: first, the subject complains of the constriction produced by the cord used to fasten on the wood; then she feels the disc itself, and if it is then removed the skin is found to be redder and warmer than the neighbouring parts; moreover, the punctures which have been previously made to ascertain the degree of sensibility now bleed, and those which are now made are felt most plainly." Chinchona bark is the most efficacious, and next in order come thuya (*arbor vitæ*), rose-wood, mahogany, pitch-pine, nutwood, maple, and apple-wood. Violet-ebony (*pallisandre*), ash, poplar, and sycamore have no action at all, at least so it would appear at present; but xylotherapy is still in its earliest infancy, and it would be rash to affirm that they have not, perhaps, some action *à distance*. Those who have followed up the vagaries of metallotherapy will remember that an indifferent metal served to "fix" the sensibility when superimposed upon the "æsthesiogenic" metal which restored it. If his patients are able to guess at the object in view, M. Dujardin-Beaumez will, no doubt, find that the inactive woods have similar "fixing" properties when applied over chinchona, mahogany, or any other lignous disc. *Apropos* of metallotherapy, this science is about to enter upon a new phase. No publication upon the subject has as yet been made, but a manufacturer of electrical instruments tell me that he has recently constructed a number of electrodes of different metals for a prominent member of the profession. If electricity has not hitherto been a panacea for all diseases, it is, no doubt, because it has not been applied properly.

The electricity of the future will be guided by the light of metalloscopy. When this process has divulged the idiosyncrasy of the patient—say, for instance, gold or silver—galvanisation through gold or silver electrodes will give a satisfactory result. One may venture to anticipate that a very long name will be given to the system, and that it will be peculiarly applicable in certain neuroses, which are always best treated when left alone.

M. Pasteur's unexpected appearance at the last meeting of the Academy of Medicine gave M. Jules Guérin an opportunity of asking a number of questions, and receiving such answers as the former cared to give. After some discussion, M. Guérin begged that his antagonist would prove to the Academy—1st. That we (the profession) know nothing whatever about the relation between vaccinia and variola. 2nd. That he himself did know something about it. M. Pasteur, who had probably not been listening to his colleague, replied that he had not understood a word, that he did not believe that anyone else had, but that if any member of the Academy could explain what had been meant he would be obliged to him. Here the venerable Professor Bouillaud intervened, and expressed the hope that the debate would not degenerate into a personal quarrel, but as soon as he had finished an angry discussion took place between the two previous speakers, which was rendered unintelligible by the cross-conversations of all the other Academicians. In the midst of this uproar the President was heard to exclaim that "the question appearing to have been sufficiently obscured, the meeting is adjourned," and so the sitting ended.

The *Journal Officiel* mentions the death of an old lady in Silesia, who appears to have been an authentic centenarian. Her name was Judith Singer, and she was born in 1768.

Medical News.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Sept. 30th:—

Hollies, George, Wellington, Salop.
O'Connor, Thomas, Ballina, Co. Mayo.
Pickthorn, Thomas Russel, Westbury-road, S. Kensington.
Shaw, John Alexander, Deal, Kent.
Tinoco, Francisco Esteran de, Bedford-place, Russell-square.

The following gentlemen also on the same day passed their Primary Professional Examination:—

George Locke and Charles William Grimes Burrows, Charing-cross Hospital; Robert Beswick and Lawrence W. K. Phillips, Guy's Hospital.

It is reported that a veteran journalist, M. Chauvet, has died in the hospital at Strasbourg from the effects of the bite of a poisonous fly.

GLANDERS is stated to be prevalent at Sutton Marsh, Lincolnshire. Six valuable horses have been slaughtered on one farm, and fears are entertained of the soundness of eight other animals.

A NEW method of preserving raw meat, discovered by Professor Artimini of Florence, and patented in this country, is said to be very effective. The material employed is stated to be less expensive than salt, and wholesome and pleasant to the taste.

ANOTHER death from the administration of carbolic acid in mistake for a black draught is reported. This time the accident occurred in Greenock Infirmary, and the unfortunate patient died within an hour of taking the poison. The nurse who administered the dose has been apprehended.

At the annual meeting of the Midland Medical Society the following gentlemen were elected to offices:— President: Thos. Savage, M.D., F.R.C.P. Treasurer: Mr. James Harmar. Hon. Secretaries: Messrs. John Garner and Henry Eales. Members of Council: Mr. T. H. Bartleet, Mr. John Greene, Dr. James Johnston, Mr. Furneaux Jordan, Mr. Wm. Thomas. Dr. J. Matthews Duncan has consented to deliver the inaugural address of the session, on the 20th instant, his subject being "The Treatment of Puerperal Fever."

CHESTER INFIRMARY.—On Wednesday last the Countess Grosvenor opened a new ward for children in the Chester Infirmary, in the erection of which the Duchess of Westminster had taken a great interest. Some 27 cots have been provided.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.—The first meeting of the session will be held at 1, Adam-street, Adelphi, on Friday, the 15th inst., at 7.30 p.m., when the President, Dr. J. S. Bristowe, will deliver an inaugural address.

KING'S COLLEGE, LONDON.—At the conclusion of Dr. Geo. Johnson's address the following distribution of prizes took place. Scholars: W. G. Evans, S. Farmer (*æq.*), senior; W. T. Brooks, second year; A. M. Vann, S. S. Merrifield, G. G. Hodgson, junior; G. G. Hodgson, C. P. Child, T. S. Short, Warneford, Class I; H. D. James, Warneford, Class 2; R. H. Botham, G. M. Taylor (*æq.*), Science (Clothworkers' Company); W. G. McMillan, Daniell.—*Winter Session, 1879-80.* Warneford Endowment: J. A. West, S. E. Craddock, prizes. Leathes Endowment: J. W. Kealy, P. H. Emerson, prizes. Anatomy: St. C. Thomson, prize; G. S. Aslett, A. R. Edwards, B. H. Stevens (*æq.*), certificates of honour. Physiology: R. G. Lynam, prize; H. R. Beevor, B. H. Stevens, certificates of honour. Chemistry: G. D. Porter, prize; R. G. Lynam, certificate of honour. Medicine: W. T. Maddison, prize; J. C. Castor, certificate of honour. Clinical Medicine: C. H. Whitcombe, prize; W. T. Maddison, certificate of honour. Surgery: S. Powell, prize; J. C. Castor, certificate of honour. Clinical Surgery (Professor Wood): S. Powell, E. H. Wagstaff (*æq.*), prizes. Clinical Surgery (Professor Lister): J. A. West, prize; St. C. Thomson, E. W. Benson, C. E. Goddard, certificates of honour. Zoology and Comparative Anatomy: J. F. Freeland, prize.—*Summer Session, 1880.* Practical Physiology: F. W. Le Maistre, N. H. Turner (*æq.*), prizes; T. S. Short, H. C. McDouall, certificates of honour. Practical Chemistry: H. C. McDouall, prize; G. Wale, J. F. Freeland, certificates of honour. Botany: C. W. Kieser, prize; T. S. Short, J. F. Freeland, certificates of honour. Tanner Prize: C. E. Goddard, prize. Todd Clinical Prize: S. Powell, prize. Pathological Anatomy: B. H. Stevens, prize; W. Groom, certificate of honour. Practical Biology: C. W. Kieser, prize; J. F. Freeland, P. G. Lewis, certificates of honour. Forensic Medicine: W. T. Maddison, prize; S. E. Craddock, certificate of honour. Obstetric Medicine: W. Groom, prize; A. H. Gordon, certificate of honour. Materia Medica: W. T. Brooks, prize; R. G. Lynam, S. S. Merrifield (*æq.*), certificates of honour. Clinical Medicine: P. Boobyer, prize.—*Associates:* W. H. Addison, C. E. Baddeley, R. Clarke, W. G. Evans, S. Farmer, T. W. Graves, H. J. R. Moberly, H. Morris, B. J. Newmarch, H. S. Parker, H. F. H. Smith, F. H. Spencer.

Medical Appointments.

Intimations for this column must be sent DIRECT to the Office of THE LANCET before 9 o'clock on Thursday Morning, at the latest.

BARLOW, J., M.D., M.R.C.S.E., has been appointed Professor of the Institutes of Medicine in Anderson's College, Glasgow.

BIRCH, R. C., M.R.C.S.E., L.R.C.P.L., has been appointed Medical Officer to the Children's Dispensary, Manchester, vice J. A. Mackenzie, M.B., resigned.

BLUMER, P., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer to the West District of the Bingham Union, Notts, vice A. Graham, L.R.C.P.Ed., resigned.

BOYD, S., M.B., B.Sc., M.R.C.S.E., has been appointed Surgical Registrar to University College Hospital, vice Silcock, resigned.

CAMERON, C. A., L.K.Q.C.P.L., F.R.C.S.I., has been appointed Public Analyst for Drumcondra Township. £10 10s. per annum.

CLARKE, A., M.R.C.S.E., has been appointed Medical Officer for the Fourth District of the Wells Union; also Medical Officer of Health to the Street Sanitary Authority, vice Paul, resigned.

COMPTON, T. T., M.B., C.M., has been appointed Junior Assistant Medical Officer to the Norfolk County Asylum.

FLETCHER, F. A. C., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer for the Sutton District of the Keighley Union.

HAYWARD, W. H., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer of No. 2 District of the Wolverhampton Union.

HILLS, A. P., M.R.C.S.E., has been appointed Surgeon to the London and Manchester Industrial Assurance Company (Limited), for the Battersea District, vice G. Hills, M.D., F.R.C.S.E., deceased.

HOWLETT, E. H., F.R.C.S.E., has been appointed Resident Surgical Officer at the Manchester Royal Infirmary, vice G. A. Wright.

MAY, B., B.Sc., F.R.C.S., has been unanimously elected to fill the newly-created honorary office of Casualty Surgeon to the Queen's Hospital, Birmingham.

NAPIER, A. D. L., M.D., C.M., has been appointed Certifying Factory Surgeon for Dunbar and District, vice Cowan, deceased.

NOURSE, W. J. C., L.S.A.L., has been appointed Medical Officer for the Bow and Colebrooke Districts of the Crediton Union.

OAKLEY, Mr. H. C., has been appointed Assistant Medical Officer at the Leeds Workhouse Infirmary.

PEARCE, A., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer of Health for the Salcombe Urban Sanitary District, Devonshire, for five years.

POGSON, W., F.R.C.S.Ed. &c., has been reappointed Medical Officer of Health for the Leeds Rural Sanitary District.

PRICE, R. G., L.R.C.P.Ed., L.F.P.S.G., has been appointed Medical Officer, Public Vaccinator, and Medical Officer of Health for the Ystradgynaf Union, vice Rhys, deceased.

READER, J., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for the Marshfield District of the Chipping Sodbury Union.

THOMPSON, J., M.D., F.R.C.S.E., L.S.A.L., has been appointed Medical Officer for the Abbotsham District of the Bideford Union.

TODD, M. S., L.R.C.S.I., has been appointed Medical Officer and Public Vaccinator for No. 3 District of the Abingdon Union.

TWEDDELL, G., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer of Health for the Houghton-le-Spring Urban Sanitary District, vice Lyon.

WANKLYN, Mr. J. A., has been reappointed Public Analyst for the Borough of Buckingham until September, 1881.

WATERSON, W. T., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer for the Embleton District of the Alnwick Union.

YOUNG, A. G., M.B., B.Ch., has been appointed Medical Officer and Public Vaccinator for the Mountmorris Dispensary District of the Newry Union. Also Medical Officer of Health and Medical Attendant to the Royal Irish Constabulary at Mountmorris and Baleek, vice Pratt, deceased.

Births, Marriages, and Deaths.

BIRTHS.

BADCOCK.—On the 2nd inst., at Buckingham-place, Brighton, the wife of Lewis Carter Badcock, M.D., of a son.

GLYNN.—On the 28th ult., at Rodney-street, Liverpool, the wife of T. R. Glynn, Esq., M.D., of a daughter.

ILES.—On the 3rd inst., at Watford, the wife of Wilson Iles, M.D., of a daughter.

NORRIS.—On the 21st ult., at West Hoboken, New Jersey, U.S., the wife of Henry Lee Norris, M.D., of a daughter.

ROCHE.—On the 27th ult., at Ivan Lodge, Cavendish-road, Southsea, the wife of William Roche, Esq., Staff Surgeon, R.N., of a son.

TINKER.—On the 2nd inst., suddenly, at her residence, Talbot House, Southport, Mary, relict of the late Frederick Tinker, F.R.C.S.E., of Hyde, Cheshire, aged 63.

MARRIAGES.

COLVILL—CAREY.—On the 29th ult., at Arbroath, William Henry Colvill, Surgeon-Major, Indian Army, to Helen, daughter of the late Robert Carey.

DINGLE—HABGOOD.—On the 5th inst., at St. George's, Hanover-square, by the Rev. Thos. C. Webster, M.A., Vicar of St. Mark's, Old-street, W. A. Dingle, L.R.C.P.L., M.R.C.S.E., & L.S.A.L., of 61, Bunhill-row, Finsbury, E.C., late of the P. & O. S. N. Co.'s Service, to Fanny, third daughter of the late Robert Mace Habgood, Esq., of Upper Tooting. No cards.

THOMSON—SANDERSON.—On the 29th ult., at 21, Bridge-street, Musselburgh, by the Rev. Henry Moncrieff MacGill, Andrew D. R. Thomson, L.R.C.P.E., L.R.C.S.E., elder son of the late L. Ramsay Thomson, M.D., of Dalkeith, to Margaret Rimmer, only daughter of A. Macdonald Sanderson, F.R.C.S.E.

DEATHS.

BOWERBANK.—On the 5th inst., at Argyle-road, Castle-hill, Ealing, Lewis Quire Bowerbank, Esq., M.D., late of Jamaica.

BROWN.—On the 19th ult., at Haverfordwest, James David Brown, F.R.C.S.E.

MOORHOUSE.—On the 18th ult., at Ivy House, Ellesmere, James William Moorhouse, M.R.C.S.E. & L.R.C.P.E., aged 53.

SALOMON.—On the 30th ult., at his residence, Lund, Sweden, Ernst Carl Victor Salomon, M.D., F.R.C.S., and Knight of the Royal North Star, in his 49th year.

STRANG.—On the 28th August, at Turkasbad, near Queenstown, Cape Colony, Christopher Strang, M.B. & L.F.P.S.G., late of Workington, Cumberland, England, aged 32.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

BOOKS ETC. RECEIVED.

ALLEN, E. W. *Babylonian Cups, or Behind the Scenes.* By a Special Commissioner. With a Preface by Dr. H. W. Williams. pp. 144.

BOGUE, DAVID, London. *Demonstrations in Physiological and Pathological Chemistry, with a Concise Account of the Clinical Examination of the Urine.* By C. H. Ralfe, M.A., M.D. Cantab. pp. 155. Illustrated.

CHURCHILL, J. & A., London. *Lectures on Diseases and Injuries of the Ear, delivered in St. George's Hospital.* By W. B. Dalby, F.R.C.S., M.B. Cantab. Second Edition. pp. 226.

St. Thomas's Hospital Reports. Vol. X. pp. 491. 7s. 6d.

Cottage Hospitals, General, Fever, and Convalescent: their Progress, Management, and Work. By Henry C. Burdett. With Plans and Illustrations. Second Edition, rewritten and much enlarged. pp. 550.

KEGAN PAUL & Co., London. *The Atomic Theory.* By Prof. Ad. Wurtz. Translated by E. Cleminshaw, M.A. pp. 339.

LEWIS, H. K., London. *A Practical Treatise on Tumours of the Mammary Gland.* By S. W. Gross, A.M., M.D. pp. 246. Illustrated with 29 Engravings.

LONGMANS, GREEN, & Co., London. *A Thousand Thoughts from Various Authors. Selected and arranged by A. B. Davison.* pp. 374.

A Voyage in the Sunbeam. By Mrs. Brassey. pp. 376. With Illustrations.

The Laws of Health. By W. H. Corfield, M.A., M.D. Oxon. pp. 152. Illustrated.

MACMILLAN & Co., London. *A Text-book of the Physiological Chemistry of the Animal Body.* By Arthur Gamgee, M.D., F.R.S. Vol. I. pp. 487. With Illustrations.

SAMPSON LOW, MARSTON, & Co., London. *Practical Blowpipe Assaying.* By G. Attwood. pp. 210. With 74 Woodcuts.

VAN NOSTRAND, D., New York. *Radical Mechanics of Animal Locomotion.* By W. P. Wainwright. pp. 294.

WASHINGTON GOVERNMENT PRINTING OFFICE. *Index Catalogue of the Library of the Surgeon-General's Office, United States Army.* Vol. I.: A—Berlinski. With a List of Abbreviations of Titles of Periodicals annexed. pp. 888.

On Lengthening of the Limb as a Result of Knee-joint Disease. By W. W. Wagstaffe, F.R.C.S.—Bulletin de l'Académie de Médecine.—Archives de Médecine Navale. (Baillière, Paris.)—On Chronic Accidental Poisoning. By Dr. Henry Barnes.—The Victorian Review, August.—Projet d'Organisation du Service de Santé de la Compagnie du Canal Interocéanique de Panama. Par le Dr. L. Compagno. (Baillière et Fils.)—Internal Urethrotomy. By Dr. A. L. Ranney. (Appleton, New York.)—Annual Sanitary Report of the Province of Assam for 1879.—Archiv. für Pathologische Anatomie und Physiologie.—Transactions of the Massachusetts Medical Society.—Medical Report of the Chinese Imperial Maritime Customs.—Recherches sur l'Enchondrome, son Histologie et sa Genèse. Par A. H. Wartmann. (Georg, Genève et Bale; Masson, Paris.)—Therapeutische Verwendung und Wirkung der Jod- u. Schwefelhaltigen Doppelkohlen-sauren Natron-leuan zu Krankheit-tözl. Von Dr. Max Höfler.—Fraser's Magazine, October.—The Treatment of Spinal Curvature and Abscess by Inflation. By J. H. Webb, M.R.C.S.—Contemporary Review, October.—Iritis, Diagnosis and Treatment. By Dr. C. A. Oliver.—On Hysteria and Hystero-Epilepsy. By Dr. W. H. Stone.—Annual Report of the Health Commissioner of the City of St. Louis.—Ein Beitrag zur Casuistik der Vergiftungen mit chlorasaurem Kali. Von Dr. J. Hofmeier. (Reimer, Berlin.)—How can these Things be? By a Physician.—Suggestions on the Management of Difficult Labour. By Dr. J. W. Singleton.—L'Eau Froide, ses Propriétés et son Emploi. Par le Dr. A. Block.—Contribution à l'Etude de la Ligature dans le Traitement des Aneurysmes. Par le Dr. J. F. Arnaud. (Baillière et Fils.)—Healthy Homes. By Dr. William Newman. (Jenkinson, Stamford.)

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Local papers containing reports or news-paragraphs should be marked.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

Lectures, original articles, and reports should be written on one side only of the paper.

We cannot prescribe, or recommend practitioners.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET to be addressed "To the Publisher."

EARLY RISING.

OF course the majority of the busy members of the community have been "away for change of air and scene," and, equally of course, the majority have derived substantial benefits—not at the moment apparent, perhaps, but to be evidenced, in better health or more energy, presently. This is, therefore, a good time to speak of such reforms in the management of self as may be expedient. We venture to suggest that those who have not yet made a fair trial of the practice of early rising should do so. With a cup of tea, and perhaps a single slice of bread-and-butter, to wake him at 6 or 6.30 in the morning, a fairly healthy man may go to his study, and enjoy the priceless luxury of two or three hours of work, when his brain is clear, and the distractions of the day's ordinary business have not begun to assail him. The practitioner of an applied science, such as medicine, is especially in need of time for reading and quiet thought. In the active hours of the day this is denied him. At night he is, or ought to be—but for the bad habit of reading by night, probably formed in student days,—too weary in mind and body to do good work. In the early morning, with his brain recuperated by sleep, and his whole system rested, he is especially fit for labour. Those who do not feel thus on awaking are either the subjects of some morbid state, or the slaves of a habit which, however common, is essentially unnatural. Some of the difficulties which beset the task of early rising are due to want of method in the act of "getting up." It is comparatively easy to rouse oneself instantly, but to not a few of us it is extremely irksome, and almost impracticable, to rise slowly—that is, taking time to think about it. The man who *really* wishes to rise early should get up the instant he wakes, and, if weakly or over forty years of age, instead of plunging into cold water or applying cold to the head to rouse himself, he should, as we have said, take a cup of tea or milk to stimulate the organism before expecting to elicit a reaction by a powerful depressant such as the cold bath or douche! Many persons make a mistake in this matter, and by taking their bath immediately after getting out of bed lower the vitality instead of raising it. In certain cases it is better to leave the bath until after a walk or a spell of work has thoroughly awakened the organism and called out its energies. Experiences in relation to this and other matters must differ as widely as constitutional peculiarities diverge; but, speaking generally, the early morning is the time for serious work, and those who do not so use it find a poor substitute, and one which is by no means hygienic, in the late hours forced upon them. A man cannot get up early if he goes to bed late; but as between the two extremities of the day, the morning is, on all accounts, the best for brain exercise.

Mr. Harrison, (Ellesmere).—The notice will appear next week.

"A QUESTION OF TREATMENT."

To the Editor of THE LANCET.

SIR,—Your correspondent, "J. B. C.," refers to an obscure eruption on the tongue, accompanied with acne pustulosa. After using soothing applications for the acne (it would be better to omit the iodide of potassium in the mixture spoken of, as it would probably be increased by the use of this drug), the best application to the tongue would be: After carefully drying the surface, and holding the tip in the hand, previously covered with a towel, to cautiously paint the patch over with a little strong nitric acid, keeping the tongue protruded for a few minutes. The eruption appears from the diagnosis to be psoriac. A couple of applications done about four days apart will suffice.

Yours truly,

Sackville-street, Oct. 4th, 1880.

JAMES STARTIN.

CRAMP WHEN BATHING.

A CORRESPONDENT writes:—"Being accustomed at the seaside to swim out far, and remain in the water for periods approaching an hour, I have been sometimes visited with fear of cramp. Farther than, on one or two occasions in my life, having had the slightest symptom in the water of a cramp in the calf of the leg, I have never had any experience of such a seizure so fatal to the swimmer. I am sure the information would be interesting and useful to many besides myself if you could inform me through your columns what state of body, stomach, or circulation renders one liable to such a disaster." The question raised is interesting and important. Is the so-called "bather's cramp" true cramp?

Burnley.—The question should be addressed to a practitioner privately.

"LIFE AND MIND ON THE BASIS OF MODERN MEDICINE."

To the Editor of THE LANCET.

SIR,—My attention has been called to a review in THE LANCET of Sept. 25th of my late tract, "Life and Mind on the Basis of Modern Medicine." Perhaps, as the subject seems at present a burning question of the day—a problem agitated in all quarters of the civilised world by all classes of thinkers, from archbishops downwards, and as its solution lies more in the province of scientific medicine than elsewhere,—you will have the courtesy to give me this opportunity of making a very few brief remarks in your valuable pages in deprecation of your strictures. I have endeavoured so steer clear of what you term "irrational dogmatism," and to base my conclusions on well-established data of modern science and philosophy, medical as well as physical, conscious as I am that neither caution, reflection, nor experience, theoretical or practical, has been spared in their elaboration. All I have at heart to prove is the simple, seemingly unassailable thesis that in matter itself, organic or inorganic, there is *unity* of substance, and that no dual factor of a non-material, spiritual, or animistic character is required for the performance of function, the necessary energy for which residing, as an immanent property, in matter or tissue itself. In other words, that there is no such reality as vital or motor principle—only vital or motor force or function—the corpuscular *vis insita*. Originally the title of my essay was "Life and Mind on the Basis of Materialism" (Hylozoism); but the term "Modern Medicine" was substituted on its latest reissue, in deference to the claims of the latter to the proud distinction of being the science of human nature itself.

Absolute atheism (see thesis 8, page 32) forms no part of my argument. All it contends for is the non-interference of "spirit" in any shape, "great or small," in cosmical phenomena or in cerebration, from which latter alone all conceptions and perceptions, so far as knowable, originate. Properly interpreted, my contention is the most self-evident and undeniable of truisms, either in the light of ordinary common sense or in that of contemporary science and philosophy. I aim at nothing beyond a clear enunciation of the data at the root of all modern science since Newton's Principia—data never more accentuated than in the canons of modern medicine since the origin of Histology at the commencement of the nineteenth century.

Your obedient servant,

ROBT. LEWINS, M.D.,

Army and Navy Club, Sept. 30th, 1880.

Surgeon-Major, H.P.

* * We maintain that the non-existence of a something beyond or behind matter cannot, with our present knowledge, be proved. The statement that function or motor force is immanent in matter is not sufficient, in these days of rigid analysis, as an explanation of the meaning of energy in organised bodies, present in the state called life, and absent in death. Co-ordinated or associated action surely has a higher or deeper signification than can be predicated of corpuscular *vis insita*. This can never account for the intelligent co-operation of atoms in working out harmoniously the well-being of the individual organism.—ED. L.

A Twenty Years' Subscriber.—There are certain special provisions for practitioners admitted to the M.R.C.P. examination. Our correspondent would have no difficulty in obtaining the diploma as he proposes. Bristowe's Principles and Practice of Medicine and Niemeyer's work are both valuable for study. Special treatises, such as Murchison on Diseases of the Liver, and Walshe on Diseases of the Lungs, may also be read with advantage.

A QUESTION IN PHARMACY.

To the Editor of THE LANCET.

SIR,—I should be glad if any of your readers would kindly give me a formula for the preparation of a subcutaneous solution of morphia which will keep without depositing any of its salt.

Yours obediently,

Oct. 4th, 1880.

L. K. Q. C. P., &c.

M.D.—It does not follow that because it is desirable to abolish the Apothecaries' Companies, it is wise to attempt to abolish the Royal Colleges, or that it would be possible to do away with all qualifications but the degrees of the University of London. This is an unpractical suggestion.

A Surgeon's Assistant.—There are wards set apart for paying patients at St. Thomas's and University College Hospitals. Application should be made to the Secretaries.

DUPLICATE MEDICAL DEATH CERTIFICATES.

Judex.—A registered medical practitioner, should he see fit, is at liberty to issue any number of duplicates of a medical certificate of the cause of death of a deceased patient. It is also true that the relative of a deceased person who hands over to any other person than the local registrar the medical certificate of the cause of death is liable to a fine; the fine, however, is 40s., and not £10. After a medical practitioner has, however, once issued a medical certificate, it is very undesirable that a second should be issued differing from that first given, unless under very exceptional circumstances. We are unable to see any reason, however, for consulting the local registrar as to the expediency of issuing any number of *duplicates* of medical certificates.

J. P.—Dr. James Beddoe, F.R.S., is President of the Health Section at the meeting of the Social Science Congress now being held in Edinburgh.

CASE OF POPLITEAL ANEURISM.

To the Editor of THE LANCET.

SIR,—I send you an account of a case of popliteal aneurism, the manner of cure of which ought to be recorded.

On December 30th, 1878, Mrs. —, aged sixty-nine, of middle height, rather stout and strong woman, went to see a neighbour's pig killed, and, when standing by, an old man tumbled up against and over her, knocking her down forwards on her face and knees. She felt something give way in her right knee, and from this time had great pain shooting down her leg "like a bad gathering." I saw her a week after, and, from her description of the pain and accident, I suspected aneurism, and on examination found a pulsating swelling at the lower part of the popliteal space, with all the characteristics of aneurism, but the bruit not well marked. The muscles of the leg (outside particularly) were also a good deal strained. I ordered lead lotion and complete rest; but she would not even keep her leg up, and I could not make her understand that the case was a serious one. Four weeks after this, as the aneurism was getting larger and the pain severe, I persuaded her to flex the knee as much as possible at night when in bed, and keep the leg up in the daytime. In a week the pulsation was perceptibly less, the pain very much less, and the tumour smaller. At the end of three weeks the pain was almost gone, and the aneurism hardly to be felt at all—in fact, had almost disappeared. At this time she took liberties, walking about &c., and the tumour became larger and more painful, but felt hard, as if a good deal of deposit had taken place. I cautioned her that she might have to undergo a serious operation, besides suffering great pain, if not more careful, after which she behaved better, and the tumour gradually subsided, there being no sign of it on May 10th, 1879. The only treatment carried out (and that only partially) in this case was flexing the knee at night when in bed. The cure was complete, and the woman has been well ever since.

Yours faithfully,

Rhymney, Sept. 9th, 1880.

T. H. REDWOOD, M.A., M.D., &c.

A Poor Assistant.—It is not clear to us that a practitioner advertising for an assistant should pay travelling expenses of applicants. Where would be his protection? Supposing twenty applied, he might have to pay an inconvenient sum. Where the distance is considerable, there should be an understanding about travelling expenses.

Mr. R. T. A. O'Callaghan.—There is a Medical Defence Association, of which Mr. George Brown, 12, Colebrooke-row, Islington, is the Honorary Secretary.

SINGULAR FREAK OF AN EPIDEMIC OF SCARLET FEVER

To the Editor of THE LANCET.

SIR,—Scarlet fever, having broken out in a distant parish of my district, has exhibited a freak hitherto unobserved by me in any former outbreak of such sporadic disease. After having invaded two families, four children in one, and five children and the mother in the other, occupying cottages some distance apart, it appeared in a house in which, remotely located from the other points of its assault, it attacked two more children, aged respectively two and four years. It should be noted that in all the twelve cases the disease was of a most virulent type, concentrating its force upon the throat; and just as these were emerging from the attack under the treatment adopted, three older children succumbed to diphtheria in a marked form—one, a girl of twelve, exhibiting a tubular diphtheritic stratum adherent to the fauces and pharynx, and in this case and that of the brother of ten years, the throats, when cured of the disease, showed deep and extensive ulcerations, causing the tissues of the walls and pillars of the fauces and velum palati to trail in shreds on the base of the tongue, plainly due to the ravages of the bygone frightful malady. These ulcerations are now almost healed. Although I had known scarlet fever degenerate or tail off, as it were, into diphtheria, I had never before seen it appear in its original phase, as in the present outbreak, in two other families in the same village, and that in the space of a month. Surely this singular alternation of the diseases, coupled with the fact that both are alike amenable to the same treatment, furnishes a strong argument in favour, if not of identity, of the close affinity of the diseases. Of the twelve cases of scarlet fever and the three of diphtheria above alluded to, though most severe, not one has had a fatal termination, most having thoroughly recovered, and the others rapidly approaching recovery.

Yours faithfully,

Crick, August 17th, 1880.

T. OSBORNE WALKER.

Dr. H. Collins.—Our correspondent should apply to one of the licensing bodies for information concerning any special classical works required to be read for the preliminary examinations, and as to the other subjects he might consult some scholastic friend.

"LEGALISED QUACKERY AND LOW CHARGES":
ANOTHER DEFENCE.

To the Editor of THE LANCET.

SIR,—Will you allow me to draw attention to a misprint in the letter of mine which you published last week? I wrote, cod-liver oil, which costs a little over one halfpenny per ounce, you printed 1s. 2d., or twenty-eight times the real cost. A serious misstatement like that is apt to throw discredit on my figures.

I should also, in further elucidation of my statements, wish to make the following additions:—That I believe there are no doubt practices where the cost of the drugs would exceed 1d. per bottle; but in these the drugs are not only chosen for their remedial properties, but also for the elegance of their preparations. The only object I had in my letter was to point out that medical practitioners do not realise the fact that drugs are not expensive articles of commerce, with few exceptions. I would therefore as a further test suggest, that the cost of drugs in large colliery and ironworks practices, supplied to mixed patients, men, women, and children, should be computed. In such practices, though the medical officer acted with perfect *bona fides*, the more elegant preparations would be excluded—for example, compound tincture of cardamoms and aromatic spirits of ammonia. A certain disturbing influence is also to be taken into consideration in computing the cost of drugs in hospital out-patients. The physicians and surgeons there, no doubt legitimately, avail themselves of the opportunity of testing the value of new and expensive drugs, not because they are convinced of their efficacy, but because they wish to watch their effect. I have no doubt that the younger and more enthusiastic members of the hospital staff are more expensive prescribers; while, lastly, some men retain a lifelong bias in favour of complicated prescriptions, others again favour the simplest combinations. All I wish to point out and to maintain is that drugs, if given to large numbers of patients, are not so expensive as is generally imagined, and even if they were twice the price which I indicated, my argument would hold good.

Your obedient servant,

M.D. Lond.

London, Oct. 4th, 1880.

AN ILLUSTRATION OF THE SYSTEM OF CHEAP
DISPENSARIES.

To the Editor of THE LANCET.

SIR,—I have noticed the insertion in your valuable journal of numerous letters in defence of a system of supplying medicines and advice on terms which to the run of medical men seem derogatory to the dignity of the profession, and scarcely consistent with advantage to the poorer classes. Admitting your fairness in giving a hearing to those whose style of practice is so condemned, I confidently rely on your giving insertion to the following illustration of cheap medical practice which lately occurred to me:—

I was asked a few weeks ago to see a man said to be suffering from spasm of the heart, and to be very bad. I went, and found a middle-aged man in great distress and pain between his disease and the diagnosis which had been arrived at a cheap private dispensary in the neighbourhood. I think the diagnosis had quite as much to do with his condition as the disease, if not more. I found he had been going to this dispensary for a week; that he had paid only one shilling for several visits and medicine; that he had never seen the principal, but his assistant, who is, I should charitably conclude, unqualified, and that the assistant had said that the disease was in the heart. Here he was, after a week of such treatment, in a state of mingled shock and extreme pain, chiefly in the cardiac region. The pulse was "slow," but regular, and the heart-sounds normal. Hot flannels and turpentine had been applied diligently. I was told, too, there were some spots on the side. I immediately suspected and soon found a very brilliant semicircular eruption of herpes zoster, and was enabled to assure my stricken patient that he had no heart disease, and that his pain was due to an eruption, which, however painful, was not deadly or dangerous. The pain, however, was unmistakably bad, and quinine, ammonia, local applications of laudanum, and the internal administration of it, with a second visit to the patient's house, were all necessary on that first day.

For curiosity's sake I asked the chemist who dispenses my drugs to give me a memorandum of what he was going to charge me for the medicines supplied to this patient on that one day—viz., an ammonia mixture, twelve pills with two grains of quinine in each, ointment of oxide of zinc, laudanum for outward use (the zinc not being effective), and an opiate draught. The bill was three shillings for one day's medicines, to say nothing of two visits and my time. Three shillings! and our cheap doctors are to give three weeks' medicines and advice for the sum that I am to pay the chemist alone for one day's medicine! I leave your readers to judge. But I have not done with the absurdity and, I must add, injustice of cheap doctoring in this case. I have to add that the patient never saw the principal, only the assistant, who was so little up to his work that, though he saw the crop of shingles, he did not diagnose it, but diagnosed a grave fault of the heart, which did not exist. It is this kind of slopwork that the shilling a week system favours, and the profession will look to you for a judgment upon it.

I am, Sir, your obedient servant,

London, October, 1880.

M.D

VIVISECTION.

DR. WILDER, of the Cornell University, proposes to classify vivisection into "sentisection," experiments attended with pain, and "callisection," those which are painless. He thinks that callisection is necessary for even elementary physiological instruction; but sentisection should be "the unwelcome prerogative of the very few whose natural and acquired powers of body and mind qualify them above others to determine what experiments should be done, to perform them properly, and to wisely interpret the results. Such men, deserving alike of the highest honour and the deepest pity, should exercise their solemn office not only unrestrained by law, but upheld by the general sentiment of the profession and the public."

Traveller might suggest to some of the practitioners resident in the locality the expediency of taking the matter up.

PLACENTA PRÆVIA AND RUPTURE OF THE UTERUS.

To the Editor of THE LANCET.

SIR,—As I am not aware of having read or heard of a case of placenta prævia in which rupture of the uterus took place, the following facts may be of interest to some of your readers:—

On the 16th instant I was summoned to attend Ann C—, the wife of a "heckler" at Parrmill Threadworks, who was stated to be in labour, and in a dying condition from hæmorrhage. On my arrival the woman had been dead for more than an hour. I made a vaginal examination, and found the os uteri well dilated; but instead of the presenting part of the child, my finger impinged against a soft spongy mass, which I at once surmised to be the placenta, and, on introducing my hand into the uterus, I felt the placenta adherent round the cervix, except at the left side, where it had apparently separated during the labour. I could not find the fetus in the uterus; but on introducing my hand still further I felt it distinctly in the abdominal cavity. The woman who attended stated that the patient had been in labour for four hours, and had several "red discharges"; but ultimately an alarming flooding ensued, and at the same time the patient complained of severe pain in her abdomen, and became faint, and mentioned that she was dying.

I made a post-mortem examination about five hours afterwards. On opening the abdomen, a considerable quantity of blood was found in the cavity of the peritoneum. No evidence of peritonitis could be detected. There was a large rent on the anterior surface of the uterus, running, from above downwards and to the right. The edges of the laceration were uneven, and the muscular tissue of the organ was considerably thinned at these parts, but did not appear to present any marks of disease. There was no injury of any of the adjoining viscera.

From what I could learn of the patient's history, she was forty-two years of age, and had previously given birth to fourteen children, the last two being still-born, and she had always been a strong and apparently healthy woman.

Your obedient servant,

Beith, Ayrshire, Sept. 17th, 1880. C. R. MACDONALD, M.B., C.M.

A Critical Reader.—We believe the uniform fee for evidence at an inquest is a guinea, an extra guinea being given for a post-mortem examination. Adjournment of the inquest does not entitle to a further fee.

"CHANGE AS A MENTAL RESTORATIVE."

To the Editor of THE LANCET.

SIR,—Would your correspondent, Mr. Downes, follow up his excellent suggestion contained in your last issue by naming some suitable works. I have for some time past been very desirous of engaging in such study.

Yours obediently,

October 4th, 1880.

M.D.

CHLORAL AND MORPHIA.

To the Editor of THE LANCET.

SIR,—Your issue of Sept. 25th contains a letter from Mr. De la Motte, setting forth the supposed fatal influence produced on the system by the combined internal administration of chloral and morphia. The case of Mr. Amplett is quoted as an example.

Mr. De la Motte appears to me to have arrived at a somewhat hasty conclusion. At least personal experience teaches me differently; and from what I have read of Mr. Amplett's case, death was the result of an overdose of chloral (200 grains), and not to the combination of chloral and morphia.

On two separate occasions I have taken chloral and morphia, following one another within one hour, for the relief of neuralgia and in order to obtain sleep. On the first occasion I took at bedtime twenty-five grains of chloral; but this not having produced the desired effect, within forty-five minutes I followed it with twenty minims of liq. morph. hydrochlor. In a very short time sleep was induced. I awoke the following morning without experiencing any unfavourable after-effects, and quite free from neuralgia. On the second occasion I followed up a similar dose of chloral with an opium pill of one grain. A state of calmness and almost freedom from pain resulted, but without sleep. Again, I felt no evil effects the following morning.

My object in sending you these few short notes is that possibly it may induce some of your readers to publish their experience on this important subject.

I remain, Sir, yours truly,

Maidstone, Sept. 30th, 1880. CHARLES BOYCE, M.B. Edin.

VACCINATION IN GREECE.

A CORRESPONDENT asked a few days ago for information on this subject. By the courtesy of the Consul-General for Greece we are enabled to state that vaccination is not compulsory in that country, but the operation is generally practised, and there are doctors in every commune who are bound to vaccinate the poor gratis.

B. L.—The carbolic acid may be used *pure*, provided care is taken not to let it touch the mouth.

INFANT DIARRHŒA.

To the Editor of THE LANCET.

SIR,—In every practice the above disease must be now prevalent, and, as I have had great success by a certain mode of treatment, I think it my duty to mention it, so that my brethren may be led to give it a trial. In typical cases, where frequent stools have led to constant vomiting and collapse, the method has succeeded when bismuth-with-chalk and nearly all the stronger astringents, both vegetable and mineral, have failed. The treatment is, I believe, old enough; but it is certainly not generally adopted, and this is my excuse for troubling you with this letter. For a child a year old prescribe the following:—Opium powder, one grain; subchloride of mercury, three grains; white sugar, twenty-four grains. Mix well, and divide into twelve powders. Order one to be placed on the tongue every three hours, and watch the effect. Carefully and particularly insist that for twelve hours the child is to have no other medicine, and no food except teaspoonfuls of water, barley-water, or weak brandy-and-water. In a great many cases it will be found that three or four powders will arrest both sickness and purging. The powders must then be given at longer intervals, and milk administered cautiously and in increasing quantities. I have tried opiates in the liquid form without effect. For a child as young as two months, half a powder may be given every three hours with safety. The abstinence from food proper for several hours is a most essential part of the treatment.

I am, Sir, yours &c.,

Middlesbrough, Sept. 23rd, 1880.

S. WALKER, M.R.C.S. Eng.

Madras Retired.—Our correspondent has been very unlucky; but as there has been no breach of faith or departure from the Regulation, we do not think it would serve any useful purpose to publish his letter.—We have received G. I., U. S. Club, a communication with the same signature, which shall have consideration next week.

A HARELIP TROCAR AND TUBE.

To the Editor of THE LANCET.

SIR,—In your issue of this day, there is a description (page 539) of a little instrument "contrived by Surgeon-Major E. Ambrose Fitzgerald." I enclose you an instrument of a precisely similar character, which has been, with some others of the same pattern, lying in my needle-box for the last four years! I cannot give you any history of it, except that it came to me with some other things on the decease of a relative (a surgeon) in the year 1876, and that the silver tube was then as black with age as a portion of it now remains. I have cleaned part of the tube to ascertain its composition, as I was not aware before reading Mr. Fitzgerald's description that it was silver.

You have considered the instrument worthy of notice in your journal. Perhaps you will also insert this note. When Mr. Fitzgerald reads it, he may offer some further information by way of explanation.

Your obedient servant,

F. ROYSTON FAIRBANK, M.D.,

Doncaster, Oct. 2nd, 1880.

Surgeon to the Doncaster Infirmary.

To the Editor of THE LANCET.

SIR,—In this day's issue of THE LANCET you describe a harelip trocar and tube contrived by Surgeon-Major E. Ambrose Fitzgerald, Bengal Medical Service. This instrument is not a new invention, having been in use many years. I cannot say who invented it, but can speak in high terms of its efficacy, having used it on several occasions.

I am, Sir, yours faithfully,

N. MAYNE,

Longford, Oct. 2nd, 1880.

Surgeon to the Longford Infirmary.

A Constant Reader, (Dublin).—The German Pharmacopœia (ed. 1874) gives directions for preparing tinct. colocynthidis as follows:—One part of powdered colocynth macerated in ten parts of rectified spirit until a clear yellow liquid is obtained.

THE USE OF PURE WATER IN ERECTING BUILDINGS.

To the Editor of THE LANCET.

SIR,—In reading your remarks upon the prosecution of the builders who used earth in the place of mortar at Edmonton, it occurred to me to mention how important it is to use pure water in mixing mortar, whether for building or for plastering dwelling-houses. Newly-built houses are notoriously apt to prove anything but salubrious to the first inmates. Much of this unhealthiness of new houses may be owing to the use of foul and polluted water for making the mortar.

I am, Sir, yours truly,

Marlborough College, Sept. 26th, 1880.

WALTER FERGUS, M.D.

Mr. Richard R. W. Oram.—The conduct alluded to is most inexplicable and unusual. Under the circumstances, our correspondent's duty is to claim a fee from the husband of the lady. Clearly he cannot regard his services as given to a brother practitioner who does not recognise either him or them.

A. B. C.—The lecture is published by Macmillan, Bedford-street, Strand, W.C.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Pollock, London; Professor Bentley, London; Dr. George Johnson, London; Dr. Burdon-Sanderson, London; Mr. J. Hutchinson, London; Mr. Langton; Mr. C. MacDowall, Bombay; Mr. N. Mayne; Dr. Waters, Liverpool; Mr. J. Startin, London; Mr. Griffiths, London; Mr. Gibbs, London; Dr. Tomkins, Manchester; Dr. Hickinbotham, Birmingham; Mr. Strickland, Kidsgrove; Mr. Willett; Dr. Eastwood, Darlington; Messrs. Maw, Son, and Thompson; Dr. De Renzy; Mr. Bartleet, Birmingham; Dr. John Thomson, Brisbane; Dr. Macnaughton Jones; Dr. Boyce, Maidstone; Mr. M. D. Keily, Newcastle-on-Tyne; Dr. Bate; Dr. Collins, Paignton; Dr. Gwynne; Mr. Epstein; Mr. J. T. Hartill, Willenhall; Mr. S. Campkin; Mr. Allt, Wittersham; Dr. Fairbank, Doncaster; Mr. Reginald Harrison, Liverpool; Mr. Walker, Putney; Mr. Brown, Northallerton; Dr. Galton, Woodside; Mr. J. H. Craigie, London; Mr. Plomley; Mr. G. S. V. Wills; Mr. Lascaridi, London; Mr. R. Biggs; Dr. G. Budd, Clifton; Dr. Beevor, Scarborough; Mr. B. Smith, Brighton; Messrs. Lee and Nightingale, Liverpool; Dr. Minto, Bengal; Mr. J. N. Wilson, Shotts; Mr. Sydney Jones; Dr. Matthews Duncan; Messrs. Briesen and Heydemann; Mr. Norton, London; Dr. Fenwick, London; Mr. F. Long, London; Dr. Weaver, Longton; Mr. Eales, Birmingham; Dr. Lyster, Liverpool; Messrs. Bell and Hughes, London; Dr. Atkins; Mr. Ayres; Mr. Christy, Huddersfield; Messrs. Keith and Co., Edinburgh; Dr. Sansom, London; Dr. Vinen, London; Mr. Julius Caesar, London; Mr. M. Ball; Hope; A Surgeon's Assistant; W. G. W.; Madras Retired; M.D.; J. W.; Traveller; E. N.; Medicus, Warwick; Hope; Medicus, Bath; Migrator; A Constant Reader; Anxious Inquirer; Accoucheur; B. L.; &c. &c.

LETTERS, each with enclosure, are also acknowledged from—Mr. Norton, Southsea; Mr. Churchill, Chesham; Mr. McCallum, Ayr; Mr. Eltoft, London; Mr. Johnson, Southport; Mr. Jackson, Dowlais; Mr. Tristan, Cleogan; Mr. Duddell; Mr. Edwards, Croydon; Mr. Robinson, Bedford; Mr. Watkins, Worcester; Mr. Robinson, Newbury; Mr. J. Lee, London; Dr. Vines, Littlehampton; Mr. Wray, Aylesbury; Mr. Butler; Miss Stanley, Greenhays; Mr. Hollinsworth, London; Miss Stone, Greenwich; Messrs. Beat and Atkinson; Mr. Harrison, Shrewsbury; Messrs. Hooper and Batty, London; Mr. Judd, London; Mr. Jones, Tremadoc; Mr. Fergus, Rothbury; Dr. McKinner; Mr. Urquhart, Edinburgh; Mr. Thomson, Dalkeith; P. H. D.; L. A. Hackney; Dr. G. Stratford; Medicus, Whitefield; F. H. K., Mile-end; W. C.; Surgeon, Northampton; Gamma, Glasgow; Medicus, Chester; M.D., London; Alpha, Edinburgh; G. M. W., North Tawton; Physician, London; X., St. Leonards; J. W. P.; M. S., Lincoln; Delta, Cardiff; L.R.C.S., Sutton-in-Ashfield; Veritas, Chesham; Constantes, Exeter; A. S.; Delta, Mile-end; Scapula, London; C. J. L., Aberdeen; E. A.; H. L. M., Walsall; Douglas; A. H., Lizard; Cappa, Clonliffe; J. H., Manchester; J. P., Axminster; Sigma; M.D., Margate; E. A. G., Balham; M.D., Notting hill; W. F., Manchester; &c.

Indian Medical Gazette, Education, Coffee Public-house News, Australian Medical Journal, Society Times, Specialist, Students' Journal, Church of England Temperance Chronicle, Chemists' Journal, House and Home, Pharmaceutical Journal, Morningside Mirror, Medical Herald, Hull Express, La France Médicale, Kentish Independent, Sanitary Journal, Le Concours Médical, La Science Libre, Record, Halifax Guardian, Boston Medical and Surgical Journal, Il Morgagni Giornale, Liverpool Mercury, Daily Courier, &c. &c., have been received.

THE PUBLISHER regrets that he cannot accede to a request which has been made to allow the distribution of THE LANCET from the Printing-office, in order to insure early delivery. No parcel of less than 500 copies is sent direct from the Printer's. The general Subscribers are supplied through our special agency, and the trade and casual sale is met at the office in Bedford-street.

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An original and novel feature of "THE LANCET General Advertiser" is a special Index to Advertisements (on page 2), which not only affords a ready means of finding any notice, but is in itself an additional advertisement. Advertisements (to ensure insertion the same week) should be delivered at the Office not later than Wednesday, accompanied by a remittance. Answers are now received at this Office, by special arrangement, to Advertisements appearing in THE LANCET. Terms for Serial Insertions may be obtained of the Publisher, to whom all letters relating to Advertisements or Subscriptions should be addressed. Advertisements are now received at all Messrs. W. H. Smith and Sons' Railway Bookstalls throughout the United Kingdom. The postal arrangements relating to the distribution of THE LANCET will be considered from time to time in the interests of subscribers. Tables of Contents, with the Index of Advertisements, for each Number can be had on application to the Publisher. A First Issue is made each week at seven o'clock on Friday morning, for the Wholesale Houses only. A large Colonial Edition is also published for despatch the same day.

Agent for the Advertising Department in France—J. ASTIER, 67, Rue Caumartin, Paris.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET OFFICE, October 7th, 1880.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radiation in Vacuo	Max. Temp. Shade	Min. Temp.	Rain fall.	Remarks at 8.30 A.M.
Oct. 1	30.27	S.W.	56	54	76	65	53	..	Foggy
" 2	29.95	W.	55	53	91	69	52	..	Fine
" 3	29.73	WSW	49	45	83	55	36	0.10	Fine
" 4	29.81	E.	44	41	..	61	40	..	Overcast
" 5	29.23	S.W.	61	59	..	66	42	0.20	Cloudy
" 6	29.36	S.W.	53	52	..	54	50	0.19	Raining
" 7	29.57	E.	54	53	..	60	50	0.87	Overcast

Medical Diary for the ensuing Week.

Monday, Oct. 11.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS. — Operations, 10½ A.M. each day, and at the same hour.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

ST. MARK'S HOSPITAL.—Operations, 2 P.M.; on Tuesday, 9 A.M.

Tuesday, Oct. 12.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 3 P.M.

Wednesday, Oct. 13.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL. — Operations, 1½ P.M., and on Saturday at the same hour.

ST. THOMAS'S HOSPITAL. — Operations, 1½ P.M., and on Saturday at the same hour.

ST. MARY'S HOSPITAL.—Operations, 1½ P.M.

KING'S COLLEGE HOSPITAL. — Operations, 2 P.M., and on Saturday at 1 P.M.

LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.

GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL. — Operations, 2 P.M., and on Saturday at the same hour.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN. — Operations, 2½ P.M.

HUNTERIAN SOCIETY.—7½ P.M. Council Meeting.—8 P.M. Address by the President.—Mr. Clement Lucas will show "A Case of Excision of both Elbow-joints."—Dr. Stephen Mackenzie, "On a Case of Glioma of the Brain."

Thursday, Oct. 14.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.

CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL. — Operations, 2 P.M., and on Friday at the same hour.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M.

Friday, Oct. 15.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, Oct. 16.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

ADVERTISING.

Books and Publications	£0 5 0
Official and General Announcements	0 5 0
Trade and Miscellaneous Advertisements	0 4 6
(Seven lines, each averaging ten words, or seventy words in all).	
Every additional Line	0 0 6
Front Page	per Line 0 1 0
Quarter Page	1 10 0
Half a Page	2 15 0
An entire Page	5 5 0

The above Scale of Charges is arranged upon the basis of the classification adopted in the Index.

NOTICE.—Advertisers are requested to observe that it is contrary to the Postal Regulations to receive at Post-offices letters addressed to initials only.

An Address ON ELEMENTAL PATHOLOGY,

*Delivered in the Pathological Section of the British
Medical Association,*

By SIR JAMES PAGET,
PRESIDENT OF THE SECTION.

EVERY pathologist must have felt that the greatest difficulty in his study is in the manifold complexity of the body in which it is pursued. The living human body is, surely, the most complex mass of matter in the known world. In composition it surpasses the highest powers of chemical analysis; in mechanism it is as far beyond the calculations of the physicist; its structures are but dimly seen with even the most perfect microscope; all the known forces of nature are constantly and coincidentally at work within it; through circulating blood and a nervous system every part is within swift communication with all the rest; and it includes the apparatus of a mind from whose influence no portion of its matter is distantly removed. And in this body the pathologist has to study, not that which is fixed, orderly, and natural, but that which is in disorder and unsettled. May we not therefore hold that, among all the sciences of observation, human pathology has, in the very nature of its subject-matter, the greatest difficulties to contend with?

I have long and often felt that in these difficulties we might gain help from studying the consequences of injury and disease in the structures of plants. For although these, too, are complex, minute, and hard to analyse, yet they are less so than are the structures of any but the very lowest animals; and, which is most important, the processes in them are not subject to the influence of a nervous system, or of a common nutritive fluid distributed from a central organ and quickly carrying to every part materials derived from all the rest. In the absence of a nervous system and of a quickly circulating nutritive fluid, we come nearer to the opportunity of studying a really elemental pathology, nearer to the changes wrought between formed and varying formless matter. I say, without a nervous system and without a circulating fluid; for though some of the properties of vegetable structures, such as are shown in their subjection to the influence of anaesthetics, their movements in relation to light, and the various groupings of their colouring particles, indicate a likeness to the properties of simple nervous structures; and though, through communicating minutest channels, every portion of a plant may be regarded as in relation with all the rest, yet these small degrees of likeness can scarcely detract from the great contrast between plants and animals in the having and the not having nervous systems and circulating bloods.

It was in the hope of promoting a study of elemental pathology that I determined, when I had the honour of being asked to preside in this Section, to put together various facts in vegetable pathology which, in the idleness of vacations, I had learned. I thought that I might provoke some of my hearers to a study which I supposed that few had pursued. I was nearly turned from my purpose when I found the vast quantity of good scientific work that has been done in it; the many volumes of books and the hundreds of papers relating to the injuries and diseases of plants which have been written within the last twenty years by both botanists and cultivators, especially by those engaged in the schools of forestry and orchard-culture in Germany. I saw no hope of studying them worthily; but, in those that I have had time to read, I have seen enough to make me more than ever sure that human pathologists may find, in watching the consequences of injuries and diseases of plants, facts of the highest interest in their more proper study.

Let me point out some few of these; but, first, I must disclaim all pretence of an ability to treat the subject as a scientific botanist, or a practical gardener, or anything intermediate between these excellent extremes. I can only, as a human pathologist, see that knowledge of great value is within our reach: I may be able to point out to you where and how some of it may be found; and I can promise attrac-

tions of novelty in the study, and of renown to be gained from it; for, admirable as is the work already published, very little of it has been done by those who could fully estimate its value in human pathology.

In my selection of subjects, I will limit myself to those that are of interest in general pathology; and, first, to hypertrophies, or the simple overgrowths of natural, or nearly natural, structures. Of these, I do not know that there are in plants any well-marked instances corresponding with those which are the most frequent in animals, in which a part grows in direct proportion to the exercise of its function, and thus may grow to relative excess when its function is, through the will or for necessary adjustment, excessively discharged. But, in plants, there are abundant opportunities of studying those forms of hypertrophy which depend on an increased supply of nutritive material to any part. To mention but one: the arts of partial or complete "ringing" and of constricting or bending the branches of trees depend for success on their ensuring an accumulation of nutritive sap in the part of the branch from which its movement is checked. The result is what we may call a hypertrophy of flowers or, in other instances, of fruit, or wood, or bark, proportionate to the increased supply of nutriment; just as, in ourselves, hairs and some other structures will grow excessively with an excessive afflux of blood; or, still more and in almost exact parallel, as limbs will grow with a retarded reflux of lymph.

Similarly, I believe that you may find in plants many instances of the kind of hypertrophy which, in ourselves, we call compensatory, in that, one part being repressed or removed, another enlarges with growth of natural structures, as if for compensation; for I think that some of the arts of gardening are based on observations that removal of certain parts of plants will induce an overgrowth of others. Perhaps, among these you may find facts which may help to explain those obscure cases in animals and ourselves in which parts or organs, which have no natural alliance in function, are yet commonly allied in disease, as if they were in some relation of complementary nutrition. Such are the excessive growths of connective tissue and fat which may follow the removal of the generative organs; events well known but, I believe, not well explained.

I will not cite more facts. Only consider how many of the luxuries from our orchards and gardens are really such growths as in our pathology we should call hypertrophies, and that to produce these is within the art of the gardener, and you may see how large a collection of facts which may be useful in our study are within our reach, constantly at hand for observation and, which is yet more important, within the range of experiment.

Let me speak next of some illustrations of the simple defects of nutrition, which we class as atrophies or degenerations.

I am not sure whether there be among plants any atrophies by mere wasting of parts once completely formed, which may be compared with the emaciation of animal structures.¹ Shrivelling, drying, withering, and defective growth are only too frequent; but these are all different from that unmaking and removing of structures which we trace in both the healthy and the morbid processes of nutrition in animals.

The atrophies with degeneration are very numerous; but I will take for illustration only that group which we may see beginning all around us in the decay and fall of leaves. This decay is their senile degeneration. It is marked chiefly by their changes of colour—the changes to which we owe the characteristic beauties of our autumn scenery. These are accompanied by changes of texture, shown in the dryness and brittleness of the leaves, and by changes of chemical composition; but I will refer to only the changes of colour, and observe that these indicate decay, not death. They do not occur when fresh leaves are quickly killed, as in hot water, or when they are pressed and dried for an herbarium.

Among many things to be observed in the changes of colour, let me first ask you to note their usual symmetry. One of the characteristics of mere degenerations, as we see

¹ I may have overlooked many instances of it; but some that may seem like mere wasting are rather diseases with associated degeneration. Such are the gum-disease (gummosis), the resin-flux (resinosis), and others of the same group, which I find classed as liquefactive diseases, and in which cell-walls, wood, and other structures dissolve in or into morbid products. See Srauer, *Handb. der Pflanzenkrankheiten*, p. 184; and Frank, *Encycl. der Naturwissenschaften, Pflanzenkrankheiten*, p. 369. I venture to guess that these may give help in the study of our mucoid and other liquefactive degenerations.

them in old age, is that they are symmetrical. I hardly need cite instances; many of us may study them in ourselves or one another. Symmetrically we become, equally on right and on left, bald, or grey, or wrinkled, or dusky with dark pigment in our epidermis, and harsh-skinned with thickening and hardening of its cells. And we know that, as a rule, arteries become symmetrically fatty and calcareous; and that very commonly joints are symmetrically affected with the arthritis of old age, and so on. Now, similarly, the rule in leaves is that, in so far as they are symmetrical in shape and structure, so are the changes of colour which mark their decay or degeneration.² You may find, indeed, very many exceptions to the rule; for it cannot be observed in leaves which have been unequally expanded, or whose several parts have not been equally exposed to heat and light, or in which parts have been killed or injured. Many accidents may hinder the observance of a rule of symmetry; but the observance cannot be an accident; and, if you will pick up leaves enough, and look well at them, you will see that the general rule of symmetry in the changes of decay is as evident as is the similar rule in our own symmetrical diseases and degenerations.

The changes may best be seen in those leaves or leaflets of dicotyledons which have a simple bilateral symmetry, a median vein, or fibro-vascular bundle, passing through the length of each leaf and giving off side-branches; but it is often scarcely less plain in palmate and in pinnate leaves, both in their several divisions and in the comparison of each division with its opposite fellow. In such leaves you may trace, in each pair of similar parts, similar changes of tint spreading uniformly or gradually over them; usually, first from a darker to a paler green, from brighter to less bright; then to pale yellow or brown, or to some tinge of red, or scarlet, or flame-colour, or some other of the tints that make autumn scenery glorious.

Now let me point out some things in our pathology which these facts may illustrate. The changes of colour are not mere chemical changes ensuing in a dead part. Leaves do not usually die till after, sometimes long after, they have fallen. Their changes of colour and of texture, even to the last dull brown in which they crackle as we tread on them, are vital changes in the same sense as are those which we see in ourselves in the advance of old age. In this view they may be taken in evidence on the question as to the nature and meaning of some symmetrical diseases.

There are at least two reasonable theories concerning these diseases. One is, that the symmetry is due to the relation between some morbid material in the blood and certain parts which are symmetrically placed, and are exactly identical in composition; absolutely like to one another, and not absolutely like to any other part which is not similarly affected by the same material in the blood. This was the theory on which Dr. William Budd and myself wrote our essays on the symmetry of disease nearly forty years ago. The other, which at that time I only ventured to suggest, but which is now, I think, rather dominant, is that symmetry in disease is determined by the disturbed condition of symmetrically disturbed nerves, the disturbance issuing from a single nervous centre. I cannot now discuss this question, or endeavour to show how probable it is that each theory is true and sufficient for certain cases, and that for some time they must be combined; but the symmetry of decay in leaves may be taken as a strong fact in support of at least these two principles: 1. That symmetrical changes may occur in degeneration and disease, as certainly as in development, without any influence of a nervous system or of a circulating blood; and 2. That, among structures which, to all our tests, may appear identical, those alone may be absolutely alike which are symmetrically placed. Surely no two things can appear more alike than are two adjoining leaves of a tree, or two parts of the same leaf; and yet, if under the same conditions, these do not decay in the same time and measure, it can only be because they are not absolutely alike. Thus the symmetry of decay in leaves may prove that none but symmetrically placed parts may be verily alike; and thus the possibility, to say the least, that in ourselves a diseased blood may similarly affect only such parts, and thus that, among symmetrical diseases, there may be some of which the essential and sole necessary condition is some morbid material in the blood.³

But let me now point out another of the lessons which may be read in the decaying leaves; for really the pathologist may find in them as many as the moralist and the poet have found.

The leaves, I have said, are decaying, not dead; and their fall is due to other degenerative yet truly vital changes. Dead leaves do not similarly fall. If a branch have been killed before autumn, you may often see its dead leaves hanging dry and withered all the winter through; and often when leaves are yellow and withered in their last decay, they hang quivering and spinning, ready to fall, yet waiting. Each leaf is literally hanging on a thread, and at last, by a rougher wind, or a drop of rain, or some chance violence, the thread is broken, and the leaf falls.

This breaking of the thread is preceded by degenerative changes in the structures of the leaf-stalk and of the stem adjacent to their juncture or articulation. These changes were first well described by the late Dr. Inman⁴ of Liverpool; they have since been made more fully known by von Mohl⁵ and others, and the rules observed in them hold, with certain variations, in the fall of petals, bracts, fruits, some twigs, and other deciduous organs.

In their beginning and maturity, the structures of the leaf-stalk and the stem or twig are continuous. There may be some external mark of distinction, but within there is exact continuity; the epidermis, parenchyma-cells, fibres, and sap-vessels are alike continuous. But, in preparation for the fall, changes ensue in the adjacent parts of both leaf-stalk and stem. In both, alike and equally, the cells multiply by partition, and those most nearly adjacent change, by a process of degeneration, into cork-cells, dry, brown and air-holding. Then, as these degenerative changes advance from opposite directions towards the plane of junction between leaf and stem, they meet, and, at their place of meeting, an intermediate layer, or rather two layers, of cells die and become scale-like and part asunder; and now the leaf is ready to fall. It hangs only on the dried thread of fibres and vessels which pass into it from the stem, and the stem is protected by its layers of cork and withered cells from the invasion of parasites and insects.

It would be hard to find a more admirable instance of processes adjacent, coincident, concurrent to a common end, yet independent. We have many of the kind in our pathology, but none more evident, or more within reach of complete study, as of vital processes tending to one end, but not guided from one centre; concurrent, but not concatenate; as independent as are the works of the several bees that make one honeycomb. And thus we may learn from the falling leaves a lesson against thinking that, when we see concurrent morbid processes, we must always expect to find some centre from which all are guided. It is not to be doubted that in organisms such as ours, in which the work is more divided according to its kind, and more distributed to appropriate organs, more is subjected to regulation by central organs, and the working of each part is more influenced by that of all the rest; yet it is not probable that, in any instance, the law is abrogated according to which each elemental structure lives its own life in a method determined by its own inherent properties. There is no law in pathology more important than this: let the falling leaves remind us of it.

And yet one lesson more. That thread on which for a time the falling leaf hangs quivering—that thin bundle of fibres and vessels connecting it with the stem—is regarded as a development from simpler cell-structures. Fibres and vessels are “higher” structures, so much higher that the relation between the Vasculares and Cellulares in plants may match in importance with that between the vertebrata and the invertebrata in animals. But mark this instance of anomaly in our language. In the elevation from the lowly cellular state to the higher dignity of fibres and vessels, there is, indeed, an instance of that development which makes fit for membership in a higher economy—that is, an economy more nearly like our own. But in the attaining of this fitness there is loss of vital power. There is no such activity of organic life in the vessels and fibres of wood or

perfect symmetry of colours is observed; in others, as in many laurels, complete asymmetry. Instances of completely unilateral decay may sometimes be found in cabbage-leaves and turnip-leaves near the roots; sometimes, also, in laurel-leaves. They may be suggestive in the study of unilateral organic diseases, some of which are not wholly due to disturbances of trophic nerve-force.

⁴ Henfrey's Botanical Gazette, 1849, p. 59, from the Proceedings of the Literary and Philosophical Society of Liverpool, No. 4, p. 89.

⁵ Botanische Zeitung, 1860, Jahr. 18.

² “In so far,” for the symmetry of living things is not mathematical; it is artistic, in the divine perfection of art.

³ In connexion with this subject, it may be useful to study the variations of leaves, in some of which, as in many varieties of Begonia, a

bark as there is in the cells around them; they are comparatively unchanging; they cannot multiply; they cannot repair their own injuries; cannot protect themselves; cannot even degenerate as the fading leaf-substance around them does (for even to degenerate needs vital power); they can only die, and the dead thread on which the decaying leaf hangs cannot dispart itself; it must be broken by some alien force. In the taking of higher form the cells seem to have spent their power of forming.

Now we have in ourselves similar instances of degenerations which we call developments. When cartilage becomes bone we usually say it is developed; but this is only because it becomes fitter for a share in a higher condition of our economy. The man is "higher" than the child, and therefore we are ready to speak of everything as ennobled if it contributes to his manliness. But, in respect of texture and self-activity in vital process—in the activity which can work with even a distant supply of blood,—cartilage is better than bone; and the change into bone partakes of the nature of a calcareous degeneration; in general utility there is development, in self-activity there is degeneration.

The same may be said of many changes from cells to fibrous structures in ourselves. In teleology there is elevation; in vital histology, degradation. And this anomaly of words is found, not without some confusion of thought, in parts of our pathology. We speak of rickets as a hindered or arrested development, and so, in respect of purpose and utility, it is; but in respect of elemental tissue-life it is rather an arrested degeneracy.

You may study such anomalies of terms in many instances in plants. Let me suggest a thesis for the D.Sc. There are such things as green roses: show the analogies between a green rose and a rickety child.⁶

But now let me end my notices of those changes in plants which you may study for illustration of atrophies and degenerations and retrogressive metamorphoses in ourselves. There are many more, such as the sweetening of fruits, in which, while becoming more useful to ourselves, they acquire chemical conditions less distant from inorganic matter; and the red and yellow tints of ripeness, which are colours indicative of imperfection, or the central softening and decay of fruits very like that of large morbid growths. In all these, as well as in decaying leaves, you may study general pathology when and where you will.

I will next speak of the repair of injuries. In studying the processes of repair in plants a first observation may be that, speaking generally, the repair of injuries and diseases is less complete in them than it is in animals, even than in ourselves and others of the highest groups. The processes of repair, so far as they extend, are similar in both, but in plants they rarely extend further than to be defensive or protective to the injured parts; they seldom reach to what may justly be called reparative or reformative, and much more rarely to anything that may be named reproduction or regeneration of lost parts. Indeed, the only instances of reproduction which I have found recorded are those of the cells of *Vaucheria*,⁷ and of parts of the minute leaflets of the small moss, *Bryum Billardieri*, and even in these the mid-rib was not reproduced.⁸

In most of the ordinary wounds and other injuries of leaves and stems, as well as of petals and fruits, we see only incomplete repair. Punctures and incisions and minute excisions, such as in ourselves would be quickly closed and healed, and in a few days be almost unobserved, are, in plants, not closed at all, unless with careful help and in some few species.⁹ The gaps or spaces are not filled-in with new material, there is no tendency to contraction, the edges do not draw together. The healing which does take place in these cases may be compared most nearly with that which, in animals, we see in wounds left open and healing under a scab. The cells and the ends of the fibro-vascular bundles which are cut across empty themselves and die, and then, becoming dry they slowly scale off and are detached; or the contents of the cells may ooze out and yield a gummy deposit, which may dry and glaze the surface of the wound. After a time this cracks, and is detached; but while it

lasts it serves, as do the dead and dry layers of divided cells, for some protection of the cut surfaces. They serve, alike, for timely protection against invasion by parasites, just as in an animal do the dried blood or the first exudation on a wound left open. Beneath this temporary protective layer the more permanently protective or reparative changes now ensue, and these are usually described as in two methods—the formation of cork and the formation of callus.

In the healing with cork, which is the more frequent in the more succulent parts of plants, the layers of cells next beneath the dead cells or the gummy covering multiply by frequent partition, forming rows of thin-walled flattened cells. Then of these the outermost, lying at and next to the surface of the wound, become cork-cells, their walls thickening and their contents being replaced by air. The more deeply seated remain active, still capable of multiplying and of replacing the cork layer, which now serves as a dermal covering, and becomes continuous with the periderm at the borders of the wound, but does not acquire an epiderm.

In the healing with callus, examples of which may be studied in the closure of the wounded surfaces of slips and cuttings, the living cells next to the surface of the wound grow out into papillæ or short pouches, with or without cell-division. These may form a protective cork-layer, and if they approach from nearly adjacent surfaces they may intermingle and unite; or they may form other structures, replacing those injured, as epithelial cells, parenchyma-cells, or a new cambium layer, in which bark and wood and fibro-vascular bundles may form.

The best instances of healing after this manner are in the wounds or the splittings or strippings of bark which do not go through the outer layers of the cambium in vigorously growing stems or branches.¹⁰ In the actively living structures of the cambium, if it be very gently guarded, callus forms by outgrowth and division of cells, somewhat after the manner of granulations, and of these, not only bark but wood, vessels, bark and cork may form and become connected with the similar tissues at the borders of the wound.

These, I say, are examples of the best healing known in plant-structures, and they must be worth studying carefully, for they would illustrate many points in our own healings and are far more apt for minute examination than any injured structures in animals.¹¹ Yet even in these the defective reparative power in plants is shown. An animal, if skin be stripped from it, will, if possible, lick the raw part, and then let dust and air and dirt collect and help to make a scab with blood and oozing fluid, and under the scab new skin will form, not indeed perfectly but well. But when bark is stripped only down to the living cambium the raw part must not be touched; mere wiping or touching with the finger, or too much drying, may kill the cambium-cells and prevent all healing; or parasites may attack it and make more mischief. And when we leave these best cases the repairs observed in plants are far less; even small branches or twigs when partially broken do not reunite, unless in a few instances in succulent plants in which the broken surfaces are carefully kept in contact, and even in them no new woody tissue may be formed. You know what is called in surgery a greenstick-fracture and its sure method of repair. In a real green stick no repair of the kind would happen; no ensheathing or intermediate callus would form; at the best the broken surfaces would be covered with a protective layer of cork without an epiderm. I cannot find an instance of repair in plants which even approaches in completeness to the ordinary repair of a broken bone or a divided nerve or tendon in ourselves or any other animal.

Perhaps the strongest contrasts may be seen in the wounds or strippings of trees that go down to the layers of wood; or, in what will follow the amputation of a branch from a tree and of a limb from a man. You may see in front of St. Catherine's College some elms from which branches were cut yesterday, and not far off, at Addenbrooke's Hospital, I dare say you may see patients from whom parts of limbs have been amputated; and, if the stumps have been treated after the manner advised by our distinguished President,

⁶ Help may be found in the study of Dr. Ord's thoughtful paper "On Brownian Movements" in the Journ. Micros. Soc., June, 1879.

⁷ As quoted from Huxtein by Frank in the Encycl. der Naturwissenschaften, Abth. i. Lief 12, p. 380; and in Botan. Zeitung, 1878.

⁸ Described by K. Müller in Botan. Zeitung, 1856, p. 200, and quoted by Frank, Waldenburg, Beijerinck, and many more, who do not add any similar fact.

⁹ See Frank, l.c., p. 383-4.

¹⁰ It may be well studied in longitudinal wounds made through bark for the relief of tension. (See H. de Vries in Archives Néerlandaises, t. xi; Haarlem, 1876.)

¹¹ I have adopted, chiefly, the descriptions of healing given by Frank (l.c.). I hope that more minute descriptions and more mutual illustrations between animal and vegetable repairs will soon be published by Mr. Shattock, who has been studying the subject with great care and skill.

they will have been left to be repaired by nature as truly as are the stumps of the branches of the elms. The stumps in the hospital have been cut in better shape for healing; but those in the garden have the advantage of more perfect rest, and, in whatever shape they might have been cut, the result would have been the same. Now, it is most probable, nearly sure, that the human stumps will be healed in a few weeks, and that in two or three months all the wounded parts will be covered in, with skin and scar and cuticle firmly adhering and compact. But it will need a very long life to see the healing of any stump of the same size on the trees. The wood cut across will die, and its necrosis will never be repaired; rotting, like a caries, may extend from it into the trunk, but it will not be repaired. Year after year the annually formed rings of new wood and bark will overlap the borders of the wound; each year they will grow thicker and will converge, and at last after many years they may, perhaps, meet and coalesce and cover in the wounded surface; but they will not unite with it, there will always be a cavity over the dead wood: a stump so ill-healed as would be a shame to any hospital. I must not imply that there are no better healings after amputations in trees than you may see in elms; some trees heal better, as do beeches and planes; but I think it may be said generally that the stump of any branch will need more years for its healing than the stump of a limb of the same size will need of weeks; and that, in the end, the work of the weeks will be far more reparative than that of the years. And in this reckoning I would include not only the limbs that have been surgically cared for, but those that have been violently crushed or mutilated in animals left to themselves.

This slowness and defect of repair are observed in other things besides the healing of wounds. Dead portions of leaves, or of wood, or other structures, are not cast-off unless by external force.¹² We have borrowed the word "exfoliation" to tell of the separation of dead bone; but, as I have said, it is only living leaves that can exfoliate. Dead pieces of young wood remain where they were killed, as they often are, without external wounds, by hailstones¹³ or any accidental blows. The structures adjoining them may become hard or corky, but they do not separate from them, there are none of the reparative changes which are seen in even a "quiet necrosis." Similarly you may often see dead tips of leaves, perfectly defined from the living parts by colour and by texture, yet without any groove or other sign of process of separation, the dead and the living epidermis remaining still continues. And as to recovery from diseases I believe it may be summed up in saying that no vegetable structure altered by disease ever reverts to its original healthy state.¹⁴

Now let me commend to you this subject of the repair of injuries in plants, not only for illustrations of our pathology, but as a part of the study of what may be called the philosophy of healing. They heal very slowly and imperfectly; they may need many years for the healing of small injuries—eight or nine years for a frost-crack in a young branch—¹⁵ yet they do heal; the intention, as Hunter would have called it, is not given up. Let me relate one case.¹⁶ A fir tree, fifty years old, had a large piece of bark stripped from its trunk. The wound extended round nearly a fourth of the circumference of the trunk, and laid bare the wood. It was not dressed or guarded; the outer layer of the exposed wood died as usual, and then every year the successive annular growths of new wood and bark extended a little further over the bared place. In one hundred and fifty years these growths met and coalesced, and the wound was covered in. When the tree was felled and cut through at the injured part, where there was still a deeply depressed scar, the concentric rings of wood proved the growth of fifty years before, and one hundred and fifty after, the injury, and even now the healing was not complete; there was still a cavity between the old wood and the new. The healing was not such as we should call good in any similar case in an animal. Still, there was healing; the "intention" was maintained for a century and a half.

Surely, in our familiarity with the processes of repair we overlook their wonder; the wonder that there should be in anything an inherent power of repairing the consequences of accident; that, for instance, in any one of us, after living for many years, with only those timely regular changes, the methods of which we have inherited from our ancestors, an accident, some quite unlikely event, such as may never have happened to an ancestor, such as no conceivable process of selection or of inheritance can have prepared us for, some mere chance as we must call it, should bring-out an increased power and a new method of organising structures exactly adapted to the repair of the consequences of that chance. And let me remind you that this power of repair is not a property of living things alone—it is evident in crystals.

It may seem unreasonable to say that we may study principles of elemental pathology in the apathetic inorganic world, or in things that we call dead. But certainly we may study them in crystals. The experiments of Jordan which I repeated many years ago, and related in lectures at the College of Surgeons¹⁷ have been extended by Pasteur,¹⁸ Karl von Hauer,¹⁹ and others, and this chief fact has been abundantly proved—that if a portion of a crystal be broken off, or filed or dissolved away, and if then the mutilated crystal be replaced in a solution of the same salt or of an isomorphous one, the lost part will be replaced, the damaged form will be repaired. In this process of repair the whole crystal will be enlarged, new crystalline matter will be formed on every surface, but the quantity formed on the injured part will be greater than that formed on any other part, and repair will be more active than mere growth till the proper form of the crystal is regained. Then, when the repair is complete, growth alone will go on and each part of the crystal, if it remain in the same solution, will increase in due proportion with the rest.

It seems impossible, by any just definition, to separate this process from those which, as pathologists, we study in the repair of the accidental injuries of living bodies. In all alike, when a natural form has been lost or impaired by external force, the native formative power works at the injured part with an energy and a method modified appropriately to the recovery from the loss, and then, when the recovery is achieved, returns to its previous energy and method. Of all alike, it may be said that where we find evidence of a design to be fulfilled in the attainment or maintenance of a certain form, there, also, we may find evidence of some power to repair injuries which that form may sustain from accidental external forces.²⁰ However various in its degree and method the power of repair is in all.

I wish that some of you, with a good broad knowledge of pathology, would study this repair of crystals and the possibility of their recovery from other changes besides those of form. The study could hardly fail to yield facts that would be very useful in the proper business of our lives. Only let me warn you that, as I have learned from Mr. Maskelyne, injured crystals need great care; if they are to be well repaired they must have as gentle handling and as kindly nursing as the tenderest patients of our own race.²¹

Even if, in studying the repair of injured crystals, we should not learn things directly useful in our own pathology, yet the facts should keep us safe from the error of referring reparative processes to such supposed causes as are called increased action, or determination, or reflex trophic force, or the like; they must convince us that repair is the result of some elemental general law of formed matter prevailing beyond the whole range of life and living structure, even in all natural bodies having harmonious form and proportions.

But while in the widest survey of repair that we can take, we may thus see an instance of so simple an expression of the Divine Will as we call a general law, yet in the degrees of apparent observance of that law, we find differences very wide and, so far as I know, quite inexplicable. We do not find equality of reparative power in all formed bodies, nor any rule of proportion between that power and their less

¹² A partial exception must be made for the tips of the fibres and vessels divided in some cuttings. See Arloing, *Sur le Bouturage des Cactées*, Ann. des Sc. Naturelles; Botanique, B. iv. p. 24, 1876.

¹³ Goethe, *Ueber den Krebs der Apfelbäume*, 1877, p. 2.

¹⁴ "It is confessed that diseases in the vegetable kingdom, when once established, are, for the most part, uncontrollable." Berkeley, *Gardeners' Chronicle*, Jan. 21st, 1864, p. 37.

¹⁵ Goethe, *loc. cit.*, figs. 3 and 4.

¹⁶ From Ratzburg, *Die Waldverderbnis*, vol. i., p. 98, pl. 21-2, and 31a-32.

¹⁷ *Lectures on Surgical Pathology*, p. 118, ed. 3.

¹⁸ Ann. de Chimie et de Physique, t. xlix. 1857, p. 6.

¹⁹ Sitzungsbericht der K. Akad. der Wissenschaften, B. xxxix; Wien, 1868, p. 611.

²⁰ In the repair of crystals, it is well seen that form, rather than size or other quality, is the highest object of the reparative process. Karl von Hauer has found that if a portion of a crystal be so removed that all the parts of the remaining mass are still within the law of its primary form, the repair is either very slow or is even not attempted.

²¹ Yet their healing may be "left to nature." Mr. Maskelyne has often seen in native crystals marks of injuries repaired.

r more simplicity of structure. There are some rules of such proportion among animals, but they are very partial, and the rule fails completely when we compare the reparative processes in plants with those in animals.

Let me revert to this comparative defect of healing powers in plants, though it may be only to tell my ignorance of all relations between it and any other of their properties or the conditions of their life. It is not related to any immunity from injuries enjoyed by them, for they are far more exposed to injuries than are animals; nor to any absence of necessity for healing, for, after wounds, they suffer severely, and often fatally, from the attacks of parasites of all kinds. It is not because of any lack of productive power at the injured part, such as we might be disposed to refer to the want of circulating blood or of nerve-force; for from many wounds of plants, as the art of grafting and of multiplying by slips or cuttings may show, entire new plants may grow; and yet these are not reproductions; they may, in one sense, replace that from which the slip was cut away, but they do not reproduce it; they are not continuous with its remains, and they commonly become much more than that which was lost would have become. Again, the increased growths, which injuries may produce in plants are not to their own advantage, though they may be so to that of a successor or a parasite; and on many wounds of wood hard and heaped-up masses of new wood may form, such as may be roughly compared with our cheloid scars and excesses of bone-callus. Neither can the defective repair be ascribed to any general tenacity in the regular methods of growth in plants, or to any general want of pliancy or of ability to adjust themselves to new conditions; for the art of horticulture abounds in instances of changes in methods of growth completely adjusted to changes of condition. There are in plants ample powers for enlarged growth and ample range of pliancy in method; but that special change in method of growth, which is familiar to us in ourselves and other animals, and which, as with design and on purpose, is adapted to the speedy healing of injuries, is in them comparatively defective. Which of you will work so as to find the explanation of what seems so strange an inconsistency?

(To be continued.)

ABSTRACT OF A

Lecture ON THE

DESIGN AND SCOPE OF LECTURES ON THE PRACTICE OF MEDICINE,

Introductory to that Course given at Westminster Hospital,

By OCTAVIUS STURGES, M.D., F.R.C.P.,

JOINT LECTURER ON MEDICINE.

GENTLEMEN,—The lecturer on medicine in the present day has unusual difficulties to encounter. Most that he has to say is already written in books. There are the seventeen volumes of Ziemssen's Cyclopædia, each as big as a family bible, and together weighing half a hundredweight and too bulky to take in a cab, and there is the vade-mecum which may be easily carried in the pocket. With so wide a range of choice, the student can learn just as much, or as little, as suits his purpose, at his own time, and in his own manner. What, then, is the justification for systematic lectures, especially when it is considered that we have in addition a teacher of practical medicine to demonstrate the methods of physical diagnosis, and a medical tutor to direct the pupil's study and test his knowledge? The lecturer on medicine, thus hedged in on all sides, must confine himself strictly to the terms of his undertaking—to the formal discussion, that is to say, of the various diseases of nosologists in a regular order. What is the use of it?

The question is one which is never absent from my mind at this season. Every student gives a practical answer to it by the regularity, and still more by the manner, of his attendance. We, on our side, all of us, it may be presumed, satisfied that our labour is not in vain, are probably not altogether at one as to its proper place and object. Some will

say, for example, that by this oral teaching, which is more enduring than the silence of print, the lecturer conveys to his hearers, not a mere transcript of the books, but an enlarged view of the subject derived from long experience and a wider reading than the student can procure for himself. But there is the obvious reply, that this comprehensive treatment of the subject, like all the rest, soon gets into print, and is to be found in the books. When a teacher, by felicity of language or description, or any other unusual gift, succeeds in imparting knowledge more clearly or compendiously than heretofore, the whole world is soon in possession of it. The case of the lecturer is thus continually getting worse, for he has to contend with the ever-increasing force and ability of that which is written.

And yet, I cannot but think, more and more with every year, that there is a service in these lectures which nothing else can supply. Granted that what we have to say is already better said in books, granted that what is curiously called the "practical" part of the subject is now taken out of our hands, yet still, as I believe, there remains a purpose to be fulfilled by the occupant of this chair which becomes the more pressing as the subjects for medical study multiply. I will endeavour, in as few words as possible, to make this appear.

It is often said of medicine that it is becoming every day more precise in its language and more scientific in its methods; and if the ground of the improvement be sought, it will be found to depend in large measure upon the fact that the various appliances of more exact sciences have been pressed into its service. It is not that we have become more shrewd in observation or more logical in inference, but that we get more help from without. Accordingly, much time must now be spent in learning the use of instruments and the application of physical and chemical tests. And it happens inevitably that the student, observing the exactness and penetration of these aids and their close connexion with medical progress, learns to despise the vagueness of old medicine, and to regard this preliminary and manual part of his work as though there were nothing beyond. It is the function of these lectures to show him how greatly he is mistaken in this belief, to point out all that yet remains beyond the view of his instruments, and to make him understand how much higher than any manipulative skill or application of physical science is that faculty of judgment and discrimination which has yet to come, and cannot be learnt by rote, or by any other means than actual contact with disease. It is customary, I know, to speak of the results of such contact in very general terms, as though by association with the sick some mysterious virtue kept flowing, which, under the name of experience, should give to every man, from the mere efflux of time, a capacity in proportion to his years. I have no such meaning. On the contrary, I believe that accuracy in observation if not practised early is not practised at all, and that "experience" often comes to mean no more than the habit of superficial examination. What I would imply is that the time of your career has now been reached when you can no longer be guided solely by the strict letter of printed instructions—when you must either become the servants of routine, or else begin to exercise higher powers of intellect than have hitherto been appealed to.

The course of medical education is, in fact, always the same, but all do not pursue it to the end. There is, first, the recognition of the separate phenomena of disease—that period of training when isolated signs and sounds are much insisted on and discussed, as though they possessed an intrinsic and independent value. Next comes the faculty to appreciate these signs aright, as acquiring significance in their several combinations. Lastly, and in varying measure as the great acquisition of all, comes the capacity to interpret, not physical conditions merely, but all that these imply in their various relationships. That these are, in fact, the several stages of the journey may be known by the numbers that are to be found resting at each. Some pass their whole lives content with bare words; others go no further than to determine the physical conditions of disease, leaving or guessing the rest; only a proportion gather the facts together and press them home, perceiving that their task is incomplete until the whole of the phenomena have been reviewed and arranged.

And what I would have you observe of this progress is the danger that besets the passage from a lower and routine learning—which nevertheless is seen to be the most exact and the most directly informing—to that higher knowledge which, while it employs the best powers of the mind, is not

of the same certain and assured value, or to be appraised and measured with the same facility, as the other. It is this sense of insecurity that makes so many halt at this point, rehearsing for ever their tables and formularies, dealing in the jargon which they mistake for learning, and decline to exchange for it.

Here then, I repeat, is a definite object to be aimed at in lectures upon medicine: the actual exhibition and demonstration of disease, in all its complexity and variety, by means of living illustrations—exercise under a master in the very same problems which must presently be solved alone, with that sort of help to the solution which comes from the possession and the study of “worked examples.” We need fear now no competition of the books, for we know that ours are better. I know for myself with what personal satisfaction, after labouring to describe some morbid sound or other aspect of disease difficult to reach by words, I have led the puzzled listener to the thing itself. Whatever is best in the verbal description gets thus fixed indelibly, while every such diversion is for the student a fresh contribution to that aggregate of experience which is to determine in the future, other things being equal, his relative merit amongst his fellows.

Such teaching must, indeed, always be incomplete, inasmuch as it depends for its illustrations upon the actual material that we have at hand. We cannot, like the books, discourse with the same fluency of hydrophobia and the plague, as of acute rheumatism or pneumonia. Yet the main purpose is not the heaping up of facts, but rather practice in arranging and interpreting them, and even this incompleteness of illustration is not without its use, for it gives the student a correct view of disease in its true perspective, exposing the unreality of that dead level of official description where every affection is depicted in its turn as though all were equally distinct and well defined.

You will say, perhaps, that by this treatment the course of lectures in medicine becomes a course of clinical lectures. And so truly does it, yet not in such manner as to interfere with the lectures we now call clinical. These latter are occasional and unconnected, they deal with some particular case, and point out unusual features of disease. They are controversial and speculative. Systematic lectures, on the contrary (in the strictest sense *clinical* if they are to be of any use whatever), follow a definite course, from which they only diverge occasionally, when attracted by the nature of their material; they point out not so much the exceptions of disease as its common rule, and show in the flesh in a series of living pictures all the chief articles of the syllabus.

All this implies, no doubt, much more than sitting at a lecture. The education I am thinking of is not to be got sitting or by any passive attitude whatever. The only question is as to the precise co-operation of teacher and learner in what must be a common work. Such difference of opinion as exists upon this point is partly explained and justified by considering that different orders of mind need different training. I cannot doubt that some have worked out this practical knowledge for themselves painfully and laboriously at the bedside, and have obtained their reward at last in a greater acumen and facility of diagnosis than often comes to those who give the hand and are shown the way. Yet for the great majority it is not too much to assume that our guidance and suggestion must go for something, provided only that the spirit of our teaching tends to educate and exercise the pupil's own judgment, not to bind him down to anybody's gospel. And while I am persuaded that no just conception of medicine can ever be conveyed in a series of dogmas, I have no fear whatever lest the frank exposition of the subject in all its ambiguity and incompleteness should disturb the proper relation between master and scholar. On the contrary, there comes to this latter of necessity, by the operation of the more liberal training, a conviction which both maintains the authority of the teacher, and in due season will form the ground of the student's own self-confidence—the conviction, I mean, that so long as the methods pursued are right and thorough, time and use continually make the way plainer and lessen the probability of error.

Such, then, is the ideal of that medical training which it is the chief business of these lectures to help forward. I am far from supposing that it is altogether realised. There is, indeed, a short reply to all that I have been trying to say, which I hear from you so often and with such little variation, that I cannot but think there is some substance in it. You say that there is no time for this sort of teaching, and

no need for it; that the student can pass his examination without it. It is not easy to say whether the irony of such a statement is the more bitter as it concerns our present system of medical education or the vigilance of our examining bodies: the importance we attach to that practical knowledge which is the grand aim and end of all medical study, or the pains we take that only those who possess such knowledge shall have authority to take charge of the sick.

CASES OF ANEURISM ILLUSTRATING DIFFICULTY IN DIAGNOSIS, AND THE USE OF ESMARCH'S BANDAGE.¹

By WALTER RIVINGTON, M.S. LOND., F.R.C.S. ENG.,
SURGEON TO THE LONDON HOSPITAL.

THE two following cases of aneurism in the lower limb present features worthy of notice. The first case was one of idiopathic aneurism of the anterior tibial artery—a rare affection, and attended in this instance with conditions which invested it with more than usual interest. Being of large size it raised a suspicion that it might be malignant disease, and having been originally mistaken, before it came under my care, for an abscess, and incised, it became the seat of secondary hæmorrhage, which, owing to the misguided refusal of the patient to submit to the necessary treatment, led indirectly to a fatal issue. The only means at my disposal for arresting the hæmorrhage, whilst giving the patient a chance of cure, was Esmarch's bandage, and it will be seen that, after one application for an hour without result, a second application for an hour and a quarter on the following day, when the hæmorrhage occurred, produced the desired coagulation in the tumour. This success, however, was itself unsuccessful, for the force of the arterial circulation was reduced below the point needed to return the blood through the already obstructed veins, and gangrene of the foot ensued. Amputation was persistently declined, and death resulted. The following is the outline of the case:—

CASE 1.—Arthur W—, aged fifty-eight, of rather a spare habit, was admitted into the London Hospital on the 8th February, 1877. His family history was very good, and he had always been a strong, able-bodied working man. He had been at sea for many years as a butcher, and for the last nine years had been a common labourer in London. He had always been a regular, temperate man. There was neither history nor appearance of syphilis, and the only severe illness which he had experienced was one attack of intermittent fever. He had never suffered from rheumatism, or been troubled with his leg. About six weeks before admission (the day before Christmas), whilst walking up stairs he felt a pain in his right leg, just below the knee, and on looking at it, he found a swelling not larger round than a halfpenny, and the same night he felt it pulsating under his fingers. Four days later he had medical advice, and was told that the swelling was an abscess. He was recommended to poultice it, and this he continued to do for about four weeks. The swelling enlarged rapidly every day, and the whole leg became larger and more painful. Two days before admission a small aperture was made in the tumour. The bleeding was free, and, according to the patient's description, “the blood spurted up in a stream like a fountain.” A compress and bandage were immediately put on, and the bleeding was checked.

The patient was advised to come to the hospital, and he did so two days later. There was then a large oval swelling commencing a few inches below the right knee, and with the long axis corresponding to the axis of the limb. It looked red and inflamed, and on palpation gave a feeling of semi-fluctuation. Over the centre of the swelling there was a small punctured wound which was closed and partly healed. On pressing the scab off a few drops of pus exuded. The house-surgeon introduced an exploring needle through the aperture, and blood came trickling along the groove. Being

¹ A paper read before the Hunterian Society.

doubtful about the nature of the case, he sent the patient to bed to await my examination.

When I saw the patient in the ward, the aspect of the tumour at once suggested an aneurism. On pressing with the ends of my fingers firmly on the tumour, a strong pulsation was communicated to them, and examination with the stethoscope revealed a loud bruit of a rather rasping character. The swelling had more of a bruised than an inflamed appearance, but the skin was hotter than that of the opposite limb. The swelling extended round the outside of the leg to the posterior aspect; the calf bulged and pulsated. Large glands were found in the groin. Pressure with fingers on the calf communicated an impulse to fingers placed over the tumour in front. Compression of the femoral arrested the bruit and pulsation. Over the tumour, and especially behind, large veins were seen ramifying. The foot was a little swollen, and the tibial arteries beat feebly. The only question in my mind was this, Is the tumour an aneurism or a pulsating cancer?—a question to which I deferred giving a decided answer; but on this point I was clear, that the case should at once be treated as an aneurism by means of compression, the effects of compression to be carefully watched, and action taken according to circumstances. Hence I directed that the patient should be brought down from the upper ward, where he was lying, to the accident ward, where he could be under the immediate eye of the house-surgeon, and that a tourniquet should be applied without delay.

The following day it was found that the effect of the compression which had been kept up through the night had been to diminish the impulse in the swelling. Some comparative measurements of the two limbs were made by Mr. Buxton, the dresser, with the following results:—The circumference 2 in. below the head of the fibula in the sound limb was 10 in., and in the diseased limb 12; at 3 in. distance, 10 and 14; at 4 and 5, 10½ and 15; at 6, 9½ and 14½; at 7, 9 and 13½; at 8, 8 and 12½; at 9, 7½ and 11½; and at 10, 7 in. and 10½ respectively.

The patient was seen early on Saturday, the 10th, by two of my senior colleagues. Both inclined to the view that the tumour was of a malignant nature; one agreed with me that, in the existing uncertainty, it was desirable to continue treating the case as aneurismal by means of compression, holding amputation in reserve; and the other gave a decided opinion in favour of early amputation. A third colleague saw the case, and balanced the points on both sides very carefully without committing himself to a pronounced conclusion.

I mention these details to show the difficulty that often exists in cases of aneurism of coming to a correct diagnosis. In favour of malignant tumour were the size of the swelling, the enlarged glands in the groin, and the dilated veins over the tumour. The chief objections to the view of malignancy were, that the tumour could not be traced into connexion either with the fibula or with the tibia, and the character of the bruit. The bruit was loud and rough, audible along the tibia, over the knee-joint and internal malleolus. At one point—viz., the upper part of the anterior aspect of the swelling—Dr. Turner noticed that the bruit was double. I determined, therefore, to continue compression till Monday, if nothing should arise meanwhile to demand interference. In case of hæmorrhage, which seemed not improbable, owing to the artificial opening on the face of the tumour, there would have been no difficulty in temporarily arresting it with the tourniquet or Esmarch's elastic tube, and I gave directions that the patient should be constantly attended.

On Sunday I found that the swelling had increased in size, measuring an inch more in the centre than on the previous day, notwithstanding the application of the tourniquet. The pressure of the instrument gave the patient considerable discomfort, but this was relieved by hypodermic injections of morphia. On Sunday afternoon I determined to try the effect of the application of Esmarch's bandage, and I adjusted it in the way recommended by Mr. Wagstaffe, passing it quite lightly over the tumour, and firmly above it, as far as the middle of the thigh, where it was pinned. Cotton-wool was placed over the foot and leg before the application of the bandage. The bruit and pulsation were arrested for one hour, and at the end of that time the bandage was removed, after screwing up the tourniquet. After awhile I loosened the tourniquet gradually, and in a few minutes pulsation became evident, and both it and the bruit were re-established as markedly as before. The tourniquet was reapplied, kept on all night, and not removed till the middle of the following day. About one o'clock the clot plugging

the aperture into the aneurism gave way and severe hæmorrhage came on, bursting through the cotton-wool and bandage round the limb. The bleeding was arrested by the tourniquet. I was summoned to the patient. I was about to adjust Esmarch's bandage with the strap for temporary security against hæmorrhage and to ascertain its effect upon the tumour, and I was about to urge upon the patient the necessity of leaving our hands unfettered in regard to amputation, when the patient informed me that he would not submit to any operation. The hæmorrhage had diminished the tension of the swelling, and so far altered it as to convince me that it was a false aneurism and not a malignant tumour. The only measure which the patient would tolerate was compression, but compression, whether digital or instrumental, with the ordinary tourniquet was ineffectual, and could not be maintained continuously so as to preserve the patient from the danger of recurrence of hæmorrhage. The only resources left were Esmarch's bandage and injection of perchloride of iron, or a combination of the two. I preferred Esmarch alone, and placed the patient under chloroform during its adjustment. Mr. Hutchinson, whose visiting day it was, saw the patient while the strap was on, and exerted his persuasive powers in vain to induce him to leave the surgeon unfettered. At the end of an hour and twenty minutes the bandage was removed, digital compression being maintained for some time longer. The limb was placed in cotton-wool. Pulsation had not wholly ceased in the aneurism after the removal of the elastic tube, and the circulation promised to become re-established in the leg and foot. But when coagulation in the sac became complete, and all pulsation and murmur were abolished, it was found that whilst the heel became hotter than usual, and showed marked evidence of the opening of a collateral circulation, the anterior part of the foot and the toes were cold. The veins on the dorsum became distended, and the surface mottled. On the following day the toes were cold and had lost sensation. Amputation was again urged without success. The tumour gave exit to venous blood, and became much diminished in size. Day by day the gangrene advanced. On the fourth day after arrest of the pulsation the disorganisation had extended to the leg. The orifice of the aneurism now began to ulcerate, and to give exit to black blood and broken-down clot. In spite of the pain and the danger to his life, the patient adhered with a Turkish fanaticism to his resolution not to part with his limb. On the 19th a line of demarcation had become evident in the lower third of the leg, but the constitutional state of the patient had become serious; quick pulse, high temperature, basi-pneumonia, flushed and anxious face, anorexia, want of rest and delirium, and in a few days more the scene was closed. Towards the end he might have been persuaded to submit to amputation, but it was too late for recovery, and I did not press him further.

Locally the post-mortem examination disclosed a nearly complete solution of continuity of the anterior tibial artery, and its ruptured part was occupied by a sac composed of the surrounding tissues and blood-clot. The sac was filled with broken-down coagulum. The aneurism was situated a few inches from the origin of the artery, and this portion contained a clot of partially decolorised fibrin, and the clot extended into the popliteal artery. It was by no means clear that the decolorised portion of the clot, which occupied the popliteal artery, had not formed at the time that the blood coagulated in the sac.

The second case was one of aneurism of the popliteal artery, projecting not in the popliteal space, but on the inner side of the limb, and thus inviting the unsuspecting practitioner to mistake it for some other tumour. The notes of the case yield the following history:—

CASE 2.—Henry C—, forty-four, a soldier, a well-nourished man, height 5 ft. 9 in., was admitted into the London Hospital under my care on August 20th, 1879, suffering from a tumour occupying the lower part of the inner side of the left thigh. He had served in the Crimean war and the Indian Mutiny. In 1858 he had a sore on the penis, which was followed by sore-throat, but not by rash, loss of hair, or other recognised sequelæ of primary syphilis. He had been accustomed to march fifteen miles a day for several weeks together. He had never had rheumatism or gout. In 1864 he had fever in India, and in 1872 he suffered from jaundice. He was discharged from the army in 1874, and since that time he had been a clerk. In the early part of last June he began to suffer from pains of a darting character in the left ham, aggravated at night when he was warm in bed. Fourteen days later he noticed on the inner

side of the left ham a small lump, which was painful, and gradually got larger and more painful. At times when he was out walking it would become so painful that he would have to stop and raise his leg, and this always relieved the pain. He consulted a hospital surgeon. Scott's dressing was applied. Removal was suggested, and the patient was allowed to walk about as usual. After his admission into the hospital a week later, my attention was called to him by my house-surgeon, who told me that there was an interesting tumour which he wished me to examine. I found an oval tumour of the size of a large orange, or of a shaddock, situated in the hollow above the inner condyle of the femur, distinctly circumscribed and solid. On grasping it with my hand, pulsation was felt. The pulsation was not a mere impulse, or pushing inwards of the tumour *en masse*, but of the generally expansile character of an ordinary aneurism, communicated to the hand in every direction. There was a loud, harsh, rasping bruit. On compression of the femoral artery both bruit and pulsation ceased. Pulsation could not be detected in the popliteal artery in the normal situation of the vessel in the ham, but it was felt in both the tibial arteries, and the limb below the aneurism was of natural warmth and aspect. The patient was anaesthetised with chloroform, and Esmarch's bandage and strap were applied for an hour. Before removal of the strap the femoral artery was compressed, and on gradually allowing the admission of blood into the limb by the main channel, a slight pulsation and bruit could still be detected. A third of a grain of morphia was administered hypodermically, and digital compression was kept up for three hours, at the end of which time no pulsation could be felt. The patient complained of a burning pain in the foot, which was warmer than the right foot. The leg and thigh had been enveloped in cotton-wool and a flannel bandage immediately after Esmarch's bandage had been removed, and this casing was kept on till the following day. On the morrow, the 22nd of August, he still complained of a burning pain in his foot; there was neither pulsation in the tumour nor swelling of the limb. On the 25th it was noted that the pain in the foot had passed off, and that the tumour had diminished in size. On the 12th of September the tumour was less than half the original size, hard, not painful, with good pulsation in the tibial arteries. On October 3rd the patient was discharged cured. I must add a word of praise for the care and attention given to the case by my house-surgeon, Mr. J. G. Clark, and the dressers.

These cases raise several points of importance relating to Esmarch's bandage as a means of treating aneurism of the limbs, and to the diagnosis of aneurismal tumours. The value of Esmarch's bandage in the treatment of aneurism of the lower limb has been clearly established by several successful cases published in the journals or brought before the Societies. It is well known, however, that it is not uniformly successful by itself, and not always when aided by instrumental and digital compression. Sometimes it might prove injurious. It is quite possible that with the greatest care it might induce sloughing of the tissues over the sac, and it might also have the effect of causing gangrene of the limb through an excess of coagulation. It is scarcely possible to state beforehand whether a case is likely to be benefited by the treatment. One or two cases have come under my observation in which, after prolonged application of Esmarch's bandage, the symptoms were barely relieved, but after the lapse of a certain time from the application the aneurism ceased, as it were, spontaneously to pulsate. My impression is that the most favourable cases for the use of Esmarch's bandage are aneurisms of moderate size, firm and not too near the skin. My first case was decidedly an unfavourable case for Esmarch's bandage, and the bandage was only applied at the first trial for the purpose, if possible, of avoiding amputation, or the less hopeful procedure of laying open a large sac and tying both ends of the anterior tibial artery; and at the second trial, with a view to arrest hæmorrhage, place the patient out of immediate danger, and give him a chance of saving a limb which he seemed to prize more dearly than his life. Ligature of the femoral was of course out of the question under any circumstances, as it must have induced gangrene. Amputation had most in its favour, and amputation I should have performed the moment that I found that coagulation of the blood in the sac was incompatible with the life of the limb below. The extension of the clot in the sac into the anterior tibial above the sac, and even the lower part of the popliteal, is certainly suggestive of the possibility of gangrene arising in other cases

from a like cause; and I know not how the occurrence can with certainty be prevented. *Primâ facie* it would seem that the pressure of Esmarch's bandage might squeeze the blood from the sac into the feeding artery and even above it, and that this blood, remaining when the strap is applied, might coagulate, plug the vessels, and not be washed into the sac again when the current of blood through the main channels is restored. But I cannot speak with any certainty as to the extent of the liability to gangrene from such an accidental occurrence.

Of the two methods of applying Esmarch's bandage to an aneurism—viz., fixing the strap and removing the bandage, and pinning on the bandage without the strap, I think the former is preferable, as we can then make observations on the tumour such as might determine a doubtful diagnosis. But even here a caution is necessary. Free manipulation of an aneurism after the application of Esmarch's bandage might give rise to the very occurrence which we wish to avoid—viz., pressing blood or coagulum into the neighbouring vessels; and I am not altogether free from a remote suspicion that something of the kind happened in my first case at the second application of Esmarch's bandage, when a most excellent and careful surgeon made a minute manual examination of the tumour. It may or may not have been so. The liability to such an issue did not strike me at the moment, but it has arisen in my mind in the course of a retrospect of the case. At all events it may be wise to bear the possibility in mind.

The only other remarks which I have to make concerning Esmarch's bandage are: (1) that even when it is passed as lightly as possible over the sac some of the blood appears to be squeezed out of the sac, at least in my own cases in which this was done the sac seemed considerably smaller than before; and (2) that it might be advantageous, where the bandage aided by digital compression had failed, to inject a little perchloride of iron into the sac in combination with another application of the bandage. This treatment, however, I would only suggest for exceptional cases. In my first case, in which there was a ready-made aperture, I should have resorted to injection of the perchloride in combination with Esmarch's bandage, if the bandage alone had not sufficed to coagulate the blood.

(To be concluded.)

ON THE PHYSICAL DEVELOPMENT OF CHILDREN;

OR, THE BEARING OF ANTHROPOMETRY TO HYGIENE.

By PERCY BOULTON, M.D., M.R.C.P. LOND.,
PHYSICIAN TO THE SAMARITAN HOSPITAL FOR WOMEN AND CHILDREN.

BOTH in England and abroad much attention has of late been devoted to the study of anthropometry, and in its medical aspect I have for many years worked at the subject. I believe that it is likely to become a most valuable aid in preventive medicine, and merits the attention of everyone interested in the healthy growth and development of children.

A profession as far-reaching as the medical embraces everything that has to do with man materially in health and disease. It is chiefly owing to improved medical and surgical skill, together with sanitary science, that in recent years the value of life has been so considerably enhanced, and by prevention of disease we are further able to do much towards raising man to the full perfection of his physical being, so that the whole race should become by degrees man for man nearer the ascertained healthy type. From the physical point of view it is during the period of growth that mischief is done or can be averted, and hence the value of a reliable standard of height for weight during that period of childhood which lies between three and five feet. During this stage the arrested growth, if discovered, can generally be remedied, and if weighing and measuring were more systematically practised it would rarely escape notice.

When I commenced weighing and measuring ten years ago correct averages were unknown to me, and I had no idea how much a child should grow in a year, so that the scales and measure were practically useless. This child

seemed healthy and fat, that one thin, and the other a fair average, and the same as to height. I searched for some guide, and came across the work of Professor H. P. Bowditch of Harvard University, Quetelet of Belgium, and others in England, which was a sufficient guarantee that the subject was of importance.

Quetelet's conclusions summarised came to this:—1. That there is a perfect form or type of man, and that the tendency of the race is to attain that type. 2. That the order of growth should be *regular* towards the type. 3. The variations from the type follow a definite law, the law of accidental causes. These conclusions commended themselves to me, but Quetelet, Bowditch, Galton, and Roberts all treat the subject from the anthropological point of view, treating man as he is in the mass. Their statistics must be so mixed up with disease and all other accidental causes of variation, that their tables cannot be looked on as standards of health. Their method is to weigh and measure *once* large numbers of children as found together at public schools or in factories, and to classify them in columns according to *age*, and then to strike the mean of the whole number. Thus, boys between ten and eleven years were found to measure from 42 to 59 inches (a difference of 17 inches between the shortest and tallest). As 1943 children examined were arranged in columns, and the greater number fell into column 50 to 51 inches in height, this is taken to be the standard or average for boys from ten to eleven years. This, I think, shows the fallacy of an age standard, for while 331 fell into this column, 1612 were "out of it" altogether, 816 being below and 796 above the mean.

The work of Roberts is very elaborate and complete. Having examined 50,000 factory and other children, these tables are no doubt correct standards of the physical averages of such children, and form a more reliable guide as to their capacity for work than certificate of age, which is the most unreliable of standards. The Acts of Parliament require that every child shall have the strength and appearance of at least eight years of age, and a *young person* at least that of thirteen years, for employment in their several capacities. The necessity, therefore, of a standard of physical averages at these ages is evident. Roberts's tables are intentionally fixed at the lowest point of physical fitness for work, which renders them unreliable as a typical standard for healthy English children brought up under favourable circumstances. A glance at the difference of physique between the children of the poor in a manufacturing district and of those that can afford to feed and care for their children well, is sufficient to convince that our standard must be higher than any average taken from such a source. As a fact, I have found my averages come out higher in both height and weight. In Belgium, America, and England, up to twelve years of age boys and girls average about the same height and weight. In America, Professor Bowditch says that girls are taller and heavier than boys. In Belgium they are the same at twelve years, and in England I find that, for all practical purposes, they may be taken together up to 5 feet. After 5 feet there is an appreciable difference, as girls arrive at puberty and cease growing sooner than boys.

Seeing that an age standard is perfectly unreliable, and that healthy children vary so much in height, it appeared likely to me that there are varieties of types depending on different rate of growth; so the first two points that I set myself to decide were—1. The rate of growth per annum of average healthy children. 2. Their weight for height. Instead, therefore, of making 200,000 *single* observations, as done by Bowditch and Baxter in America, I have examined the same children at least once annually, and kept careful records of the results over a space of ten years. In order to get a typical standard of weight for height the children were selected as average children of healthy well-to-do parents, brought up with suitable food and surroundings, giants and dwarfs being excluded. By this means I have been able personally to watch and record their rate of development under identical circumstances, and to glean interesting and reliable information on some points.

The table which I have drawn up may be looked upon as a typical standard for weight and height, and as it should be our aim to see every unit of the population brought up to the maximum of healthy development, I believe it will be found a reliable guide, subject to other statements which I shall shortly make. Observations of weight without height are of no scientific value, so that in this, at any rate, our clever artist, Mr. Marks, is right in the assertion that "science is measurement."

The masses of figures that have had to be digested in drawing up my table would be dry and difficult to follow, so I shall only give results.

Annual rate of growth.—The fact that different healthy children grow at different rates explains the circumstance of varying height in healthy individuals. I find that average English children brought up under favourable circumstances grow from 2 to 3 inches a year. A growth of less than 2 inches or over 3 should excite apprehension. The former would indicate arrested development, and the latter a rate of growth beyond the powers of average children. Rate of growth should be regular, and being so, prognosticates future stature, because the healthy child that grows 2 inches a year passes 5 ft. at about fifteen, which indicates a short stature (i.e., if a male, about 5 ft. 6 in.; female, about 5 ft. 1 in.). The healthy child growing $2\frac{1}{2}$ in. a year is 3 ft. 2 in. at three years, and passes 5 ft. at thirteen to fourteen years. Such child will be a medium-sized adult (i.e., if a male, about 5 ft. 8 in.; female, about 5 ft. 3 in.). The quick-growing healthy child that accomplishes 3 in. a year passes 5 ft. at ten or eleven, and eventually makes a tall adult (i.e., if a male, about 5 ft. 10 in.; female, about 5 ft. 5 in.). So rate of growth might be likened to three trains travelling at, say ten, twenty, and thirty miles an hour; the fastest train, of course, covers the most ground in a given time, subject somewhat to the exact point where puberty puts on the brake, which at first slows, and ultimately stops the progress altogether. Of course, one meets with many variations, but these variations are, I believe, always abnormal. Some children seem to do their growing by fits and starts, the common diseases of children arresting for the time their progress, which is made up for afterwards by a supreme effort. Such growth is unnatural and often very detrimental. I believe, then, that every healthy child has its own regular rate of growth of 2, $2\frac{1}{2}$, or 3 in. a year, from which it has no right to vary more than $\frac{1}{4}$ in. a year.

Next as to weight for height. Whether a child grows 2, $2\frac{1}{2}$, or 3 inches a year, weight for height should be in each case identically the same, and all healthy children should grow broad in proportion to their height. Between 3 and 4 feet the increase in weight should, I find, be 2 lb. per inch, and between 4 and 5 feet $2\frac{1}{2}$ lb. per inch.

I do not wish it to be thought that the table which I offer as a standard is a precise statement of what has come out of my statistics. I wish it to be understood that statistics do not accommodate themselves to the regularity of half-pounds, as found in this table. An observant and accurate statistician may, however, very easily lay down a law from the facts and figures which he has to deal with. It is a fact that my statistics came out 2 st. 8 lb. for 3 feet, and 4 st. 4 lb. for 4 feet, and 6 st. 6 lb. for 5 feet, and having found 2 lb. per inch to be the normal increase between 3 and 4 feet, and $2\frac{1}{2}$ lb. per inch between 4 and 5 feet, the rest naturally follows, and has proved a reliable approximate working standard.

Feet	In.	st.	lb.
3	0	2	8
3	1	2	10
3	2	2	12
3	3	3	0
3	4	3	2
3	5	3	4
3	6	3	6
3	7	3	8
3	8	3	10
3	9	3	12
3	10	4	0
3	11	4	2
4	0	4	4
4	1	4	$6\frac{1}{2}$
4	2	4	9
4	3	4	$11\frac{1}{2}$
4	4	5	0
4	5	5	$2\frac{1}{2}$
4	6	5	5
4	7	5	$7\frac{1}{2}$
4	8	5	10
4	9	5	$12\frac{1}{2}$
4	10	6	1
4	11	6	$3\frac{1}{2}$
5	0	6	6

Some children exceed these weights that are by no means giants; and really healthy, well-nourished children of healthy

parents and favourable surroundings generally attain these averages. But what of children that fall below the standard? I find that there is a 7 lb. margin of safety, and that children falling more than 7 lb. below this standard are devoid of reserve capital on which to draw, and consequently they succumb quickly to many constitutional diseases. This, therefore, may be called the preventive medicine margin, beyond which lies the dangerous land of cachexia.

Arrest of growth, or loss of weight, precedes so many diseases that it may be looked upon as a danger signal, and if the "caution" is noticed before the disease point is reached catastrophe may frequently be prevented, and so childhood may be worked on a kind of "block system." It is thus that it becomes of such value in preventive medicine.

In pulmonary consumption loss of weight generally precedes cough, and, according to Dr. Dobell's table No. 4, hæmoptysis only occurred 8 times out of 100 cases before loss of weight had been noticed. Moreover, while cough is a symptom at once recognised and noticed, loss of weight is so insidious that it is apt to go some time unnoticed. The number of cases in which loss of weight began before cough is sure to be understated. These remarks apply more strongly to the cases in which loss of weight preceded first hæmoptysis—a symptom never overlooked.

I have been glad to notice that lately there have been evidences in various quarters that this subject is attracting attention. At the International Congress at Amsterdam Professor Donders in his most eloquent address said, that "the principal aim of hygiene is contained in the factors—the desire to raise man to the full perfection of his physical and moral being, the principles of gymnastics, that are yet but little known, the doctrine of heredity, the influence of consanguinity," &c. Dr. Zeeman, of Amsterdam, in speaking of the best methods for measuring public health, dwelt on "the physical development of infants and youths, and the results which have partly been obtained, or will be obtained in the future, by a series of careful investigations, which are classified under the name of anthropometry." At the meeting of the British Medical Association at Cork Dr. Rabagliati touched on the same subject.

As a practical example of what has been done through the knowledge of a physical standard, let me instance what occurred at the Boys' Home, Regent's-park. In 1875 it was found at that institution that the boys had not increased on an average two inches a year, so in January, 1876, a revised dietary was used, and it was found, after one year, that by this simple change the average increase amongst the boys had been over two inches in stature, and 6½ lb. in weight.

It is not possible in this paper to go into the question *how* the standard is likely to be more generally attained; but, speaking broadly, the principles of sanitary science, food, clothing, work, rest, pure air—in short, the proper bringing up of children is the foundation. It is merely stating a truism to say that suitable food and surroundings are necessary for the healthy development of every living thing; and that overwork of the young, whether mental or bodily, ill-feeding, sickness, hereditary diseases, and the like, cause children to be puny and fall below their proper averages. Diseased and diminutive parents are apt to procreate undersized and unhealthy offspring, which nothing will make grow up to a typical standard, for the embryo receives a stamp at the time of conception which would baffle all our subsequent efforts for its welfare. But children born of healthy parents are constantly being added to the roll of the weedy and undersized owing to want of care during the growing years. For all such the scales and measure offer indications of no mean value. Much might be done by sanitary, medical, and general inspection of children's homes, and by establishing child-colonies, as in Switzerland, America, and Saxony.

Our school boards might become a great power for the physical improvement of our rising population, if some of the monstrous sum expended in teaching our labourers and servants of the future the rudiments of science, mathematics, and German were utilised during school vacation in sending the undersized to the country under the care of their teachers, and opportunity were afforded them to become physically strengthened by judiciously regulated diet, plenty of exercise in the fresh air, &c.; if, in short, a little less were done for the *mens sana* and a little more for the *corpore sano*. It is perfectly wonderful what only three weeks of change to the country has been found to do for town children thus treated in Saxony. In Switzerland and America the children are placed in the families of farmers, who take charge of

them for a small sum—a system of "farming out" not as yet known, I am sorry to say, in this country.

The medical inspection of schools which has been instituted in the department of the Seine is a step in this direction which might be imitated in this country with advantage, and I would strongly urge the triennial use of the scales and measure as the most trustworthy indicators of the physical welfare of the rising population. There is little doubt that the mental pressure which is now so common in elementary schools causes an excessive waste of nerve force for mental work, which should be subservient to bodily growth and development. Mental overstrain is most common amongst the poor who suffer from want of food and bad hygienic surroundings, but it is not uncommon amongst the growing children of the rich; and it is important that parents should be aware of the possibility of sacrificing physical to mental development. The reverse may certainly occur, the result being a fine but not very intellectual animal; and therefore in this, as in most things, it is the "happy medium" that is the best and safest.

Seymour-street, W.

CASE OF CEREBRO-SPINAL MENINGITIS; DEATH AND AUTOPSY.

By TOM ROBINSON, L.R.C.P. LOND., &c.

A. G—, aged eight, was a cheerful and intelligent schoolboy. Father and mother both living and healthy; have four other children all living and well. On July 21st whilst at school the mistress noticed that he was dull and sleepy, but he got through his lessons in the morning and came home crying with pains in his head. His mother gave him castor oil, after which he vomited.

On July 22nd he was quite delirious, complaining of intense pain in his head. On the evening of this day I saw the boy and found him lying in bed and on his back. He was rolling his head about and complaining of great pain. I did not distinguish any irregularity of pupils or paralysis of muscles of eyeball or elsewhere. He was extremely irritable. No evidence of any disease or eruption. Temperature 102° 2'; pulse 126; respiration 32.

July 23rd.—His right eye attracted my attention on going to his bedside. The pupil was very dilated, insensible to light, and the cornea looked steamy. He was still lying on his back, moaning and complaining of pain in his head, particularly when moved about. He said he could see a candle, but he could not count my fingers or tell those around him. Temperature 102° 2'; pulse 103; respiration 31.

24th.—Mr. Hutchinson saw the case with me. On his first visit the patient was lying on his back with the knees drawn up, almost touching the chin, very delirious, and screamed violently on being disturbed. The steaminess of the right eye had become opacity, and from the evidence we concluded he was blind on this side. There was marked increased tension of the globe. Temperature 103°; pulse 124; respiration 30.

25th.—Head thrown back and very fixed. His gums were inflamed from repeated doses of calomel. His eye was much the same. Temperature 102° 2'; pulse 123; respiration 30.

27th.—Quite conscious. Slept well during the night. His left eye was normal, but with the right he was totally blind, and the iris was invisible. Temperature 100°; pulse 120; respiration 30.

31st.—His condition had not much changed. He had slept for long periods both night and day. Complained of great pain when he was moved. Could lie on either side, but his head was always drawn back, and he resisted any effort to flex it. Temperature 99°; pulse 120; respiration 30.

Feb. 2nd.—I made the following notes: "On the right eye there is marked bulging on the upper aspect, which bulging is brown. I can now see through the cornea, and discern the iris distinctly, but there is an opaque patch on the cornea which obscures the pupil. He is conscious, does not like to be disturbed, and says his legs pain him. Temperature 100°; pulse 120; respiration 24."

10th.—Wasting very rapidly, but more cheerful. The bulging on the globe is less; the cornea is more transparent;

the pupil is triangular. The vision of the left eye remains good. Temperature 96.2°; pulse 110; respiration 20.

14th. — Dr. Wilks saw the case in consultation with me. On our visit the boy was cheerful, was lying on his left side, and had no pain or difficulty in turning from side to side, but moved his head and shoulders as if fixed. He complained of pain in his neck. When he sat up his head seemed too heavy for his body, and he begged of us to put him on his pillow. With the exception of the right eye, there were no other discoverable physical signs. Temperature 97.8°; pulse 108; respiration 20.

21st. — Quite conscious. Often complains of cold, and when he does so his cheeks look like gooseflesh. When asked to sit up he says he cannot. If an attempt is made to lift him he cries, but his head may be rotated and extended without any resistance. Vomits after food. Complains of the slightest noise. Temperature 98°; pulse 107; respiration 21.

March 2nd. — Has not slept all night, and was wandering incessantly, lying on his right side, with his legs drawn up. The right eyeball is getting smaller, but is quite sightless. Temperature 102.8°; pulse 110; respiration 22.

12th. — Since the last note he has been very irritable and restless. Has complained much of pain in his head, and asks to be left alone. He vomited at frequent intervals. Is delirious at times. Picks his face, and chatters a great deal incoherently. Temperature 98.4°; pulse 100; respiration 20.

19th. — Seems very much better. Answers questions rationally. His hearing and sight of left eye seem quite normal. He takes his food, and does not vomit. Still looks extremely ill. Temperature 99°; pulse 98; respiration 22.

26th. — Since the last note his right eye has given way in the upper aspect, and is discharging pus. Complains bitterly of his head, particularly when moved. Temperature 99°; pulse 110; respiration 24.

April 10th. — He has not exhibited any material alteration since the last note was made. He looks very careworn and old. Has incontinence of urine and faeces, and is terribly thin. There are some aphthous patches in his mouth. He will answer questions, but the response is slow and monosyllabic. Temperature 98°; pulse 124; respiration 22.

16th. — There is a band of herpes over the sixth right dorsal nerve. There are on his abdomen a number of purple spots, which do not disappear on pressure. The saliva dribbles from his mouth, and over his body in such positions as the helix the skin is dead, but only the skin. When he is raised his head falls back, and he cannot move it without assistance, at least he does not. Temperature 99.2°; pulse 126; respiration 24.

21st. — He goes scarlet in his face at times. Is absolutely unconscious to reflex action or questioning. Breathing in short rapid gasps, which are irregular. Sweats on the least exertion. Swallows with great difficulty. He died during the night. Temperature 99.8°; pulse 144; respiration 68.

Autopsy, twenty-four hours after death. — The body was very much wasted, and the muscles about the neck appeared more so than any other part of the body, the transverse processes of the vertebrae standing out in relief as the body lay on the table. The abdominal and thoracic viscera were healthy. Head: The pia mater on the surface of the brain was shining and normal, but as you looked towards the base of the brain this membrane became greasy, which greasiness gradually became opacity, and on the under surface, matting together the optic commissure and other structures, was an opaque covering, which was firm. This opacity was continued on each side into the Sylvian fissures. The convolutions of the brain were flattened. The lateral ventricles were much distended by about six ounces of thick fluid. There was no evidence of tubercle or injury to the skull. I was forbidden any examination of the spinal cord.

The points of interest in this case are three.

1. The destructive process which so suddenly attacked the eyeball.
2. The cutaneous conditions which arose during the boy's illness.
3. The want of evidence as to the cause of the meningitis.

The first two, I think, must be attributed to alteration in nerve-function. I have seen cases where, after affections of the brachial plexus, either from injury or other causes, the fingers have become withered and glazed, and one need scarcely say how much modern pathology has done to demon-

strate the connexion between nerve changes and several forms of skin disease. In the museum of St. Bartholomew's (Series 9, No. 9) is a case of penetrating ulcer of the cornea, which occurred in a case of tumour near the pons, which tumour destroyed the trunk of the trigeminal. And Sir James Paget writes in his work on Surgical Pathology, "It is well-known that when the trigeminal nerve is divided the eyeball inflames, so that within a few days its textures may be greatly injured, or even destroyed, by the inflammation."

I have under my care at the present time a young lady whose fingers and toes are an indigo blue, which blueness disappears on pressure, is not changed by position, but passes away when she has been near the fire for some time. Her fingers are very painful and she cannot feel the pricking of a pin. This patient has cherry-coloured lips and is free from organic disease of heart; so we must believe she has, from cold, a paralysis of those nerves which govern the arterio-capillary venous network, which vessels are simply, as Dr. W. H. Stone has shown, closed cells. So that I think I am justified in stating that the destructive inflammation which took place in my patient's eyeball was due to the destruction, or partial destruction, of the trigeminal nerve by the inflammatory process which took place at the base of his brain; and I apprehend his herpes zoster and his cutaneous gangrene were attributable to the same action, involving other nerves.

In the absence of any history of an injury, or growth, or fracture of skull, one is compelled to accept this as a case of idiopathic cerebro-spinal meningitis, such as is described by Niemeyer under the term epidemic, and by many other writers, and it is found that isolated cases have been reported from time to time. Thus Dr. B. W. Richardson saw an unquestionable case at Mortlake in 1843 (*Social Science Review*, May, 1865, p. 398). Dr. Wilks has reported cases which he has met with during each of the three years 1856, 1858, and 1859, in London, and I remember a case occurring in the London Hospital during the year 1870. The difficulty arises as to whether the case I have ventured to make public is a true example. It certainly presented all the objective symptoms, and the pathological evidence would demonstrate that it was a cerebro-spinal meningitis.

Guilford-street, Russell-square.

FIVE YEARS' SURGICAL WORK IN THE CARDIFF INFIRMARY.

BY ALFRED SHEEN, M.D.,
SURGEON TO THE INFIRMARY.

(Continued from p. 533.)

Dislocations. — Under this heading there are but few entries, chiefly because dislocations as a rule are dealt with as out-patients. The elbow case had a stiff bandage applied in ten days, and was made an out-patient. It was a dislocation backwards, complicated by fracture. The shoulder cases were both of some standing—one being thirty days, and the other nine months. The first was in a man aged fifty-four, and was reported in THE LANCET at the time.¹ On admission, there was flattening of the left shoulder, prominence of the acromion, lessened mobility of the arm, which was somewhat from the side, and pain on trying to raise it. No swelling or crepitus; slight prominence in front of the joint; head of the bone to be felt in the axilla. The patient was placed fully under the influence of chloroform, the limb was manipulated to break down any adhesions which had formed, and reduction attempted, but without success. A further examination of the limb was then made, and on rotating the arm with my fingers placed on the head of the bone the latter was found not to move. The diagnosis was: original accident, fracture of the neck with dislocation, and now disturbance of fractured ends. In Guy's Hospital Reports for 1875, p. 132, I find a somewhat similar case thus recorded:—"Mr. Howse attempted to reduce an unredacted subcoracoid dislocation of the right humerus of one month's standing. With the patient under chloroform, Mr. Howse attempted to violently break down the adhesions, and in doing so fractured the humerus, pro-

bably at the surgical neck. Attempts were afterwards made to reduce it with the heel in the axilla, but without success. The lower fragment slipped up somewhat in the normal position of the humerus, whilst the head remained fixed in its subcoracoid position." Mr. Jonathan Hutchinson subsequently made some comments on my case,² with a view of showing that it was most probably one of fracture of the neck without dislocation. I have seen cases of fracture of the neck since, and I am still inclined to believe that the case I have here commented on was a fracture *plus* dislocation, although this may be a rare accident, and such was the opinion of my colleagues who saw the case in consultation. The chief point upon which I relied was the fact that the head of the bone was felt in the axilla after the fracture had occurred. The second case was in a woman, aged sixty. On making an attempt at reduction under chloroform, I broke the bone at the neck, it giving way with a loud snap. The arm was brought to the side, which could not be done before, and the patient was subsequently discharged with a fair amount of motion, and satisfied with her condition. There was no snap of any kind in the first case, and this helped to confirm me in my diagnosis of that case.

DISLOCATIONS.

	Under ten. M.	Under twenty. M.	Under forty. M. F.	Under sixty. M.	Over sixty. F.	Totals. M. F.
Shoulder ..	0	0	0	0	1	1 1
Elbow	0	0	0	1	0	0 1
Clavicle	0	0	1	0	1	2 0
Hip	1	1	1	0	0	3 0
Ankle	0	0	1	0	0	1 0
	1	1	3	2	1	7 2

Both clavicle cases were dislocations of the acromial end, which Mr. Bryant, following Skey, MacLise, and Flower, says should be called dislocation of the *scapula*. They were both caused by direct violence, and were admitted within a fortnight of each other. One case was put up in a stiff bandage, and the other in broad strapping under the elbow and over the shoulder. The dislocated hip in a child was of eight months' duration, and was interesting in more ways than one. At the time of the accident the child was taken to a chemist, who, of course, failed to recognise the nature of the injury, but had the audacity to treat it as something which it was not, and for a month previous to admission it was treated by a medical man, who presumably ought to have known better, as a case of hip disease, and was sent into the infirmary for the purpose of having a stiff bandage applied. No attempt at reduction was made, as a false joint had formed, and the child had good use of the limb. The second case of hip disease was of eight weeks' standing, and an attempt at reduction under chloroform failed.

FRACTURES: SIMPLE.

	Under ten.	Under twenty.	Under forty.	Under sixty.	Over sixty.	Totals.	Deaths.
Skull ..	1	2	0	0	0	3	2
Spine ..	0	0	3	1	1	5	5
Lower jaw ..	0	0	1	0	0	1	0
Clavicle ..	0	1	0	0	0	1	0
Scapula ..	0	0	0	0	0	1	0
Humerus ..	2	3	1	0	0	6	0
Radius ..	0	0	1	0	0	1	0
Radius and ulna ..	0	2	0	0	0	2	0
Ulna ..	0	0	1	0	0	1	0
Ribs ..	0	0	2	0	0	2	0
Pelvis ..	0	0	0	3	1	4	2
Femur ..	10	3	5	3	0	21	1
Tibia ..	5	0	3	3	2	13	0
Fibula ..	2	1	0	0	0	3	0
Tibia and fibula ..	0	4	16	7	1	28	0
Patella ..	0	0	0	3	0	3	0
Both legs and right femur }	0	0	1	0	0	1	0
	20	16	43	20	6	105	10

Of simple fractures there are 105, 90 being males and 15 females. The proportion of females is unusually small, and this is due in some measure to the absence of those industries where women would be employed. I think there is only one such establishment in this neighbourhood—a paper mill; but although many accidents occur here they are all amongst men, and this is probably due to the fact of the women being kept out of the way of the machinery.

Two of the cases of fractured skull died within twenty-four hours of admission, one being admitted in a moribund state. All the cases of fractured spine died, three within

twenty-four hours of admission. The case of fractured pelvis was interesting. It was in a painter, aged forty-eight, who fell thirty feet whilst painting on the second landing of a staircase, coming down on his buttocks. When admitted he had intense pain in the pelvis, much bruising in the sacral and coccygeal regions, partial loss of power over the lower extremities, and contusion in the right iliac region, with crepitus on pressing both sides of the pelvis. His easiest position was a prone one. When a catheter was passed, a few hours after admission, half an ounce of dark-coloured urine was drawn off. After a further interval of some hours half an ounce of clear urine was drawn away. Next day he passed half a pint of clear urine. Eleven days afterwards there was a bed sore over the sacrum, although he had been on a water-bed since admission, and redness and swelling over the left iliac region, extending upwards, and his temperature went up to 101° F. An abscess formed in the loin, and in nine days broke, giving exit to about one pint of pus, followed by a quantity of clear urine, and his temperature became normal. In twenty-four hours two pints and a half of clear urine escaped from the opening through a drainage-tube, and none came per urethram. He died exhausted three days after. I suppose that in this case the left ureter had been ruptured, but unfortunately the body was allowed to be taken away by the friends without a post-mortem.

As to treatment in cases of fractured thigh, Lister's long splint was almost invariably used at the commencement, and a stiff bandage applied as soon as possible, varying from six to twenty days after the receipt of injury, with cure, and in most cases little or no appreciable shortening. One case of fracture of both thighs in a child aged four and a half years was treated by slinging his limbs, as recommended by Hamilton in his work on "Fractures and Dislocations," and afterwards by stiff bandages. He was running about the ward five weeks and a half after the accident, but the limbs were not quite straight. The case of fracture of both legs and one thigh was sustained in a railway collision, and did well, the patient being discharged fifty-five days after the accident. The cases of fractured patella were treated by simple elevation of the limb, to take off all strain of the muscles, and as soon as all swelling had disappeared a stiff bandage was applied. The results were admirable. Fractures of the leg were mostly treated by Cline's splints, and the early application of a stiff bandage. The average stay in hospital of such cases, where there were no complications, was fifteen days. I am a strong advocate for the early application of a stiff bandage in simple fractures of the limbs. They may be put on with advantage immediately after the accident, if there be little or no swelling; in other cases, so soon as the swelling has subsided. This treatment enables the patient to take early exercise, which is beneficial to himself, and the surgeon to make an out-patient of him at an early date, which is a great gain to the funds of the institution. Up to quite recently we have used a mixture of *gum and chalk*, which forms a capital support of the requisite strength, but since the introduction of muslin bandages we have used *plaster-of-Paris* applied over a stocking. These bandages are preferable, because the limb can be held in position whilst the plaster sets.

Of compound fractures I have had the large number of sixty-six cases, and more than one-third of these were what I may call "railway smashes." The Great Western line runs through the town, and in addition we have the termini of the Taff Vale and Rhymney railways, and from the former of these two most of our serious accidents are supplied. Although an admirably managed line it is a dangerous one to the workmen employed, and this familiarity with danger makes them somewhat careless. More than half the cases were of such a serious nature as to require immediate amputation, and remarks upon these cases are given under the heading of "Amputations for Accident." One or two cases I may draw attention to.

No. 26.—G. T. S.—, aged fourteen, fracture of femur. Carbolic-acid lotion, one to twenty, was injected into the wound, which was, after the lotion had drained out, sealed with styptic colloid, and Lister's long splint applied. Cline's splints were applied to the fractured leg. The patient did well, and two months after his discharge the report upon him was, "Can walk as well as before the accident; no shortening."

No. 64.—P. M.—, aged fourteen. Compound fracture of humerus and radius, put up antiseptically; five dressings; bony union and fair position in twenty-three days.

² THE LANCET, vol. i. 1876, p. 341.

No. 46.—J. Y—, aged thirty-two. Compound fracture of leg. Put up antiseptically; five dressings. Stiff bandage in twenty-four days. Temperature chart, a straight normal line throughout.

No. 41.—W. E—, aged fifty-three. Compound fracture of leg. Wound sealed with styptic, and a stiff bandage applied in fourteen days.

FRACTURES: COMPOUND.

No.	Age	Sex	Part.	Side	Result.	Days in hosp.	Treatment of wounds &c.
1	34	M.	Clavicle	R.	C.	60	Styptic colloid
2	5	M.	3 fingers	—	C.	12	Boracic ointment
3	4	M.	2 "	—	C.	41	Amputation
4	35	M.	1 "	—	C.	30	—
5	18	M.	1 "	R.	C.	12	Amputation
6	56	M.	Thumb	R.	C.	12	Carb. oil
7	19	M.	4 fingers	R.	C.	12	Amputation
8	17	M.	Thumb & 2 fing.	R.	C.	27	"
9	20	M.	Thumb	L.	C.	24	"
10	18	M.	1 finger	L.	C.	4	"
11	16	M.	2 fingers	R.	C.	16	"
12	16	M.	Hand	L.	C.	—	"
13	26	M.	"	R.	C.	38	"
14	20	M.	"	L.	C.	21	"
15	14	M.	"	L.	C.	18	"
16	16	M.	3 fingers	R.	C.	—	"
17	41	M.	Lower jaw	—	C.	49	Gutta-percha splint; dead bone
18	42	M.	"	—	C.	19	"
19	22	M.	Lower jaw &c.	—	C.	15	"
20	19	M.	Nasal bones	—	C.	7	Water dressing
21	38	M.	"	—	D.	1	Brain injury
22	39	M.	"	—	C.	23	Carb. oil
23	45	M.	Chest	—	D.	6 hs.	—
24	44	M.	Skull	—	D.	2	—
25	27	M.	Femur	R.	D.	3	Antiseptic
26	14	M.	{ Femur and simple right leg	L.	C.	53	Carb. oil and styptic
27	18	F.	Femur & rt. foot	L.	D.	2	Amputation
28	—	M.	Femur	L.	D.	3 hs.	—
29	40	F.	Legs	bth.	D.	10 hs.	Double amputation
30	31	M.	"	"	D.	1	Amputation
31	18	M.	"	"	C.	46	{ Antiseptic; secondary amputation of thigh
32	38	M.	"	"	D.	21	Double amputation
33	58	M.	"	"	D.	—	Admitted moribund
34	39	M.	Legs & int. inj.	—	D.	—	—
35	32	M.	Tibia, fibula	R.	C.	76	Antiseptic
36	19	M.	"	L.	C.	34	Amputation
37	15	M.	"	L.	C.	82	Carb. oil
38	10	M.	"	R.	C.	36	Amputation
39	11	M.	"	L.	D.	1 hour	Hæmorrhage
40	15	M.	"	—	D.	1	—
41	53	M.	"	—	C.	20	Styptic colloid
42	52	F.	"	—	D.	1	Amputation
43	15	M.	"	R.	C.	47	"
44	14	M.	"	R.	C.	56	"
45	60	M.	"	L.	C.	37	"
46	32	M.	"	R.	C.	29	Antiseptic
47	—	M.	{ Do. (simple) Tibia, fibula	R.	C.	146	{ Carb. oil; erysipelas, rheum., endocarditis
48	25	M.	{ Do. (simple) Tibia, fibula	L.	C.	110	Antiseptic, delayed union
49	46	M.	"	—	C.	152	Secondary amputation
50	72	M.	"	L.	D.	20	Carb. oil; pyæmia
51	35	M.	"	L.	C.	51	Carb. oil
52	22	M.	"	R.	C.	35	Amputation
53	60	M.	{ Foot Hand, forearm.	L.	D.	1 hour	"
54	46	F.	Ankle-joint	R.	R.	102	Antiseptic
55	23	M.	Foot	L.	C.	93	"
56	44	M.	"	R.	C.	63	Amputation
57	25	M.	Toe	—	C.	45	"
58	14	M.	"	L.	C.	33	Secondary amputation
59	41	M.	Toes	R.	C.	32	Amputation
60	40	M.	"	R.	C.	25	Carb. oil
61	40	M.	Humerus	R.	C.	30	Styptic colloid
62	29	M.	"	R.	C.	—	Amputation
63	22	M.	Elbow-joint	L.	C.	34	Antiseptic
64	14	M.	Hum. & radius	R.	C.	34	"
65	23	M.	Radius & ulna	—	C.	7	"
66	14	M.	Radius	R.	C.	17	Amputation

As to cause: Nos. 12, 16, 17, 18, 21, 23, 24, 25 to 34 inclusive, 36, 37, 38, 42, 44, 51 to 59 inclusive, and 63, were railway accidents; 14 was from a gun explosion; 39 from a reaping machine; the remainder occurred in various ways.

There were sixteen deaths. Of these two were admitted moribund; one, a smashed chest (No. 23), died in six hours. In No. 25, a severe compound fracture of the thigh, an attempt was made to save the limb by antiseptic treatment, but the injuries to the soft parts were so great that gangrene supervened, and the patient succumbed on the third day. In No. 21 there was, no doubt, injury to the brain. No. 50,

a compound fracture of the leg, died in twenty days from pyæmia. No. 39 is a fair illustration of the dire results which sometimes happen from the prevailing ignorance of the immediate and temporary treatment of injuries, an ignorance which the St. John's Ambulance Association is making most praiseworthy efforts to get rid of. The patient, a boy, aged eleven, got his foot cut off by a reaping machine. His leg was tied up in some fashion. He was driven in a cart to the infirmary, a distance of six miles. There was much bleeding on the way, and the poor boy died half an hour after admission. Of course, we have much more serious accidents in railway smashes, but in these, the wounds being lacerated, the vessels are mostly twisted, and serious hæmorrhage, as a rule, prevented. Case No. 53 was that of a gentleman who was deaf and dumb, who strayed on to the railway, and was knocked down by an advancing train from behind, whose approach he was unable to hear. He was dreadfully injured, and died just as a lower limb had been separated from the trunk, and the stump trimmed.

The treatment of these cases of compound fracture has been of various kinds. Where there is not much damage to soft parts, and the bones are easily kept in apposition, *styptic colloid* is always a favourite application with me, with a view to closing the wound, and in some cases it has answered admirably. The "antiseptic treatment" has been fully carried out in some cases, imperfectly in others. It is one of the disadvantages of this treatment that unless you give *personal* attention to all its details you cannot ensure that amount of success which, I think, fairly belongs to it. So far as I have practised it I should give it the palm over every other kind of treatment, as tending to remove all fear and anxiety as to constitutional disturbance and bad symptoms. I should not be guided much by statistics with reference to the antiseptic treatment. We all know what tedious cases compound fractures were, as a rule, previous to the introduction of "Listerism," and many of us know now how differently these cases progress, and are able to appreciate at their proper value the lessons which Professor Lister has taught us. Whether his *method of practice* is the best which can be devised probably remains to be decided hereafter.

AMPUTATIONS: ACCIDENTS.

No.	Age	Sex	Part.	Side	Nature of Operation.	Result.	Days in Hosp. at Operation.	Dressings, &c.
1	4	M.	2 fingers	—	Flaps	C	40	—
2	18	M.	1 "	R	"	C	12	Carbolic oil
3	19	M.	4 "	R	"	C	12	"
4	18	M.	1 "	R	"	C	4	"
5	16	M.	2 "	R	"	C	16	"
6	16	M.	3 "	R	"	C	—	"
7	17	M.	Thumb & 2 fing.	R	"	C	27	"
8	20	M.	Thumb	L	"	C	24	"
9	16	M.	Partial hand	L	"	C	—	"
10	26	M.	"	R	"	C	38	"
11	20	M.	Low. 3rd forearm	L	Mod. circ.	C	21	"
12	14	M.	"	L	Flaps	C	18	Styptic colloid
13	14	M.	Up. 3rd forearm	R	Mod. circ.	C	17	Carbolic oil
14	40	M.	Upper 3rd arm	R	"	C	20	Antiseptic
15	22	M.	Middle arm	L	Skin flaps.	C	34	Carbolic oil
16	41	M.	Toes	R	"	C	32	"
17	14	M.	Great toe	L	Flaps	C	33	Carbolic water
18	25	M.	Tarso-metatars.	—	Mod. circ.	C	45	—
19	44	M.	Chopart	R	Flap fr. sole	C	63	Carbolic oil
20	51	M.	Tarsus	R	"	C	45	Styptic colloid
21	46	M.	Mid. 3rd leg	R	Mod. circ.	C	53	Carbolic oil, secondary
22	60	M.	Below knee	L	"	C	37	Antiseptic
23	22	M.	"	R	"	C	35	Styp.colloid & carb. oil
24	19	M.	"	L	"	C	34	—
25	31	M.	Both legs	—	—	D	1	—
26	38	M.	{ Lower 3rd leg Middle leg	L	{ Mod. circ. R	D	21	Carbolic oil
27	15	M.	Knee	R	Carden	C	47	Antiseptic
28	18	F.	Upper 3rd thigh	L	Skin flaps	D	1	—
29	27	M.	Middle thigh	L	Mod. circ.	D	3 h.	—
30	52	F.	Lower 3rd thigh	—	—	D	1	—
31	14	M.	Middle thigh	R	Flaps	C	56	Antiseptic
32	18	M.	Lower 3rd thigh	L	Mod. circ.	C	35	Antiseptic, secondary
33	10	M.	"	R	Skin flaps	C	36	Carbolic oil
34	60	M.	{ Mid. forearm Both mid. thighs	R	{ " " " " " "	D	1 h.	—
35	40	F.	"	—	Mod. circ.	D	10 h	—

As to cause: Nos. 2, 3, 4, 5, 6, 7, 8, 13, 14, 27, resulted from machinery; Nos. 9, 12, 15, 16, 17, 18, 19, 23, 24, 25, 26, 28, 29, 30, 31, 32, 33, 34, 35, were caused by railway injury; and the remainder were due to various causes.

AMPUTATIONS : DISEASE.

No.	Age.	Sex.	Part.	Side.	Nature of Operation.	Result.	Days in Hosp. aft. Operation.	Dressings, &c.
1	4	M	2nd finger	L	Flaps	C	28	Carbolic oil
2	39	M	Finger	L	"	C	5	Styptic colloid
3	17	F	Great toe	L	"	C	18	Carbolic oil
4	35	M	Ankle	R	Syme	C	44	Terebene
5	51	M	Lower 3rd leg	R	Teale	C	26	Antiseptic
6	26	F	Below knee	L	Mod. circ.	C	41	"
7	41	M	"	R	"	C	60	Carbolic oil
8	52	F	Lower 3rd thigh	L	"	C	56	Antiseptic (atheroma)
9	51	M	"	R	"	C	40	"
10	32	F	Thigh	R	Carden	C	80	Antiseptic (phthisis)
11	48	M	"	L	"	C	48	"

The diseases for which the operations were performed were : No. 1, thecal abscess; No. 2, contracted tendon; No. 3, necrosis; No. 4, tarsus; No. 5, ulcer of heel; No. 6, gangrene from arterial plug after scarlet fever; No. 7, old pyæmia; No. 8, ruptured popliteal aneurism; Nos. 9, 10, 11, knee.

(To be continued.)

PREMATURE LABOUR INDUCED BY QUININE.

By E. DOWNES, L.R.C.P. LOND.

It is sometimes questioned whether quinine does or does not induce labour when given to pregnant women. It is not often necessary to give it in England; but in India, where ague is so common, it often becomes a serious question whether to give it or withhold it in pregnancy. A case has just occurred to me which bears out the idea that quinine does induce labour.

A lady placed herself in my hands; she expected her confinement at the latter part of August. In the middle of July she had bad fever, which, originally of an intermittent kind, showed a tendency to become continuous. I endeavoured, with some success at first, to keep off the fever by jaborandi and arseniate of quinine, without giving the sulphate of quinine. The amount of quinine in the arseniate was so small that I did not fear giving it. Nearly a month passed and the fever was so bad and intractable, and she became so weak, that I began to fear the consequences both to mother and child; so, on the 7th of August, I resolved to give quinine. I gave it in five-grain doses, which I ordered three times a day. She took two doses—one in the morning and the second at mid-day. At about 8 o'clock in the evening, without any warning, the "waters burst," and slight uterine pains came on. They were, however, very slight—so much so that she doubted whether she was in labour at all, until at about 11 o'clock the pains became a little stronger; one or two sharp pains succeeded, and the child's head, followed after a few moments by the body, was born. The placenta came away about half an hour afterwards without hæmorrhage. The child was very small, and looked as though it had been born a month before its time. A great deal of its skin peeled off, and after a week it became very much jaundiced, but it promises to do well.

There can be little doubt that the moderate doses of quinine which I gave caused the birth of the child, and under the circumstances it was perhaps the best thing that could have happened. But I shall be careful that I do not give quinine to a pregnant woman again unless I feel that I am obliged to do so. In the case which I have recorded I deliberately chose the induction of labour as a less dangerous alternative than the continuance of the fever.

Kashmir, India.

MR. PHILIP COWEN has received a gratuity of £25 from the Islington Guardians in "consideration of the heavy duties performed by him as the late resident medical officer of the workhouse and infirmary, pending the appointment of his successor and assistant."

A Mirror

OF

HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proæmium.

MIDDLESEX HOSPITAL.

CASE OF LYMPHADENOMA; OPERATION; RECOVERY.

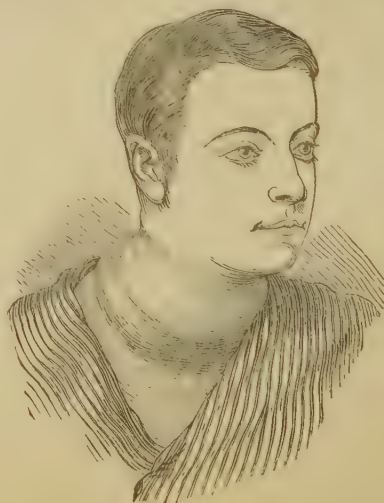
(Under the care of Mr. GEORGE LAWSON.)

FOR the notes of the following case we are indebted to Mr. Duff.

Wm. C—, aged thirteen, a fair-haired, delicate-looking boy, was admitted into Pepys ward on April 20th, suffering from a large tumour of the lymphatic glands in the neck. The boy's father was subject to cough, but was otherwise healthy; his mother was also healthy. There were three sisters younger than the patient, all of whom were healthy. The boy had had whooping-cough, measles, and scarlet fever. About three years ago he first noticed that he had a small lump behind and below the right ear. The lump grew downwards until it reached a little below the clavicle. The mass then spread forwards and backwards. There had been no difficulty in swallowing, and no pain until about a fortnight before admission, when he first began to feel discomfort in the back part of the tumour. About twelve months ago he first noticed a swelling about the size of a marble in the left groin; this steadily increased in size.

On admission, there was on the right side of the neck a large tumour of a somewhat triangular shape, having its apex at the mastoid process of the temporal bone, and its base extended round the root of the neck. In front it passed slightly beyond the mesial line, and had pushed the larynx and trachea over to the left. Behind, it reached to within two inches of the spinous processes of the vertebrae. Below, the tumour overlapped the inner two-thirds of the clavicle, and extended down to the lower border of the second rib. The growth was crossed by the sterno-mastoid muscle, and was overlapped by the edge of the trapezius. The surface of the tumour was lobulated, and over the lower part the skin was reddened. It was apparently composed of a mass of enlarged glands matted together.

In the left groin there was a similar tumour, but very much smaller, about the size of a large horse-chestnut. The boy looked very pale and anæmic, his complexion being remarkably clear and semi-transparent, with a slight hectic



blush. He slept well and his appetite was good, but he complained that he soon tired when at play. Owing to the size of the tumour, his face was kept turned slightly to the left, and when he wanted to look to the right he had to

turn his body. Heart and lung sounds normal; blood examined by the hæmocytometer, 4,560,000 red corpuscles in cubic millimetre; 20,000 white corpuscles in cubic millimetre.

April 28th.—The patient was taken into the theatre and Mr. Lawson removed the tumour, which consisted of masses of enlarged glands matted together in groups. A transverse incision was first made on a level with the clavicle, and from its anterior extremity the knife was carried upwards in a line with the sterno-mastoid to behind the lobe of the ear. A flap of skin was then turned up, and after a little dissection and enucleation with the finger and handle of the scalpel, the whole of the tumour was turned out. The edges of the wound were united, and a drainage-tube was inserted into the posterior and most dependent part of the wound. The wound was then covered with a pad of lint soaked in terebine oil (one part in ten). Cotton-wool and carbolic gauze were then placed over the whole and kept *in situ* with a bandage. The right arm was bandaged across the chest. He did not sleep well, and vomited several times after the operation, probably from the effect of the anæsthetic. The wound was dressed next day with the terebine oil and covered with carbolic gauze. Temperature 99° 8'; pulse 120. As he continued to vomit everything he took all food was omitted for a time, and a little ice was given to suck. A nutrient enema was administered containing half an egg, half an ounce of arrowroot, two drops of tincture of opium, and one ounce of beef-tea every three or four hours.

On the 30th he was able to keep down a little beef-tea. The tongue was moist, pulse 120, temperature 100° 6'. The enemata were discontinued. From this date the boy progressed favourably, and the wound completely healed. When near convalescence the boy had an attack of erysipelas of the neck and face, which detained him in the hospital. At the end of June he was discharged, to go to Eastbourne.

Remarks by Mr. LAWSON.—This lad presented the characteristic appearance of the disease known as lymphadenoma, first described by the late Dr. Hodgkin (Med. Chir. Trans. 1832, vol. xvii., p. 68). In the anæmic condition of the boy, and in the excessive growth of the glands in the neck, the case corresponded to that so fully described by the late Dr. Murchison in the Path. Trans., vol. xxi., p. 372. The tumour was removed because it gave pain, and as it was rapidly increasing it was likely to interfere with breathing, for it had already pushed the trachea considerably to the left side. The history of similar cases made the ultimate prognosis unfavourable. The glands in the abdomen and chest are always prone to become similarly affected, and deposits, resembling lymphatic-gland tissue, to take place in the liver, spleen, or kidneys. The operation was the means of affording great relief to the local symptoms, and of improving, for a time at least, the general health of the boy.

ASHBURTON AND BUCKFASTLEIGH COTTAGE HOSPITAL.

PLASTIC OPERATION FOR CONTRACTING CICATRIX.

(Under the care of Dr. JAMES ADAMS.)

J. S—, aged fourteen, was admitted on Oct. 30th, 1879. This boy in November, 1876, was severely burned by the ignition of gunpowder in his pocket. He was admitted into the hospital four months afterwards in a state of extreme prostration, with a bad bed sore. He had diarrhœa, and frequently passed motions involuntarily in bed. The burn included the whole right side of the abdomen from two inches left of the mesial line to the lumbar region, the anterior and inner aspect of the right thigh, the skin over right patella, and a small patch about the size of half a crown two inches above left nipple. The condition of the burn was very unhealthy. After being an inmate of the hospital sixteen months, he was discharged with the burn cicatrised; but in spite of frequent skin grafting, and the application of a heavy weight to the affected side, the cicatrix had begun to contract before his discharge.

On his readmission there was a thick and hard cicatricial band at the bend of the hip joint, causing the boy to stoop considerably, and rendering him unable to extend his thigh beyond an angle of 140° when lying on his back.

On Oct. 31st, under chloroform, the contracting band was freely divided an inch below Poupart's ligament, and a weight of 3 lb. was fixed to the leg. On extension the

wound gaped three inches and a half. It was dressed with carbolic oil (1 to 30). A week later one or two small bands at the bottom of the wound that were tense, and prevented the limb lying comfortably straight, were divided.

On Nov. 8th a Lister's splint was put on the left side.

On the 22nd the wound was filled with healthy granulations, and measured four inches from the upper to the lower edge, and rather more in the transverse direction, and was lozenge-shaped. A piece of healthy skin with subcutaneous tissue was carefully dissected out at the outer side of the thigh over the trochanter, leaving a neck of skin at the point joining the wound, and a bed for the graft having then been made by removing the granulations to the depth of one-sixteenth of an inch, and of the required size (two inches by an inch), the flap was fixed in its place by five silver sutures. These were firmly and deeply embedded by means of a nævus needle. The graft took well; a small portion of the end of it sloughed, owing, I believe, to the suture there being rather tighter than it should have been.

On Dec. 8th the neck of the graft, which was firmly adherent in its new situation, was divided. At the same time the skin and subcutaneous tissue were divided about three inches above the knee, where there was some tension. The lips of the incision separated one-fourth of an inch. Once subsequently a similar incision was made, two inches higher up the thigh, followed by a similar gapping.

The transplanted skin covered only a very small portion of the large traumatic ulcer, which was healed up by the use of different stimulating lotions. At first the healing process was fairly rapid, but afterwards it was quite the reverse, and the last fourth took as long to heal as the first three-fourths.

The whole time, with but few intervals, a weight was kept fixed to the leg varying from 1 lb. to 7 lb., the medium weight of 3 lb. being chiefly used, and this he still has at night. The Liston's splint was also kept up the whole time.

The boy was discharged on July 17th, 1880, having gained at least 3 in. on his right side as the result of the operation, and he was able to lie down straight and stand upright. He was seen two months after he left the hospital, and was then able to walk well and easily, with scarcely any stoop. The operation may be regarded as highly successful, and provided, as he grows, this lowly organised portion of the burn cicatrix remains *in statu quo* and there is further contraction, the same line of treatment may be again resorted to.

BURRA BURRA HOSPITAL, S. AUSTRALIA.

DOUBLE EMPYEMA TREATED BY EXCISION AND ASPIRATION; RECOVERY.

(Under the care of Mr. JOHN I. SANGSTER.)

GEORGE L—, aged two years, had suffered for two weeks from an attack of broncho-pneumonia. At the end of that time the physical signs of the disease were clearing up, some slight dulness and fine moist râles being the only abnormal sounds heard at lower part of right lung posteriorly. During this period no friction sound or any symptom indicating pleurisy was discovered, but as the dyspnœa continued out of all proportion to the physical signs, and the temperature did not fall below 103°, the presence of pus in the pleural cavity was suspected, although a careful daily examination for several days failed to completely decide this point. At length the dulness appeared to have increased, and the breath sounds got less distinct, though the measurement gave a negative result. As the condition of the patient was deteriorating, it was determined to make an opening into the chest, but as a precautionary measure an exploration was made with an ordinary hypodermic syringe. Pus was obtained. The patient was then placed under the influence of chloroform, and an opening was made into the chest in the usual manner, between the eighth and ninth ribs in a line with the angle of the scapula. A considerable quantity of a mixture of serous fluid and pus escaped. A drainage-tube was introduced, and during the time that the wound was left open the pleural cavity was washed out with a small solution of carbolic acid, and, later on, iodine.

The relief obtained by the operation was not encouraging, as the dyspnœa continued almost as bad as before, the temperature fell but little, and the irritable cough continued. At the time of operation the left side was carefully examined,

but no collection could be discovered there. Five days after the operation there seemed to be fluid in the left cavity, and exploration, as before, again proved the presence of pus. The aspirator was used; two ounces were withdrawn. For two or three days there was some improvement; but the dyspnoea gradually returned, and became so severe that another aspiration was made, and six ounces of pus were obtained. After this operation the improvement in patient's condition was marked. He gradually improved; his recovery was retarded by two slight bronchial attacks; diarrhoea was also occasionally troublesome.

More than three months after the last aspiration, and six weeks after the wound on the right side was allowed to close, the child had grown, from a state of great emaciation, stout and rosy, and seemed quite easy in his breathing. The exact state of his chest could not, however, be satisfactorily ascertained, as he would not now submit to an examination. Several cases of empyæma cured by aspiration have been recorded, and it becomes a question whether this should not be first tried, and if necessary repeated, instead of resorting to the more formidable operation in the first instance.

Medical Societies.

CLINICAL SOCIETY OF LONDON.

Severe Laceration of Face.—Ataxy in several members of a family.—Sclerotomy for Eyeball Tension.—Elephantiasis of Leg treated by Elastic Bandaging.—Case of Epilepsy treated by Trephining.

THE first meeting of the session of the Clinical Society was held on Friday, Oct. 8th, Dr. Greenhow, president, in the chair. The papers read were of an unusually interesting character, and the President was fully warranted in describing it as a brilliant opening. Dr. Glover called attention to the fact that one of the papers considerably transgressed the ten-minutes rule of the Society, and urged that facts, not theories, were the special study of the Clinical Society. The President, however, replied that the rule, though a valuable one, must be applied with discretion, and that the Society must leave it to him to decide when a paper was unnecessarily prolonged; in the particular case alluded to he had felt that the paper was a very valuable one, and could not with advantage have been shortened—a view in which the members present appeared to concur.

THE SECRETARY read a paper by Surgeon-Major Curran on a Case of Mutilation by a Bear. The bear had bitten his victim's face and destroyed the cheek, one eye, and a great part of both jaws. A photograph of the patient after recovery was shown.

Dr. GOWERS brought forward a series of five cases of Locomotor Ataxy in members of the same family, three of whom were exhibited. The father was healthy, but his brother and two half cousins were insane. The mother had suffered in early life from chorea. The family consisted of nine children: (1) A son, aged thirty-nine, with well-marked ataxy, which commenced at nineteen. He is just able to walk with crutches. There is incoördination in the arms and affection of articulation. Sensation to touch is normal, that to pain on the legs increased. The knee-jerk is lost. (2) A girl, who died of fever at ten years old. (3) A son, aged thirty-five, healthy. (4) A son, aged thirty-three, healthy. (5) A girl, aged twenty-nine, in whom the affection commenced at eighteen. She can now scarcely stand; there is weakness in the legs, as well as ataxy, and also incoördination in the arms. Speech is affected; sensation is normal; the knee-jerk lost. (6) A son, aged twenty-six, perfectly well. (7) A son, aged twenty-three, considerably affected. The disease showed itself at nineteen; he is now scarcely able to walk, with ataxy of both arms and legs, and loss of sensation, absence of the knee-jerk, and affection of articulation. (8) A son, aged twenty-two, reported to be well but found, on examination, to be distinctly affected. Articulation is confluent, there is inability to stand with eyes shut, absence of knee-jerk, and distinct impairment of sensation on the legs to touch. The arms are at present unaffected. (9) A

son, aged nineteen, affected in rather a greater degree than the last, with slight unsteadiness of gait, inability to stand with eyes shut, distinct impairment of sensation to touch, absent knee-jerk, unsteadiness in writing, and confluent articulation. The state of sexual power is doubtful, the patients being all single. Thus of eight members of the family who have reached adult life, five are affected, a daughter and four of the seven sons. The symptoms, allowing for the variations in degree, are similar in all, the chief difference being the marked impairment of the tactile sensation in the two youngest, while in the others, in whom the affection has reached a more advanced stage, it is normal, and except that in one there is hyperalgesia. The only causal influence discoverable is the neuropathic heredity. This form of ataxy was first described as a distinct variety of ataxy by Friedreich, who recorded two groups of cases, and a few other instances have been recorded by Carré and others. Two sisters, evidently suffering from this disease, were shown in 1872 to the Medical Society of London by Dr. A. Carpenter, and in this family a brother has since become affected. Those now shown resemble Friedreich's in the early date of commencement, the affection of the arms, and the interference with speech. They differ from Friedreich's in the number of males affected and in the absence of nystagmus and in the affection of sensation in two individuals. It is noticeable that none have suffered from any pains in the limbs; there is no affection of the iris or of the optic nerve. As in Friedreich's cases, the antecedents were of other forms of nerve disturbances, not of ataxy. The term "hereditary ataxy" seems therefore of doubtful accuracy. Friedreich described the affection of speech as ataxy of articulation, but it does not differ from that seen in other degenerative diseases of the nervous system. The pathological changes were found in two of Friedreich's cases to be in the main similar to those in ordinary ataxy. — Dr. J. ALTHAUS thought that cases of ataxy were more common than usually supposed, and were often confused with paralysis. He had seen more than two hundred cases, but in none of them was more than one member of the family affected, nor could any strict heredity be traced; but in all the cases there was a neurotic tendency observed in one or both parents. Carré's cases were the most remarkable yet recorded. In one instance he states that this form of ataxy was observed in a woman, in her eight children, and in the seven children of one of the daughters—sixteen persons in all—and in three generations. It was remarkable that the pain of ordinary locomotor ataxy was quite absent in this condition, and that the affection of sensation was only slight. He thought that it would be well to follow up the history of those members of this family who were at present unaffected, and also to make careful trial of various therapeutic agents. — THE PRESIDENT had never seen such cases before; and from the striking facts of the early age of the patients when first affected and the complete absence of pain, thought that the disease differed from common locomotor ataxy. — Dr. GOWERS had found that ataxy was very rarely to be traced to hereditary influence; he had stated two years ago that 50 per cent. of patients suffering from it had a history of previous syphilis, and he now thought it more accurate to say that such was the case in 75 per cent. of cases of sporadic ataxy, in all ranks of society. Apparently the disease is the same in those cases occurring in families, as the posterior columns of the spinal cord had been found to be the seat of degeneration. One of the most remarkable facts is that the disease begins at about the age of twenty, and that any members of such a family who are free at twenty-five escape altogether. So marked a feature is this that a recent applicant for life insurance, who had three brothers and sisters thus diseased, but was himself unaffected and much beyond the age of twenty-five, was recommended by him for acceptance as not being prejudiced.

Mr. SPENCER WATSON read a case of Eyeball Tension. Elizabeth M. B.—, a widow and dressmaker, aged forty-six, was operated on by sclerotomy for eyeball tension in 1876, the tension being T 2. After the lapse of four years and a half the eye remains free from excess of tension, and its fellow, though occasionally visited by chromopsia, remains useful. The eye operated on has a staphyloma as the result of the sclerotomy, but this causes no inconvenience and seems beneficial as affording a means of filtration from the anterior chamber to the surface of the eye. The sight continues good up to the present date. — Mr. C. HEATH asked what advantages sclerotomy had over iridectomy. Surgeons were accustomed to see cases of

glaucoma permanently relieved by iridectomy. Some years ago oculists had fully discussed an operation introduced by Mr. Hancock of division of the ciliary muscle, and had not adopted it. By removal of a piece of the iris the secreting surface was reduced, and the tension more effectually relieved.—Mr. S. WATSON replied that sclerotomy, which is a simple section of the sclerotic with a narrow knife parallel with the surface of the iris, was a simpler and less painful operation than iridectomy, and could be done without an anæsthetic, and that as the relief of tensioa was less abrupt there was not the danger of intra-ocular hæmorrhage he had frequently seen occur in iridectomy. But iridectomy was still required for cases of very acute and severe glaucoma. Sclerotomy was not the same as Hancock's operation; the incision was horizontal, not vertical. He did not think the explanation of the value of iridectomy given by Mr. Heath to be correct.

Dr. STEPHEN MACKENZIE related a case of Elephantiasis of the Leg treated by Elastic Bandaging. The patient, a male, aged thirty-three, a native of Rosscar, co. Fermanagh, Ireland, had never been out of Ireland till he came to England for treatment. Worked always as a farm labourer, and was healthy until present disease. Never had syphilis; had never eaten largely of fish. His home was about nine miles from the coast. Ten years ago had an injury to leg, which was much bruised and swollen. About three years after accident the leg was noticed to be larger than its fellow, and from that time to his coming under observation the limb continued to enlarge. About four times a year, with a certain degree of regularity, the leg became acutely worse. Preceded for a few days by nausea, headache, and shivering, the leg became sore and painful, feeling extremely hot, looking red, and steaming. After lasting in this state for about a week, the surface of the leg began to discharge a fluid, clear but of offensive smell. When the fluid escaped he got ease, the heat left the leg, the nausea and constitutional disturbance subsided, and he returned to his usual condition; the limb, however, remained of greater size than before the attack. The limb, when the patient was admitted into the London Hospital in September, 1879, was enormously swollen, presenting several large lobulated masses of oedematous tissue, whilst the surface of the limb was covered by abrasions of the cuticle and papillary elevations. The right leg and scrotum were normal in all respects. There were no enlarged glands. No changes in the blood or urine. He was confined to bed simply for the first month, with slight transient subsidence of the swelling. At the end of that time Martin's bandages were firmly applied to the leg from the toes to the groin. He was kept in bed, with the exception of being allowed to go into the garden for one hour a day. The diminution in the size of the limb from the time the rubber bandages were applied was almost uninterrupted, and very remarkable. All the lobulations subsided; the papillary elevations disappeared. A good deal of fluid exuded from the cuticular abrasions, and the decrease in the limb appeared to be proportionate to the fluid discharged. As the swelling subsided what appeared to be dilated lymphatic vessels could be felt. The patient had no inconvenience from the treatment. During it he had one paroxysmal attack, lasting a few days, in which his temperature rose to 103°, and the limb became hotter than its fellow. Whilst the case probably differed in its origin from the tropical ones, and in the absence of filaria in the blood, the disease reached almost as high a grade as the elephant leg of Barbadoes or India. The case was brought forward to show the good effects of elastic bandaging. There is no novelty in bandaging a limb in this condition, for this treatment is generally adopted alone or combined with other treatment in this disease; but there were not, to the author's knowledge, any published cases in which Martin's bandages have been used for this purpose. The bandages allow of considerable equable pressure, which is kept up as the limb recedes; they are readily applied, and can be washed every day. The results in this case could scarcely have been exceeded by any other treatment, whilst that employed was wholly destitute of the dangers attendant on ligature of the femoral artery. It was found that the swelling recurred when the bandages were removed, so that it is probable that the bandages will have to be worn permanently.—The PRESIDENT asked whether the family history had been carefully inquired into with the view of tracing any possible source of hereditary taint. — Dr. CROCKER mentioned that he had recently had a similar but less

severe case under his care at University College Hospital, which was the sequel of an injury. The elastic bandage was employed, and in a fortnight there was a marked improvement. Although the man was at his work all the time, the reduction in the size of the limb steadily progressed, and the man had not been to the hospital for three or four months.—Mr. A. T. NORTON reminded the Society that at its very first meeting he had recorded a similar case treated by iodide of potassium and tight bandaging. In ten months the man was cured, and when he saw him two years ago there was no return of the disease. The patient continued to wear a bandage.—Mr. GOLDING BIRD had had many examples of elephantiasis from ulcers of the leg among his out-patients that had been greatly relieved by Martin's bandages. He referred to one case in particular of old syphilitic ulceration with this form of chronic dermatitis, in which the reduction of the swelling had been very rapid, but after omitting the bandage for a month the man began to complain again, and he had been compelled to wear it constantly. He considered that the bandage did good by its pressure, and also by keeping the limb in a perpetual Turkish bath.—Mr. E. HART was glad to hear that such a formidable disease was amenable to such a simple treatment, the only really successful case he had ever seen was in Philadelphia nine months ago, in which first the sciatic and then the femoral nerve was stretched.—Dr. DOWSE mentioned a case of elephantiasis which came on five years ago from syphilis for which bandaging, mercury, and iodide of potassium had all been ineffectually tried, but was greatly benefited by the application of the constant galvanic current over the nerves of the limb. The bandages had been given up, and by this treatment alone the patient appeared to be in a fair way to get well.—The PRESIDENT said the cases of chronic dermatitis referred to by Mr. G. Bird were of an entirely different nature from true elephantiasis.—Dr. S. MACKENZIE, in reply, stated that there was no light thrown upon the case by the family history, and that this case was no doubt the result of injury. He had been informed by Mr. Barker that cases of elephantiasis were not so rare in Ireland as in England. He thought that there were all stages between simple chronic dermatitis and elephantiasis to be met with, and no sharp line of demarcation to be drawn. He did not consider nerve-stretching to be a very simple operation; in a case of hydrophobia he had known the operation afford relief to that state, but cause death from pyæmic infection from the wound.

Dr. D. B. LEES and Mr. E. BELLAMY contributed a paper on a case of Traumatic Epilepsy treated by Trephining. S. O—, when seven years old, received a blow on the head from a poker. There was no breach of surface, but the mother found a swelling over the right parietal region. When this subsided no scar or depression of bone remained. The next day he complained of headache, and this symptom persisted more or less until after the operation of trephining. About twelve months after the accident he began to have fits. These occurred at first about once a day, but afterwards more frequently. He attended for several years as an out-patient at the Hospital for Sick Children, Great Ormond-street, but without obtaining relief. On the contrary, the fits became more frequent. It was noticed that they occurred in groups, a period of very frequent fits being followed by an interval, in which he had only about one a day. The periods of exacerbation lasted about three weeks; the intervals of comparative quiet about as many months. Four (if not five) of these alternations occurred during the fifteen months preceding the operation. When the fits were frequent, impairment of grasp in the left hand was always noticed, and he sometimes complained of pain all down the left arm. At such times also the tongue became thickly furred, and his speech (never very clear, apparently from labial paresis) became decidedly more indistinct. In April, 1879 (nearly seven years after the injury), came a period of four weeks, in which the fits were more numerous than ever before, averaging from twenty to thirty daily. In the interval between them he was apparently unconscious. When this period passed away Dr. Ferrier was requested to see the boy in consultation with special reference to the advisability of trephining. He found tenderness on pressure over the right parietal, with loss of grasp in the left hand, and the labial symptoms already mentioned. He advised that trephining should be practised, and that the part of the skull selected should correspond to a spot rather low down in the fissure of Rolando, as the centres involved seemed to be those of the arm and lip, and not of the leg.

The boy was admitted into Charing-cross Hospital under the care of Mr. Bellamy. On the day of his admission he slipped on the waxed floor of his ward and fell, falling on his left knee. He said nothing of this to anyone but his mother, but she afterwards related that he had told her he had had a bad fall. On June 14th, 1879, two days after his admission, Mr. Bellamy trephined, with antiseptic precautions. The "ligne Rolandique" had been previously marked out on the shaven scalp, according to the directions of M. Fort. The spot chosen for operation was about the centre of this line, and was a little lower down than the point indicated by the mother as the site of the original injury. The piece of bone removed was apparently quite normal. It was thought that the dura mater bulged up into the opening made by the trephine. For eight days after the operation the boy progressed very satisfactorily. The temperature gradually came down to normal, the headache vanished, and the wound healed uninterruptedly, and mainly by first intention. Twenty-four hours after the operation the fits ceased, and did not recur for eight weeks. Before the operation he had not for upwards of three years passed a fortnight free from fits. On the ninth day after the operation, however, the temperature began to rise gradually, and in four days reached 104°. There were no rigors. The boy complained of pain and tenderness in the left hip, thigh, and knee. These symptoms continued, with a temperature of 99-100°, during the month of July, and it becoming evident towards the close of the month that the head of the femur was dislocated, Mr. Bellamy excised the head of that bone on the 2nd of August. The pain, tenderness, and rise of temperature still persisted, abscesses formed low down in the thigh and invaded the knee-joint. On the 9th of October it was found necessary to amputate at the hip-joint, which was done with antiseptic precautions. The boy rapidly recovered from this operation, and gained flesh. Eight weeks after the trephining the fits recurred. In seventeen days he had twenty-six fits. If this period represented the expected crisis about three months after the last severe crisis in April, it was unquestionably much reduced in severity. Six weeks of freedom from fits followed. They then recurred, but with much less severity. During the sixteen months that have elapsed since the operation, he has passed to the authors' knowledge thirty-seven, and they believe upwards of forty, weeks entirely free from fits. Four convulsive periods have occurred, but the frequency of fits in these has never averaged more than two or three daily, and he has never been confined to bed on account of them. The authors suggested the following points as worthy of discussion:—1. The advisability of the use of trephine in traumatic epilepsy. They referred to a paper by Dr. Echeverria of New York, published in the *Archives de Médecine* for November and December, 1878, in which no less than 145 cases are cited of traumatic epilepsy treated by trephining. The results in these 145 cases were: cure, 64 per cent.; improvement, 12½ per cent.; no change, 3½ per cent.; made worse, 1 per cent.; death, 19 per cent. Dr. Echeverria maintains that the operation is by no means dangerous in itself, provided that no inflammatory symptoms are present at the time. He refers to cases of many years ago when it was performed more than twenty times on the same patient. 2. The question of the cause of the relief obtained in this case by the removal of a piece of apparently healthy bone. The successful case brought before the Medico-Chirurgical Society last winter by Mr. West of Birmingham was adduced to show that the cause must be the relief of pressure generally, and not any special effect on the motor centres, for in Mr. West's case the lesion and the seat of operation were in the frontal region. 3. The authors wished to inquire whether the periodicity which formed such a marked feature in the convulsions in this boy is usually found in cases of epilepsy due to irritation of the brain cortex. Reference was made to two cases observed at the Hospital for Sick Children, both probably due to lesion of the cortex, in which similar phenomena were observed. 4. They submitted to the surgical judgment of the Society the question of the causation of the osteomyelitis of the femur which followed the trephining. They argued from the antiseptic operation, from the rapid healing, from the boy's satisfactory progress for eight days, from the gradual rise of temperature, from the absence of rigors, and from the exclusive affection of the left hip-joint and femur, that the cause could not have been pyæmic in nature.—Dr. GOWERS suggested that the operation had merely acted

like a seton, which, like other counter-irritations, was well known to be of benefit in some cases.—Dr. BROADBENT had often known epilepsy to be suspended during severe pain or illness, and thought the temporary improvement noticed might be thus explained. He had only seen one case of the kind, and Mr. Heath of Manchester had showed him a patient who had suffered from traumatic epilepsy, and had been benefited by trephining; the fits were, however, beginning to recur.—Dr. LEES, in reply, thought that Dr. Gowers and Dr. Broadbent had hardly sufficiently appreciated the marked improvement in the boy's condition that followed upon the operation.

The meeting then adjourned.

WOLVERHAMPTON DISTRICT MEDICAL SOCIETY.

THE inaugural meeting of the session 1880-81 was held on Tuesday last in the Bell Medical Library. The following officers were elected:—President: Mr. J. T. Hartill, Willenhall. Vice-president: Dr. Totherick. Secretaries: Dr. McMunn; Dr. Joseph Hunt. Committee: Mr. W. H. Hartill, Willenhall; Mr. Sharp, Walsall; Dr. Smith, Bilston; Mr. Dunn, Mr. Vincent Jackson, Mr. Lycett, Mr. Newnham. An address was delivered by Dr. Thos. Barlow, F.R.C.P., Assistant-Physician to University College Hospital and the Hospital for Sick Children, Great Ormond-street, on "The Difference between Children and Adults in their relation to Disease." After the meeting there was a supper, to which nearly all the members adjourned.

Reviews and Notices of Books.

Lectures on Digestion; an Introduction to the Clinical Study of Diseases of the Digestive Organs. By DR. C. A. EWALD, Lecturer in the Royal University of Berlin. Translated by ROBERT SAUNDBY, M.D., Assistant Physician, General Hospital, Birmingham. London: Williams and Norgate. 1880.

"GOOD wine needs no bush:" a laudatory introduction therefore of Professor Ewald's work on Digestion, in its English garb, at our hands is quite superfluous. The German text has already made its way in this country with those familiar with the language, and Dr. Saundby's elegant and accurate translation will secure the work a still wider recognition among English and American physicians and physiologists than could have been possible otherwise. The first two lectures are devoted to a consideration of *ferments*, the questions relating to their intimate character, their significance in the combustion processes of the animal body, their ubiquity, and the possible rôle played by them in the production of the so-called "intra-molecular respiration" (the "dissociation process" of Pflüger) is succinctly and lucidly described. The second lecture ends with a graphic table giving the ferments met with in the animal body and the products resulting from their action; this table we prophesy ere long will become part of the stock in trade of most manuals of physiology. Lectures three and four are devoted to the salivary glands, their histology, innervation, and secreting processes. Heidenhain's experiments, with reference to the effect of the secretion of parotid saliva by stimulation of Jacobson's nerve and the sympathetic, are fully discussed. Professor Ewald thinks as a result of these inquiries we must regard the nerve of Jacobson as governing mainly the separation of water, while the sympathetic presides over the formation of the specific elements of the secretions. Professor Ewald dismisses our old friend "the much-talked-of sulphocyanide of potassium" very contemptuously, regarding it only as a product of decomposition, arising in the cavity of the mouth, probably derived from urea and sulphate of potash. Three lectures are devoted to gastric digestion. Discussing the question what are the causes that bring about the secretion of acid, especially of a

mineral acid, in gastric juice from alkaline blood, Professor Ewald remarks—that a recent “brilliant experiment” of Maly’s has thrown an “unexpected light” on this subject. Both Ewald and Maly, however, seem ignorant of the fact that the separation of acid from an alkaline solution consisting of a neutral and acid salt, both having an alkaline reaction, had been effected experimentally by Ralfe in the laboratory of Charing-cross Hospital, and the particulars of which appeared in THE LANCET, July 4th, 1874, quite three years before Maly’s experiment! Discussing the physiology of the bile, Ewald incidentally directs attention to Rossenbach’s method of testing for bile pigment; it is so simple that it deserves to be universally practised. Icteric urine is filtered and the wet filter paper dabbed with a drop of impure nitric acid, at the border of the paper the play of colours from red to green is developed. On the contrary, with regard to the test for bile acids, we do not think the “Strassbourg method,” recommended by Professor Ewald, superior to that devised by Francis with “sulpho-saccharic acid.” The pancreas, as might naturally be expected, comes in for a considerable share of the author’s attention, but space forbids our doing more than drawing attention to the excellent summary given of all that is known concerning that organ and its secretion. One point, however, we must mention, which has a practical bearing upon treatment of disease, and that is Ewald’s statement that the power of digesting albumen in the pancreatic ferment is destroyed by the action of gastric digestion, so that for therapeutic purposes, so far as concerns administration by the mouth, pancreatic preparations are quite worthless, a view confirmed by Dr. Roberts in the Lumleian Lectures for the present year.

OUR LIBRARY TABLE.

On Removal of the Entire Tongue by the Walter-Whitehead Method; with full details of the operation and after-treatment. By EDWARD LUND, F.R.C.S., one of the Surgeons to the Manchester Royal Infirmary, Professor of Surgery in the Owens College. London: J. & A. Churchill. — Mr. Lund’s object in this paper, which was originally written for the Medical Society of Owens College, is to advocate the plan of excising the whole tongue, which has been systematised, and, in his view, perfected, by Mr. W. Whitehead. The main principles of the operation are the removal of the whole tongue through the mouth by means of scissors only, and the ligature, with silk thread, of the lingual arteries and any branches that may bleed to any troublesome extent. We judge from Mr. Lund’s description that the operation is really formidable, that the hæmorrhage may be profuse and dangerous in more than one way, and that only a bold operator with skilled and trusty assistants should ever undertake it. As by other means, and especially by the use of the wire or thread écraseur, the operation may be robbed of most of its primary and subsequent terrors, we do not think that many surgeons will be found willing to adopt this, a more difficult and dangerous, method.

L’Année Médicale de l’Hospice de la Princesse D. Maria-Amélia à Funchal (Ile Madeira.) Par C. A. MOURRAO-PITTA, M.D., &c. 1871–1879. pp. 23 and 31. — These pamphlets contain a brief report of the work of the hospital to which M. Mourrao-Pitta is attached, during the years 1871–1879. The hospital is devoted to the reception of patients suffering from chest affections. The tables place the patients under the several heads of tuberculosis of the first, second, and third degrees; chronic bronchitis; chronic pleuro-pneumonia; chronic pleurisy; pulmonary gangrene, and chronic asthmatic bronchitis. One hundred and ninety-one cases were under treatment; their occupations, age, and married or single state are given in different tables. There were sixty-six deaths. The object of the reports seems to be to point out that the climate of Madeira is still

charming, notwithstanding the disparaging remarks in regard to it that from time to time appear in the journals. We must leave to those who have made trial of Madeira as a winter residence the corroboration or refutation of M. Mourrao-Pitta’s statements.

Notes on Diseases of Women. By J. J. REYNOLDS, J. and A. Churchill. — This little book contains eighty-six pages, and is said to be “specially designed for students preparing for examination.” In the short space stated it treats of diseases of the uterus, vagina, and vulva. It can, however, be regarded as little else than an index to larger works upon the subject. It cannot teach diseases of women, though it may be an aid to the memory of those acquainted with the subject. We can see no reason for the publication of such a work. On the other hand, there are many reasons against it, for such books aid cramming (which frustrates the object of examinations), and encourage ignorance of such subjects as they treat.

Science. Vol. i., No. 2. Sept. 11th, 1880. — The current number of this young and well-conducted journal contains a very long and interesting article upon the photophone, by Mr. Alexander Graham Bell. The principle of this instrument is, that a beam of light is reflected upon a mirror diaphragm, which is set in motion by the voice or other means. The concentrated ray is then reflected so as to affect a piece of selenium in a telephonic current, which by its varying conductivity acts intermittingly on the diaphragm of the telephone, and thus in the usual way reproduces the sound. The paper is illustrated by many drawings, and is well worthy of perusal.

The *Leisure Hour*, the *Sunday at Home*, the *Girls’ Own Paper* (Religious Tract Society) are serials which deserve the success they seem to have achieved. They supply a literature useful of its kind and wholesome in its tendency, and which compares favourably with much that is issued avowedly for the benefit of the religious public and our juvenile population. The October part of the last-named publication contains an article, with illustrations, on a subject to which we have repeatedly called attention—namely, the urgent need for the provision of seats for shop-women. The device suggested in the article referred to, though no doubt ingenious, appears to require to be submitted to the test of further experience before it could be confidently recommended for universal adoption.

We have also received the following:—*Professional Book-keeping.* By W. J. Gordon (Wyman and Sons). *Illustrated Guide to Blackpool.* A new edition of the *Familiar History of Birds.* By the late Dr. E. Stanley (Longmans). *Dickens’s Dictionary of London.* *Picturesque Tourist of Scotland* (A. & C. Black). *The Englishman’s Illustrated Guide-book to the United States and Canada* (Longmans). The Fourth Edition of the *Nature and Treatment of Syphilis.* By Dr. C. R. Drysdale (Baillière, Tindall, and Cox). *Introductory History of England.* By W. M. Lupton (Longmans). *Journals and Journalism.* By John Oldcastle (Field and Tuer); &c. &c.

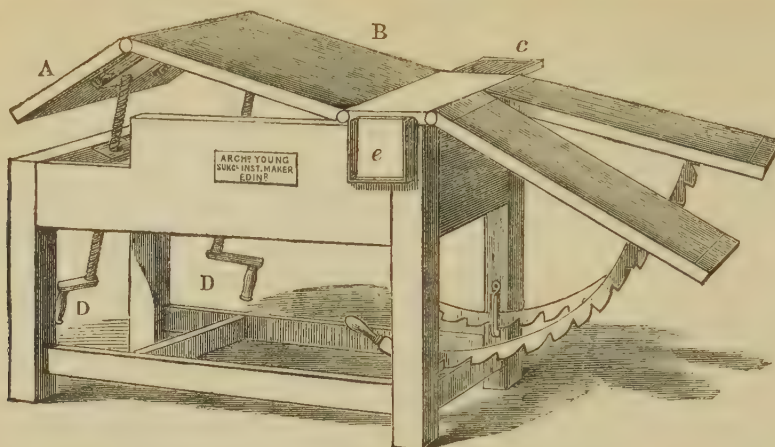
New Inventions.

A NEW OPERATING-TABLE.

WHEN making our inspection of the new Edinburgh Royal Infirmary, we were much struck by Professor Annandale’s new operating-table, and we have pleasure in laying before our readers a representation and description of the same. This table has been constructed at Professor Annandale’s suggestion, with a view to combine several arrangements already in use in other hospitals. By means of two screws, D D, the portions A B, the body of the table, can be steadily elevated or depressed, together or separately,

while the patient is on the table. The portion A was specially designed in order to allow the head to be placed in the dependent position during operations on the mouth, throat, ace, &c. (see Professor Amundale's paper in THE LANCET

of March 8th, 1879); and the two small trays, *c e*, which can be folded down, are found to be very useful for placing, convenient to the operator's hands, a small basin containing carbolic solution, for dipping instruments into and carrying



out other Listerian precautions. Castors covered with vulcanised india-rubber have been added to the legs since the drawing was taken, which render it easy of movement. The table has been made by Archibald Young, surgical instrument maker to the Royal Infirmary, 57, Forrest-road, and 58, North-bridge, Edinburgh.

IMPROVED REGULATING DIGITORUM.

A MODIFICATION of the dumb piano has been contrived by Messrs. Horn, of Elgin-road, Croydon, which is designed to strengthen the movements of the fingers by rhythmical exercise. It consists of a series of five or more piano-keys, the resistance of which can be nicely regulated from an ounce to a pound, or more if required, and the degree of resistance is shown by an index at the side. Another improvement consists in a means of regulating the touch of the keys from one-eighth to seven-eighths of an inch, as required for the purpose of exercising the muscles more fully. Messrs. Horn, in the wording of their prospectus, seem to suggest rather more power for the instrument, as a means of restoring strength, than it can justly claim; but as a contrivance for facilitating muscular exercise of the fingers it is certainly a useful mechanism, and as such has been found of practical value.

THE LADIES' SANITARY TOWEL.

THIS consists of soft wool, which has been treated with a disinfecting substance. It appears to be well adapted for the purpose which it is intended to fulfil, but while the price charged for it remains at three shillings a dozen, we cannot expect it to come into common use. This is a misfortune, for this towel has advantages, not the least of which is that it must be destroyed immediately after use. The towels are manufactured by Messrs. Southall Brothers and Barclay, Birmingham.

THE IMMEDIATE TREATMENT OF STRICTURE OF THE URETHRA.

To the Editor of THE LANCET.

SIR,—In your issue of the 2nd inst. appears a letter from Mr. Horace Manders, in which he alludes to my letter to you on the subject of the treatment of stricture by the "immediate plan." Mr. Manders seems entirely to misapprehend the object with which my letter was written; it was not written with the view of contrasting one plan of operative procedure with another, but was written solely

with the view of vindicating Mr. Holt's operation, so far as my experience, by no means a limited one, goes, from the vague, serious, and unsupported charges so unhesitatingly brought against it. Were it my object to contrast different modes of operative procedure, I might refer to two fatal cases (the patients being dear personal friends of my own) resulting on external urethrotomy, the operation having been performed in one case by the late Mr. Hutton of this city, a surgeon second to none, and in the other by no less a person than the late Professor Syme. I could also refer to at least one fatal case resulting on internal urethrotomy, the instrument employed having been Maisonneuve's, and the operator being one of our most skilful hospital surgeons.

I am, Sir, yours, &c.,

RAWDON MACNAMARA,

Surgeon to the Meath Hospital, and Senior Surgeon to the Westmoreland Lock Hospital.

Stephen's-green, Oct. 9th, 1880.

To the Editor of THE LANCET.

SIR,—I observe in THE LANCET of the 2nd inst. a reference by Mr. Teevan to a case of mine in which death followed the above operation. Mr. Teevan assumes that because the patient had dropsy he suffered from renal disease. On referring to my notes, I find that such was not the case. He had ascites from diseased liver, and as a complication a very tight stricture. The introduction of a catheter was extremely difficult and accompanied by great pain, and I thought it better to split than subject him to continual irritation. I am bound to say that I do not attribute the death to the operation; on the contrary, I believe he thereby obtained much relief.

I have several times performed Holt's operation, and my experience, so far as danger to life is concerned, is decidedly favourable. I feel it the more necessary to state this distinctly, as, for other reasons which I need not here go into, I have abandoned the operation in favour of internal urethrotomy. (Vide THE LANCET, vol. i., 1878, p. 200.)

I am, Sir, yours truly,

Liverpool, Oct. 6th, 1880.

C. E. LYSTER.

GLASGOW SOUTHERN MEDICAL SOCIETY.—At the thirty-seventh annual meeting of the Glasgow Southern Medical Society, held on October 7th, the following office-bearers for the session 1880-81 were appointed:—President: T. F. Gilmour, L.R.C.P. Ed. Vice-President: Neil Carmichael, M.D., F.F.P.S.G. Treasurer: E. McMillan, L.R.C.S. Ed. Secretary: William Carr, M.B., L.R.C.S. Ed. Editorial Secretary: William McFarlane, M.D. Seal-Keeper: Alex. Napier, M.D. Court Medical: John Niven, L.F.P.S.G., Convener; A. L. Kelly, M.D.; Eben. Duncan, M.D.; Jas. Stirton, M.D.; Robt. Park, L.F.P.S.G. The following gentlemen, with the office-bearers, form the council: A. J. Hall, M.D.; Archd. Pearson, M.D.; Wm. Wilson, L.R.C.S. Ed. William Carr, M.B., Secretary.

THE LANCET.

LONDON: SATURDAY, OCTOBER 16, 1880.

BOTH the aspect and the actual position of affairs at Guy's Hospital have changed since last we discussed the situation, its duties, and its probabilities. Just as we were going to press on the 7th inst., the Governors held a Special General Court, and passed resolutions condemning the action of the medical staff, and calling upon Dr. HABERSHON and Mr. COOPER FORSTER to resign. The terms in which the Governors embodied their conclusions and determination are so remarkable that we reproduce them. "Resolved—(1) That it is essential to the well-being of the hospital that the medical staff and nursing department should work in harmony. (2) That the medical staff having persisted in ignoring the matron appointed by the Court, and confirmed in her appointment after patient investigation of all complaints against her, while she is on her part willing to submit herself obediently to the orders of the several physicians and surgeons in all matters directly affecting the treatment of any patient, this Court finds that it is the attitude of the medical staff which impedes the harmonious working of the hospital. (3) That Dr. HABERSHON and Mr. COOPER FORSTER having made themselves responsible for a circular in which they refuse the means offered them by the Court for bringing all complaints before it, and impute to the Governors that they knowingly persist in a mischievous system, are hereby required to resign the posts which they hold in the hospital.—HENRY H. GIBBS, President of Guy's Hospital." Let us see what all this means.

The first resolution has the literary merit of going straight to the root of the matter, and making the issue perfectly clear. The Governors regard the medical staff as one element of the hospital system, and the "nursing department" as another, and they require that the *two* "should work in harmony." Here lies the germ of the whole contention, and whatever may be done to gloss over the surface of matters, there can be no final settlement of the real issue raised until it is recognised that "the medical staff" and "the nursing department" of a hospital are *not* two departments which "should work in harmony," but that the "nursing department" of a hospital stands in precisely the same relation to the medical staff as the dressing, the pharmaceutical, or the surgical-instrument "departments." In short, it must be seen and felt by all concerned that, inasmuch as a hospital is *throughout* an establishment for medical treatment it—that is, the institution as a whole—must be organised, not in "harmony" with, but in subserviency to, the medical authority. Nursing is not, and never can be, a separate branch of skill or a specialty. It is an integral part of treatment; and medical committees which for the sake of peace are tacitly allowing the "nursing departments" at other hospitals to be regarded as distinct, and striving, from amiable but short-sighted motives, to work in "harmony" with them, are practically surrendering a principle, and preparing the way for a cata-

strophe which in the interests of the sick poor, not less than of science, ought to be averted.

The second resolution is one chiefly affecting the details of the local controversy at Guy's, and does not call for general discussion. Whether or not the matron of that institution is "willing to submit herself obediently to the orders of the physicians and surgeons in all matters directly affecting the treatment of any patient," is scarcely a question with which the profession has any concern. It is not of the *personnel* of this particular establishment we desire to speak, but of the system at work there, and the organisation as a whole. The matron may be docile, but the position she occupies as the head of a separate "department" is untenable. The medical interests of the poor and of the institution cannot be satisfied by any concession on *her* part. Unless the service is so changed that the medical men shall have direct control of the nursing to which *their* patients are subjected, and by which, in a large measure, diseases are "treated," it is impossible to regard the position of affairs with confidence or even complacency. The nurse is the agent of the physician or surgeon in charge of a case. She is as much his instrument, and the interests of cure require that she should be as completely under his control, as the drug prescribed by the physician, or the knife in the hand of the surgeon. If he directs that a patient shall be kept in the recumbent posture, no matron must be empowered to give any contradictory order, and no rule can be allowed to stand in the way of the special directions of the physician being carried out. So, likewise, nurses must not be removed from ward to ward, either at the caprice of the matron or in obedience to any rule of rotation, so that the services of a nurse trained by a particular physician or surgeon, and familiar with *his* system of nursing, whatever that may be, shall be lost to the medical officer and his patient. These are fruits of the "nursing department," and it must be uprooted. The attempt to work in harmony with it is vain, because the system is, in itself, *mischievous*.

The third resolution embodies the judgment of the Court of Governors upon the letter of Dr. HABERSHON and Mr. COOPER FORSTER, and the penal sentence which, in its wisdom, that Court saw fit to pronounce. The following is the text of the letter which has given such dire offence.

*To the President, Treasurer, and Governors of
Guy's Hospital.*

MY LORDS AND GENTLEMEN,—We have carefully considered the Report of the Governors' Committee, and the proposals which you have made to us in accordance with its recommendations. We beg to thank you for the further explanations which we have received from the Treasurer through Dr. Habershon, and to express our appreciation of the trouble taken by the Committee. We regret, however, that we are obliged to decline the proposition which you have made. We entirely disapprove of the system of nursing which the Treasurer introduced last November, without consultation with us, without our sanction, and even without our knowledge. We told the Treasurer in December, and the Court of Governors in February last, that the new Matron was unfitted for her post, and we asked for her removal. We then warned you of the evils which would ensue if our representations were disregarded. We need not say how lamentably these fears have been realised. Our patients have suffered, the discipline of our School has been impaired, the good order and harmony which ought to

exist has been gravely disturbed, and the authority of the Treasurer has been thrown away. Worst of all, the cherished reputation of Guy's Hospital is in jeopardy. We should be most happy to aid the Taking-in Committee with our counsel, but so long as the present Matron is maintained in office, and so long as the Treasurer continues the course of action which has led to our present disasters, we have no hope of real improvement, and we cannot consent to take part in a system which we and you alike know, by the unhappy experience of the last few months, to be in every respect mischievous.

We cannot but hope, in justice to the Governors, that they will even now take the obvious and necessary steps to restore the prosperity and harmony of last October. If our unanimous and repeated protests are disregarded, we must publicly record the facts which abundantly justify our action, and leave the responsibility of present and future evils upon the Treasurer and Governors. We shall continue to perform our duties to the utmost of our power; we shall still do our best to obviate the consequences of ill-advised action; and we shall wait with confidence for better counsels to prevail.

We are, my Lords and Gentlemen,

Your obedient servants,

(Signed on behalf of the
Medical Staff.)

S. O. HABERSHON,
Sen. Phys. Guy's Hosp.

J. COOPER FORSTER,
Sen. Surg. Guy's Hosp.

Guy's Hospital, Aug. 13th, 1880.

The medical faculty have, it appears, withdrawn this letter. At a full meeting of the medical and surgical staff, held on Saturday, Oct. 9th, it was unanimously resolved:—"1. To request the Governors' permission to withdraw the communication dated August 13th, 1880, and to express regret that a sentence contained in it should be open to the construction which has been put upon it; and further, to offer their assurance that it was not intended by the staff to impute that 'they (the Governors) knowingly persist in a mischievous system.' 2. That having heard through Dr. HABERSHON that representatives from the staff are to form an integral part of the Sub-committee of Governors, the staff are prepared to send representatives accordingly. 3. That as Dr. HABERSHON and Mr. COOPER FORSTER signed the communication of August 13th on behalf of the staff, this meeting feels the staff is collectively responsible for it." There is, happily for the honour and dignity of the medical staff, no foundation whatever for the statement in a newspaper report that the medical staff expressed a hope that, "under the circumstances," the Governors would rescind their resolution calling upon the senior physician and surgeon to resign. Disunion would have been a fatal evil; but here again we have the satisfaction of knowing that the several members of the staff have pledged themselves to stand together and to be bound by the action of their seniors in their name and on their behalf. They, in fact, placed their resignations in the hands of Dr. HABERSHON and Mr. COOPER FORSTER, to be used in the event of those gentlemen being compelled to retire. It would, indeed, have been a deplorable *finale* to what promised to be a manly assertion of the true claims made by the medical profession in the interests of the sick poor, if those to whom we all look with respect and confidence as standing boldly in the breach, had surrendered, or even faltered in their steadfastness at the moment of victory. The cause in which they are engaged is not their own, nor are their personal interests to be regarded as paramount. Humanity imposes upon them the duty of speaking and

acting in the behalf of hospital physicians and surgeons throughout the country. It is comprehensible that the staff may prefer to withdraw a phrase which, as they allege, has been misinterpreted, but we must confess our inability to understand why the letter as a whole has been withdrawn. It was, as our readers will see, a manly, straightforward, and good letter, embodying the conclusions at which everybody who knows anything of this lamentable business must have arrived independently. The Governors, in their statement, did not quote correctly the sentence to which they took exception. They charged Dr. HABERSHON and Mr. COOPER FORSTER with having imputed to them that they persisted in maintaining a system which they, the Governors, knew to be in every way mischievous, whereas what Dr. HABERSHON and Mr. COOPER FORSTER actually wrote was: "We cannot consent to take part in a system which we and you alike know, by the unhappy experience of the last few months, to be in every respect mischievous." If there is any sting in this sentence, its virulence must be entirely due to its veracity. Why it should have been withdrawn we cannot even guess. If the truth may not be spoken in any letter addressed by the medical staff to the governors of a hospital, the relation of these two authorities needs to be entirely revised.

As the matter now stands, we assume that an attempt will be made to carry on the business of the hospital by means of what purports to be a joint administrative committee. Such a committee, as Mr. LUCAS has opportunely pointed out, ought, in accordance with the express wishes of the founder of Guy's, to be constituted, in part at least, of medical men. THOMAS GUY, by his will, nominated four physicians—namely, Drs. RICHARD MEADE, THOMAS CROW, FRANCIS FOUQUIER, and EDWARD HULSE, as a Committee of Management. By the process of self-election—a destructive arrangement at the best—the medical element has been entirely excluded from the Committee of Management! This is a matter which ought certainly to be brought under the notice of Parliament. In spirit it contravenes the terms of the founder's will, and transgresses the fundamental principle which is supposed to underlie the policy of the Charity Commissioners. An essentially *medical* institution cannot successfully or consistently be administered without the presence of a *medical* element on the Committee of Management. It may be expedient to give the arrangement by which a medical element is to be introduced into a "Taking-in Committee,"—a half-hearted and round-about way of making a concession—the trial asked for; but we are doubtful of success. It ought at least to be a condition of the agreement that the Governors shall acknowledge their error in trying to rule the hospital without the medical staff, and to treat the physicians and surgeons as their servants instead of the principal authorities in the charity. We cannot claim a lower status than this for the profession in relation to institutions established *solely* for a curative purpose, whether they be hospitals for the sick or asylums for the insane. And, we are convinced, no lower status can be assumed by any medical staff without a sacrifice of usefulness and self-respect.

A RECENT outbreak of nervous disturbance in Italy, which has been described in the *Annales d'Hygiène* by M. LÉON

COLIN, indicates that the conditions which gave rise to some of the most remarkable epidemic phenomena of the Middle Ages are not yet extinct in the country in which they were then chiefly prevalent. On Dec. 11th, 1878, the governor of the district of Tolmezzo informed the Prefect of Udine that for three months some forty females, living in the commune of Verzegnis, had been attacked by religious mania. In consequence, Drs. FRANZOLINI and CHIAP were delegated to examine the outbreak. From their report it appears that the first case was in the person of a woman named MARGUERITE VIDUSSON, who had been the subject of simple hysteria for about eight years. In January, 1878, she began to suffer from convulsive attacks, accompanied by cries and lamentations. She was regarded as the subject of demoniacal possession, and on the first Sunday in May was publicly exorcised. Her affection, however, increased in severity; the attacks were more frequent and more intense, and were especially provoked by the sound of church bells, and by the sight of priests. Seven months later, three other hysterical girls became subject to "convulsive and clamorous" attacks. Here, again, an attempt was made to get rid of the supposed demon. A solemn mass was said in the presence of the sufferers, but was followed only by a fresh outbreak. At the time of the visit of the delegates eighteen were suffering, aged from sixteen to twenty-six years, except three, whose ages were respectively forty-five, fifty-five, and sixty-three years. Similar symptoms had also appeared in a young soldier on leave in the village.

During the attacks the patients talked of the demon which possessed them, stated the date on which they were seized by it, and the names of the persons who were possessed before them. Some boasted of being prophetesses and clairvoyants, and of having the gift of tongues. In proof of the latter they pronounced incomprehensible sentences which they affirmed to be Latin or French. In all the sound of church bells caused attacks, and religious ceremonies appeared not only to aggravate the disease in the sufferers, but also to cause its extension to those not previously attacked. The reporters referred the outbreak to pre-existing hysteria, aggravated by the fanatical zeal of certain preachers, and to the frequency and exceptional impressiveness of the religious services which were being held as a means of cure. Their effect was to recall to the memory of the hysterical women the legends of demoniacal possession and of sorcery, and the exorcism of the priests deepened their conviction as to the nature of the affliction. Dr. FRANZOLINI draws special attention to certain old establishments long of repute for the efficacy of the exorcisms practised at them. He cites especially the sanctuary of Clanzetto, an odious vestige, as he terms it, of the barbarism of the Middle Ages.

M. COLIN points out that the soil was particularly favourable for the development of an epidemic of this nature. The population of Verzegnis is backward in education, and most superstitious, and functional nervous diseases are common among them. Dr. FRANZOLINI has, however, ascertained that they possess a practical immunity from alcoholism and from pellagra, and also from diseases due to general insanitary conditions. He appears to be inclined to ascribe some share in the production of the disease to an

obscure pathological influence derived from the French race, since he notes that the inhabitants pronounce the letter "r" as it is pronounced in France, and not as in Italy—the suggested inference from this circumstance M. LÉON COLIN is naturally unable to discern. It appears, further, that the inhabitants of the village are a good deal cut off from intercourse with the adjacent country in consequence of comparative inaccessibility, and the frequent interruption of communications by storms and floods. Moreover, craniometric observations on twelve of the inhabitants seem to show that the brachycephalic form of skull predominates, and that the development of the cranium is slightly below the average.

M. COLIN points out, with much truth, that the relative sequestration of the inhabitants of a town must tend to favour the spread of such a nervous malady, if it does not assist in its production. The reciprocal impressions of the inhabitants are little varied, and hence, in spite of differences in age and social position, the members of the community come to bear a close mutual resemblance in psychological constitution. Consanguineous marriages will be common in such a population, and will contribute to the deterioration of the masses, and to the development of any common morbid predisposition. If such a predisposition results, in one individual, in actual disease, many others are probably not far from the same morbid state, ready to undergo fuller development by imitative contagion.

The epidemic at Verzegnis has proved extremely obstinate. Since the commissioners visited the place, new cases have occurred, which have rendered energetic measures necessary—even a military occupation of the district (!)—while seventeen of the "possessed" have been compulsorily removed to the hospital at Udine. Such an epidemic constitutes a rare event in modern Europe, but it reminds us closely of some historical epidemics with which all are familiar. Even in our own day, in some backward races, as of Norway and New Caledonia, similar outbreaks have been observed.

THE Introductory Addresses in the provinces bear a very favourable comparison with those of the metropolis, and only confirm that consensus of advice and opinion on which we remarked as a feature of the London Introductory. There is no royal road to medical knowledge or success. The provincial teachers agree with the London ones that only on the basis of a good general education can a solid medical education be founded; and that the most vital subjects of study in real medical education are Anatomy and Physiology. On the whole, there seems a tendency in the mind of teachers to attach more importance to Physiology, and perhaps less to very minute and detailed Anatomy. Surgical, regional, prominent, and medical Anatomy, all are agreed, should be severely and soundly learnt. That Pathology cannot be understood apart from Physiology is one powerful reason for attention to this subject; but there is another, in the fact alluded to by Dr. WATERS, of the Liverpool School of Medicine, that it is daily more and more taught in schools, and will, in its great facts, become part of the common knowledge of educated people; and in these days of school boards who is to remain uneducated? We note Dr. WATERS'S words on Anatomy, and on the provision for its teaching in Liverpool, with great satis-

faction. "It [Anatomy] lies at the root of all your studies, and you will find in this school the completest means and opportunities for acquiring a practical knowledge of it..... You will find the study of it not only essential in order to pass examinations, not only in reference to the study of disease and accidents, but also of the highest value as a training for the mind." Students of the first and second year especially, who are still in the happy position of having no experience of unsuccessful examinations, might do worse than make a large-sized copy of these words, and place them over their mantelshelf, and students who have had such experience will find the best security against a repetition of it in a similar device.

Dr. GWYNNE, of Sheffield, in a very able address, drew attention to the special advantages of the Sheffield School. He was severe in his reflections on Oxford, hoped much from the lately-created Victoria University of Manchester, and, while admitting the good done by the University of London, maintained in manly language that "it failed in the most valuable duty of a university—viz., *teaching*." He specially recommended the study of physiology, and the institution of a preliminary scientific examination, so as to lighten the overcrowded curriculum. At Leeds, too, Mr. CHARLES J. WRIGHT advocated, like Dr. ORD, making the natural sciences part of the school schedule. Mr. WRIGHT also touched on the question of pupilage to a general practitioner. Though there is some difference of opinion as to where this should come in the career of a student; there is a growing tendency to believe, what is only too obvious, that some great lessons of practice can only be learnt properly in the school of practice itself. Mr. WRIGHT would place this pupilage in the period just succeeding the Primary Examination in Anatomy and Physiology. Like Dr. GWYNNE, he spoke in favourable terms of the Victoria University, and expressed a hope that a union might ere long be effected between the College and their own School of Medicine. Professor BARTLETT, at Birmingham, though indulging in a somewhat gloomy style as to the political and social disadvantages of the position of the medical practitioner, became more cheerful at the close, and said that the general practitioner was the backbone of the profession, the man to cope with difficulties of every kind in every department of general and special practice, and honoured in his district as those in special practice rarely were.

Annotations.

"Ne quid nimis."

THE NURSING QUESTION AT THE WESTMINSTER HOSPITAL.

FOR the past few years the Westminster Hospital has been nursed by the Westminster Training School for Nurses, an institution founded by the late Lady Augusta Stanley in 1874. Owing to certain disagreements between the hospital authorities and the committee of the home and their servants, it has been found necessary to cancel the standing agreement, and substitute for it another. We have this new agreement before us, and call attention to it because it is most important to watch vigilantly the various developments of the "nursing department." The main provisions of

this agreement are as follows:—The nurses are to be under the charge and authority of a "lady superintendent," to be selected by the home, and appointed by the hospital. This person is to be paid by the home, but is to reside in the hospital, and in addition is to discharge the duties of matron of the hospital without salary. The committees of the home and of the hospital are annually to appoint three of their number who shall form a "nursing joint committee," and "all complaints with respect to matters in the hospital under the control of the lady superintendent, whether as lady superintendent or matron, shall in the first instance be made to her, and if the complainant be not satisfied, the complaint may be made to the house committee, or to the committee of the home, to be by them referred without discussion to the nursing joint committee, whose decision shall be final." Should any questions arise which are not thus provided for, they are to be settled by three referees, one to be nominated by each of the two committees, and the third by the two thus chosen. "The lady superintendent shall not be removable except by common consent of the hospital and the home, and in the event of any difference arising on this subject the matter shall be referred to the referees." The permanent staff of nurses is to be not less than twenty-six in number, and the home may send to the hospital for training probationers not exceeding twenty-five at any one time. The other clauses in the agreement refer to the financial arrangements. Viewing the matter from an outside, and impartial, standpoint, we think this agreement contains within itself endless opportunities for disagreement. The only possible chance of its working well is that a wise woman should be appointed lady superintendent, and that there should never be any occasion to refer to the agreement. Leaving out of sight minor points, there are several of the provisions to which most serious objection must be taken. First of all, there is the introduction of an outside authority not in any way officially connected with the hospital; for although the lady superintendent is to perform the duties of her office "subject to the general control of the house committee of the hospital," that committee cannot select her, cannot dismiss her, does not pay her, and may not consider any complaint brought against her from any source whatsoever. Its "general control" over her is therefore a mere figure of speech, a delusion, and, we fear, a snare. But this is not the worst of the matter, for the duties of matron are to be discharged by this lady superintendent, over whom the hospital authorities have no direct control; and yet these duties have nothing whatever to do with the nursing of the hospital; the hospital authorities have actually delegated their duty of choosing their own matron, and if perchance she and the cook or any of the servants disagree, the matter has to be referred to a "nursing joint committee." How is it possible that any decisions of an outside authority can be final on questions relating purely and solely to servants of the hospital? The next fundamental blot in this agreement is the total ignoring of the claim of medical officers of hospitals to control the nursing of the patients for whose welfare they are responsible. The staff are specially precluded from the appointment of referees, and the only point on which they are to be consulted is the dismissal or removal of ward sisters; but unless they agree with the lady superintendent, the matter is to be referred to the "nursing joint committee," so that their authority here is nominal rather than real. It is not difficult to trace the real purport of the agreement; the one object attained by it, whatever may have been in view, is the conversion of the hospital into a training school for nurses in connexion with the home. As many as twenty-five women may be sent to the hospital regularly for the purposes of training only, while only one more than that number of trained nurses has to be provided

as the permanent establishment; and at the same time the home is to be paid more highly than formerly for its services. Against this we fail to find one single advantage to accrue to the hospital. None are so interested in improved nursing as doctors, but the fundamental principle of all good nursing is that, like the other treatment, medicinal and dietetic, it shall be directed and controlled by the medical men in charge of the case.

QUEEN'S UNIVERSITY IN IRELAND.

THE annual meeting of Convocation of the Queen's University in Ireland was held on the 7th inst., presided over by Sir Robert Kane, Vice-Chancellor. The report of the annual committee for 1879-80, which was adopted, expressed an opinion that the University Education (Ireland) Act of 1879 was unfair to the Queen's University and its graduates and undergraduates, now numbering nearly 3000. The committee trusted that Her Majesty's Government would reconsider the matter, and make such changes in the educational arrangements of Ireland as would leave to the Queen's University a continued separate existence. The Senate having nominated Sir Robert Kane, F.R.S., as Vice-Chancellor in the room of the late Sir Dominic Corrigan, the place which he held on the Committee as an ordinary member was vacated, and Dr. O'Keefe, of Cork, was unanimously elected to the vacancy. A resolution in reference to the dissolution of the University and urging that an appeal should be made to the Government to reconsider its position, as alluded to in our issue of last week, was unanimously adopted; it being a further instruction that the Committee of Convocation should seek the co-operation of the Graduates' Association at the Queen's Colleges and in London, in appointing a deputation. Mr. R. J. M'Mordie then moved a series of resolutions, to the effect that without reference to the demands for endowed sectarian universities or colleges, Dublin University should occupy in relation to any new university the same position as the Queen's University; that the existing non-sectarian colleges—viz., Trinity College, Dublin, and the Queen's Colleges—should be affiliated colleges in a non-sectarian teaching university; that by additional endowments, or an adjustment of existing endowments, they should have similar advantages as regards professorships, residences, fellowships, and exhibitions; and that a deputation be appointed to submit the views of Convocation to the Prime Minister and the Chief Secretary for Ireland. These resolutions, however, after a little discursive argumentation, were withdrawn, and the proceedings terminated. We may add, that there is little doubt that the legislation of the late Government in reference to university education in Ireland has not been successful. It has not satisfied anyone; it has disappointed the friends of the Queen's University, and it has only partially pleased its enemies. It is, indeed, notorious that some of the most influential members of the Senate of the new University have joined in open condemnation of the Queen's Colleges; although an assurance was publicly given by the late Government that they would not be injured.

UNCERTIFIED CAUSES OF DEATH IN LONDON.

THE present unsatisfactory state of registration law notwithstanding, a good deal of unfounded indignation was recently expressed at a special meeting of the Sanitary Committee of the St. Pancras Vestry, with reference to the statement of the Medical Officer of Health, that the registrars of births and deaths in London are in the habit of registering deaths in a wholesale manner without a medical certificate. We have continually insisted that the State, which compulsorily imposes upon all registered medical practitioners the duty of furnishing gratuitous certificates of the causes of the

deaths of their patients, is bound to provide some means for obtaining satisfactory and scientific evidence of the causes of other deaths—namely, cases in which no registered practitioner has been in attendance on the deceased, and in which no inquest is held; and we further maintain that effectual means might be adopted for securing this end, which, instead of increasing the number of inquests, would render unnecessary a large proportion of those now held. Such a reform, however, which is intimately bound up with the impending reform of the laws governing the appointment and duties of coroners, will rather be retarded than assisted by such unfounded charges as those alleged to have been made by the Medical Officer of Health of St. Pancras against the registration system generally in the metropolis, and especially in St. Pancras. According to the Registrar-General's Weekly Returns, it appears that during the thirteen weeks ending the 2nd inst. only 213 out of the 19,426 deaths registered in the whole of London, or scarcely more than one per cent., were uncertified. A very large proportion of these were cases of infants who died within a day or so of birth, and whose mothers had only been attended by a midwife, and had not called in a registered medical practitioner; of the remainder, a considerable proportion were cases in which the deceased had been attended either by an unqualified practitioner, or by the unqualified assistant of a registered practitioner. We should hail with satisfaction the inauguration of a system which would secure satisfactory certification of all causes of death, but considering the state of the law we are astonished at the small proportion of uncertified deaths in London, and can see no ground for complaint as to the manner in which the law is carried out. As regards registration in St. Pancras, we are informed on good authority that only two of the 1245 deaths registered within that district during the three months ending last quarter were uncertified. We agree with the Vestry Clerk, that there must be some great mistake in the matter to account for the charge of wholesale registration of uncertified deaths, whether in St. Pancras or in any other part of London. As a matter of fact, the proportion of uncertified causes of death is smaller in North London (including St. Pancras) than in any other part of the metropolis. The largest proportion of uncertified deaths occurs in South London, especially in Southwark and Woolwich.

CONVULSIONS FROM ABSINTHE.

MANY of our readers will remember the researches of M. Magnan on absinthism. He stated that the administration to an animal of a relatively small quantity of essence of absinthe causes convulsive attacks closely resembling those of epilepsy, presenting loss of consciousness, tonic and clonic spasm, with tongue-biting, involuntary evacuations, and subsequent coma. He maintained that such attacks may occur in man under the influence of great or prolonged excesses in absinthe liqueur, and, in support, he adduced cases from his own observation, and from that of others. These facts have not, however, been accepted as conclusive by all subsequent workers. Bohm and Kobert, for example, have maintained that the dose of absinthe which has to be given to a mammal to cause convulsions is so large that it is difficult to admit that a sufficient quantity is ever taken by man. They further maintain that the essence of aniseed, which is always added to the absinthe liqueur, possesses deleterious properties, and that its effect is attributed wrongly to absinthe. M. Dujardin-Beaumetz administered large doses of absinthe to pigs, but never witnessed convulsions as a consequence, although the dose amounted to one or two grammes per kilogramme of body weight.

Further doubt has been thrown upon the conclusions of M. Magnan in a recent communication of M. Lance-reaux to the Académie de Médecine. In some cases of

chronic absinthism to which he alludes, in which convulsions were supposed to be due to the toxic agent, an autopsy demonstrated the existence of chronic meningitis sufficient to explain the occurrence of the convulsive attacks. In some cases of acute absinthism relied upon by M. Magnan, the attacks, according to Lancereaux, resembled those of hysteria rather than of true epilepsy, and he cites, in support of the view, five cases which have come under his own notice. In one case a regular absinthe-drinker had long-continued attacks, and was found by M. Lancereaux in a well-marked hysteroid seizure, unconscious, with opisthotonos and violent irregular movements. Neither coma nor stertor followed. In the four other cases the character of the seizures was the same. Nevertheless it remains true that in some of the cases recorded by M. Magnan the attacks were of a true epileptic character, and it is quite within the range of pathological probability that the same cause should give rise in some individuals to hysteroid, and in others to epileptoid seizures. The deleterious effect of the agent is almost as grave in the one case as in the other, for recurring hysteroid attacks in men constitute almost as serious a disease as genuine epilepsy. The subject is one of more pressing moment in France than in this country, but even here we cannot afford to disregard it, since "Absinthe Suisse" is still conspicuous in the windows of not a few public-houses in London.

CORONERS, DOCTORS, AND DEATH CERTIFICATES.

A LETTER we publish elsewhere shows how much care should be taken before readily believing a statement discreditable to a medical man, though made before a coroner and a jury. Our own attitude towards the statement—that a medical man offered to give a certificate of death for 3s. 6d.—was one of simple incredulity. We did not believe that a medical man could act as Mr. Ayres was alleged to have acted in this case. The letter throws great light on the difficulty of knowing what to do in some serious cases among the poor. Surely 3s. 6d. for attendance at home for a week on a child very ill was little enough; yet it was declined by the parents, who exercised their minds rather in doubting whether the doctor could do good than in giving him the opportunity of doing it. It was the mother herself who conceived that a medical certificate could be bought without proper medical attendance and without paying even a very moderate sum for it. We may pity those whose ignorance or whose poverty leads them—and there is no evidence here that it was pure poverty—to regard a doctor as an authority for death certification, and not a physician to prevent death. But it is clearly the duty of medical men in such cases to withhold certificates. The carelessness with which death is regarded by the public must not be shared by medical men.

HOSPITAL REGISTRATION.

It will be seen from the report given in another column that the meeting of registrars at King's College Hospital on the 6th inst. resulted in the adoption of a definite resolution, which is likely to lead to good results in the improvement of the registration of disease. The object of the meeting was to take steps to secure greater uniformity in such registration at the hospitals, and the interesting statement of Mr. Howlett showed clearly the varying systems at present in vogue. Many of the gentlemen present gave their experience of hospital registration, and, as might have been expected, opinions differed as to the comparative merits of these systems. It became obvious that it would not be possible to establish a uniform plan at the different hospitals in the matter of recording data, even if this were desirable, but there was an unanimously expressed opinion that the

actual work of registration might be made uniform. As long as the required observations are made it does not much matter for registration purposes whether these are done by the registrar himself, or by his assistants, the important point being that the collection of the data should be pursued on the same lines in every hospital. This it would not be difficult to effect, provided—as the attendance at the meeting of representatives from eight out of the eleven metropolitan hospitals showed—that there is evinced a common desire to make the effort. The first step in this direction was the unanimous adoption of a resolution to form an Association of Hospital Registrars, which is to hold its first meeting at King's College Hospital on Nov. 3rd, when the subject of a revised index of diseases will be taken in hand. We shall watch the further progress of this movement with interest, and shall expect to see it bear early fruit in the statistical tables and reports now issued by nearly all the registrars of our hospitals.

THE NEWCASTLE-ON-TYNE INFIRMARY.

THE *Newcastle Chronicle* of October 8th, in reporting the proceedings of the quarterly court of the governors of the Infirmary of Newcastle-on-Tyne, announces the resignation of Dr. George Y. Heath as senior surgeon. The Mayor, the Sheriff, Dr. Bruce, and others, expressed feelingly their regret and sense of loss in connexion with this step on Dr. Heath's part. Dr. Heath's retirement from a post of prominence is a matter for more than local regret. He has been long regarded as one of the leaders of surgery in this country, and has contributed largely to that elevation of surgery which is so conspicuous in the last decade or two. The authorities of the Infirmary have appointed Dr. Heath consulting surgeon to the Infirmary, and so will retain the advantage of his opinion and advice when necessary. It is due to Dr. Heath that the governors should fill up the appointment with a sole regard to perpetuating the goodly fame of the Newcastle School of Surgery. Already we hear of six candidates in the field—viz., Messrs. Page, Jeaffreson, Williamson, Dodd, Dixon, and Scotland. Mr. Page's long connexion with the Infirmary as senior house surgeon, and lately as senior assistant surgeon, gives him a great advantage in the contest; but should he be elected the governors will have a difficult duty to decide between the claims of the remaining gentlemen, most of whom will probably contend for the post of assistant-surgeon.

THE CORK FEVER HOSPITAL AND DR. MACNAUGHTON JONES.

A SPECIAL general meeting of the subscribers to the Cork Fever Hospital is announced for the 15th instant at the Royal Cork Institution, to receive the report of the General Committee on the management of the hospital; and if approved, to adopt the recommendations contained in the report.

At a meeting of the Council of the Royal College of Surgeons in Ireland, held on the 7th instant, the following resolution was adopted:—"That on the consideration of the published reports of an inquiry recently held in Cork, with reference to certain charges brought against Professor Macnaughton Jones, a Fellow of the Royal College of Surgeons in Ireland, the Council of the College desires to express its opinion that the conduct of Professor Jones, as established by the investigation, was in accord with the accepted practice of medical science, and with professional usage; and that it gave no just grounds for the accusations to which he has been subjected."

At a special meeting of the Council of the Irish Medical Association, held on the 5th instant at the Royal College of Surgeons, Dublin, the following resolution was unanimously adopted:—"That the Council of the Irish Medical Associa-

tion, having regard to the facts disclosed in the recent inquiry respecting occurrences at the Cork Fever Hospital, and being of opinion that Dr. Jones acted conscientiously within the best of his judgment as a physician, and in complete accordance with professional propriety, hereby expresses its sympathy with him in regard to the charges made against him. That this Council, furthermore, in vindication of the freedom of action of a medical attendant responsible for the life and health of his patient, cannot recognise the competency of any non-medical tribunal to pass judgment on a question purely of medical science; nor does this Council consider that any physician should be held responsible for results so long as due skill and care have been devoted by him to the treatment of the patient entrusted to him. That a copy of this resolution be forwarded to Dr. Jones, and to the editors of the weekly medical journals."

Dr. John Adderley, resident medical officer of the hospital, has, we are informed, tendered his resignation.

THE PIROGOW JUBILEE.

ON the 2nd inst. the jubilee of Dr. Nicholas Pirogow's entry into the profession of medicine was celebrated. Fifty years have passed since the celebrated Russian surgeon began his career, and all ranks and classes of the Russian people have been eager to seize the occasion of testifying their affectionate admiration and regard for him. The *Voice*, writing of the event, says M. Pirogow's name is associated with every reform which has been effected in Russia during the half-century in aid of suffering humanity. We have seen him, heedless of self, devoting his care to the wounded on the field of battle during the Franco-German war, and to the sick and wounded in our camps during the recent Turkish war. Russia knows how to appreciate worthily a man who has done so much for her, and the nation will join its voice with the voices of the Medical Council of the Ministry of the Interior, who have addressed M. Pirogow as follows: "We have the agreeable duty of expressing to you, an honorary member of the Council, our most sincere congratulations on the occasion of the fiftieth year jubilee of your scientific activity, and recording our tribute of admiration to your merits. The Medical Council trusts that you will still be spared many years, to the advantage of science and to the honour and glory of our country."

THE ORIGIN OF HOSPITAL SUNDAY.

THERE be many to claim the credit of what is now become one of our best and most established institutions—Hospital Sunday. A very strong case is to be made out for giving the credit to the late Canon Miller when living at Birmingham. We ourselves are vain enough to believe that we have some claim to be considered amongst the earliest and most ardent promoters. But we must allow priority to the good people of Aberdeen. The facts adduced from the books of the Aberdeen Infirmary by the treasurer, show that a collection has been made in Aberdeen on the first day of the year since 1784 for the Infirmary, and that such a collection has been regarded by all denominations as at once a privilege and a duty.

COLLEGE OF PHYSICIANS, IRELAND.

WE understand that there will be a contest for the presidency of the College of Physicians of Ireland, the candidates being Dr. Johnston and Dr. Hayden. The election will take place next Monday, and will be by ballot.

A MEDICAL STUDENTS' SOCIETY has been formed in Melbourne. There are, it is stated, over one hundred and fifty students attending lectures in the medical school of the University of the Australian city.

THE Ophthalmological Society of Great Britain and Ireland will meet during the present year at the rooms of the Medical Society, 11, Chandos-street, Cavendish-square. The first meeting will be on Thursday, 28th inst., at 8.30 P.M., when the rules of the Society will be considered, new members elected, and papers read by Mr. Critcheff, Mr. Hutchinson, Mr. Higgins, and Dr. Hughlings Jackson. Living specimens should be in attendance at 8. Applications for membership and notice of intended communications should be sent to the secretaries, Dr. Stephen Mackenzie, 26, Finsbury-square, E.C.; Mr. Nettleship, 4, Wimpole-street, W.

DR. ALFRED HUDSON, of Dublin, has resigned the Regius Professorship of Physic in the Medical School of the University of Dublin, in consequence of declining health. He was appointed early in 1878 as a successor to the late Dr. William Stokes. There are at present two candidates for the vacancy—viz., Dr. John T. Banks, and Dr. Moore, King's Professor of Practice of Medicine in the University. Should Dr. Moore obtain the post he will resign his present appointment. The emoluments attached to the office amount to £100 per annum. The appointment lies with the Board of Trinity College, who will probably elect a successor to Dr. Hudson in about a month or six weeks.

THERE is now in Barclay ward (Rachel block), under the care of Dr. Sansom, a case of hystero-epilepsy, in which the fits are provoked by pressure over the ovarian regions; they are attended with the attitude of "crucifixion" and all the typical phenomena described by Professor Charcot. The patient suffers from obstructed dysmenorrhœa, which Dr. Herman is treating by dilatation of cervix uteri. There is also a case of hysterical paraplegia; improving under treatment (by Dr. Herman) for uterine retroversion and cervical endometritis; paralytic phenomena receding.

A MEMBER of our profession has, we regret to learn, been a victim of the lawless spirit abroad in Ireland. According to the report of the Dublin correspondent of *The Times*, two ricks of hay and oats, worth £200, the property of Dr. Alexander Patton of Finglas, were burnt down on the night of the 5th inst. The outrage appears to have been committed to avenge some fancied wrong involved in the doctor engaging as servants two men from the north of Ireland.

THE death, on the 7th inst., of Deputy Surgeon-General Thomas Hunter, late of the Army Medical Department, is announced. Dr. Hunter served for many years in the 4th Queen's Own Hussars. His death on Thursday week was very sudden, at the Army and Navy Club, St. James's-square, he was found by one of the waiters in the committee-room, apparently asleep, but on assistance being sent for it was discovered that life was extinct. Dr. Hunter was unmarried.

AT St. Bartholomew's Hospital, in Sitwell ward, under the care of Mr. Willett, there is a child with congenital deformity of the left scapular arch; a bridge of bone unites the scapula to the spinous process of the sixth cervical vertebra. As the mobility of the arm is much impeded, it is proposed to remove the intervening bridge of bone.

AT the Medical Society of London on Monday evening next Dr. Hughlings Jackson will read a paper on "Cases of Recovery from Symptoms of Organic Brain Disease."

THERE seems a probability of Professor Bain becoming a candidate for the office of Assessor to the Council of the University Court of Aberdeen.

In a case of aortic stenosis, with slight murmur of mitral regurgitation and post-diastolic murmur heard near the apex, now under Dr. Sansom's care in the London Hospital, an interesting question of diagnosis arose between "slight" aortic regurgitation and mitral stenosis. It is concluded that the murmur heard at the apex is aortic regurgitant.

THE election of Council of the Surgical Society of Ireland for the session 1880-81 will take place on Monday, November 1st, at the Royal College of Surgeons. Those entitled to vote must, besides being Members of the Society, also be either Fellows of the College of Surgeons or of the College of Physicians in Ireland.

ACCORDING to the report of the University of Dorpat for the year 1879, the number of students studying medicine there during the year was 475.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

St. Matthew, Bethnal-green (area, 755 acres; inhabited houses, 17,475; estimated population, 133,400).—Dr. Bate introduces his report for 1879 by an amusing extravagance which forcibly indicates the great changes going on in this part of the metropolis. He says if the alterations being made by the Great Eastern Railway Company, the School Board for London, and the Metropolitan Board of Works, particularly those involving the demolition of small house property, are continued much longer, Bethnal-green will become a huge agglomeration of board schools, intersected by railways and new streets. Certain it is that great clearances of old and dilapidated cottage property have been effected, and are still being carried out in the district, and the numerous large, well-built board schools form a most conspicuous feature in it; but hardly more conspicuous than the great blocks of Improved Labourers' Dwellings which have sprung up and are still springing up there, and which it is obvious will presently overshadow even the board schools. Indeed, as Dr. Bate himself shows, his prospective description of Bethnal-green would have been more accurate if he had said, "a huge agglomeration of Board Schools and Improved Dwellings," &c. The arrangement of these blocks of improved dwellings is said to be very good, the ventilation being excellent, and the drains well constructed. Bethnal-green, of which the name is associated with so much that is painful in the sanitary history of the metropolis, has obviously, according to Dr. Bate, a much happier sanitary future before it; and it is pleasant to find how eagerly that gentleman is striving, by precept and example, to help onward the tide of improvement which has now fully set in.

The birth-rate of Bethnal-green in 1879 was 39.3 per 1000 of the inhabitants (as against 36.5 for the whole of the metropolis), and the death-rate was 23.0 per 1000 (as against 23.3 for the whole metropolis). The death-rate has been stationary during the last three years, and on this Dr. Bate observes:—

"I cannot say that I am content with this stationary condition of things. We are only holding our ground, while we ought to be diminishing our mortality. Certainly it is in each year a little less than the general metropolitan rate, but I should like Bethnal-green to be something more than an average London parish. We have a gravelly soil, wide, well-paved roads, good sewers, a fine public park, and few offensive trades carried on in our midst; still the insalubrious condition of many of our houses (and not always the smallest ones) remains a patent fact, and undoubtedly keeps up the death-rate. The drainage arrangements of many houses are as bad as they can well be, leaky and unventilated. What we are endeavouring to abolish as much as possible just now are sinks in washhouses communicating with foul drains,

and inside closets badly placed, or not thoroughly ventilated. These we get altered as soon as we discover them, but sanitary officers are not ubiquitous, and unless cases of bad drainage and defective sanitary arrangements are reported to us in time, they are frequently not discovered till the mischief is done, and a death from fever in the Registrars' weekly returns draws our attention to the locality. If people would only learn the A B C of sanitary science, keep out drain air and open their windows so as to let in fresh air, we should have fewer deaths and a healthier population.

"It cannot be too strongly impressed upon the owners of house property that it is not sufficient merely to trap a drain; if that drain have an opening inside the house it should be ventilated by a pipe continuous with some portion of it carried right above the eaves, and left wide open. If a proper trap with an air inlet be placed between the house-drain and the sewer so much the better, but sewer air is not so bad as it is represented, and is always infinitely better than that of small pipe drains. The sewer is well ventilated, frequently flushed, and fairly clean, so that we cannot do better than strive to obtain a similar condition of things in our small pipe drains, which, from the vile manner in which they are frequently laid and arranged, are often little better than tubular cesspools pouring their fetid effluvium into our dwellings."

We get an instructive illustration from the report of the value of infectious disease hospitals. Forty-five cases of small-pox were reported to the Sanitary Authority, and of these not less than thirty-four were removed to hospital. It cannot be doubted that if a like proportion of other dangerous infectious diseases had been isolated in hospital, a marked diminution in their prevalence must have happened. The people generally have not, however, yet reached a pitch of sanitary cultivation fully to apprehend this, but growth is slowly taking place in this direction, and sooner or later will bear fruit.

Commenting on the readiness with which the child's brain takes on morbid action, Dr. Bate observes:—"The liability of an organ like a child's brain, rapidly growing and developing as it is, to take on inflammation and disease is well known, and must be taken into account when considering any plan for the education of children. My own opinion is that no young child should be forced to learn; and that to take tender little youngsters and herd them together in stuffy or draughty schoolrooms for purposes of so-called education, is fraught with danger, not only to their brains, but to their bodies too, for no better plan of spreading infantile contagious disorders could well be devised." Taking this in conjunction with the previous gibe on Board Schools, we fear it is to be concluded that Dr. Bate does not affect these institutions.

In an appendix Dr. Bate describes and gives a plan and elevation of the new mortuary erected at Bethnal-green. The mortuary contains separate rooms for the dead from infectious and non-infectious diseases, and a post-mortem room with necessary conveniences.

REPORT OF THE LOCAL GOVERNMENT BOARD.

The ninth Annual Report of the Local Government Board (1879-80) has issued from the Parliamentary Press. It forms, as is customary with these reports, a portly volume and refers to the last year of the Rt. Hon. G. Selater-Booth's administration. The report is pretty equally divided between the Poor-law and Public-Health work of the Board, while a bulky appendix contains much tabular matter and numerous instructional memoranda and circulars published by the Board during the period to which the report refers. The Public-Health division contains very many things of great interest, a detailed examination of which we reserve for the moment. On the whole, the general impression left by the Report is that the Board in Public-Health matters is shaking itself better into shape—feebly and sluggishly of a certainty, but still tending in a more rational direction. The Board has not the courage frankly to avow (we give it the credit of having the wisdom to perceive) that the difficulties it has had and still has to contend with, are chiefly of its own creation, and so it stands at a disadvantage in its endeavours (such as they are) to get its public-health administrative policy into a right track. Moreover, feeling the force of the apophthegm that boards have neither heads to think, nor hearts to feel, let us be thankful for such indications of amendment as we think we trace in the 672 pages octavo of printed matter now before us.

A VENTNOR OR MALEBOLGE?

Fulham is having constructed within its area a great blessing or a great curse. That is to say, according to local views; for it may chance that the construction is neither the one nor the other, but simply what it professes to be—to wit, a common-place commercial operation. An enterprising dairyman there, in fact, is building a cowshed to contain 100 cows. Now there is nothing necessarily unwholesome about cow-keeping or that should tend to unwholesomeness where the keeping is carried out in the midst of a community of which the sanitary authority does its administrative duties in a reasonably systematic manner. But cow-keepers and sanitary administrators have, unfortunately, the weaknesses of ordinary men, and certain persons living near to the spot where this cowshed is being built, distrusting equally the one and the other, complain that the shed must prove a monstrous nuisance, and, further (but in what manner does not appear), a means of spreading "fever and other diseases" in the neighbourhood—a matter held to be of no little consequence, seeing that schools are being erected by the London School Board, for 1000 children, hard by. On the other hand, it is averred that the cowshed, so far from being a nuisance, will prove an inestimable advantage to the neighbourhood. Is it not well known that the atmosphere of cowsheds is excellent for persons suffering from incipient consumption? Have not physicians in many places, and for many years, been in the habit of sending their consumptive patients to live in lofts above cowsheds, holding that breathing the moist, odoriferous air of the sheds, especially when occupied by the cows, is highly beneficial to their patients? And as to dirty cowsheds, is not the dirt an important element in the beneficial influence of the atmosphere? As a member of the Vestry ingeniously put it when this case was before that body, "the cowshed, so far from being a nuisance, would, if properly managed, become a health-resort." However, the local authority sympathise with the complainants. The building of the cowshed cannot be stopped, nor can the question of nuisance seemingly arise until cows are in it; but the Vestry propose to oppose the granting of a licence for the use of the shed as contemplated.

LONDON "DUSTING."

Every now and then a faint hope arises of some London sanitary authority becoming aroused to the error of its ways as to "dusting," and setting a good example to its brother authorities within the metropolitan area. Some such hope sprang up when, at a recent meeting of the Hackney vestry, Mr. Fitch moved "That, in the opinion of the Vestry, it be now taken into consideration whether it is not absolutely requisite, as a sanitary measure, to avoid the continuance of those centres of infection known as dust-bins; and that the dust and waste of householders should be removed daily, as it is in well-regulated municipalities—such resolution to come in force at the expiration of this present dust contract." But £20,000 a year was held to be too great a sum to pay for the privilege of being included among well-regulated municipalities and the greater wholesomeness of the district, and the motion was withdrawn. Metropolitan ratepayers complain loudly and bitterly of the evils inflicted upon them by imperfect dusting, and so long as they confine themselves to mere complaining without organising measures for controlling the action of their representatives on the Vestries and District Boards of Works, it is unlikely that we shall witness those bodies eager to carry out a reform which presents little to enlist the imagination of ambitious representatives. "Dusting" is a work of repulsive detail, of which the results mainly affect the individual householder. It has not the merits even of street scavenging, which are obvious to all men, and serve the part of whitewashing, so to speak, the metropolitan sepulchre.

WATERED MILK.

A Berkshire farmer pleaded "guilty" at the Marylebone police-court a few days ago of having sold milk diluted with water, but he explained that the water had accidentally got into the milk while the latter was being cooled in a brook. This mode of cooling demands the notice of medical officers of health, for we remember having our attention directed not long ago by a farmer, residing in the same county, to an ingenious arrangement he had made, as he thought, for cooling his milk. He had dammed a brook running through his farm so as to form a pool of sufficient depth to immerse

a milk-churn. To a tree above this pool he had fixed pulleys with ropes, for readily placing the churn in and raising it from the pool. At the time we were there a full churn was suspended in the pool, with its brim just above the surface of the water. The arrangement appeared to be irreproachable, and did not want an element of the picturesque. The brook ran clear and sparkling beneath banks thickly covered with wood; the pool, also bright and clear, was surrounded by trees, and the murmur of the water above and below filled the air with a pleasant sound. But curiosity prompting us to follow up the course of the brook a few yards, there we found, hidden among the foliage, and placed across the stream, the one privy of a populous farmstead! The brook, while it served for cooling the milk, served also for carrying away all that was most revolting of human filth from a numerous household.

A SANITARY MYTH.

Certain questions relating to defective structural arrangements in new buildings, and especially to defective foundations, coming before the Hampstead Vestry on the 30th ult., the chairman observed that they were matters for the consideration of the district surveyor. Whereupon a member remarked that the district surveyor was "a myth." It must be admitted that there is very much to be observed in the new buildings springing up within the metropolitan area, particularly towards the margin, which tends to confirm the conclusion, that in regard to numerous important points of construction of new buildings the district surveyor is, in fact, a myth. How this comes about it is no part of our present purpose to consider, but it would be a clear gain if the public were enabled to discriminate between presumed functions of the surveyor that are mythical and functions that are real.

Both the Holborn guardians and the Marylebone guardians have applied to the Metropolitan Asylums Board for permission to rent the Hampstead Hospital pending the appeal in "Hill v. the Asylums Board," in order to relieve the pressure which now exists upon their workhouse accommodation. They would transfer to Hampstead such occupants of their workhouses as might be fittingly accommodated there. The Asylums Board assented to the application, subject to the approval of the Local Government Board.

The Marylebone Vestry have passed a resolution expressing the deepest regret at the death of Dr. Whitmore, and conveying to the family of that gentleman their sincere condolence with them in their bereavement. The resolution also recognises the great energy, ability, and uniform urbanity with which Dr. Whitmore carried out his duties as medical officer of health. The Vestry further directed that a copy of the resolution, framed and glazed, should be forwarded to the widow and family.

A very fatal outbreak of scarlet fever is reported at Loughton, near Epping. The Local Government Board has sent a medical inspector to the spot to confer with the sanitary authority on the measures to be adopted for arresting the spread of the disease. The schools of the locality have been closed, one of them converted into a hospital, and trained nurses secured to attend upon the sick.

The Halsted Board of Guardians, sitting as Rural Sanitary Authority, at their meeting on the 17th ult. appointed a committee to consider the provision for the Union of hospital accommodation for cases of infectious sickness. It was suggested that two or three cottage hospitals would best meet the requirements of the district.

A curious incident is reported from Olton, near Solihull, in the vicinity of Birmingham. The sanitary authority, on seeking for the source of a nuisance, discovered that a drain on a gentleman's property had been wilfully and carefully blocked with clay, turf, bags, and wood.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

The marked decline in English mortality which occurred in the previous week was scarcely maintained last week. In twenty of the largest English towns, estimated to contain in the middle of this year a population of seven and a half millions of persons, or nearly one-third of the entire population of England and Wales, 4633 births and 3118 deaths were

registered last week. The births were 552, and the deaths 157 below the average weekly numbers during 1879. The deaths, however, showed an increase of 58 upon those returned in the previous week, and were equal to an annual rate of 21·7 per 1000, whereas in the six preceding weeks the rate had steadily declined from 25·1 to 21·3. The lowest death-rates in the twenty towns last week were 14·6 in Plymouth, 15·6 in Brighton, 16·9 in Sheffield, 17·2 in Birmingham, and 18·1 in Oldham. The rates in the other towns ranged upwards to 30·6 in Liverpool, 31·2 in Salford, 34·4 in Sunderland, and 35·3 in Leicester. The high rates in the four last-mentioned towns were mainly due to excessive zymotic fatality. During the thirteen weeks ending on 2nd inst., the death-rate in these towns averaged 23·2 per 1000, against 23·8 and 18·3 in the corresponding periods of 1878 and 1879.

The deaths referred to the seven principal zymotic diseases in the twenty towns, which had been 1009, 912, and 657 in the three preceding weeks, further declined last week to 617; of these, 281 resulted from diarrhoea, 141 from scarlet fever, 68 from fever (principally enteric), and 60 from whooping-cough. The annual death-rate from these seven diseases averaged 4·3 per 1000 in the twenty towns, and ranged from 2·7 and 2·9 in Brighton and London, to 10·4 and 14·3 in Salford and Sunderland. The death-rate from diarrhoea did not exceed 1·4 per 1000 in London, but ranged upwards in the nineteen provincial towns to 4·8 in Leicester, 5·3 in Salford, and 5·4 in Sunderland. Scarlet fever caused more deaths than in any recent week, and showed the largest proportional fatality in Sunderland, Brighton, and Salford. Measles was somewhat prevalent in Leicester. The death-rate from enteric fever was excessive in Salford, Plymouth, and Leeds; and small-pox caused five more deaths in London. The number of small-pox patients in the Metropolitan Asylum Hospitals, which had been 116, 105, and 95 at the end of the three preceding weeks, further declined to 92 on Saturday last; fourteen new cases were admitted to these hospitals during the week, against 6 and 24 in the two previous weeks. The Highgate Small-pox Hospital contained 7 patients on Saturday last.

The deaths referred to diseases of the respiratory organs in London, which had steadily increased from 124 to 199 in the four preceding weeks, further rose last week to 266, and exceeded the corrected weekly average by 42; 149 resulted from bronchitis, and 69 from pneumonia. The annual death-rate from lung diseases was equal to 3·8 per 1000 in London, 5·9 in Liverpool, and 5·6 in Salford.

HEALTH OF SCOTCH TOWNS.

In eight of the largest Scotch towns, having an estimated population of rather more than a million and a quarter persons, the annual death-rate last week averaged 19·6 per 1000, against 18·9 and 18·8 in the two preceding weeks; this rate was, however, 2·1 per 1000 below the average rate in the twenty large English towns. The rates in the eight Scotch towns ranged from 16·8 and 17·4 in Leith and Dundee, to 20·8 and 22·3 in Edinburgh and Paisley. The fatal cases of the seven principal zymotic diseases in the eight towns, which had been 153 and 134 in the two preceding weeks, further declined to 116 last week; they included 46 from diarrhoea, 30 from scarlet fever, 13 from diphtheria, 13 from whooping-cough, 3 from measles, and not one from small-pox. The annual death-rate from these seven diseases averaged 4·7 per 1000 in the eight towns, and slightly exceeded the rate from the same diseases in the twenty English towns. No death from any of the seven diseases was recorded in Perth, while the zymotic death-rate in the other towns ranged from 1·8 in Leith to 4·6 and 7·9 in Glasgow and Edinburgh. The fatal cases of diarrhoea in the eight towns, which had been 69, 53, and 51 in the three previous weeks, further declined to 46 last week, and were equal to an annual rate of 1·9 per 1000, corresponding with the average rate from the same disease in the twenty English towns. Edinburgh showed the largest proportional fatality from diarrhoea among the Scotch towns last week. The fatal cases of scarlet fever further declined to 30 last week, from 45 and 33 in the two previous weeks; 15 occurred in Edinburgh and Leith, and 12 in Glasgow. The 13 deaths referred to diphtheria included 7 in Glasgow, 2 in Edinburgh, and 2 in Greenock. The 11 fatal cases of fever showed a decline of 6 from the number returned in the previous week; 4 were returned in Glasgow, 3 in Aberdeen, 2 in Edinburgh, and 2 in Dundee. The deaths attributed

to acute diseases of the lungs (bronchitis, pneumonia, and pleurisy) were 66 in the eight towns last week, against 68 and 76 in the two preceding weeks; the annual death-rate from these diseases last week was equal to 2·7 per 1000 in the eight towns, against 3·2 in London.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, although again excessive, showed a further slight decline from that which prevailed in the three preceding weeks. The annual death-rate in the city in the four past weeks has steadily declined from 39·3 to 33·3 per 1000. During the thirteen weeks which ended on the 2nd inst. the death-rate in the city averaged no less than 34·6 per 1000, against 21·3 in London, and 21·8 in Edinburgh. The 201 deaths in Dublin last week included 53, or more than 26 per cent., which were referred to the seven principal zymotic diseases, showing, however, a further decline of 10 from the high numbers returned in the three previous weeks; 22 resulted from diarrhoea, 11 from whooping-cough, 7 from fever, 7 from scarlet fever, 5 from measles, 1 from small-pox, and not one from diphtheria. The annual death-rate from these diseases was equal to 8·8 per 1000 in Dublin, whereas it did not exceed 2·9 in London, and 7·9 in Edinburgh. The fatal cases of diarrhoea in Dublin, which had been 44 and 33 in the two previous weeks, further declined to 22 last week, and were equal to an annual rate of 3·6 per 1000; the annual death-rate from diarrhoea in London did not exceed 0·9 per 1000. The 7 deaths referred to fever, including typhus and enteric or typhoid, showed a decline of 3 from the number returned in the previous week. The deaths from scarlet fever also showed a decline; whereas those from whooping-cough and measles were somewhat more numerous. The rate of infant mortality in Dublin showed a further decline from that which had prevailed in recent weeks.

SUMMER DIARRHOEA IN LEICESTER.

It is many years since the exceptional fatality of summer diarrhoea in Leicester began to attract the attention of sanitarians, professed and amateur, and yet during the summer just over the death-rate from this disease in the town has been higher than that recorded in any of the nine preceding years. The deaths returned from diarrhoea in Leicester, which in the nine years 1871 to 1879 had ranged from 265 in 1873 to 60 in 1879, were no less than 343 in the thirteen weeks ending last Saturday, and were equal to an annual rate of 10·6 per 1000. The fatal cases of diarrhoea, which were but 2, 5, and 9 in the first three weeks of July, afterwards rose rapidly to 50 in the second week of August, after which the numbers declined slowly, and were 22 and 24 respectively in the last two weeks under notice. The fatality of other zymotic diseases was not excessive in Leicester last quarter; 43 deaths were referred to measles, 16 to scarlet fever, 13 to fever (probably enteric), 11 to diphtheria, 5 to whooping-cough, and not one to small-pox. In English urban populations more than 80 per cent. of the deaths referred to diarrhoea during the summer are usually of infants under one year of age, and it is not therefore surprising to find that infant mortality was exceptionally high in Leicester last quarter. During the thirteen weeks under notice 456 deaths of infants under one year of age were registered within the borough, against 207 and 179 in the two preceding quarters of the year; these deaths were equal to 346 per 1000 births registered. The proportion of infant mortality measured in this manner averaged 238 per 1000 in the twenty towns last quarter; it was equal to 212 in London, whereas it averaged 263 in the nineteen large provincial towns. With regard to the annual death-rate from diarrhoea last quarter, we have seen that it was equal to 10·6 per 1000 in Leicester; it averaged 4·4 in the twenty large towns (against 2·3, 4·2, and 1·2 in the three preceding corresponding quarters), and while it did not exceed 3·3 in London, it averaged 5·6 in the nineteen large provincial towns. The question naturally recurs, Why was the death-rate from diarrhoea in Leicester last quarter nearly twice as heavy as the average rate from the same disease in the nineteen provincial towns, and more than three times as great as the rate that prevailed in London during the same period? The average weekly number of deaths from diarrhoea in Leicester did not exceed 6 in July, while it increased to 35 in August, and was 36 during the five weeks ending October 2nd. It is worthy of note that nearly 99 per cent. of the causes of deaths regis-

tered in Leicester last quarter were either certified by registered medical practitioners or were the subject of inquests. It is strange, indeed, if under those circumstances some light cannot be thrown upon this annual sacrifice of infant life in Leicester. Two facts bearing upon this subject may be taken as already proved—namely, that infant mortality in Leicester is remarkably excessive from other causes as well as diarrhoea, and that Leicester is not a generally unhealthy town, inasmuch as the rate of mortality prevailing among its population above infancy bears very favourable comparison with that in most of the other large English towns. It should not surely be impossible to discover why infant mortality in Leicester is so high, while the death-rate at all other ages is comparatively low.

HEALTH MATTERS GENERALLY AT HOME AND ABROAD.

DR. BEDDOE'S ADDRESS.

Dr. Beddoe's address as President of the Health Department of the Social Science Congress held in Edinburgh covered a wide range, and presented much matter for thought. In especial he impressed upon his hearers somewhat more enlarged views of the influences and agencies which have concurred in lowering the death-rates of certain sections of our population than have lately obtained to any considerable extent among sanitary workers, and he showed the erroneously limited fashion in which the term "preventable" was generally made use of as applied to disease. Taking the position that man is seen at the healthiest (physically) when he is most scattered and bears the least proportion to surrounding nature, he dwelt upon the steadily increasing tendency in civilised countries to the aggregation of people in towns, and the numerous complex questions touching the physical future of our communities arising therefrom. This "urbanisation" of man (to coin a convenient phrase for the moment) tends, Dr. Beddoe thinks, to a slowly progressive physical deterioration, but one, perhaps, not beyond the reach of arrest, if the problem be rightly apprehended. There is excellent promise of this in the appreciable effects of the great moral and social changes which have occurred during the century—the protection afforded to young children in mines and manufactures, the spread of education, and the generally more comfortable state of life of the masses—changes which have exercised a clearly measurable influence upon the well-being of the people. We are only now beginning to see our way with clearness to definite methods of dealing with the deteriorating influences peculiar to towns. We are here confronted with difficult questions of organising for the best our sanitary administration, ordering for the better our habitations, and securing reasonable purity of water-supply. We have, moreover, to reconcile our objection to the multiplying of laws (with the accompanying evil of multiplying opportunities for jobbery) with the obvious insufficiency of existing laws. Clearly, however, the liberty of builders and plumbers to perpetrate unrestricted mischief in our dwellings must be restrained, whatever our theoretical objections may be to increasing and harsher legislation on sanitary subjects. But legislation to be effective cannot pass beyond the knowledge of the persons legislated for, and our soundest improvements in sanitary and other matters affecting the physical welfare of the people will be those which keep pace with their growing knowledge. Hence, underlying all true progress in the health-reform of the kingdom, must be the sound sanitary education of the masses.

THE SOCIAL SCIENCE CONGRESS.

The Health Department of the Social Science Congress has been busily engaged in Edinburgh under the presidency of Dr. John Beddoe, F.R.S. The question of "What are the best areas for sanitary purposes, and how far should there be a revision of the mode of electing and continuing the services of the officers under the Public-Health Acts?" has been discussed, and papers on various matters concerning the public health read by Mr. Sherif Spens, Dr. Hardesty (Galashiels), Mr. Kenneth McLeod, Baillie Colston, Sir John Rose Cormack, M.D., Dr. Littlejohn, Mr. Johnston, and others.

MR. SYMONS ON HEALTH-RESORTS.

Mr. Symons, professedly seeking information on our health-resorts at the Congress of the Sanitary Institute, Exeter, contrived to raise a vision of horror which would daunt any but the most ardent enthusiast in such a subject. Discoursing on some deficiencies in our knowledge respecting health-resorts, he showed that these were so numerous and so big that it would require, at a reasonable guess, about a generation of physicians, water-analysts, geologists, meteorologists, sanitary engineers, and statisticians to lay a foundation for making them good. It is some relief to find that the mixed physician and sanitary worker, the "sanitarian" properly so-called, as it is the habit now to designate him, is not mentioned, and that he may go on his way rejoicing; in other words, enjoying health-resorts from a lower plane of observation than Mr. Symons would recognise. He has a scheme for forming a public body, "perhaps a committee comprising representatives of the leading medical, sanitary, and scientific societies," to undertake the task of preparing an exhaustive account of our watering-places, medical, water-analytical, geological, meteorological, and so forth, and for giving the results to the world. It is a scheme which may be commended to the Institute as having abundant room for the exercise of its multifarious functions for an indefinite period of time to come, and which when (if ever) completed will at least form an important help to filling up our library shelves. We sympathise with Mr. Symons's aspirations in the matter, are prepared to be grateful for all the information he can get for us or give us on the subject, but we doubt his having seized upon it quite accurately. The number of places in this country regarded as health-resorts in the sense of being resorts for invalids in search of health are not very numerous, and fall far below those health-resorts which are frequented by persons seeking rest or recreation—most commonly recreation. In the one case we have to deal with a medical question; in the other with a question of individual tastes as various as the different modes in which rest and enjoyment are sought. In the first-named case, the health-resort proper, so to speak, information of the sort Mr. Symons seeks is desired in the interest of the invalid and of medical practice; in the second-named case, the requirements of the visitor are met by a reasonable assurance that the local sanitary arrangements are such as every authority is empowered to make. True, the "health-resorts" of the two classes may unite in one and the same place, but the distinctions noted between them are sufficiently obvious to make discrimination easy. A work of the kind suggested by Mr. Symons limited to the "health-resorts" proper would be a welcome addition to our literature; but extended indiscriminately to all places which have or may aspire to the name would, we venture to think, be a huge error and useless labour. Let us hope Mr. Symons will somewhat moderate his views in this direction.

SEWER VENTILATION AND SANITARY PROTECTION.

The recent correspondence in *The Times* on sewer ventilation chiefly brought to light the astonishing ignorance which exists among some of the more highly educated classes of society of certain of the most rudimentary sanitary matters. It was obvious that the majority of the writers had not given a moment's care to ascertain if anything definite was known on the subject on which they so unhesitatingly wrote and advised, and that they had not the remotest conception of the functions of sanitary authorities in the matter. In fact, the difficulties and dangers which troubled them were for the most part imaginary. If, however, the correspondence should give an impulse to the formation of "Sanitary Protection Associations," good will result from it. An incidental bit of information, contributed during the correspondence by "A Physician," writing from Edinburgh, deserves to be had in memory when sanitary reform comes to the front again in England. He tells us that the northern capital has an officer of which the like does not exist in English towns. He is called the burgh engineer, but his duties appear to differ in several important respects from those of the engineers and surveyors of our local authorities. He is "paid by the rates," says the writer, "and his services are at the call of every ratepayer as occasion arises. Any person suspecting that something is wrong with his drains may send up to the burgh engineer's office, and is always sure of courteous attention. Within a day or two of such application a competent person is sent

down to inspect the premises, and, if necessary, the pavement is taken up and a thorough investigation made. If nothing is found to be wrong, the householder has official assurance to that effect; and if, on the other hand, there are real grounds of complaint, the matter is taken up by the burgh engineer, who notifies the landlord that such and such alterations must be made; and if these are not quickly carried out the work is done by the burgh engineer's men at the landlord's expense. For all this no fee whatever is charged, and of every such case a record is kept at the office, so that on any future occasion it is easy to ascertain exactly what has been done. A general oversight is also given to all new buildings, and I believe that none can now be erected unless the drainage and water arrangements are satisfactory to this most beneficent despot. Why such an officer is not appointed in every town in the kingdom is to me a mystery, and I hope that the good example of Edinburgh will speedily be widely followed in this respect." We hope so too.

DIPHTHERIA IN RUSSIA.

From 1877 to 1880 diphtheria has been very fatally prevalent in the district of Tchiguirine, government of Kiew, the number of the sick from the disease sometimes having reached (as reported) no less than 6000. Under these circumstances, the medical assistance usually provided for a district—namely, one physician with six assistants—proved lamentably insufficient, and M. Soukatchew, the physician for the district in question, devised a mode of relieving this difficulty. He proposed to form a staff of women willing to give their help for the purpose, to instruct them in the general mode of treating a case of diphtheria, to furnish them with medicaments, and distribute them in the villages where the disease appeared and where proper medical care could not be had. He proposed, in fact, to train at the moment a corps of medical nurses, who would serve after a fashion as substitutes for medical men, where these could not be obtained. This proposition was submitted to the local authorities, and it was willingly acted upon. M. Soukatchew himself undertook the training of the women who volunteered, and expressed himself highly satisfied with the aptitude of his pupils. They were instructed to observe the signs of the malady, to use certain modes of treatment, to separate the sick from the healthy, to disinfect houses (burning infected articles of clothing), and to keep the physician informed of the occurrence of new cases. The plan fell in so well with the notions of the inhabitants of the district that, when at a later period certain sanitary detachments consisting of trained sisters of charity reached the district, they manifested a marked preference for the extemporised sisters.

SPLENIC FEVER.

A curious conflict of opinion is reported from Birkenhead between the officers of the sanitary authority and the officers under the Contagious Diseases (Animals) Act as to the unwholesomeness or not of a carcase, and as to the cause of death of the animal. The slaughter-house inspector, supported by the medical officer of health and a veterinary surgeon, expressed the opinion that the animal (an American bullock) had died of splenic fever; the inspector under the Contagious Diseases (Animals) Acts, the chief meat inspector at Liverpool, two veterinary surgeons, another inspector, and two old butchers, averred that the meat was good, and that the animal had not suffered from splenic fever. The stipendiary magistrate, who had been asked to condemn the carcase, gave the owner the benefit of the doubt, and refused to do so.

The *Globe* of Wednesday states: "The coroner's inquiry into the causes of the typhoid fever epidemic at Rochdale was resumed yesterday. Eleven deaths from fever, and fifty-two cases of infection, are reported to have occurred in the borough during the past two months, and in a considerable number of these cases it was shown that the milk taken by the deceased had been supplied from a particular farm. The jury were of opinion that the evidence adduced was not sufficient to prove from what particular cause the fever arose, but they considered it to have arisen either from infected milk or defective sewers."

At the suggestion of the medical officers of health of the Wandsworth and Clapham District, the Board of Works have resolved to send a memorial to Sir W. Harcourt, urging

that in all cases of uncertified death, where no inquest is held, an investigation should be made, and a certificate of the cause of death given, by the medical officer of health of the district before burial. The Board also resolved to forward a copy of the memorial to each of the vestries and district boards of the metropolis, with a request for their support in the matter.

According to a statement on unhealthy lodging-houses, recently presented to the French Academy of Medicine by M. Marjolin, there are more than 2000 lodgings in the outlying quarters of Paris which derive their light from corridors only, while 3000 have no chimneys. Families of five, six, or ten persons have been found living in one room a few metres square, a single small bed sometimes serving for as many as four or five children.

REPORT OF THE FRENCH MEDICAL COMMISSION ON PLAGUE IN ASTRAKHAN,

1878-79.¹

THE long-expected report of the Commission—or rather Commissioner—despatched by the French Government, early last year, to make inquiry into the outbreak of plague on the banks of the Volga in the government of Astrakhan, has at length come to hand. It is not easy to understand why the publication of the report should have been so long delayed; but such disappointment as may have been experienced from the lateness of appearance is amply repaid by the greater elaboration which it has been practicable to give to the report in consequence of the delay.

The Commissioner appointed was Dr. C. Zuber, surgeon-major, joint professor of Epidemiology in the School of Val-de-Grâce. He left France for the scene of the outbreak of plague in Astrakhan on the 22nd February, 1879, and, in common with the other foreign medical commissioners (as also the Russian), got there when the outbreak was over. He nevertheless employed his time so well during his stay in the lately infected district that he has been enabled to pen a report which, for comprehensiveness and lucidity, certainly carries away the palm from the other reports of the outbreak which have hitherto appeared. We propose here briefly to glance at the general results of Dr. Zuber's inquiry, reserving until another occasion observations on disputed questions arising out of it. We have still hope that the Russian Government will eventually publish the materials they have in their possession relating to the outbreak. That Government, it is understood, contemplated a detailed medical inspection of the delta of the Volga and parts of the littoral of the Caspian, with a view to the discovery of any prevalence of larval or other forms of plague, and it may be that the publication of the official report of the outbreak on the Volga is postponed until the results of this more general inspection can be given.

With regard to the locality of the outbreak on the Volga, the distribution of the disease on both banks of the river, the period of its occurrence, its duration and probable fatality, Dr. Zuber is in accord with previous reporters. He concurs also with them in regarding the disease as true bubonic plague, and he repudiates the notion that it was the black or Indian plague. He lays especial stress upon the tendency of the disease to prevail as a series of house epidemics, killing the majority of the inhabitants of the houses attacked, the mortality ranging from 80 to 95 per cent. Differing in this respect from the British medical commissioners, he regards the spread of the disease by contagion as the most characteristic phenomenon of its diffusion. On the question of origin of the outbreak, moreover, he comes to conclusions widely diverse from those of both the British and the German Commissioners. He thinks it impossible to admit the autochthonous origin of the disease, advocated by Colvill, but spoken of more guardedly by Payne, and he thinks that theory of importation from Mesopotamia by way of the seat of war in Asia Minor, through the intermedium of infected spoils carried to the banks of the Volga by re-

¹ Une Mission Médicale en Russie. La Peste du Gouvernement d'Astrakhan en 1878-79. Rapport présenté à M. le Ministre de l'Agriculture et du Commerce. Par le Dr. C. Zuber, Médecin-Major, Professeur Agrégé d'Epidémiologie, à l'Ecole du Val-de-Grâce, Baillière et Fils.

turning Cossacks (as thought possible by Hirsch), inconsistent with the ascertained facts, and in the highest degree improbable. On the other hand, he regards the hypothesis of an importation from Persia as supported by well-established facts, natural and demonstrable. The frequency of the communications between Astrakhan and Persia, the maritime nature of these relations, the relatively small distance between the two countries, and the insufficiency of their quarantine establishments, all tend, he thinks, to support this hypothesis. Moreover, the presence of "abortive plague" in Astrakhan, and its probable continuance there until 1879, furnish, he believes, confirmatory evidence that the plague on the Volga was derived by importation from the plague previously prevailing in the southern littoral of the Caspian in Persia.

The last word is not yet said on this outbreak of plague on the Volga, and even as we write we have before us certain new contributions of Dr. Tholozan to the literature of plague, which will render necessary a reconsideration of some of the positions taken by Dr. Zuber.

THE SERVICES.

VOLUNTEER AMBULANCE DEPARTMENT.—INSPECTION OF THE 7TH SURREY AMBULANCE CLASS.

The class of volunteers belonging to the 7th Surrey Rifles, who have lately undergone a course of instruction in ambulance and stretcher drill by Surgeon Cyril Lloyd Jones, the regimental surgeon, was inspected on Saturday last at their head-quarters, Kennington-lane, by Surgeon-General A. Shelton, head of the Medical Branch, War Office. The class went through the different evolutions of stretcher drill, and was examined in surgical assistance and the application of dressings, bandages, splints, &c., all of which were skillfully and expeditiously performed. Surgeon-General Shelton congratulated the class most warily on their efficiency, which manifested great care and labour on the part of the instructor, the zeal and regularity which the members had shown in their attendance in the class-room, and their aptitude for the work. Major Bowen, who with the Adjutant, Lieutenant Maclure, of the London Scottish, the Hon. Secretary, and other officers received the Surgeon-General, proposed a vote of thanks, which was most cordially given, to the Surgeon-General for his kindness in making the inspection.

We are requested to announce that the next class of instruction in volunteer ambulance and stretcher drill will commence on Wednesday, October the 13th, at the Guildhall, at 7.30 P.M., and will continue each Wednesday till the end of the year. Application should be made to Lieutenant A. Maclure, London Scottish.

To be Surgeon-General—Deputy Surgeon-General Frederick Freeman Allen, C.B., of the Bengal Army.

ADMIRALTY.—Staff Surgeon Patrick Keelan has been promoted to the rank of Fleet Surgeon to Her Majesty's Fleet, with seniority of 2nd inst. Surgeons William Deacon Isaac and Christopher Harvey have been promoted to the rank of Staff Surgeon in Her Majesty's Fleet. The following appointments have been made:—Surgeon Christopher Pearson, M.D., to the *Crocodile*; Surgeon Robert Redford to Haslar Hospital; Surgeon John Arthur Langdon, additional, to the *Duke of Wellington*.

HOSPITAL REGISTRATION.

A MEETING for the purpose of considering the question of uniformity of registration in the metropolitan hospitals was held at the King's College Hospital, on Wednesday, Oct. 6th; Dr. Sidney Coupland in the chair.

After a few introductory remarks, the chairman called on Mr. Howlett to open the discussion.

Mr. HOWLETT first proceeded to explain the causes which had led to the calling of the meeting, and then went on to point out the methods of registration at present in working at the different hospitals, which were as follows:—On the medical side—1. Cases recorded by the registrar (two hos-

pitals); 2. Cases recorded by house-physicians, the index alone being kept up by the registrar (four hospitals); 3. Cases taken by students subject to supervision by the registrar (five hospitals). On the surgical side—1. Cases recorded by the registrar (six hospitals); 2. Cases taken by students, supervision by registrars (five hospitals). He then proceeded to draw attention to the points of merit or the faults of the different systems, laying special stress on the want of control over students in those instances in which the students took a part in the case-taking; and also the difficulty of obtaining access to the notes under the circumstances in which the case books or notes were not kept either in the ward or by the patient's bed. It was also shown that the Pathological reports were kept in three different ways. 1. A report of the post mortem being added to the ward notes. 2. An abstract of the ward notes being attached to the Pathologist's report. 3. The Pathologist's report entered in a separate book, reference only being made to ward notes by vol. *x*; p. *y*. The issuing of annual reports was then briefly alluded to, and their direct bearing on the accuracy of the ward notes. It was suggested that the registrars should form themselves into an association which should hold meetings two or three times a year, at which any alterations or improvements in the method of registration could be discussed, and the attention of registrars drawn to the working out of any special point.

Dr. MAHOMED (Guy's) considered that it would be impossible to establish anything like a uniform system of registration, and of the different methods now at work he was inclined to think that one the best in which students were allowed to take part, but at the same time he was strongly in favour of registrars having complete control over the students.

Mr. SYMONDS (Guy's) was of opinion that it would be better to allow students only to keep up the daily records of the cases, and that the actual taking of the case in the first instance should be the duty of the registrar. With regard to the suggestion of forming an Association of Registrars, he considered it a good one, but feared that there would be a possibility of registrars being overburdened with work, as it was likely that the Pathological or some other Society might send down a request to the Registrars' Association to investigate some point.

Mr. MULLEN (London)—who stated he had experience of the two methods of registration: (1) in which the registrars record the case; and (2), in which the students performed those duties—was strongly in favour of the first method, and objected as strongly to the registrars having any control or connexion with the students in the work of note-taking.

Mr. CRIPPS (St. Bartholomew's) also preferred that the registrars should record all cases, and stated that at St. Bartholomew's the surgical registrars had no difficulty in recording two hundred cases each. He alluded to the faulty method of indexing diseases generally employed, and suggested that if an association of registrars were formed that this should be one of the first points to which attention be given.

Dr. DUNBAR (St. George's), Dr. GABBETT (London), and Dr. WILLCOCKS (King's), also took part in the discussion, the general impression being that it would be impossible to establish a uniform method of registration, but that an Association of Registrars would go a long way in mitigating the present evils, in that they could make suggestions for the working, or direct attention to any special point.

Mr. HOWLETT then proposed, "That an Association of metropolitan and provincial hospital registrars be formed, which shall hold occasional meetings for the general supervision of the work of registration." Mr. CRIPPS seconded the motion, which was carried unanimously.

The meeting then adjourned with a vote of thanks to the chairman.

The following hospitals were represented at the meeting—viz., St. Bartholomew's, St. George's, Guy's, King's College, London, Middlesex, University College, and Westminster. The first meeting of the new Association will be held at King's College Hospital, on Wednesday, November 3rd, at 8 P.M., to elect officers and establish a uniform index.

ST. THOMAS'S HOSPITAL MEDICAL SCHOOL.—Mr. Robert Lawson has obtained the Entrance Scholarship in Natural Science of the value of £100, and Mr. Herbert Lankester that of £60.

Correspondence.

"Audi alteram partem."

HYPODERMIC INJECTIONS OF MORPHIA IN CHOLERA.

To the Editor of THE LANCET.

SIR,—In justice to the whole medical profession in India, I hasten to make public what I know of our experience of the above-named treatment in Asiatic cholera, as Mr. Hardman in his exceedingly interesting communication to your columns of the 2nd inst. seems to desire. I believe I was the first to try so obvious a mode of treatment in 1865, with the *post hoc* result that six cases out of fourteen got well. This you were good enough to publish in THE LANCET in 1872, and was first made known in Deputy-Surgeon-General Murray's compendious "Report" on Cholera. The average success is scarcely above the usual one in severe epidemics. These cases, also, were all of very severe type. But most often deaths were, as usual, in the secondary fever stage. How far this was the result of the treatment is uncertain, for fatal *coma-vigil* is a common ending in the malignant disease. Reaction took place in more than half the fatal cases, and I have always found the morphia injection favour it. But it is of much more interest to inquire whether the cases cited by Mr. Hardman with so much careful accuracy were cases of choleraic diarrhoea or rather (for the term is now abolished in official reports) of the diarrhoea stages of true cholera. For if "choleraic diarrhoea" mean simply a diarrhoea bearing a certain resemblance to cholera, and that is the most likely to be the case, morphia is the remedy which Mr. Hardman paints it to be. Still, although it is almost certain that diarrhoea simply resembling cholera cannot become such, nevertheless morphia (of course, hypodermically), by diminishing exhaustive discharges and obviating blood-thickening, and perhaps as a stimulant, &c., practically, and combined with other remedies, is found to be one of our chief resources. It has been used, abandoned, and returned to over and over again. But it is not an antidote to the cholera poison (or force, as some thinkers have it in the sense that heat and electricity are forces). Mr. Hardman well and truly describes the features of diarrhoea resembling cholera, but unconsciousness is noted in the collapsed stage of only three out of the thirteen. Again, cramps were only noted in five cases. Cramps are also seen in bilious diarrhoea, &c., and collapse (mentioned in three of the cases) in many diseases. Rice-water stools, which are quite *sui generis*,¹ are only mentioned in one case. The purging in three others is either "watery and colourless" (this is quite different from rice-water) or "yellowish," the other dejecta apparently were merely loose, "violent purging," &c. None of the cases presented the peculiar burning anguish over the præcordia, nor the suppression of urine, so universal in cholera. But whether the disease were cholera (at least in some of the cases) or not, the treatment does Mr. Hardman great credit. The reason why it is not so successful in malignant cholera is that it is not alone "the purging that kills," I fear; I say it with the utmost deference. It is not, at all events, the mere loss of water and salts that kills, for intravenous injections have been extensively tried since Mr. Hamilton's experiments in Edinburgh in 1833. I injected large quantities of warm water subcutaneously, not into the veins, after the plan suggested by a surgeon in Bengal. As in Hamilton's cases, every symptom disappeared only to return and kill before we had time or heart to inject more. I think I sent you the cases. It is true this man had long been troubled with chronic bronchitis and embarrassed heart. Nevertheless, as I saw a gentleman who never gave opium lose all his cases (16), and as the most wonderful recoveries sometimes follow a full opiate, purging must be allowed to be a factor in assisting the fatal collapse. If opium simply locked up the poison and caused subsequent uræmia, then all the cases taking opium would get worse and die, in a severe type of the disease, which is, as shown by Macnamara and most unprejudiced writers, utterly at variance with experience. At the very time that the anti-sedative practitioner lost all his cases a col-

league saved two "without treatment," he said, but when hard pressed, he allowed that "of, course, that they had had opium at the first onset." I fear that the undue dread of this medicine has made us unduly sparing of it. I have known a gentleman severely reprimanded for using it. This was in the Madras Presidency, he told me. It seems almost incredible. A soft pill (to ensure its retention by gravity, Wylie's) of calomel should be given with any injections, to encourage the depurative functions. Chloral cures cramps, but does not relieve capillary spasm in the lungs, nor, apparently, does nitrite of amyl (not extensively tried). Injection of ammonia, if strong enough to do good, causes such terrible sloughing in cholera as to be practically useless, and in any case does not seem to have had a pronounced success. I saw numbers die, after reaction, under its use. I injected bromide of ammonia late in one case (but it was a relapsed one) without appreciable effect. Diuretics, &c., must never be neglected. The cold douche helps reaction. I have not seen a case subsequently. Since my first experience as resident medical assistant in a temporary cholera hospital in England I have seen five epidemics in India, besides constant sporadic cases, which must be my excuse for troubling you, and writing too dogmatically.

I beg to remain, Sir, yours truly,

C. MACDOWALL, F.R.C.S.E., &c.

Bombay Army.

INTESTINAL OBSTRUCTION.

To the Editor of THE LANCET.

SIR,—I have just read Dr. Lambart's case of intestinal obstruction, published in your journal of June 26th, 1880; and think that that gentleman will not object to an account of the experience of an Indian medical officer on the same subject, which I shall make as concise as possible.

Subsequent to my commencing practice in India, and before I had read Dr. Brinton's monograph on this subject—i.e., from 1859 to 1865—very many cases of intestinal obstruction, including intussusception, came under my care, as this disease is very common among native troops, who eat only once or twice daily, and then are apt to gorge themselves with, often, indigestible, badly cooked food. Between 1859 and 1865 my treatment for such cases was castor oil internally—both by mouth and, mixed with a pint or so of warm water, by rectum—followed by calomel and opium, with, externally, fomentations, &c., and when everything else failed injections of air through the rectum. In most of the cases there was swelling—generally localised to right side of abdomen—or when there was, as often happened, general tympanitic distension of the abdomen, this enlargement was more prominent and defined on one side of the abdomen than on the other, which side was also the almost exclusive seat of the pain. In some cases blood was passed per anum, but frequently none was thus passed; vomiting soon ensued in most cases, and was, after a time, of a faecal character; all of such cases proving fatal—i.e., cases with faecal vomiting. In the class of cases now before my mind the symptoms were quite different from those observed in colic, and fever set in almost with the pain, which was always increased by the slightest pressure.

In 1865 I read Dr. Brinton's monograph, carefully studying the (1) mechanism of the disease (i.e., its natural history), its (2) pathology and (3) treatment, as is so beautifully, clearly, and ably described in the work referred to; and, as the monograph can be easily had at any medical bookseller's in England, I need scarcely refer further to the above three points here. Of course, in the treatment solid opium by the mouth, pushed to its most extreme limit compatible with safety from narcotism—so as to completely paralyse the affected part of the bowel—is the main principle of the treatment, as thus rest and time are allowed sufficient to permit of the invaginated portion of bowel sloughing off and of a break in continuity being prevented by the lymph, which has been previously thrown out, gluing together the upper and lower ends of the affected portion of bowel; the slough being carried off with the other contents of the bowel, and the continuity of the tube being restored by the removal of the invaginated portion thus shed. As in Dr. Brinton's cases, I found from thirty to forty days necessary for this process to take place, and in the interval only concentrated fluid nourishment in small quantities at a time was given, and by the mouth also. From twelve to twenty

¹ I think it was Sir Joseph Fayrer who produced in dogs something like rice-water dejecta by acute poisoning with arsenic.

grains of solid opium were sometimes given in twenty-four hours, although, generally, a smaller quantity sufficed. After a few weeks the patients complained of the pills (opium) purging them, which was really because about then large black and often fetid stools were passed. In fact, the first stools were remarkably copious with large scybala, for no other drug was given, and I cannot, now, have treated less than two hundred such (as the latter ones) cases, not one of which has terminated fatally. Other medical officers—several years since, before Dr. Brinton's work was generally read—have at my suggestion tried this treatment in similar cases and with equal success.

I am, Sir, your obedient servant,

CHARLES P. COSTELLO,

Surgeon-Major, Bengal Medical Department,
Officer in charge, 1st Goorkha, L.I.

Jagdallack Kotal, Afghanistan, July 27th, 1880.

CHIAN TURPENTINE IN CANCER.

To the Editor of THE LANCET.

SIR,—I hope I may be excused if I decline to reply to the attack made upon me by Messrs. Hickinbotham and Tait in last week's LANCET. In Birmingham, where all of us are known, there is no need for reply. To readers at a distance I may say that I cannot hold myself responsible for the failures of Dr. Hickinbotham and Mr. Tait, who unite with curious eagerness to testify that *they* can do nothing with a remedy which in other hands has proved itself valuable. As it seems that their experience extends over a very short period, it is not likely to be accepted as weighty, still less as conclusive.

With your permission I shall, from time to time, continue to report facts, which come under my observation; and I shall venture to ask candid members of the profession to do the same, as the truth can be established only by experiments widely conducted, undertaken without prejudice, and extending over a sufficient period to afford a real test of the value of Chian turpentine in cancer.

I am, Sir, yours obediently,

Birmingham, October 10th, 1880.

JOHN CLAY.

THE HEALTH-RESORTS OF THE HARZ MOUNTAINS.

(From our *Roving Correspondent*.)

WHEREVER fresh air, temptations towards wholesome exercise and abundant opportunities for the relaxation of the mind are to be found, there may health also be met with, and since these health-giving opportunities all exist in the Harz, together with some few more special aids towards the recovery of tone, lost either through disease or undue application to professional work, we propose to give a brief sketch of the chief characteristics of a district which is not perhaps one of those which is most intimately known to British travellers.

The Harz is easily reached, and if the traveller be not afraid of a thirty-six hours' voyage, I should advise him to follow my example and go direct from London to Hamburg by steamboat. If the weather be favourable no better beginning to a holiday can be imagined than the enforced idleness, the sunlight, and the fresh air, which are the concomitants of a lucky voyage, but I say nothing of the horrors of an overfilled packet in rough weather, when ports are closed and the unhappy passengers spend their time in the stifling atmosphere of a prison lazaretto, in which that "chance of being drowned" of which Dr. Johnson spoke becomes in no short time a consummation devoutly to be wished. The visitor to the Harz will use his own judgment in such a matter, for it can also be approached with great readiness *viâ* Calais and Cologne, or by half a dozen other routes, of which he can take his choice. From Hamburg to Brunswick is but a short journey, and from the latter place to Harzburg, the most north-westerly point in the mountains, where accommodation is to be found, may figuratively be spoken of as "a mere step."

The Harz is a mountainous forest, about fifty miles long and twenty miles wide, running obliquely from the north-

west to the south-east. It rises with strange abruptness from the sandy plain of North Germany. Round it is a girdle of railway which connects the important towns of Goslar to the west, Halberstadt to the north, Halle to the east, and Nordhausen to the south. From the northern half of this iron girdle run branch lines southward which just touch the mountains at Clausthal, Harzburg, Wernigerode, Blankenburg, Thale, and Ballenstedt, and serve to carry travellers and bring away the wood, iron, lead, manganese, silver, and other minerals which the district produces. A railway is being talked of to go right through the Harz from Nordhausen to Ballenstedt, but this enterprise is as yet in an embryonic condition, the surveyors having only just commenced their work.

I can add very little to the two words used to describe the Harz at the beginning of the last paragraph. It is a "mountainous forest." The mountains are none of them very high; the famous "Brocken," which towers considerably above its fellows, being about the height of Snowdon, and being almost the only one which is not wooded to its summit. The forest is everywhere surpassingly beautiful, and for the variety of foliage to be found therein it greatly excels the Black Forest, and rivals the lake districts of Cumberland or our own New Forest. The oak, beech, birch, and mountain ash are to be found in great quantities; and pines, it is needless to be said, are everywhere. There are no lakes, but rippling mountain torrents make music upon every side. The soil is almost everywhere porous, being composed of granitic and shaly detritus; and this fact, coupled with the universally undulating nature of the ground, ensures that the effects of rain are not of long duration, and that out-of-door exercise is usually possible the moment that it is dry overhead. As in all northern mountainous districts, rain is not uncommon, but it is neither so frequent nor so severe as always is the case at Killarney, and nearly always in Cumberland. The absence of lakes, the insignificant size of the rivulets, and the great number of open-air restaurants scattered here and there all testify to the fact. The two great industries of the district are wood-cutting and mining, the latter having its headquarters at Clausthal. The climate is a temperate one, with perhaps rather more sun and certainly less rain than we are accustomed to at home. The almost entire absence of any of the more delicate fruits (even in September) and vegetables from the country markets is an indication that we are in a country verging on the barren north, while an occasional glimpse of a snow-plough by the roadside, or of a disused sledge hanging from the beams of an inn coachhouse, serve to remind one that here the rigours of winter are such as we in England have no acquaintance with.

Before going into details with regard to any one of the resorts of the Harz mountains, it may be well to state what are the good and bad points (from the point of view of the traveller and health-seeker) of the district generally. To take the good points first—we may say, *imprimis*, that the inhabitants appear to be universally obliging, scrupulously honest, and deferentially polite, and I feel sure that a lady might travel throughout the district without suffering molestation or incivility of any kind. The roads are everywhere magnificent, and well-kept footpaths for the convenience of visitors lead to all the most picturesque and interesting points. The average German does not appreciate scrambling over rocks and boulders. Quiet contemplation and rumination are his natural occupations, and he prefers to take his pleasure and his ease together, and is ready to climb to the summits of the hills provided he can do so leisurely and comfortably without having to fling away his cigar, or being obliged to discontinue his disputations or his ruminations for the sake of looking after the safety of his limbs. The points of view are all railed in, and finger-posts are so plentiful that in the depths of the forest it is not possible to lose one's way. This ample provision of paths is a great boon to ladies and persons who are not blessed with a great amount of physical vigour. Even the most determined pedestrian or climber is not allowed in the Harz to run the risk of exhaustion for want of food, for wherever he is likely to be tempted to press forward his footsteps, there he is equally sure to find the inevitable restaurant and gasthaus; and, indeed, the lively German keller, flitting to and fro with pyramids of glittering golden beer, seems as native to the soil as the grasshopper or the dragon-fly. The omnipresence of "refreshment" is a kind of thing to which in England we are apt to apply the term "cockney," but the cockney is often a practical indi-

vidual, and some of his habits are upon occasions acceptable. It often seems, however, in Germany, as if mine host were the absolute proprietor of the beauties of nature, and that those visitors who are not endowed with a perennial appetite and an insatiable thirst were scarcely welcome.

The drawbacks to travelling in the Harz, especially to invalids, are mainly two, and these two are most important—viz., the hotels and the food.

In the first place, it is imperative that the hotel selected by a traveller in search of health should be quiet, so that sound sleep with an open window shall be possible. How rarely this is to be found every traveller knows to his sorrow. The hotels generally abut upon the village street, and the village street is always paved—or rather, we should say, covered—with huge boulders roughly placed together. Along the streets a country timber waggon will make a noise like thunder, and a light empty truck drawn by galloping dogs will produce a sound like a thousand policeman's rattles "sprung" together. He who leaves the noise of London to enjoy the peaceful quiet of a German village will often find that he has by no means improved his condition. As the villagers begin to stir soon after four o'clock in the morning, our traveller will perhaps seek his couch at an early hour; but floors and walls being thin, and the houses being to a great extent constructed of wood, he will find that sounds of various kinds, and all equally disturbing, find their way to his heavy pillow. The guests downstairs are drinking a last "toast," and growling a last pæan in praise of Vaterland and Kaiser, and when this is finished the inhabitants of the rooms on either side seek their respective beds with no little lumbering, and stamping, and clearing of throats. Then the arrivals by the last train have to be stowed away, and their boxes have to be carried up creaking stairs and along resounding passages, and then when the last "gute nacht" has sounded, and the last door has slammed, the worried traveller may sink to rest for three or four hours' quiet repose, always provided that the big dogs of the village do not take a fancy to bay the moon, or the cats of the neighbourhood be not minded to go a-courting. If it be laid down as a rule that voyagers should avoid hotels which abut upon the village street, or which are situated too near to a railway station, I fear their choice will be small. Another common and very serious defect of the hotels in the Harz is the "sanitary arrangements," if such a term can be applied to the pestilential privies which are to be found in all but the very best houses.

Next, as to the food. Good coffee and bread, excellent butter and eggs, and first-rate beer are to be got everywhere, but a wholesome, nutritious, and appetising dinner is scarcely to be got anywhere. Potatoes and grease in plenty, huge lumps of cabbage, heaps of coarse beans, compressed masses of chopped skin and sinew, to which no scrupulous person would give the name of a "rissole," added to dabs of veal and coarse beef swimming in rich oily gravies, form the staple of the table-d'hôte at all except a very few of the best hotels. Such dinners are cheap no doubt, but there is equally no doubt of their nasty and indigestible qualities. If the Germans could restore to the French their two ravished provinces, and take in exchange the knowledge of, and the talent for, the culinary art, which their neighbours possess, how very much the best of the bargain they would have.

Next, to come to particulars, Harzburg has claims to be considered a "Bath" and a health-resort, and its popularity is very greatly on the increase. It is well provided with lodging-houses and hotels; and of one of them, the Actien Hotel, which is the property of a limited company, I can confidently say it is admirably situated, and its accommodation fully equal to that which is to be found in the very best Swiss hotels. I expect that the example which has been set in Harzburg, in the matter of hotels, will be followed in other localities in the Harz. Harzburg itself is a most picturesque and delightful spot, standing at the entrance of the Radau Thal, and some seven hundred feet above the sea-level. On every side of it save to the north is the undulating forest, intersected with pleasant paths and drives. It is a point from which numberless excursions can be made, and every facility in the form of carriages, ponies, and guides is here in abundance. It has also a well-known brine spring, the so-called Julius Hall, containing rather more than six per cent. of chloride of sodium, besides other ingredients; and there is a bath-house of considerable size, where not only soot (or brine) baths may be had, but also many other varieties of baths which have

been devised by German ingenuity—such as wave baths, pine baths, douche and shower baths of salt or spring water, vapour baths, inhalations of all kinds, and, lastly, malt baths (!), which I conclude is the last new thing. Being a real "Bath," Harzburg has also the resources proper to such a place—viz., a capital Kurhaus, a very good band of musicians, a first-rate promenade in the shade of a picturesque plantation of oaks, and, lastly, that collection of booths for the sale of nicknacks and trumpery without which no continental bathing-place would be complete.

Thale, which is at the eastern end of the Harz, is certainly the most picturesque spot in the whole of the district, and is probably more frequented than any. The rocky valley of the Bode can scarcely be excelled for grand magnificence and a wondrous intermixture of bold, rugged, and fantastic rocks, with soft and varied foliage, and is, I think, as picturesque a spot as it is possible to conceive. Here, too, is fair hotel accommodation, and here also is a brine bath, called the "Hubertus Bad," to which a certain number of patients repair annually to do a "cure." Thale belongs, however, rather to the tourist than the invalid, and on a Sunday especially trains come loaded with excursionists from the neighbouring cities of Magdeburg, Halberstadt, and Quedlinburg.

At Suderode, a pleasant village not far from Thale, on the southern slopes of the hills and overlooking the plain, is also a brine spring, which is used to some extent for bathing purposes.

Other picturesque spots which are much visited in summer are Ilsenburg, at the entrance of the lovely Ilsethal, Haserode, a village close to Wernigerode, and Blankenburg. In addition to its brine springs the Harz can boast of a chalybeate spring of some notoriety. This is at Alexisbad, which is situated high in the mountains, nearly midway between Ballenstedt and Nordhausen. The situation of Alexisbad is charming, and for quiet, rural, and picturesque qualities it is not excelled by any watering-place I know. The water is a strong chalybeate, but I was unable to ascertain its exact composition. Alexisbad, notwithstanding its great natural beauties and powerful medicinal spring, seems to have passed the zenith of its fame. It was founded more than sixty years ago by one of the Dukes of Anhalt, and, with the aid of a gambling table, it obtained a certain amount of fashionable notoriety. I fear, however, its sun has nearly set. I arrived there on Sept. 15th, which is by custom the last day of the season. The "season" had certainly ended at least the day before, for I was the sole guest at this once fashionable resort, notwithstanding that the weather was still warm and summery. The healing fountain was locked up, and I only managed to taste its water by committing a pseudo-burglary. I walked through the bath-house unchallenged and alone, and noted the ample provision for bathers who had taken their departure. I paced alone the floor of the prim old-world white and gold ball-room at the Kurhaus, while my fancy took me back some sixty years to the time when the reigning beauties of the Court of Anhalt, with high-waisted dresses and with powdered hair, trod its smooth floor to the stately measure of a minuet; I peeped into the billiard-room where formerly clusters of gamblers had been grouped around the roulette table; I walked to and fro on the excellent promenade where was never a soul but myself; and finally I sat down in state in the biggest room of the best hotel to a table-d'hôte of two persons! Assuredly the Alexisbad season was at an end; and from some conversation with the natives, I gathered that of late years the number of visitors had gradually declined. During the afternoon this discarded shell of fashion was visited for a few moments by a party of royalty from the neighbouring Residency at Ballenstedt. Returning from a walk, I found a couple of Court carriages, with outriders and servants in gay liveries, in front of the Kurhaus, while their royal occupants were taking a short and stately promenade in the well-gravelled avenue, and listening to the final efforts of the Alexisbad band, stationed for the occasion on the summit of a high rock in the neighbourhood. A few strips of white and green bunting (the Anhalt colours) fluttered from the top windows of the hotel, bouquets were presented, and the Royal party of eight returned the salutations of about as many onlookers; but, alas, the royal carriages were soon refilled, the strains of the band died away, and the last faint spark of life died out in Alexisbad. There appear to be two possible causes for the waning popularity of this bath; one is that the pretty stream which

waters the valley in which it stands has been fouled and rendered turbid by some lead-works a mile or so higher up, and another is that there is a good deal of stagnant water, o'ergrown with duckweed, and no little swampy ground in the immediate neighbourhood of Alexisquelle itself. The want of direct railway communication and the competition of other and more fashionable resorts, &c., are also doubtless answerable in some degree for the small number of visitors who come to Alexisbad. Nevertheless, it is a most lovely spot, and when the railway finds its way there, as it will do in a few years, it will only require a master mind and a little energy and wise expenditure to make Alexisbad one of the most popular chalybeate springs in Europe.

PARIS.

(From our own Correspondent.)

AN unpleasant incident occurred at the last meeting but one of the Academy of Medicine. After a speech from M. Jules Guérin, in which that gentleman objected, both as a savant and as a ratepayer, to the Government grant awarded to M. Pasteur, the latter replied in a violent manner, and in a tone which was supposed by M. Guérin to impugn his scientific honour. The most objectionable phrase was as follows:—"When in the name of clinical principles a man has proposed to aspire up to the surface of wounds by means of an india-rubber cap, some tubes, and a pneumatic pump, he is capable of anything (*on est capable de toutes les audaces*), and finds the careful and correct experimenter, who will not announce his method to the world before being able to demonstrate it, singularly simple. This is a question of scientific honour. I shall not risk compromising mine by too hasty publication for the satisfaction of gratifying the indiscreet and unhealthy curiosity of M. Guérin." M. Guérin was anxious to reply, but on the motion of Baron Larrey the sitting was immediately adjourned. What followed is not published in the official bulletin of the Academy, but may be described as a "row" between the two savants. After making a vain attempt to "go for" M. Pasteur, and unrestrainedly expressing his opinion about his colleague's veracity, M. Guérin retired. The following day brought his resignation as a member of the Academy of Medicine, and negotiations for a "meeting." M. Pasteur then placed himself in the hands of two friends, and by their intervention the matter has been arranged satisfactorily. At the last meeting a pacific letter was read from M. Pasteur, and it was announced that M. Guérin had withdrawn his resignation.

The smells of Paris have taken up the attention of the Municipal Council since the members have returned from the holidays. As usual, there is a great deal of talk but very little action. At a recent meeting, M. Alphanand attempted to make out that there had in reality been very little to complain of, and that the whole outcry against the administration had been the result of a fictitious and political agitation on the part of an ill-disposed Press. Unfortunately for the public authorities, they have a very powerful opponent in this matter in the shape of M. Francisque Sarcey, the eminent critic, who happens to reside in one of the least fragrant quarters. He deals with M. Alphanand's statement in a recent number of the *XIXième Siècle*, and some of his statements are worth quoting textually:—

"M. Alphanand tire de cette unanimité même un argument contre la presse: Ce sont les journaux, dit-il, qui ont envenimé la question! Ce sont eux qui ont fait tout le mal! A force de crier contre les mauvaises odeurs, ils ont fini par persuader aux Parisiens et même aux étrangers, que ces mauvaises odeurs existaient véritablement. Jamais, avant ce concert de criailleries, les Parisiens ne s'étaient aperçus que ça puait chez eux. Les voilà aujourd'hui amentés contre cette prétendue infection. A qui la faute? A ces incorrigibles bavards de journalistes. Pour un peu, Alphanand dirait volontiers que c'est nous qui avons la malice de puer, pour le plaisir de donner du souci à l'administration. Depuis une huitaine de jours, ça puait tous les soirs dans mon quartier, et ça puait ferme. Un soir, notamment, ça puait si fort que je me suis vu obligé de fermer les fenêtres, et ça n'en puait que davantage. Ma foi! le lendemain matin j'avais un article à écrire; j'ai l'habitude

d'entretenir nos lecteurs de tous les sujets qui m'intéressent, et juste à l'heure où ils m'intéressent et comme ça puait dans mon quartier, j'ai tout de suite dit avec ma bonhomie ordinaire: Ah! mes enfants, comme ça pue dans mon quartier! Non, mais vous n' imaginez pas comme ça pue dans mon quartier. Cette phrase m'est témoin que je ne m'étais point demandé, avant de pousser ce cri de douleur, si M. Andrieux avait pris un arrêté la veille, ni même si M. Andrieux était préfet de police. Je disais: Ça pue, parce que ça puait, avec l'ingénuité d'un homme qui se bouche le nez quand ça pue, en s'écriant: mon Dieu! que ça pue!"

The *Charivari* of last week, alluding to the same subject, represents a country gentleman in the act of inhaling the emanations from a heap of manure. "What are you doing there, papa?" asks the son, "Going into training for a visit to Paris," is the reply.

Obituary.

WILLIAM MOORHOUSE, M.R.C.S., L.R.C.P. Ed.

DR. MOORHOUSE, whose death we announced last week, was a student at Edinburgh and St. Bartholomew's Hospital, and after passing his examination at the College of Surgeons went to India; subsequently he became house-surgeon at the Royal Free Hospital. After a short interval, occupied in assisting in private practice and at the Liverpool Infirmary, he commenced practice in Ellesmere, and soon became a great and universal favourite in the neighbourhood.

There was much in his character and disposition to cause him to be beloved by the generous and kind-hearted people of Shropshire, who, whether rich or poor, found that they had a sympathising friend in James William Moorhouse. He was a rigid observer of medical etiquette, and invariably acted with frankness and generosity towards a brother practitioner. He was a man of extraordinarily active habits. About two years ago his constitution showed symptoms of giving way, and on September 18th, after coming from a long journey, he was suddenly seized with a fatal attack of apoplexy, which terminated his existence in about two hours. The grief of his friends cannot be told; but the sorrow of his patients and neighbours found expression in the respect paid to his memory, as the mournful procession passed through the town on the day of interment, by the shops being closed and every other mark of regret manifested.

SIR WILLIAM LINTON, K.C.B.

WE regret to announce the death of an old and distinguished army surgeon. Sir William Linton, K.C.B., M.D., expired after a very short illness from apoplexy on Saturday last at his residence, Skairfield, Dumfriesshire. He was a graduate of Edinburgh University, and entered the Army Medical Department in 1826. He served in Canada, the Mediterranean, and the West Indies, and in 1848 was made staff-surgeon of the first class. In the Crimea he held the post of Deputy-Surgeon-General of the First Division, and was in medical charge of the General Hospital, Scutari, after the termination of the campaign. In 1857 he was promoted to the rank of Inspector-General of Hospitals, and shortly afterwards was ordered to India as Principal Medical Officer of the European Army. He acted in this capacity throughout the mutiny, and for his services was advanced to the Knighthood of the Bath, having been made a Companion of the Order in 1856. In 1859 he was appointed Honorary Physician to Her Majesty. Sir William, who was never married, was placed on the retired list in 1863.

At an inquest held on Wednesday at Birmingham, on the body of Charlotte Stephens, widow of a jeweller, the Borough Coroner commented (says the *Globe*) strongly upon the course the police had adopted. The deceased was found lying in the street, and a policeman, supposing she was under the influence of drink, locked her up on a charge of drunkenness, but early the next morning she was removed to the hospital, where she died the same evening. The post-mortem examination proved that death resulted from apoplexy, and the jury, in returning a verdict to that effect, expressed an opinion that the woman ought to have been examined by a medical man before she was locked up in a police cell.

THE CRISIS AT GUY'S HOSPITAL.

At the moment of going to press the rumour reaches us that the Court of Governors, at their meeting on Thursday evening, accepted the letter of withdrawal addressed to them by the medical staff.

Medical News.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Oct. 7th:—

Atterbury, Walter, Acacia Villa, Oppidans-road.
Davis, Edward, Euston-square.
Jay, Melville Richard Hindmarsh, Adelaide, S. Australia.
Nance, Henry Chester, Eccleshall, Staffordshire.

The following gentlemen also on the same day passed their Primary Professional Examination:—

Henry Green, St. Mary's Hospital; Simpson Powell and Chas. Henry Whitcombe, King's College Hospital; Robert Williamson Shelley, Charing-cross Hospital.

DR. FAUSSETT, late medical officer of Clontarf Dispensary Committee, has been allowed a superannuation of £50 per annum.

ACCORDING to the report of the cattle inspectors of the county of Lancashire, pleuro-pneumonia and swine fever continue to spread. Meanwhile all available precautions seem to be taken to check the ravages of the diseases.

At the quarterly meeting of the directors of the Compassionate Branch of the Naval Medical Supplemental Fund, on the 12th inst., Dr. H. J. Domville, C.B., Inspector-General, in the chair, the sum of £65 was distributed among the several claimants.

GUY'S HOSPITAL MEDICAL SCHOOL.—The open entrance scholarship of 125 guineas in science has been awarded to Mr. H. W. Pigeon, and that of 125 guineas in Arts to Mr. R. Moody Ward; Mr. G. E. C. Anderson *proxime accessit*.

EAST LONDON HOSPITAL FOR CHILDREN.—The fifth anniversary festival in aid of this charity was held, under the presidency of the Lord Mayor, on Wednesday evening. The aggregate number of patients treated since the foundation of the hospital amounts to 85,961. There was last year, we are sorry to learn, a falling off in the receipts to the extent of £1374—a state of things which we trust will be found to have been improved by the time the next festival comes round.

BEQUESTS AND DONATIONS TO MEDICAL CHARITIES.

—The late Mr. John Skirrow Wright, of Birmingham, bequeathed £200 each to the General Hospital and the Queen's Hospital, Birmingham. By the will of Mr. George Checkland, late of Hawkswick, Herts, the Leicester Infirmary receives £100, and the Dispensary of the same town £50. The late Mr. John Andrew Jones, of New York, bequeathed 5000 dollars to the Dreadnought Hospital, Greenwich. The Brixton, Streatham-hill, and Tulse-hill Dispensary has become entitled to £50 under the will of the late Mr. John Holloway, of Brixton-road. Miss Jane Burnett, of Oldmeldrum, has left the residue of her estate to the Aberdeen Royal Infirmary.

Medical Appointments.

Intimations for this column must be sent DIRECT to the Office of THE LANCET before 9 o'clock on Thursday Morning, at the latest.

BATTERBURY, R. L., M.B., has been appointed Certifying Factory Surgeon for Berkhamsted.
BRUCE, R. C., M.B., C.M., has been appointed House-Surgeon to the Edinburgh Royal Maternity and Simpson Memorial Hospital.
CLARKE, J. A., L.K.Q.C.P.I., L.R.C.S.I., has been appointed Medical Officer of the Levensden Schools.
ERSON, W. R., L.F.P.S.G., L.S.A.L., has been appointed Medical Officer and Public Vaccinator for the Lindley-cum-Quarby District of the Huddersfield Union, vice F. C. Ellerton, resigned.
GOODE, C. F., M.R.C.S.E., L.S.A.L., has been appointed House-Surgeon to the Brighton and Hove Lying-in Institution, vice Freeman, resigned.
HARRIS, F. W. H., M.R.C.S.E., has been appointed Assistant Medical Officer to the Suffolk County Asylum, vice Tate, resigned.

HEATH, G. Y., M.B., L.R.C.P.Ed., M.R.C.S.E., has been appointed Consulting Surgeon to the Newcastle-on-Tyne Infirmary, on resigning as Surgeon.

HUNT, J., M.R.C.S.E., has been elected Acting Surgeon to the Children's Hospital, Birmingham, vice Mr. G. H. Evans, resigned.
JAKINS, P. S., M.R.C.S.E., L.S.A.L., has been appointed Clinical Assistant to the Western Ophthalmic Hospital, vice Bird, resigned.

KELLETT, R. G., L.K.Q.C.P.I., L.R.C.S.I., has been reappointed Medical Officer of Health for the Halstead Urban Sanitary District. £25 per annum.

KEMPE, J. A., M.R.C.S.E. & L.R.C.P.L., has been appointed Assistant Demonstrator of Anatomy at University College Hospital.

MACDOWELL, F. V., L.R.C.S.I., has been appointed Medical Officer to the Baltinglass Union Workhouse and Fever Hospital, vice Seymour, deceased.

MAYLARD, A. E., M.B., B.Sc., has been appointed Demonstrator of Anatomy at Guy's Hospital.

PALMER, H. L., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer to the Llanllwchaearn District of the Newtown and Llanidloes Union.

PULLON, H., M.B., C.M., has been appointed House-Surgeon to the Edinburgh Royal Maternity and Simpson Memorial Hospital.

RUTHERFORD, R. L., Senior Assistant Medical Officer, Durham County Asylum, has been appointed Assistant Medical Officer to the Devon County Asylum.

STEELE, R. L., L.R.C.P.Ed., M.R.C.S.E., has been appointed Honorary Medical Officer to the King's College Hospital Convalescent Home, Hemel Hempstead.

WATSON, C., L.K.Q.C.P.I., has been appointed Medical Officer to the Kildare Dispensary District of the Naas Union, vice Kehoe, deceased.

WHITE, R. P., M.B., C.M., has been appointed House-Surgeon to the Halifax Infirmary, vice Hammond, resigned.

WHITE, W. H., M.B., has been appointed Resident Medical Officer to the Evelina Hospital for Sick Children.

Births, Marriages, and Deaths.

BIRTHS.

ADAMS.—On the 28th ult., at 42, Russell-road, Kensington, the wife of W. Stanley Adams, M.D., of Forest Lodge, Hongkong, of a son.
BUCHANAN.—On the 3rd ult., at Lucknow, the wife of Surgeon-Major Buchanan, Army Medical Department, of a son.
HUNTER.—On the 4th inst., at Norfolk-crescent, Hyde-park, the wife of W. Guyer Hunter, M.D., F.R.C.P., Hon. Surgeon to the Queen, Surgeon-General H.M. Indian Army, of a daughter.
PHIBBS.—On the 29th ult., at Sutherland-gardens, W., the wife of Dr. R. Featherstone Phibbs, M.R.C.P., of a son.
SPANTON.—On the 9th inst., at Chatterley House, Hanley, Staffordshire, the wife of W. D. Spanton, M.R.C.S.E., of a daughter.
THURSTAN.—On the 23rd ult., at The Hollies, Windmill-road, Croydon, the wife of E. Paget Thurstan, B.A., M.B., of a son.

MARRIAGES.

EDMOND-FRASER.—On the 13th inst., at 21, Chalmers-street, Edinburgh, by the Rev. R. Macdonald, D.D., Free Church, North Leith, and the Rev. R. G. Balfour, Free New North Church, Edinburgh, John Edmond, Advocate, Aberdeen, to Evangeline Mary, eldest daughter of Surgeon-General J. Fraser, M.D., C.B., Honorary Physician to the Queen.
HINE.—On the 30th ult., at the Wesleyan Chapel, Baldock, Herts, Alfred Leonard Hine, M.R.C.S.E., L.R.C.P., third son of the late Joseph Hine, of Newnham, Herts, to Helen, second daughter of Thomas Hine, of Baldock.
ROSE-CLARK.—On the 6th inst., at St. Stephen's Church, Westbourne-park, W., by the Rev. T. J. Russell, M.A., Vicar (one of Her Majesty's Chaplains), William Rose, F.R.C.S., M.B. Lond., to Mary Anne Cooper, youngest daughter of Robert Clark, Solicitor, of Chepstow Villas, W.
SMITH-HIGGS.—On the 6th inst., at All Saints' Church, Clapham, by the Rev. A. G. Girdlestone, M.A., Sydney Lloyd Smith, F.R.C.P.E., M.R.C.S.E., L.S.A.L., &c. &c., second son of W. F. Smith, M.P.S., of Walworth and Brixton, to Sarah, eldest daughter of James Higgs, of Highbridge House, Brixton-hill.
STRUENELL-BRETtingham.—On the 2nd inst., at St. James's Church, Paddington, F. W. Struenell, L.R.C.P., of Highgate road, to Elizabeth Susette, second daughter of the late Richard F. Brettingham, of Carlton-road, Maida-vale.

DEATHS.

AITKEN.—On the 23rd August, of sunstroke, on board the s.s. *Peiho*, one day after leaving Singapore, Ewing M. Aitken, M.R.C.S.E., aged 26.
HUNTER.—On the 7th inst., suddenly, at the Army and Navy Club, London, Thomas Hunter, Esq., M.D., Deputy Inspector-General of Hospitals, late of the 4th (Queen's Own) Hussars.
SMITH.—On the 29th ult., at Stuttgart, Robert Smith, Deputy Inspector-General of Hospitals (retired), aged 72.
SPARKS.—On the 11th inst., at Misterton Lodge, near Crewkerne, the residence of his brother, Edward Isaac Sparks, M.A., B.M. Oxon., F.R.C.P., younger son of William Sparks, Esq., of Crewkerne, aged 37.
TINKER.—On the 2nd inst., suddenly, at her residence, Talbot House, Southport, Mary, relict of the late Frederick Tinker, F.R.C.S.E., of Hyde, Cheshire, aged 63.
WATTS.—On the 8th inst., at Battle, James Watts, M.R.C.S.E., in his 91st year.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET OFFICE, October 14th, 1880.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radiation in Vacuo	Max. Temp Shade	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Oct. 8	29.72	E.	52	53	..	59	50	0.22	Raining
" 9	29.67	N.E.	50	51	..	69	47	0.22	Cloudy
" 10	29.89	N.E.	53	54	..	67	51	0.80	Raining
" 11	30.31	N.E.	50	52	86	60	46	0.10	Overcast
" 12	30.16	N.E.	46	50	..	56	45	0.02	Cloudy
" 13	30.29	N.E.	48	50	..	58	45	0.02	Fine
" 14	30.42	N.	50	46	63	54	46	..	Overcast

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Local papers containing reports or news-paragraphs should be marked.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

Lectures, original articles, and reports should be written on one side only of the paper.

We cannot prescribe, or recommend practitioners.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET to be addressed "To the Publisher."

SOMETHING NEW.

THIRTY-SEVEN nurses of the Poplar and Stepney Sick Asylum have petitioned for a monthly allowance instead of beer. The petition was not granted on the ground that the plan had been tried in nearly every hospital in London, and not found to work well. It was decided that nurses who did not take beer should be allowed an equivalent in milk, lemonade, or anything from the stores, except spirits.

ANTISEPTIC MIDWIFERY.

To the Editor of THE LANCET.

SIR,—I am surprised to find that Mr. Verdon's article on the above subject, in your issue of Sept. 25th, has remained unnoticed. Mr. Verdon surely is trifling with the common sense of the profession when he publishes such a case as showing the value of Mr. Lister's treatment applied to midwifery. Whether it be possible or not to apply Lister's treatment to midwifery, it is quite clear to anyone familiar with the principles and details of that treatment that Mr. Verdon did not even attempt to surmount the difficulties peculiar to such cases. He does not even allude to how urination was accomplished. Moreover, this woman had a very bad time of it, being four or five days with fever and other symptoms, and barely convalescent on the eleventh day. Mr. Verdon appears to attribute this to the poison of erysipelas, as the nurse was developing an attack of facial erysipelas at the time of the confinement. This may or may not be. At any rate the value of the treatment is not apparent. But Mr. Verdon tells us he has used antiseptics in ordinary midwifery cases, and with marked benefit. Really one would suppose a successful midwifery case was as remarkable as a successful ovariotomy. There is many an old midwife who would feel proud if she knew of the wonders she had been accomplishing all her life, and that, too, without the aid of antiseptics.

Yours faithfully,

Wittersham, Oct. 4th, 1880.

N. W. ALLT, L.K.Q.C.P.I.

CHLORAL AND OPIUM.

To the Editor of THE LANCET.

SIR,—In reference to the risk stated to arise from the combined action of chloral and opium, I have a patient who has been taking both for some months past, and certainly without any injurious effect. During the thirty-three days preceding Sept. 2nd he took daily from thirty to forty-five minims of tincture of opium (eighteen drachms in all), and a sleeping draught of chloral, varying from twenty to forty grains (fourteen drachms and three-quarters in all). From Sept. 2nd to Sept. 12th he had opium pills only—twenty-nine, each containing one grain. From Sept. 12th to Oct. 10th inclusive he has again taken chloral, sixteen drachms in all, and fifty-six more of the one-grain opium pills.

Yours sincerely,

Lewisham, Oct. 11th, 1880.

H. DISMORE, M.R.C.S., &c.

CAYMAN'S OIL IN PHTHISIS.

DR. HEFFENGER, in the *Boston Medical and Surgical Journal*, advocates the use, in consumption, of the oil obtained from the crocodile. He states that in Peru this oil has almost superseded that derived from the liver of the cod, being thought more nourishing and palatable. It is given in tablespoonful doses, after meals, for long periods.

Mr. C. Priestley.—Our space will not allow us to insert another letter from our correspondent. He will allow that we have given not a little to those who share his views.

Inquirer.—Another report will appear, probably, next week.

DOCTORS AND DEATH CERTIFICATES.

To the Editor of THE LANCET.

SIR,—I am much obliged to you for your courtesy and kindness in your notice of the charge of 3s. 6d. for a death certificate in your edition of October 2nd. Family bereavement has detained me from noticing it earlier. The facts of the case are as follows:—The woman called here with her child on Sunday night. I was at home; but my assistant, Mr. Bowden, saw the child, and prescribed for it, saying at the time, "This child is so very ill that possibly it will not live long. You had better be attended at home, and pay 3s. 6d. for the week." The reason of 3s. 6d. charge is that I have a private, a club, and a dispensary practice here, and, on the principle that poor people can only pay moderate prices, we charge for children, 9d., for adults, 1s. each bottle of medicine at the surgery; for a single visit at home in the day, 1s. 6d.; for a week, 3s. 6d. This was the origin of the 3s. 6d. idea. We heard no more of her until Tuesday morning, when she called on me, and asked me for a death certificate, saying her child was dead. I said, "I don't remember your name. Who saw you?" In answer, "Mr. Bowden." "When?" "On Sunday night." I said, "Call to-morrow (Mr. Bowden not being present), and I will inquire all about it." She did so on the Wednesday. I told her, "I have inquired into your case. You are greatly to blame. We visited in the same house on the Monday, and yet your child being so ill, why did you not ask us to attend, or some other medical man?" She replied, "The gentleman said the child would probably not live, and I did not think you could do anything for it." I said, "Do you mean deliberately to ask me for a certificate of death without having seen your child?" The answer was, "Yes, I can pay for one. A friend of mine had one from another medical man." I asked "What medical man?" and she told me his name was "—," and that she paid 1s. for it." I said, "Now if you had paid your 3s. 6d. as was asked of you, your child would have been seen night or day, and then you would have received a certificate in the ordinary way. As it is, you are more guilty than the woman who brought her child here in a dying state from privation, &c., and was tried at the Old Bailey, and if you give me twenty 3s. 6d.'s I will not dream of giving a certificate." She then said, "Because I did not pay the 3s. 6d. you refuse the certificate." I told her, "If you had paid, we should have been held responsible." She then burst into tears, and asked me what she was to do. I said it would be for the coroner to decide; and out of consideration of the feeling she appeared to evince at her neglect, I said I would inform the coroner. I did so, with the result that I heard no more of the case. Not being asked to attend the inquest, and unheard, I had to bear the blame of this charge, and the remarks of the coroner. I send you his letter, which I received before I heard of the public notice.* I may mention that the coroner's remarks in his letter bear upon the fact that previously I had told him that in such cases as this one—and they are common enough here—I did not see why a medical man should inform a police officer, or the coroner's officer, or even the coroner, of a death, as we had no fund to do so with. I may mention that we had seventeen cases of dead bodies we have been called to, and in no one instance has a post-mortem or medical evidence been called. My assistant, Mr. Wm. Bowden, who has been with me for over a year, heard my remarks to this woman, as also another person present.

I remain, Sir, yours truly,

JAS. W. AYRES, L.R.C.P.E., &c.

Union-street, Deptford, Oct. 6th, 1880.

* "Greenwich, S.E., Sept. 24th, 1880.

"DEAR SIR,—In reply to your letter of the 22nd inst., I held an inquest in the case of T. J. Jenkins last evening, and the jury returned a verdict of 'Died from convulsions.' It is not my custom to give certificates as to the cause of death when no inquest is held, neither am I in the habit of taking the individual opinion of a police constable as to the necessity of an inquest.

"With reference to your complaint of there being no fund to repay the medical gentlemen for their trouble in informing the police or the coroner of a suspicious death, I regret I am unable to assist you in this matter, as I possess no authority to recoup any expenses incurred for that purpose.

"I fail to perceive that you would be put to much expense or inconvenience when applied to by a relative of a deceased person for a certificate,—which you do not feel yourself justified in giving,—that they must communicate with the coroner's officer of their parish, or, if you have reason to believe that the relatives have not done so, to draw the attention of the first constable you meet to the matter.

Yours faithfully,

"ED. ARUNDEL CARTTAR.

"Jas. Wm. Ayres, Esq., Union-street, Deptford."

A. G. P. should call on the practitioner in question, and come to a friendly understanding with him as to the case and its future relations. Such questions must constantly arise, and should admit of amicable settlement. Something depends on the degree of intimacy of the parties, and much on the disposition of the patient. We quite perceive that our correspondent puts his questions in a proper spirit towards Mr. D.

Enquirens.—1 and 2. No.—3. The Fellowship of the Royal College of Surgeons of England.

Dr. Spencer.—We regret that the letter is not suitable for our columns.

AN ILLUSTRATION OF THE SYSTEM OF CHEAP DISPENSARIES: A REPLY.

To the Editor of THE LANCET.

SIR,—It would be too bad were such a prejudiced and misleading statement as that of your correspondent "M.D." allowed to pass unchallenged.

First, he endeavours to confuse the issue by throwing upon dispensaries the odium which properly attaches to unqualified and ignorant practice—ill weeds, indeed; but they would still be found flourishing in the keeping of many a prosperous practitioner if every dispensary were closed to-morrow.

Secondly, "M.D." invites the inference, and, indeed, takes it for granted, that the cost of the medicines he ordered—all of which were, of course, absolutely necessary—must have been three shillings, because the chemist charged that sum. I would remind "M.D." that it is not the usual practice at dispensaries to send prescriptions to be made up at a chemist's, that these gentlemen usually make a profit on the drugs they dispense, and that "M.D.'s" calculations would have appeared more ingenious had he estimated the cost at one shilling instead of three.

I will not criticise the somewhat cumbrous artillery which "M.D." brought to bear upon his patient, but will leave it to those of your readers who have had much experience of the disorder referred to to decide, whether such a case would not, as a rule, have been adequately met by a zinc powder and cotton-wool locally; and, if the neuralgia was severe, by a morphia injection, and a mixture containing arsenic, strychnine, and gelseminum, which could have been supplied at a cost of twopence or threepence.

With reference to "this kind of slopwork," which "M.D." properly inveighs against, it is indefensible. But I should like to ask any medical man who has conducted an extensive dispensary practice how many poor patients he has seen in one year suffering from scabies, who have been dosed with repeated bottles of medicine at 2s. 6d. apiece, and nothing else? How many trussed and treated herniæ that cannot "face the light," and similar blunders, not the work of unqualified assistants, but of qualified and flourishing M.D.s, who may perhaps derive satisfaction from the reflection that, whatever their fees, they can never be called cheap.

No doubt there are grave abuses at some dispensaries, so there are in all classes of practice; but that does not justify the indiscriminate statements which have been so freely made, and which are stamped with envy, hatred, malice, and all uncharitableness.

Professional ignorance and carelessness are only too common, but they are not monopolised by dispensaries, and I don't doubt that if all the mistakes committed at dispensaries were collected, they could be matched by cases which come to them from neighbouring practitioners.

Yours faithfully,

October, 1880.

M.R.C.S.

To the Editor of THE LANCET.

SIR,—It may make my illustration of the evil of the cheap dispensary system more complete if I say that since writing my last letter the patient has called to report himself well, and to pay my charge of two guineas, fully convinced, too, I think, that if he did not get all he wanted at a cheap dispensary for a shilling a week, he got all he could reasonably expect. The point of my present additional illustration is that not only is the patient likely to be misled and badly catered for at a cheap dispensary, but the profession is injured by one of its members doing for a shilling a week a service for which, as in this case, the patient can pay, and pay cheerfully, a guinea a week.

Your obedient servant,

London, October, 1880.

M.D.

To the Editor of THE LANCET.

SIR,—I am sorry to say that "dispensary doctors" are not the only ones in our profession who charge unprofessional fees. I am in practice in the country, and in a part where the men make good wages; yet a firm of surgeons here will go from one end of the place to another for 1s. 6d. fee, including visit and medicine. I am also informed that a powder for a child can be had at their surgery for 6d., and that they are not above selling 2d. worth of castor oil. Surely these "surgeons" should add the word "chemist" to the plate on their door!

I remain, Sir, yours truly,

Sept. 28th, 1880.

ANOTHER L.R.C.P. Ed.

THE COLLEGES OF PHYSICIANS AND THE TITLE OF DOCTOR.

M.D.—We entirely agree with our correspondent; but we consider the question closed, and admitting of no further discussion.

Ærom.—We cannot insert the inquiry.

Accoucheur.—The patient should have given notice of her confinement, and our correspondent has a certain legal claim upon her. Whether it is worth pressing in Court, we must leave to him to judge.

Dietetic will find part of his argument against "M.D." used by another correspondent. His views of the use, or rather the uselessness, of drugs are very peculiar.

J. R. should consult a qualified medical practitioner.

INDIAN MEDICAL SERVICE.

To the Editor of THE LANCET.

SIR,—Your leader of the 29th May last, on the Imperial Policy of the Government of India in Medico-sanitary Matters, is a truthful, though trenchant, remark upon what prevails in this great English dependency.

As if to mock the recognised opinions of the most eminent authorities in Europe on cholera, its pathology and etiology, the Government of India has just ordered that the returning troops from Cabul should march through Tangi, in Peshawur, where cholera is believed to be raging severely. The telegram from Simla states that "as the Government of India does not countenance the contagion theory, our brave soldiers, after facing all the dangers of war," are once more to experiment with their lives upon a theory which is now an established fact.

In India we have no public opinion, and as regards public medical opinion we are deplorably behind even the early days of the Apothecaries' Society of London. Official etiology and pathology take precedence of everything. Medical education being entrusted to the hands of Government officials, it is easy to understand how religiously they uphold official views, both from the professorial chairs and in medical journals held exclusively by them. No newspaper, and especially no medical journal, would receive attention or support unless placed under official influence. To understand such a deplorable state of affairs in this vast empire, one has only to study the native character. A glance at some of the proceedings of the Calcutta Medical Society will at once show how the official medical autocrats get the support of the hungry aspiring youths of India.

I would draw your attention to the discussion on the "new disease" recently epidemic in Calcutta, which was officially announced as *beri beri*. No idea was more ridiculous or more revolting to educated medical men than such absurdity. Official opinion has been given grudgingly to the views of the profession in Mauritius, where a similar epidemic disease prevailed; but the ill grace which marks the change of front is too apparent in the last issue of the *Indian Medical Gazette*. I will send you a description of the Mauritius epidemic, known as "acute anæmic dropsy," as well as a full report of the epidemic here, as observed by me. In Mauritius the blood of those suffering from the disease was examined in several instances under the microscope, which revealed the presence of spirilla (beaded or chained). My observations showed some of the fission-fungi present in recurrent fever, as well as higher organisations, which I hope to be able to send to the Royal Microscopical Society, with a description. There is little doubt in my mind that relapsing fever and typhus have concurrently prevailed in Calcutta, and that the diseases still continue, but less extensively. It is left to be seen if the next winter will not cause another epidemic. I might state here that the unusually protracted fall of rain in some places, and the absence of it from others, is likely to result in damage to the crops, and scarcity once more. The history of Indian famines and pestilence will soon rival similar phenomena in Ireland.

I remain, Sir, yours truly,

Calcutta, August 25th, 1880.

MEDICUS.

To the Editor of THE LANCET.

SIR,—In your leading article of Oct. 2nd you have pointed out the unfair way the changes in the administrative grade of the Indian Medical Service have been effected, and which appear to have been made for the special benefit of sanitary officers, who have been promoted from the grade of surgeon-major to surgeon-general, over the heads of their seniors, many of whom were selected for promotion to deputy surgeon-general years ago by the same Government which has now ordered their supersession.

There is one grievance which you have omitted to allude to, and which was lately pointed out in your columns by "Bengal Retired"—viz., the postponed allotment of retiring annuities from the Indian Medical Funds to those officers who have been compelled to retire through ill health, and from whose pay large sums have been deducted for twenty-five years, with the understanding that they would receive at the above average period of service a retiring annuity, but of which they will be now deprived for an indefinite period by the large influx of senior officers on the retired list, through the reduction of administrative appointments in the Military Department of the Indian Medical Service, which were formerly obtainable by seniority. As no satisfactory answer on the subject can be obtained from the officials at the India Office, I would suggest that a Fund be raised by retired officers for the purpose of obtaining counsel's opinion as to whether we cannot claim our annuities, in return for the subscriptions which were calculated by an actuary to furnish these annuities, at the average period hitherto prevailing.

Your obedient servant,

East India United Service Club, Oct. 4th, 1880.

MADRAS RETIRED.

Dr. H. R. Walwyn.—Application should be made direct to the Secretary, stating the special circumstances of the case. The general rules do not apply.

Dr. Peters, (Davos).—We regret that we are unable to find space for the communication.

Mr. A. T. Norton.—The MS. has been received.

A QUESTION IN PHARMACY.

To the Editor of THE LANCET.

SIR,—In your issue of October 9th, "L.K.Q.C.P." asks how to prepare a solution of morphia for subcutaneous injection. If he will refer to the last edition (1874) of the British Pharmacopoeia, he will find "injection morphiæ hypodermica," which might answer his purpose. This preparation, however, when long kept, deposits a little of its salt; consequently only a little should be made at once, or the addition of a little glycerine will keep the preparation any length of time. Some practitioners object to this addition of glycerine, as it is said to irritate the skin a little occasionally. When making a strong solution of morphia, it is necessary to use a perfectly fresh salt of morphia. Hence, in making the "injection morphiæ hypodermica," the Pharmacopoeia orders the dissolved hydrochlorate to be precipitated with ammonia, and then redissolved with a little acetic acid, so that a solution of a freshly prepared salt may remain.

Yours truly,

October, 1880.

R. W. W.

To the Editor of THE LANCET.

SIR,—For some time I have used the following solution of morphia, and found it keep well:—Acetate of morphia, twelve grains; carbolic acid, five minims; distilled water, one ounce. Dissolve the morphia by gentle heat, and when cold add the acid, which must be pure. I frequently to the above add five grains of extract of belladonna, which I find prevents sickness. I have never found this deposit the morphia, and it has the advantage, after injecting, of causing no smarting.

Yours &c.,

March, Cambs, Oct. 11th, 1880.

W. EASBY, M.D.

To the Editor of THE LANCET.

SIR,—In answer to the question in pharmacy by "L.K.Q.C.P." in your last issue, I find the following keeps very well:—

R. Morphiæ mur., gr. xxiv.

Atropiæ sulph., gr. ss.

Glycerini, 3ij.

Aquæ, 3vi.

M. v. contains $\frac{1}{2}$ gr. morphia.

Yours &c.,

Dublin, October, 1880.

J. L. B.

MALTA AS A PLACE FOR PRACTICE.

Migrator would like to know if "S. G." in THE LANCET of the 2nd instant asks with a view to going or for curiosity's sake.

A Constant Reader is referred to the article on Books in our Students' Number, Sept. 11th.

Dr. Burney Yeo.—Shortly.

Alpha has forgotten to enclose his card.

TUBERCULAR DEPOSITS IN THE BOWELS AND PERITONEUM.

To the Editor of THE LANCET.

SIR,—Dr. Finlay's case of tubercular peritonitis, reported in THE LANCET of Sept. 25th, reminds me of one of tubercular deposition in the bowels and the peritoneum that I had under my care in May last.

A. L—, aged seventeen, had always been a weakly anæmic girl. Menstruation occurred for the first time twelve months previous to her present illness, recurring at irregular intervals. Latterly she had suffered much from obstinate constipation. She walked almost daily a distance of two miles to her place of business, a woollendrapers' warehouse. Tea formed the principal article of her diet. On Sunday, May 9th, she walked two miles in the country, and on her return home she was taken ill with violent vomiting, coldness of the extremities, and a feeling of soreness (not particularly localised) throughout the abdomen. That night and the following morning the vomiting continued with but slight intermission.

I saw the patient for the first time on Monday at 10 A.M., and, in addition to the above account, learned that she had been menstruating the whole of the previous week, and had walked daily to and from her place of business. Menstruation was now very painful. Vaginal examination revealed the uterus retroverted and tender. The feeling of soreness throughout the abdomen still persisted. Physical examination of the chest showed nothing abnormal. There were no symptoms of cerebral disturbance. Temperature normal; pulse 82. The examination was frequently interrupted with violent retchings. I succeeded in getting the uterus replaced. The bowels were cleared by an injection, and mustard was applied to the epigastrium. She was ordered bicarbonate of potash with hydrocyanic acid, a pessary of belladonna and hyoscyamus, and enemata of brandy and beef-tea. Vomiting occurred at least a dozen times throughout the afternoon and evening, and on the following Tuesday. Creasote, bismuth, bicarbonate of soda, pepsin wine, bromide of potash, and wood-charcoal were tried, some alone, and others in combination.

The only drug that seemed to allay the vomiting was charcoal given in twenty-grain doses. Wednesday and Thursday were passed in comparative ease, and the patient slept well. On Friday vomiting occurred three times, and the temperature fell to 96° in the axilla. On Saturday the vomiting was again excessive, but the temperature had risen to the normal. On Sunday about 5 P.M. she called to her mother for a drink of water, but expired suddenly before receiving it.

In this case the constipation and violent vomiting would have led one to suspect some form of intestinal obstruction; but then at no time were there febrile symptoms, actual pain was never complained of, and the constipation was easily overcome. On the other hand, the symptoms might have been caused by the retroverted uterus, as in Dr. Graily Hewitt's case read before the Clinical Society of London. In A. L—'s case, however, replacement of the womb did not remove her distressing symptoms.

Post-mortem examination of the abdomen only was allowed. On the peritoneal layers I counted eight deposits of grey tubercle, each surrounded by a patch of congestion, the bloodvessels radiating in streaks from the deposits. Nowhere was the patch of congestion as large as a sixpenny piece. Throughout the entire length of the bowel there were found twelve deposits, the bloodvessels in close proximity to the tubercles being very large and distinct. Three perforations were discovered in the duodenum, two being evidently of recent origin. The stomach contained a little fluid and some pieces of toast. The womb was slightly enlarged, both ovaries being of a beautiful violet tint. The remaining viscera were healthy.

Yours truly,

M. D. KELLY, L.R.C.P., L.R.C.S.

Newcastle-on-Tyne, Sept. 30th, 1880.

Medicus.—1. He would certainly be unfit, and we have no doubt he would be considered so.—2. Our article on Books in the Students' Number will answer this question.

Dr. Reimann, (Kiev.)—Thanks.

A very Old Subscriber is thanked for bringing under our notice a very unprofessional bill.

Mr. A. Durand.—We must decline the proposal.

Dr. Sousino, (Cairo.)—We shall be glad to see the paper.

COLOUR-BLINDNESS AND RAILWAY EMPLOYÉS.

To the Editor of THE LANCET.

SIR,—In reference to your annotation of Oct. 2nd, I may say that the English Railway Companies, as well as the Indian, are fully alive to the necessity of strict examination of candidates for their service, and, in strict justice to them, I may say that as long ago as my appointment to the Great Western Railway as surgeon for this district in 1866, one of the questions was, "Can he see well, and distinguish one colour from another?" while the Midland Railway form expressly enjoins that the candidate's sight as to "distance" and "knowledge of colours" shall be specially reported on. The public, therefore, need not fear that so important a matter has been overlooked. But my special object in writing is to say that during the fourteen years I have examined men for these two Companies I have met with so few cases of strongly marked colour-blindness that I think its frequency is overrated. The most marked case I ever saw was a very fine young man, who had been a sailor, and who was utterly unable to distinguish between red and green either in the form of flags or (in a dark cellar) of the two colours in railway lamps, the only concession I could get from him, when he found from my examination that he had "gone wrong," being that he thought one was "a rather lighter green than the other." Cases are of much more frequent occurrence in which there is inability to distinguish different shades of the same colour and gradations of tint; but there is also a comparatively very large number of cases in which the supposed colour-blindness is not this phenomenon at all, but simply colour-ignorance, and it requires considerable care to distinguish between this and the true colour-blindness; for I have often been surprised at the extreme difficulty, especially among the agricultural population, in naming even the primary colours, where experiment showed that practically they thoroughly knew the difference between them, and it seems to me very probable that many of these cases have been classed as colour-blind.

One word as to the mode of examining patients for this affection. I used to have circles painted on a card for candidates to name. On one occasion a man did this very glibly and correctly; but on further testing I found he was the subject of colour-blindness sufficient to disqualify him for railway service, and I had good reason to believe that my card of coloured-discs was too well known, and that the sequence of them had been carefully noted. Since that time I have adopted a rough-and-ready but very effective method. I tell the candidate to go to my book-case, and place his hand upon a red, yellow, green, and blue book, and if he selects these colours readily from among scores of others I am satisfied; but if he chooses obscure tints of the colour for which he is asked, as sometimes happens, I then carry out a much more rigorous application of tests.

I may say, in conclusion, that more evidence is required before we can assume that this curious condition is as prevalent as has been assumed.

Yours obediently,

ROBERT BIGGS, M.R.C.S., L.S.A.,
Surgeon to Great Western and Midland Railways,
Bath District.

October, 1880.

DELIRIUM FROM POISONING BY FUNGI.

To the Editor of THE LANCET.

SIR,—I shall feel greatly obliged if you will allow me to ask your readers for references to cases of delirium from poisoning by fungi.

I am, &c.,

October, 1880.

J. H. J.

COMMUNICATIONS, LETTERS, &c., have been received from—Sir J. Paget, London; Professor Wharton Jones, London; Professor G. Corradi, Mr. Walter Rivington, London; Dr. Whiphram, London; Mr. Adams, London; Mr. A. Durand; Dr. W. Alexander, Liverpool; Mr. Faulds, Tokio; Mr. W. H. T. Power; Mr. T. R. Allinson; Dr. Evandeullender, Utrecht; Mr. Tuer, Buxton; Dr. M. Thomas, Glasgow; Dr. Strange, Worcester; Dr. Haig, London; Dr. Barker, Warrenton; Dr. Cameron, Dublin; Dr. Minns, Thetford; Signor Saffi; Mr. Macnamara, Dublin; Mr. Speedy, Dublin; Dr. Caldwell, Lakefield; Mr. Black; Dr. Lewins; Mr. Bailey, Crewe; Dr. Andrew, London; Mr. Nettleship; Mr. Nall, London; Dr. Bridges; Mr. Kenyon, Bradford; Dr. Gramshaw, Gravesend; Dr. Hardwicke, Sheffield; Messrs. Moses and Son; Mr. Walmsley, Belmont; Mr. Martindale; Dr. Tomkins, Monsall; Mr. Teevan, London; Mr. Julius Cesari; Mr. Reynolds, High Wycombe; Miss Yates; Dr. Campbell, Liverpool; Dr. Peters; Dr. J. Jeffries, Boston, U.S.A.; Dr. Garrido; Dr. V. Jackson; Mr. Locker; Dr. Wigg; Mr. T. Woods, Gillingham; Mr. Wheeler; Dr. Hadden, London; Dr. Easby, March; Dr. Coleman, Surbiton; Mr. Holden, Bolton; Mr. Dismore, Lewisham; Dr. Uthoff, Brighton; Mr. S. J. Hutchinson; Dr. Smiles; Dr. Foss; Mr. Pickworth, Weardale; Mr. Walwyn, St. Kitts; Dr. Seaton, Nottingham; Dr. Sousino; Dr. Payne, Bengal; Mr. Collins, Bampton; Dr. West, Vienna; Mr. Gibbs, Dublin; Mr. Emmerson, Biggleswade; Dr. Bunce; Dr. Cook, London; Messrs. Freeman and Co., Bristol; Dr. Lister, Newton-le-Willows; Messrs. Macmillan and Co., Cambridge; Sir E. Lechmere; Mr. Pink, London; A Constant Reader; R. M. L.; Anomalous; A. G. P.; M.R.C.S.; L.R.C.P. Ed.; Dietetic; Sauve qui peut; J. L. B.; Weak Sight; A Poor Assistant; Medicus; M.D.; Pompeii; A. M. D.; J. L. S., Glasgow; R. B. G., Edinburgh; A. B.; T. G. M.; Alpha, Leicester; Fides, Sheffield; E. G., Stamford; &c. &c.

LETTERS, each with enclosure, are also acknowledged from—Dr. Rose, London; Messrs. Carter and Co., London; Mr. Barber, Sheffield; Messrs. Christy and Co., London; Mr. Walker, Wakefield; Mr. Towell, Manchester; Mrs. Pratt, Liverpool; Mr. Webb, Exeter; Mr. Scoth, London; Mr. Thompson, Ilfracombe; Mr. Smyth, Northleach; Mr. Thomas, Landrindod Wells; Mr. Hudson, Ventnor; Mr. Huxley, Abergavenny; Mrs. Phillips, Newcastle-on-Tyne; Mr. Roberts, Attercliffe; Messrs. MacLachlan and Co., Edinburgh; Dr. Walker, Aldbrough; Mr. Dungey, Margate; Mr. Hakens, Bayswater; Mr. Gee, Royston; Mr. Johnson, Loughborough; Messrs. Gostling and Son, Diss; Dr. Walker, Cheltenham; Dr. Davies, London; Dr. Kirkpatrick, Woodbridge; Dr. Fraser, Edinburgh; Mr. Walker, Middlesbrough; Messrs. Harper and Co., Belfast; Nucleus; Magnus; Omega; Beta, Cardiff; Delta, Holywell; W. G. C. K., Kensington; P., F.R.C.S.; Rex; Sigma, Nottingham; M. S.; M.D., Bristol; S. S.; A. S.; E. A.; C. J. L., Aberdeen; L. W., Rickmansworth; Lexicon, Bow; L. L. D., Stradbroke; Medicus, Talk-on-the-Hill; Millgate; Statim, Whittton; Medicus, Chesham; Retina; R., Llandovery; M.D., Strand; Omega, Tipton; D. B.; Alpha; &c.

Church of England Temperance Chronicle, L'Union Médicale, Science, La Science Libre, Spiritualist, Journal des Sciences Médicales de Lille, Bradford Observer, Western Mail, Sanitary Engineer, Common Good, Revue Médicale, Pharmaceutical Journal, El Liberal, Worcestershire Chronicle, France Médicale, Perthshire Constitutional, Indian Herald, El Alumno Médico, Allgemeine Wiener Medizinische Zeitung, Indian Daily News, Englishman, Concours Médical, &c., have been received.

Medical Diary for the ensuing Week.

Monday, Oct. 18.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS. — Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; on Tuesday, 9 A.M.
MEDICAL SOCIETY OF LONDON. — 8½ P.M. Dr. J. Hughlings Jackson: "Cases of Recovery from Symptoms of Organic Brain Disease."

Tuesday, Oct. 19.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 3 P.M.
PATHOLOGICAL SOCIETY OF LONDON. — 8½ P.M. The following Specimens will be shown:—Case of Dilatation of Central Canal of Spinal Cord; Fibroid of the Uterus; Myeloid Tumour of Tibia; Fatty Tumour removed from Right Aryteno-epiglottidean Fold; Fatty Tumour from the Scalp; Osteitis of Femur; Acute Necrosis of Tibia; Case of Hodgkin's Disease associated with Tuberculosis.

Wednesday, Oct. 20.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL. — Operations, 1½ P.M., and on Saturday at the same hour.
ST. THOMAS'S HOSPITAL. — Operations, 1½ P.M., and on Saturday at the same hour.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
KING'S COLLEGE HOSPITAL. — Operations, 2 P.M., and on Saturday at 1 P.M.
LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL. — Operations, 2 P.M., and on Saturday at the same hour.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN. — Operations, 2½ P.M.

Thursday, Oct. 21.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL. — Operations, 2 P.M., and on Friday at the same hour.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M.
HARVEIAN SOCIETY.—½ P.M. Mr. F. H. "Ivory Exostosis in both Ears successfully removed by Operation."—Dr. Milner Fothergill: "Some Practical Points in Digestion."

Friday, Oct. 22.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
QUEKETT MICROSCOPICAL CLUB. — 8 P.M. Dr. M. C. Cooke, "On a New Fresh Water Alga found during the year."
CLINICAL SOCIETY OF LONDON.—8½ P.M. Mr. Clement Lucas, "On Cross-legged Progression (Scissor-legged Deformity), the result of Double Hip Anchylosis."—Dr. Greenhow, "On a Case of Intestinal Obstruction caused by a Hernia through the Mesentery of a Meckel's Diverticulum, which had retained its attachment to the Umbilicus."—Mr. H. Morris, "On Nephro-lithotomy, with a Case in which the Operation was successful."—Mr. Adams, "On a Case of Ligature of the Common Carotid and Subclavian Arteries for an Aneurism, supposed to be of the Innominate Artery."

Saturday, Oct. 23.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

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Answers are now received at this Office, by special arrangement, to Advertisements appearing in THE LANCET.
Terms for Serial Insertions may be obtained of the Publisher, to whom all letters relating to Advertisements or subscriptions should be addressed.
Advertisements are now received at all Messrs. W. H. Smith and Sons' Railway Bookstalls throughout the United Kingdom.
The postal arrangements relating to the distribution of THE LANCET will be considered from time to time in the interests of subscribers.
Tables of Contents, with the Index of Advertisements, for each Number can be had on application to the Publisher.
A First Issue is made each week at seven o'clock on Friday morning, for the Wholesale Houses only.
A large Colonial Edition is also published for despatch the same day.

An Address ON ELEMENTAL PATHOLOGY,

Delivered in the Pathological Section of the British Medical Association,

By SIR JAMES PAGET,
PRESIDENT OF THE SECTION.

(Concluded from p. 607.)

THE resemblances which, in human pathology, we trace between the processes of repair and some of those of Inflammation are well-marked in plants. Of course, in speaking of inflammation in plants, we must be nearly limited to the essential parts of the process. In ourselves, we look to its so-called signs—in heat, redness, pain, swelling, and disturbed function; but these are not of the essence of inflammation, and, even in ourselves, one or more of them may be absent when yet the real process of inflammation is active. For the elemental pathology of inflammation, as for that of decay and of repair of injuries, we must study the altered relations between the elemental formed parts and the varying formless materials about them; and these, let me repeat, may be seen more nearly in plants than in animals, in which it is hardly possible to isolate any parts from the influence of stagnant or wandering corpuscles or of circulating blood and nervous systems.

The signs of inflammation, I have implied, cannot well be observed in plants. Increased heat in the part has not, I think, been noticed; yet I suspect that, with so rapid organisation as sometimes ensues in gall-formations, it might be detected. Redness is often present, as in the galls and curled leaves of which I shall speak presently; but it is in a fallacious likeness to the redness of congestion of blood; it is only the colour of imperfection which one sees in many immature and many decaying leaves. Pain we cannot suppose in plants; and yet it may be through some change like to that of transmission of nerve-force that we must explain what I find told by Frank,¹ that in many green parts of plants there appears, some few minutes after wounding them, a change in the normal position of the chlorophyll-grains and the protoplasm in cells at a distance from the wound—a change which, as he says, must be regarded as due to the transmission of a stimulus of some not well-known kind from the wounded to the intact living cells. Slight slowly-ensuing swelling is often evident in the inflamed parts of plants, and is due, as in animals, to new formation and to increased afflux of nutritive matter—an afflux, be it observed, not due to any vaso-motor nerve-change. Disturbed function is evident enough.

But the likenesses between the inflammations in plants and in animals are best shown in their visible structural changes; and these have been admirably traced by Waldenburg.² He has applied various irritants to leaves, fruits, and stems—such as foreign bodies, setons, crushings, cauteries, and others. The results, speaking very generally, are: that, as in ordinary wounds, the cell-structures actually involved in the injury perish and dry up; that those most nearly adjacent suffer degeneration, indicated by their protoplasmic contents becoming turbid and their chlorophyll becoming yellow or brownish; while in those next to them, and within distances varying according to the injury and the texture of the part injured, enlargement of cells ensues, and increase by division and thickening of the cell-walls.

In these changes you may study, with comparatively easy experiments, imitations (as near as difference of texture will allow) of the most constant constituents of inflammation in animals, especially those of the least acute of the productive interstitial inflammations, leading to thickening, opacity, induration, and other such changes. The defective maintenance of some of the natural structures of the part is evident; so is an increased afflux of nutritive material; so is an increased production of lowly organised structures not widely different from the natural structures.

But of all morbid processes in plants, none, I think, are so suggestive as are those produced by parasites, whether vegetable or animal. The whole subject would be far too large to speak of, even if I were familiar with it; it is, indeed, a subject of the gravest national importance; but, keeping to the design with which I started, and which was only that of pointing-out where useful pathological knowledge may be gained, I will speak of only some of the changes which are produced by insects. The most remarkable of these are the Galls;³ and among the many hundreds of them that have been described I may assume that you know some in their natural mode of growth—such as the common oak-apple, with which some celebrate the restoration of our monarchy, and the bedeguar of the wild rose, the bright-crimson oak-spangle, the currant-gall, or the artichoke-gall, or the gall of pharmacy. But, besides the hundreds of different true galls, there are still more hundreds of changes of structure in leaves and stems and roots, all produced by the irritant secretions of insects, and all such as may justly be ascribed to processes of inflammation. In some, as in the “curl” of the leaves of the whitethorn, you find thickenings of leaves which are lifted, rolled, or curled into chambers which serve for defence of the aphides or other insects; in some, the thickened and distorted clusters of leaves, in buds or twigs, roll-up and are mutually fastened so as to form the walls of similar defensive lodgings; in some cases, leaves become swollen as with a kind of oedema; in some, their layers separate as if with blistering; or leaves, or stems, or fruits, or clusters of flowers, buds, or roots produce variously shaped and variously constructed growths of cellular parenchymatous tissue and cork, and, more sparingly, of woody tissue or of cells, whose thick walls become as hard as wood. Besides, some of the monstrous growths of parts of plants, and some of the viviparous variations, and the undue metamorphoses of leaves, are to be referred to the influence of parasites.⁴

It may seem bold to speak of so many hundreds of widely various morbid processes as having any essential character in common, or as fit to be included under one name; yet, I think, we may regard the whole of these as being such as, in our pathology, we should call inflammatory hypertrophies or hyperplasias. They all show a rapid increase of lowly organised structures, by derivation from, and in continuity with, those pre-existing. There is, as in the products of our inflammations, a general likeness among these new structures whatever be the part of the plant from which they are derived, and all bear a general likeness to the structures formed after injuries of actively growing parts. In the morbid growths formed by these new structures, the deflection from the natural shape and construction of the part, in continuity with which they have grown, is often not complete; they often retain marks of characteristic normal forms, and sometimes acquire marks of natural variation from the species.⁵ Moreover, all these morbid growths have their origin in what may justly be called “irritation” of the part on which they grow; and in all of them, I think, we may note signs of degeneracy from natural conditions, either in the absence of stomata or similar structures, or in the presence of the red, or yellow, or other colours commonly noticed in decay.

Here, I believe, are reasons enough for regarding all these galls and gall-like products of disease, generated in plants by insects, as analogous with a large group of the products of inflammation which we study in our own

³ Many growths like galls are produced by fungi and other parasitic plants; but those I omit. Many are described by Schroeter (Beiträge zur Biologie der Pflanzen, Band I., p. 4) and by Beijerinck. The best essays on the minute structures and modes of growth of galls are those of Lacaze-Duthiers in the *Ann. des Sciences Naturelles, Botanique*, 1853; of Prillieux, in the same; *Botanique*, 1876; and of Beijerinck, *Bijdrage tot de Morphologie der Plantegallen* (Utrecht, 1877). But I am most indebted to Miss E. A. Ormerod, who, by her admirable works on Entomology and Meteorology, sustains the scientific reputation of the name so well known to pathologists. Since the Address was sent to press I have received the second part of Frank's essay in the *Encyclopædie der Naturwissenschaften*, containing a much fuller account of galls and gall-like growths than, I think, had before been published. With this, or with the soon-coming second part of his separate *Pflanzen-pathologie*, and with Beijerinck's essay, the whole subject may well be studied by any human pathologist. But I hope that it will soon be yet more clearly illustrated by Dr. Arthur Ransome.

⁴ Among them are the “witch-brooms” of the birch, pine, larch, &c. Miss Ormerod has described the “Phytophys of the Birch-knots” in the *Entomologist*, 1877. A long list of the teratological forms due to parasites is in Beijerinck, *loc. cit.*, p. 32. With this should be studied Dr. M. Masters's volume on *Vegetable Teratology*.

⁵ As Darwin pointed out in the likeness of the mossy covering of the common wild-rose-gall to the calyx of the moss-rose. There are, also, instances in which galls imitate small cones or other structures of the plant.

¹ *Encyclopædie der Naturwissenschaften*, Abth. i., Lief 12, p. 333, from a paper by him in *Pringsheim's Jahrb. f. Wiss., Bot.* viii. p. 220.

² *Virchow's Archiv*, Band 27, 1863, p. 145.

pathology; and the analogy is not the less because neither group can be circumscribed with any exact definition.

I will not be tempted to speak long, but I beg you to think long, of the marvellous facts of natural adjustment which we have here, in this intense example of the "*sic vos, non vobis*." Here are the bare facts. Each species of these parasitic insects can compel some part of a plant into such disease as shall supply good food, or well-built and well-placed lodging, or both, for itself or for its eggs and larvæ, or even for part of the life of its complete offspring. Each insect selects, by instinct, the very part of the plant which is adapted to its purpose. The provision made at the cost of the plant is exactly adapted in quality to the welfare of the insect or its offspring, and in quantity as well; for both the lodging and the food are made sufficient for any necessary time—for days or weeks, often for many months; in some instances, for two or even three years. Nay, more than this, the gall, of which the growth has been provoked by the virus of one insect, may be fit for the food and lodging of another, which, when all seems complete, can penetrate the gall-cavity, and there, as with theft or murder, obtain food and lodging perfectly suited to itself or its progeny.⁶ And the whole process in the plant, though it be one of disease and, in a sense, unnatural, is yet so regular, so constant and specific, that the form and other characters of each gall or other morbid product are, usually, as constant and characteristic as are those of the insect itself, and the differences among the galls are at least as great as those among the insects. Is there, in all the range of natural history, a more marvellous group of facts than may here be studied? If you would like to work out a problem in evolution, find how it has come to be a part of the ordinary economy of nature that a gall-insect compels some part of a plant to grow in a manner which, while injurious to the plant, becomes useful to one insect not yet born, and to another who will, in due time, kill this one and feed on it.

But now, of the relation between galls and our specific diseases, such as our eruptive fevers, syphilis, cancer, gout, and others.

In these galls and other similar diseases in plants we have, it seems, hundreds of specific diseases due to as many hundreds of specific morbid poisons;⁷ for the most reasonable, if not the only reasonable, theory of these diseases is, that each insect infects or inoculates the leaf or other structure of the chosen plant with a poison peculiar to itself. The poison may be merely deposited; but, in the instances best for study, it is inserted in the plant-structure, whether leaf or any other; and the wound for inserting it, the poisoned wound, may be made either with part of the oral apparatus, or, as in most of the true galls, with the ovi-positor through which one or more eggs are passed with the virus, and are left among actively living structures of the plant. The little wound closes; the virus, whether an oral or an ovarian secretion, remains, and the result of its influence on the plant-structures and their contained protoplasm is the formation of the gall or other morbid product. The whole process may be compared with the local consequences of the insertion of vaccine-lymph, or any such morbid poison, in ourselves or other animals. I say the local consequences, for we have no clear evidence of what might be called general infection or constitutional disease in the plants. In the absence of quickly moving fluid, such as lymph or blood, the virus infects only the part in or very near to which it is inserted. A single oak-leaf may have fifty "spangle" galls on its under surface, but the structures between them may be quite healthy; and when in any instance a general damage is done to a plant by gall-growths, it seems to be only as a remote consequence of the spoiling of considerable portions of its structures. And this appears to be true, even though the virus may continue active for a long time, as in the galls which begin to grow soon after the insertion of the virus with the ovum, and continue to increase during the whole—sometimes long—development of the larvæ; or even, in a few instances, after the larvæ have deserted them.

But, while plants supply no occasions for studying fever, or any other of the constitutional phenomena of specific diseases, they are all the more fit for illustrations of some of the local

characteristics. Let me suggest some things for study in them, in addition to the inflammatory changes of structure.

We find hundreds of different forms of galls, and we may be nearly sure that there are as many kinds of morbid poisons produced by the gall-insects, each form answering to a different virus. This may suggest that we may be too grudging in thinking of the number of morbid poisons, or of their modifications in the blood, to which diseases in ourselves may, at least in part, be due.

It is true that the galls are produced by many species of insects on many species of plants; and that the differences among these species may be as wide as those between ourselves and any other mammalia. But, even among closely allied species, there are many and very different forms of galls. Mayr,⁸ ten years ago, described and figured ninety-six kinds of galls found on the oaks of middle Europe, all but two of them being produced by different species of gall-wasps. Of those ninety-six kinds, thirty-two are formed on the leaves alone; and, even on similar parts of one oak-leaf, it is not rare to find three or four different forms of galls.⁹

We have, thus, clear evidence of a very large number of morbid poisons, each of which is capable of producing, in an appropriate subject, a distinct specific disease with a characteristic morbid structure.

We may safely believe that, for each of these morbid poisons, there is no test yet possible except that of the disease which it may produce; and so we may as safely believe that there may be many morbid poisons or morbid conditions of blood in ourselves which may be indicated by very different products of disease, though they may be beyond detection by any other, even the most refined, method of research.

Further, though it may be impossible by any other means to detect any differences among these morbid poisons, yet the diseases which they severally produce may be widely different; as unlike as are a pustule and a goitre, or a vaccine vesicle and a carbuncle, or as any of the morbid changes due to gout or rheumatism.

It may be observed, however, that these great differences are marked in outer shape and construction much more than in minute structure. As, in human pathology, there are certain general characters and degrees of likeness in all inflammatory products, however differently they may be constructed—in pustules, vesicles, thickenings, opacities, adhesions, scars, fibroid, and other changes; so, in galls, there are certain likenesses in minute structures, even among those that are, in their construction, size, and outer shape, most unlike.

It may be well to learn from this a lesson on the imperfection of our methods of minute research. As we cannot doubt that the differences in outer shape and method of construction of the products of specific diseases are associated with differences of chemical composition and ultimately minute structure, so it must be in those yet greater differences on which we frame our distinctions of species in all living nature. The coarse, visible, and tangible distinctions may be well marked; the really material differences with which these are associated, and to which, probably, they are due, are beyond our reach.

Again, in the study of specific diseases in ourselves, we see many variations due to the differences in the parts, or even in the persons affected with them. In the study of galls similar variations may be seen. As a general rule, each gall-insect lays its eggs in one part of one plant, as the leaf, leaf-stalk, bud, fruit, or root of this or that species; but if, as rarely happens, one lays in different parts of the same plant, there is usually a very close agreement in the characters of the resultant galls. A few exceptions to this rule are known, one of them being in the very different galls produced on the roots and on the leaves of vines by *Phylloxera vastatrix*; but the rule is generally observed, and accords with the fact of certain features of general likeness being observed in the products of our several specific diseases, wherever they may be seated.

When the same insect lays in similar parts of different plants the galls may be all similar,¹⁰ but I believe they more usually are different, and that their differences are such as bring them severally nearer to the distinctive characters of the plants on which they grow; just as, in ourselves, a

⁶ The Inquilline, Einmiether, lodgers, or (as they might be called) burglars, are usually described in the works on gall-insects, though not themselves "gall-makers."

⁷ Karsch (abstract in the Botanische Jahresbericht, 1879, p. 156) gives the total number of the forms of galls at present known as about 1250, of which one-fifth belong to the Cynipida.

⁸ Die mitteleuropäischen Eichengallen, 1870.

⁹ While writing, I have before me some oak-leaves from a sapling on which are five kinds of galls, three being, in several instances, on one leaf.

¹⁰ Fr. Löw. Ueber Gallmücken. in Verh. der K. K. Zool.-botan. Gesellschaft in Wien, 1877.

specific disease may be modified by the personal conditions of each patient.

In similar analogy the differences are yet greater when the eggs are laid in different parts of different plants.

Very rarely the same insect may produce on one leaf different forms of galls.¹¹

In all these points you may, I think, find help in the study of specific diseases. I will add only one more. Usually the gall begins to grow directly after the deposit of the egg; but sometimes there is a long delay, a long period of suspense, an "Eiruhe,"¹² which may last for many months before the growth begins. What is going on during this time? I believe we may see here an instance of events very difficult to study in our own pathology, in which two or more conditions must concur to the production of some disease, and one of them must wait for the complete efficiency of the rest. In the case of these long-delayed galls, either the egg, after being laid, requires a long time for the completion of changes ending in the production of the necessary morbid poison, or the plant-structure in which it is laid requires the time for changes to make it susceptible of the poison; or both egg and plant may need to change. So in us, two or more conditions must concur. A tendency to gout may be inherited, and the blood may have slowly acquired the necessary morbid condition; but no structure may be susceptible of gouty disease till a blow, or a strain, or some disturbance of nervous force makes it so. So with cancer, a general tendency may be inherited, but it must wait till the material of some structure is by age, or injury, or long-continued "irritation," changed into fitness for concurrence in morbid action with the material on which the general tendency depends. Then, when the two materials meet in mutual fitness, the result may be a change so great, that we may compare it with that from an act of impregnation. I have often thought of this comparison when seeing the almost sudden appearance of cancer in a breast or a tongue or a scar long irritated. In the growth of these galls the comparison may seem less far-fetched; at least, it may be difficult to suggest any nearer comparison for a process in which the meeting of two living materials from different organisms is immediately followed by such a change in the method of life of one of them, as ends in the production of a definite new growth exactly adapted to the method and purpose of the life of the other.

But it is more than time that I should have done with galls. If I have been tedious, let me assure you that I am myself ashamed to have gathered so little from the rapidly increasing records concerning them to which the botanists, and still more the entomologists, of our time are contributing. And, even for that little, I feel as if I deserved to be compared with one of those burglars that I spoke of, feeding on the results of others' labours. Let it be my apology to them, that I believe I have taken nothing they would have used. I have only taken, from their rich stores of facts, some that may be much more useful in pathology than in natural history. And I am sure, from all I know of naturalists, that they will gladly let any of you into their fields, though you may use them for your own purposes much more than theirs. It would be difficult to find a field for the study of the very principles of pathology larger or richer than this offers to you. The objects are within easy reach; hundreds of morbid processes are at hand for deliberate study; experiments may be made at will; and, during many months, thousands of insects, as natural vivisectioners, will be at work for you; and it must yet be some years before they will be required to take out licences.

I will speak of only one more of the subjects of general pathology—that of tumours; and on this I may be very brief.¹³

¹¹ Beijerinck, loc. cit., p. 21, from whom, also, the two preceding sentences are quoted. He cites from Winnertz the case of *Cecidomyia tremula*, which may produce on the same leaf of the white poplar four different forms of galls; but I would suspect that there may be as many differences among the eggs, just as there are among those of some Lepidoptera, in which, out of the same brood of eggs, all laid in the same place, some are hatched in the next following season, others in one, others in two, seasons later. Of course these eggs are not all alike, though no other difference besides that proved by the times of hatching may be discoverable in them, or in the insects produced from them.

¹² Schenck, Beiträge zur Kenntniss der Nassauischen Cynipiden, p. 24. He cites the case of *Trigonaspis megaptera*, which lays its eggs in May, and the galls do not appear till the next April; others lay in buds, and the galls appear at the time of opening of the leaves. Hartig mentions similar facts (Zeitschr. für die Entomologie, Band ii., p. 176, 1840).

¹³ What is here said of morbid growths, and some of the deductions from the study of galls, were, for the want of time, omitted in delivering the address.

I do not know if there be any morbid growths in plants which may justly be compared with our cysts or cystic tumours. Foreign bodies lodged in them usually give rise to such changes in the immediately surrounding textures as produce layers of cork-tissue, which may be compared with the capsules of connective tissue similarly formed around foreign bodies in animal structures,¹⁴ but I do not know if there be any such diseases as cysts filled and enlarging by the increase of secretions or growths from their own walls.

Growths which may be coarsely—and only coarsely—compared with our cheloids are common on elms and other trees, especially on apple-trees. They are called cankers, or in Germany by the same name as cancers—Krebs.¹⁵ They are usually rounded and coarsely nodular masses of wood, covered with bark, sessile singly or in clusters on branches, and depressed at the middle of their projecting surfaces. Thus, in form, they are not far unlike masses of scirrhus cancer projecting from the breast or axillary glands; and the likeness is the nearer when, as is usual, the depression on their surface leads into a cavity bounded by decaying wood. The imitation of an ulcerating cancer may justify the use of the same name; but in the canker of the trees the central cavity usually indicates the beginning, not the advance, of the disease; for cankers, like most cheloids, are formed after wounds—whether from frost, or blow, or injury of parasite, or any other cause. Around these wounds layers and bosses of wood are annually heaped up, as if with an exaggeration of the process of repair, and with concentric growth they may close in and complete the likeness to the cheloid. But more commonly, while the outer part of the canker is annually increasing, its inner part is constantly decaying under the attacks of the parasites which the wound let in, and which plants seem to have no power to expel. Thus, within a kind of shell of laminated wood, outstanding like a tumour on the branch, you may find a great hollow space filled with rotten wood and other residues. It may look very like a mass of cancer, with central softening and decay; and the likeness is even greater when, as not rarely happens, the central decay keeps pace with the formation of new wood. Then is formed what some call an open cancer; others gangrene or Brand. In these an uneven surface of rotting and dead wood is surrounded by an undulating, knotted, and everted or overhanging border of the wood annually formed, but in its turn destined to decay, and thus to imitate the constantly enlarging cancerous ulcer with its nodular uplifted borders.

It is impossible not to be struck by these likenesses between cankers and cancers, and I commend them to your study, though I fear they are much more apparent than real. The nearer, yet still distant, likeness seems to be that to cheloid growths; for these also appear as morbid troubled processes for repair, and they are so far like to tumours that no line of definition between them seems yet clear.

The growths in plants which may, I think, be deemed most nearly like to our tumours, are those which are called exostoses,¹⁶ knours, or wens. They may, indeed, be regarded as only prominent examples of that disorderly growth of adventitious buds which produce the various strange and beautiful knots and veins in ornamental woods; but they are too like tumours for me to pass them by. You may find plenty of them on the trunks of the beech, hornbeam, ash, birch, holly, and cedar. The best specimens appear as ovate or nearly spherical masses of hard wood partly covered with bark, which is reflected on them from the continuous bark of the trunk on which they rest. They range from a few lines to many inches in diameter, and are attached sometimes broadly, sometimes by short narrow pedicles continuous with the wood of the tree. Some are without pedicles, and lie as free encapsuled masses in the growing wood.

In many of these conditions there is a very strong resemblance between these growths and some of the bony exostoses after which they are named. Especially when one breaks them off the trunk of the beech, or the holly, or cedar, and sees their pedicle of attachment and the bark-like integument and periosteum, continued over them, one cannot but compare them with the narrow-based ivory exostoses of the skull or the pedicled exostoses which are common on the

¹⁴ See Arlring in Ann. des Sc. Nat., 1874, t. iv. p. 27.

¹⁵ Sorauer, Handb. der Pflanzenkrankheiten, 1874, p. 199, &c.; Göthe, Ueber den Krebs der Apfelbäume; Leipzig, 1877.

¹⁶ Berkeley in Gardener's Chronicle, 1855 and 1857; Trécul des Loupes et des Broussins in Ann. des Sc. Nat., t. xx., 1853. An excellent account of the knots and veins of wood to which they are related is given by Frank; loc. cit., Maserbildung, p. 394.

femur and humerus, or with the sessile fibroid uterine tumours.

On section, they show themselves formed of very hard wood; and their pedicles appear as cylinders of wood passing from their centres into continuity with the normal wood of the trunk. Through these pedicles, while they last, the exostoses probably obtain some of their materials for growth; when detached, they wholly subsist and increase on materials derived from the cambium spread out over them. In this continued growth, when encapsuled, they resemble the typical tumours of our pathology more than do any other morbid growths on plants; and they may continue to grow so long as nutritive material is supplied to them.

Now, the history of these growths is very suggestive to us. They are derived from buds, which remain, as Trécul says, in a sort of lethargic state for several years, and then become active, and form either a little branch or a *loupe* or exostosis, which, in its increase, will project more and more beneath the bark. Surely, they may thus confirm that theory of tumours which regards those whose structure does not differ widely from the natural structures as growths derived from portions of germinal substance remaining, though one knows not why, for years "lethargic," and then becoming active, growing in their own method, and subsisting on materials derived from the living parts around them.¹⁷

Before I end, let me briefly say some things in apology and self-defence.

If I have seemed to speak as a botanist or any kind of naturalist, I have erred. It is more than forty years since I was a botanist, and anyone familiar with the science as it now is may justly say that I know nothing about it. He may detect at once my ignorance even of the language in which I have tried to tell where, in the field of botany, good facts for pathologists may be found.

I have not tried to deal with the whole subject of the diseases of plants. It is far wider than I could learn, even if the duty of my life were not to study those of men. I have not tried to learn more from them than may help to give me, and perhaps you, a clearer and wider view of human pathology and the duties it imposes upon us.

In dealing with even this narrow range of the diseases of plants, and in referring to the vastly greater number of those which occur in them—especially in the plants which we, to our own not their advantage, cultivate—I may seem to have been giving evidence against belief in the influence of nervous systems in the production and methods of organic diseases. I have had no such design against any reasonable belief of the kind; I have long held, and often declared, belief in the trophic influence of nerve-force. An alteration in the nervous force in a part can surely alter its method of nutrition, even without altering the condition of its blood-vessels, as much as an alteration of its temperature can; and, to cite no others, the facts which Brown-Séquard and Hutchinson brought before us yesterday, tested as they have been, are beyond refutation. Only, let us learn from a pathology more nearly elemental than that which we can study in ourselves, that many processes of disease, even the most various, may occur when there is no nervous system; and that there are many processes of degeneracy, and of repair, and of disease, of which the essential features are alike whether in the presence or in the absence of a nervous system. The study of such processes in plants, and even in crystals, may help us towards learning the real relation between the nervous force and the processes of organic disease. A certain normal condition of nervous force abiding in each part accessible to it may be deemed a necessary condition of the healthy life of that part; as a certain normal temperature is a necessary condition, and perhaps even a certain electric state. But we are bound to recognise the distinctions between the conditions of life and the essential properties of living things; and, as I proposed when beginning, so now, I hope I may have succeeded in showing that it will be very useful if you will study pathology in bodies less complex than our own, especially in such as are not subject to those conditions of our own elemental organic life, which are of all the most difficult to estimate—the conditions, namely, of a nervous system and a quickly circulating and quickly changing blood.

And now let me, only for a minute, claim the position of a senior in our profession, that I may tell how the study may

be useful for something more than the direct advancement of knowledge.

I hold it to be very desirable that every one of us should, all his life long, study some science in a scientific manner. There seems to be no equally good method for maintaining the temper and the habits which, by making us always good students, will make us as good practitioners as we can be. There is no method so good for maintaining a constant habit of inquiry, with accuracy and perseverance in research, the power of weighing evidence, of calmly judging, and of accurately speaking; none better for cultivating the love of truth, the contempt for fallacies, whether others' or our own, the gentleness and courtesy which are appropriate to the consciousness of the imperfection of our knowledge.

You may say that we can study science in the practice of our profession. So we may; at least, some of those among us may, who, before getting into practice, spent many years in scientific pursuits, and acquired habits which it is very hard to lose; but, even for these, the study of science in their practice is too much like that which, I suppose, an astronomer may pursue in some stormy night on a railway journey. For really scientific study, we need repeated observations in unchanged conditions, the right to watch deliberately the course of natural events, sometimes to change that course when and how we please, to set down our descriptions of the objects of our study, even while we watch them, sometimes to have them at home and readily at hand for revision and refreshment of memory. These and many other conditions for scientific study cannot be had in our practice, in which our first and never-ceasing duty must be to do, as soon as we can, all the good we can, though in doing it we may lose or spoil all the best opportunities of acquiring fresh knowledge.

If, then, I am thus far right, that we all are always bound to study a science in a scientific manner, and that it is very hard to do this in our practice, let me again commend to you this elemental pathology. In any fragment of it, studied in those fragments of time which we are all too apt to waste, you may find ample opportunities for observation and experiment, for recording, collecting, and comparing facts, for generalising, for imagining and testing; thus you may gain the happiness and reputation of discovery; and, without ever leaving the paths of duty, you may refresh and strengthen your minds in the study of stores of beauty, wonder and utility, such as, in all ages, have attracted the wisest and the best of men.

DIPHTHERIA AT ST. GEORGE'S HOSPITAL.

By T. WHIPHAM, M.B.,
PHYSICIAN TO THE HOSPITAL.

CASE I. — Esther S. C., aged six, was admitted under Dr. Barclay's care into St. George's Hospital on April 21st, 1880. The parents and relatives were healthy. The family originally consisted of ten, of whom five died of "coughs and teething" between the ages of one and two. One died soon after birth, and one died on the day previous to the admission of this child from "disease of the throat," with which it had been attacked on April 19th. The patient had "measles and bronchitis" a few months ago, otherwise had been healthy. On April 19th she was attacked with sore-throat and hard swelling below the angle of the jaw on each side, having been previously free from throat affection. The swelling rapidly increased, and was accompanied by difficulty of swallowing, cough, restlessness, loss of strength, and great thirst.

At the child's home there were at the time of her admission two other children apparently in good health. No similar throat affections had been heard of in the neighbourhood of their dwelling (King-street, Chelsea). There was, so far as the mother was aware, no defect in the drains, and the house was free from bad smells.

The patient was of strumous aspect, with fair hair and delicate skin, but well nourished. There was much swelling beneath the angles of the lower jaw; the swelling was of about the size of an egg, and hard; and from the nostrils

¹⁷ I think that many examples of "club" on the roots and stems of cabbage and other species and varieties of the same order may illustrate the growth of tumours. But some are certainly insect-galls, and the parasitic origin of others is suspected.

came a glairy discharge. There was neither cough nor dyspnoea. The tongue was clean, but the soft palate and pillars of the fauces were covered with a thick white membrane. Pulse 125, fairly strong, and regular. Temperature in the evening 100° F.; respiration 30. Deglutition difficult.

April 22nd.—Slept fairly well; no delirium; took fluid nourishment without much difficulty; some, however, returned through the nose; bowels confined; pulse 160, weak, regular; temperature 99° in the morning; no urine passed. The patient died at 9 P.M. from sudden failure of strength; there was no obvious dyspnoea before death.

The treatment consisted of ten minims of tincture of the perchloride of iron, and two minims of dilute nitro-hydrochloric acid in two drachms of water every two hours; ten ounces of port wine daily, strong beef-tea and milk, of each two pints.

At the post-mortem examination no membrane was found, but the mucous membrane of the fauces, larynx, and trachea was intensely congested, and covered with a little thin, purulent secretion. The heart was contracted, and to all appearance natural.

CASE 2.—Alice C—, aged twelve, sister to the above, was admitted under Dr. Barclay, on April 21st, 1880. She had always been healthy, and at the time of her admission was well nourished. She had had measles a few months ago, but had not been subject to throat affections. This child was suddenly taken ill about midday on April 21st, and she complained of pain under the lower jaw, and of difficulty in swallowing.

When admitted she was very prostrate; the neck was much swollen; there was swelling below the angles of the lower jaw, and the child spoke with difficulty. She was admitted in the evening, a few hours after her sister. She resembled her sister in appearance—i.e., she had light hair and fair complexion, and was well nourished. There was slight dyspnoea, but no cough or expectoration. There was much difficulty in opening the mouth; a whitish membrane was visible on the soft palate and tonsils. Temperature in the evening 103°.

April 22nd.—Passed a restless night, with some delirium, but took wine, milk, and egg-and-brandy mixture; respiration was somewhat noisy; no action of the bowels; pulse 140, weak but regular. Temperature: morning, 104°; evening, 103°; urine highly albuminous.

23rd.—Almost pulseless; restless and delirious at night. Took but little nourishment. Died of asthenia in the evening.

Treatment:—Twelve ounces of port wine, four ounces of brandy mixture, with two pints of strong beef-tea and milk. No post-mortem examination was made.

CASE 3.—Annie B—, aged twenty, general servant, was admitted under my own care on April 19th, 1880, in an extreme state of depression, suffering from pneumonia of the back of the left lung. It appeared from the history that the patient was in her usual health on April 13th. On the morning of the 14th she was unable to get up, and when her parents saw her on the 17th she was delirious. The delirium continued, being worse at night, and on the 18th she became so violent that two persons were required to keep her in bed. There had been diarrhoea for a day or two before her admission. She had been comparatively free from cough. She was ordered two pints of strong beef-tea and milk, five ounces of port wine and an egg.

April 20th.—She was delirious at night; one loose motion had been passed in the bed; no urine had been passed, the bladder was therefore emptied with the catheter, and the urine was found to be clear, acid, sp. gr. 1015, albuminous.

At the time of my visit her face was dusky; she was much depressed, delirious, but when roused answered questions rationally. She was constantly picking at the bed-clothes. Her skin was hot and dry; her tongue moist (probably from fluid nourishment, which she took readily). Pulse running and weak; respiration quick and shallow.

A hurried examination, which was all that could be attempted under the circumstances, revealed pneumonia of the lower lobe of the left lung posteriorly. The abdomen was flaccid and free from spots. She was ordered quinine and nitro-hydrochloric acid, and in the evening four ounces of brandy. A poultice was applied to the chest.

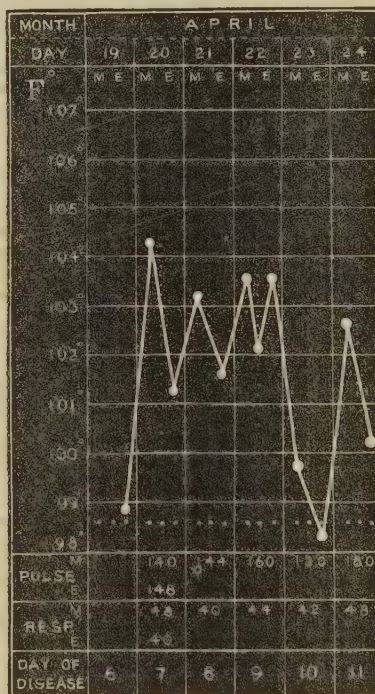
21st.—Owing to the indefatigable exertions of the head nurse, the patient was wonderfully improved in every respect, and was partially sensible. About noon one of the children, Esther S. C—, was brought into the ward, and placed in a bed nearly opposite to her, and remained there

for two hours and a half, when she was removed to the separation ward.

22nd.—The patient passed a very restless night; slept about twenty minutes only, and was very delirious. The urine and faeces were passed unconsciously in the bed. Respiration 42, chiefly abdominal, with marked movements of the alae nasi. Tongue thickly coated, dry and brown. She took both brandy and nourishment well.

23rd.—Passed a better night, but otherwise showed no improvement. She occasionally complained during the day of sore-throat. This was attributed to the fact that the brandy had been administered with as little water as possible, in order to save her the fatigue consequent upon the exertion of swallowing. She took nourishment and stimulants readily.

24th.—Passed a restless night, with low muttering delirium; still she continued to take food, almost with avidity. At 9 A.M. she spat up a tenacious white membrane, which had the appearance of having been moulded to the form of the soft palate and fauces. On examining the mouth at 1 P.M. I found the soft palate and tonsils and pillars of the fauces covered with an opaque, white diphtheritic membrane. A spray, consisting of lactic acid, five minims to an ounce of water, was ordered to be applied to the throat frequently, and the parts covered by the membrane were brushed freely with a solution of benzoate of soda (two drachms to six ounces). The brandy was increased to eight ounces. During the early part of the night the delirium was somewhat less, but there was more difficulty in swallowing. She died exhausted at 4.30 A.M. on April 25th.



The body was examined fifty-eight hours after death. Decomposition was already very far advanced, and was far more evident than in the case of another body in which life had been extinct twenty-four hours and three-quarters longer. Externally the neck was swollen, the skin much discoloured, the superficial veins clearly marked, and the subcutaneous tissues infiltrated with blood-stained serum. The thyroid gland was much enlarged. The mucous membrane of the fauces, larynx, trachea, and larger bronchi was intensely congested, but no distinct membrane was found: the mucous surface of these parts being merely studded with minute yellow points, apparently the remains of the diphtheritic membrane. The back of each lung was greatly congested, and the tissue of the left soft, and easily broken down by pressure: portions of the left lung, on being thrown into water, sank at first, and then slowly rose to the surface. The organs of the body generally were much decomposed and blood-stained; the heart, though contracted, was flabby;

the blood fluid. The liver was soft, and especially greasy in appearance.

CASE 4.—Probationer S—, aged thirty-three, had been on duty for some weeks in the male accident ward, and on the evening of April 21st was told off to take charge of the two children, Esther and Alice C—, in the separation ward, having been up to that time in her usual good health.

On April 23rd, at 5.50 P.M., the second of the children died, and in the course of the evening Probationer S— complained of sore-throat.

Next day at 1.0 P.M. I saw her: she was looking pale and anxious, with a weak pulse of 110. She complained of feeling very ill. Her right tonsil was much swollen and very red: on its inner surface was a ragged-looking yellow patch of about the size of a threepenny-piece. The patch resembled the sloughy condition of mucous membrane such as is commonly observed in cases of "hospital sore-throat." She was ordered a mixture containing tincture of perchloride of iron twenty minims, chlorate of potash one scruple, dilute hydrochloric acid twenty minims, sulphate of quinine two grains, spirit of chloroform half a drachm, water one ounce, every four hours, with eight ounces of port wine. She was also directed to take as much strong beef-tea and milk as possible, and to spray the throat frequently with a solution of lactic acid (five minims to one ounce.)

On Sunday, April 25th, Mr. E. V. Dickinson, who was officiating as house-physician, sent me a notice that the patient was much worse. At 8.15 P.M. I saw her, and by the indifferent light of a candle I found the soft palate and tonsils much swollen; the parts being, as far as could be seen, oedematous. It was impossible to be certain as to the presence of a membrane. There was great swelling of the neck, and especially of the parts below the angles of the lower jaw. The lactic acid spray was continued, and the throat was ordered to be swabbed out with solution of benzoate of soda (two drachms to six ounces) at frequent intervals, and spongio-piline saturated with warm Goulard and laudanum applied to the neck. The wine was increased to sixteen ounces, and eight ounces of egg and brandy mixture prescribed.

At midday, April 26th, I learnt that she had taken both food and stimulant readily; had passed a sleepless night, having suffered much pain in the throat, but had had no delirium. The neck was very much swollen, and the fauces and tonsils were covered by a dense white membrane.

The same night, between midnight and 1 A.M., I saw her again, when some slight improvement appeared to have taken place. The pulse was 120, and was a trifle stronger. She still continued to take all that was given her, but the pain in swallowing was very distressing. She was free from cough, but constantly hawked in order to remove the mucus from the throat. As far as could be seen by the candlelight the membrane had cleared off the pillars of the fauces. The inability to open the mouth wide, however, prevented accurate examination. The tongue was sore, swollen, and coated with a thick, dirty-white fur. The bowels acted freely. She was perfectly conscious, and still continued to take the wine, brandy mixture, and fluid nourishment. At 4.30 A.M. she became much worse. Mr. H. Griffiths, the house-physician, saw her, sprayed the throat with lactic acid, and applied the benzoate of soda freely. Both afforded relief in that they alleviated the dryness of the throat and the pain on swallowing. About 5 A.M. Mr. Griffiths again saw her, as she was evidently sinking, and again sprayed the throat for nearly an hour. Her pulse at this time was 160, and extremely weak. She took wine and nourishment in less quantity, owing to the painful deglutition. At 6 A.M. she died from asthenia, having been free from delirium and quite conscious to the last.

This patient was from the first very despondent, and expressed doubts as to the probability of her recovery. Shortly before her death she remarked to the nurse in attendance on her, "The Princess Alice kissed her children when they were ill, and I kissed the children downstairs." She was menstruating during her illness. Some urine, however, was drawn with a catheter for examination, but was unfortunately thrown away.

(To be concluded.)

MR. SAMUEL STRETTON, M.R.C.S.E., has been placed on the Commission of the Peace for the Borough of Kidderminster.

EXCISION OF ONE LATERAL HALF OF THE TONGUE.

PRESENT CONDITION OF THE FIRST PATIENT,
OPERATED ON IN 1865.

By GEORGE BUCHANAN,

PROFESSOR OF CLINICAL SURGERY, UNIVERSITY OF GLASGOW.

IN the *Edinburgh Medical Journal* for November, 1865, I described an operation for removal of one lateral half of the tongue affected with epithelial cancer, which I had contemplated for some time, but first put into practice in the case of Mrs. M—, from Arran, on Aug. 12th, 1865. The proceedings consisted of dividing the lower lip in the centre; sawing through the lower jaw at the symphysis (as formerly done by Mr. Syme in his operation for removal of the whole tongue); separating the tongue and sublingual apparatus from the floor of the mouth; drawing out the tongue by two loops of strong thread passed through each side of the tip; cleaving the tongue in the centre, from the tip to the epiglottis; and then dividing the attachments to the hyoid bone with a probe-pointed knife.

The principle thus introduced, of removing only the affected lateral half by cleavage, has been variously modified by using the *écraseur* or thermo-cautere to divide the attachment to the hyoid bone, with the view of obviating the necessity of tying the lingual artery; but the surgeon has more certainty as to what he is cutting away, when he uses a sharp probe-pointed knife; and I have never seen any difficulty in tying the lingual artery in the stump, when the remaining half of the tongue is well pulled out. Also, on more than one occasion, I have seen it necessary to ligature the artery after the divided half of the tongue had been removed by the *écraseur*, and it was much more difficult to catch the mouth of the vessel in the crushed stump left by the *écraseur* than on the clean surface left by the knife. I incline therefore to return to the operation as I first performed it.

The only objection to this proceeding is what is applicable to all cases of epithelial cancer—viz., the possibility of the disease reappearing in the glands below the jaw or in the neck. But if the operation is undertaken before there is any affection of the lymphatic glands, and if the excision is effected wide of the diseased parts, then the relief, which in my experience is at all events uniformly temporary, is in many instances permanent.

The object of this short communication is to state, that this autumn Mrs. M—, the subject of my first operation, called on me to report that now, fifteen years after its performance, she remains in perfect health, with no annoyance from the loss of half of her tongue. She can speak quite intelligibly, though of course there is a little defect; and she can swallow quite well.

The tongue is rolled over on the cut side (as is the case usually after this operation), so that when it lies in the mouth, or is projected, it is narrow and pointed, like the tongue of a bird. There is not a trace of thickening, hardness, or pain.

A NOTE ON INTENTION IN THE DETERMINATION OF SEX, AND THE MENTAL AND PHYSICAL INHERITANCE, OF CHILDREN.

By J. MORTIMER GRANVILLE, M.D.

THE laws determining the sex and the physical and psychological inheritance of children are not as well formulated as they ought to be, and the influence of intention, working under and through these laws, is therefore practically *nil*. It is scarcely creditable to science that this should be the case, considering the vast array of facts with which we are surrounded, all pointing to the conclusion that a better and fuller acquaintance with these laws would tend to the improvement of the human race, and the abatement of disease. Nor is the reduction of the laws of procreation and transmission to practice a Utopian project, inasmuch as their broad principles admit of application by individual pairs; and, subject necessarily

to the disturbing effect of collateral influences, they will produce the results which science enables the student of the principles of sex and heredity to predicate. It would be impossible within the limits of a short paper to give the evidence upon which the following conclusions have been reached, nor is it my purpose to attempt an argumentative proof of the propositions to be presently stated. A simple summary of facts observed independently, and now for the first time, so far as I am aware, brought together and submitted for consideration in their natural relationship, is all I contemplate. The inferences suggested certainly require, and they admit of, proof, but it must be left to time to work that out. I shall content myself with stating two propositions as briefly as the conditions of clearness will allow.

1. It has been shown by direct experiment with the lower animals, and is known to the most expert breeders of stock, that sex is determined by the relative aridity of the two parents. A preponderance of impulse on the part of the male parent produces female offspring, while excess on the part of the female parent produces male progeny. Facts commonly observed in relation to the human species show that the same law governs the determination of sex in man. Among these may be mentioned the following:—(a) The first children of quickly married parents are generally females. This is particularly noteworthy in the case of men marrying with a strong feeling of personal affection, or an especial desire for heirs. (b) Children born as the result of unions in which the female parent is not a consenting party, or is averse from the union, are almost invariably females. (c) Female children commonly resemble their male parents in early life, and at the successive periods of change occurring in the course of development and decadence. On the other hand, the offspring of unions, or periods, in which the female parent is the more ardent are nearly always males. (a) The first children of parents whose union has been long delayed are generally males; so also are those of unions in which the male parent is not specially attached to the female. (b) The offspring of unions in which the desire of the male parent for an heir has become less ardent, while that of the female parent has increased, are generally males. This is a very common experience, whose significance has been strangely overlooked. (c) Children born under circumstances in which the female parent is the more exigent are, with rare exceptions, male. Large families of boys indicate the existence of a constitutional excess of the procreative force on the part of the female parent, or a relative deficiency on the part of the male; while a family consisting of girls is proof of preponderance of the same quality in the case of the male parent. When an odd child of the opposite sex is born in the midst of a one-sided family, it is generally weakly, or in the proportional development of its mental and physical systems exhibits the weakness of the force which has exceptionally produced it. Children born late in the life of the dominant parent are frequently characterised by disproportionate development of the mental and nervous, or the more strictly *animal*, parts of the being. Of course, every rule has its exceptions, but the exceptions to these rules are very few. It commonly happens that instances which seem to transgress the general law of sex-determination are found on close inquiry to conform to it strictly. I believe that law to be one of the most universally kept, with the fewest exceptions, among the known orders of occurrence—which we call laws—of life and development. Granted the conditions necessary to establish a predominance of the procreative force on one side of the parentage, the offspring will be found of the opposite sex. Thus arises the question of “intention.” Assuming that the conditions essential to a proposed result can be established, the event will almost certainly follow the measures taken for its production. This is the first conclusion to which the facts observed obviously point. Sooner or later science will recognise the significance of the lesson they teach.

2. The inheritance of mental and physical qualities, so far as the emotional temperament, the nerve-state, and the less permanent characteristics, are concerned, follows the line of the force that determines the sex; while the deeper constituent elements of the “nature,” elaborated by family influences, pass directly from father to son, from mother to daughter. The new organic result—i.e., the offspring of the union, with its consequential and dependent properties,—will be determined by the law that makes all effective power the resultant of the combined forces of which it is composed. The inheritance will not therefore be simply the qualities of body and mind received from the dominant parent,

plus what the less ardent parent contributes, but will be the mean of the two sets of qualities, in such state of combination as may be determined by the mental concord or sympathy of the parents, and the compatibility of their organic constitutions. With qualities of mind and properties of the organism—so far as these two series of phenomena may be separable even in thought or for the purposes of argument—are transmitted mental and physical defects, weaknesses, irregularities of faculty or form, and consequent abnormal proclivities; the several forms of disease and derangement descending in the same line with the constituent elements to which they are most closely related. Thus, peculiarities of temper, nerve-state, and habit, with their morbid tendencies generally, follow the oblique line from father to daughter; while the underlying elements and characteristics, both good and evil, pass directly from father to son, from mother to daughter, subject to the laws of development, to which we will advert presently.

The study in detail of the laws governing heredity has been too much neglected. Had it been pursued with greater care and industry we should not have heard of many strange terms that have crept into use even in technical phraseology. For example, “atavism” does not clearly or adequately express the fact it is employed to denote. The *seeming* absence of certain elements of the hereditary constitution in one generation and their re-appearance in the next or a later generation, is not a mere accident, but precisely what we should expect under the operation of the natural laws governing sex and heredity. Thus a father may transmit certain peculiarities to his daughter, and she will pass them on to her son, who consequently inherits from his maternal grandfather. The female link in the chain being incapacitated by her sex for the development of certain parts of the *entailed* inheritance, they lie dormant in her organism, to be transmitted, like vitalised but ungerminated seeds, to her offspring when she becomes a parent. That is understood, but that which is not so generally recognised is that this latency is not the simple consequence of incapacity on the part of the daughter to develop the inheritance in her own person, because of her sex; but the result of the repressive operation of other forces inherited by her directly from her mother. There are, in fact, two lines of inheritance—the direct and the oblique. To the former we owe the perpetuation of the likeness of body and mind observed in families bearing a particular name. The force acting in this line is the stronger, or, perhaps, I ought to say the deeper laid and more persistent of the two. This is proved by the preservation of characteristics in the direct descent. The oblique line tends to the dispersion of the inheritance through the daughters of a house and their male children. To make this clear, suppose the existence of two families which we will call respectively *A* and *B*. A male of the house *A* marries a female of the house *B*, and two children are born, a male *A B* and a female *B A*. A male of some other house, say *C*, marries *B A*, and has a child, *B A C*, who inherits the peculiarities of *A* transmitted through *B A*, thus dispersing the inheritance of the house *A* through the house *C*; but *A B*, the brother of *B A*, besides inheriting the surface characteristics of the house of *B*, obliquely through his mother, receives the deeper underlying qualities of the house of *A* directly from his father, so that the constitutional characteristics of the family *A* are handed down from father to son and preserved in the direct line with the name. If the energy of transmission were not stronger in the direct line of inheritance, with the descent, than in the oblique, it is easy to see that family characteristics could not descend intact, as is the fact in society. The direct force is superior to the oblique, though the introduction of powerful female elements into the line of descent may do much to weaken it. What we call “atavism” is due to the circumstance that in the case of a male child, although the energy of the female parent determines the sex and does much to influence the surface type of the organism, the force of the male parent preserves the constitutional type. This enables the male characteristics to reassert themselves in any generation in which the female influence, though sufficient for the determination of sex, is not so strong as to influence the whole course of development. Therefore the latency of peculiarities of constitution is not rhythmical, but irregular, the force directly transmitted generally, however, regaining its ascendancy in every second or third generation. The term “atavism” is not so much erroneous or inapplicable as inadequate. It does not explain or even define that which it designates. The laws of inheritance are inseparable from the

laws of development, which may be summarised as follows: 1. There is a force operating to produce an animal of the class *Homo*, in obedience to the law of the development of species. 2. There is another force gravitating upon this, the outcome of geographical, climatic, and racial energies and influences, which tends to give the animal so produced a national type. 3. There is a force, of which we have been speaking—namely, the energy of family exclusiveness. 4. There is the individual entity, which embodies the sum of the ancestral energies so far as these have been transmitted or may be revived.

Intention in relation to heredity is the purposive employment, interruption, or control of the laws known to us, for the production of a given result—such as the extinction of disease or deformity, and the engrafting of a healthy stock. It cannot be doubted that science has a wide, and as yet unworked, field of enterprise in this department, from which the richest and best fruits may hereafter be gathered. It lies within the scope of the medical profession to attempt the cultivation of this field, but before good work can be accomplished the subject must be investigated and the province thoroughly explored. One of the first and most suggestive considerations in connexion with the practical aspects of this subject is that it is by repression as well as desuetude the evil parts of an inheritance are to be destroyed. It seldom happens that a morbid or evil element in the entailed estate of nature can be directly eliminated, but it may be starved and crippled and finally destroyed by repression and exhaustion. We can only eradicate special disease by the cultivation of special health. It is not enough to keep an inherited defect or evil tendency in abeyance, some healthful quality or property of the nature should be encouraged to over-lie and restrain it. Some sturdy branch must be trained across it. Diseases and morbid tendencies do not die out by virtue of neglect alone. They are only to be destroyed by the cultivation of other characteristics of organic form or function; of "nature" or "habit"—to use vague terms loosely—which have antagonistic or incompatible tendencies. It is not commonly within the power of the physician to make or mar the unions to which affection or policy impels adults; but it is strictly within his province and duty to offer advice that shall help to mitigate the evils, and enhance the advantages, of such unions as have been contracted. And the family medical adviser can generally find opportunity to direct a course of training—physical, mental, and moral—for children which will tend to the fostering of any inherited, though latent, forces that may be capable of being used to repress or repair the defective traits of the young organism. We leave too much to chance in relation to the propagation of the species and the improvement of the race. "Intention" has a part to play in the determination of sex, and in the revival or repression of inherited forces, by an intelligent use of the laws of Nature, which is not yet even recognised.

Welbeck-street.

CASE OF TRAUMATIC TETANUS.

By JAMES MORE, M.D.

ALTHOUGH the following case had a fatal termination, it is, I think, a good illustration of the therapeutic value of chloral hydrate in cases of traumatic tetanus. The attack was one of extreme severity, and, clinically speaking, had three distinct stages, each having characteristic features of its own, marking alike the progress of the malady and the effect of the remedies.

A. B—, a strong, healthy-looking coachman, forty-three years of age, had his middle finger crushed in a chaff-cutter. Adhering too rigidly to conservative surgery, tissues were unfortunately left in the first dressing, which sloughed, exposing and ultimately necrosing the bone to the middle joint of the finger. This may or may not have had anything to do with the occurrence of tetanus; but nevertheless decided symptoms of this dire malady set in just ten days after the accident.

His symptoms and appearance correspond precisely with the classical description of the most acute form of traumatic tetanus; for he had pleurothotonos, opisthotonos, well-marked risus sardonius, clenching of the jaws and grinding of the teeth, difficulty in breathing, in speech, and deglutition, high temperature, quick pulse, and profuse sweating.

These symptoms lasted, with little or no intermission, for twelve days, rising quickly to a pitch of intensity, with almost continuous pleurothotonos, and then again gradually subsiding to a state nearly free from tetany, and characterised chiefly by extreme weakness, moist skin, a pulse 120, full, soft, and compressible, and a mean temperature of 100°. During the intensity of his attack, his body seemed fixed in a curve, his disabled hand pressed against the wall to prevent himself, as he told me, being forced out of bed. The risus sardonius, which up to the ninth or tenth day after attack, and before chloralism was established, had been most marked, was gone. He now slept well, could swallow easily, and felt free from the terrible sternal tetanic pain.

This improvement in all the more urgent symptoms was not, however, quite decided till Nov. 23rd—i.e., the nineteenth day of attack. Before this date was reached the tetanic paroxysms, though not occurring as it were rhythmically or continuously, were still easily induced. Thus, being sick one morning he vomited, and this brought on intense spasm in the laryngeal muscles, so that for an hour his attendants thought he would have died. Again, during one of my early visits I witnessed one of these induced attacks. In drinking some wine-and-water rather hurriedly a fit of choking came on, with clenching of the jaws and grinding of the teeth, his mouth being filled almost at once with viscid mucus. On his brother attempting to raise his head his body arched from occiput to heels, so much that I could easily have passed a pillow under him from one side of the bed to the other. He was then bathed in perspiration, and his pulse was hard, full, and varied from 120 to 130. The treatment up to this time had been thirty grains of chloral hydrate every four hours, a morphia and belladonna suppository at bedtime, and the bowels kept open by giving each night an enema of turpentine and castor oil.

On the nineteenth day decided improvement set in. His face looked placid and cheerful, the tetanic paroxysms had now almost left him, his pulse had lost its extremely high-tension character, being only 98, and though full was fairly compressible. His skin was moist, and the temperature 98°. Thinking his recovery assured, and keeping in view the fact that tetanus kills not so much by the lethal grasp of its paroxysms as by the fatigue and exhaustion induced by the force of the muscular movements, I reduced to a considerable extent the dose of chloral, and this the more as I dreaded its weakening effect upon the already exhausted heart. That this was premature may be imagined, when I record the fact that no sooner had my poor patient got from under the relaxing influence of the chloral than all his symptoms returned, and that with even greater force and intensity (I had almost said malignancy) than before. This recurrence of the tetanic symptoms was in part, as above indicated, due to the too precipitate withdrawal of the chloral, but the immediate cause, I believe, was due to intense bronchial irritation. The weather at this stage of his illness was, perhaps, colder than any we have had for some years. Snow was on the ground, and some nights twenty-seven degrees of frost were registered. There was no fireplace in his bedroom, nor, indeed, upstairs, and though I had a stove fitted up the cold was so intense that even his nurses had to have bottles of hot water to their feet to keep them from shivering. What wonder, then, that, with a moist perspiring skin, dilated arterioles, involving extreme heat-loss, this apparently trivial bronchial disturbance should run quickly into an intense and acute attack of capillary bronchitis.

About the twenty-first day my patient began to have fits of coughing, each fit, to my chagrin, being accompanied and followed by tetanic paroxysms in the laryngeal and respiratory muscles. These tetanic symptoms were quite decided, though still induced, not spontaneous, as at first, but like the necessary discharge of accumulated reflex irritation. When not coughing he seemed calm and free from tetanic spasm, and after expectorating the now muco-purulent phlegm, he seemed, though exhausted, fairly comfortable. To meet this dangerous array of symptoms I felt constrained, in spite of the pulmonary mischief, to return to the chloral, and that in increased doses. I now gave sixty grains of chloral twice in the day, and with it twenty grains of bromide of potassium and fifteen drops of tincture of digitalis. In the bromide I hoped to find a remedy which, with the chloral, would tend to soothe the inflammatory mucous membrane, as well as the tetanic irritation of the laryngeal and respiratory muscles, whilst the digitalis I hoped might

act as a slight cardiac stimulant; for surely this was needed, not only on account of the exhaustion arising from the paroxysms themselves, but on account of the possible weakness resulting to the heart from the large doses of the chloral.

By the twenty-second day the chloral mixture had again improved the general condition of this complicated case. He slept quietly most of the previous night, though on Nov. 26th he had one bad attack of opisthotonos, during which his bowels were forcibly moved in bed. The tetanic tension in the abdominal muscles must during this attack have been very great, for, besides the fact of the fæces being forcibly extruded into the bed, he passed wind with a loud, prolonged, sonorous sound, different from anything I have ever heard. The first night he was under the increased doses of chloral he seemed on awaking to be quite delirious, but this, though furious, soon passed off and did not again return. I suppose this symptom cannot be credited to the chloral alone, but it and the high tetanic tension in the arterioles of the brain carried the state of the cerebral anemia a little too far.

Twenty-fourth day (Nov. 28th).—Since last report my patient has slept fairly well. His pulse (120) was very full, weak, and at times thrilling under the finger. From this date the force of the tetanic paroxysm seemed completely broken. Temperature still under 100°. He had no return of the choking fits, but there was a decided increase in the bronchial mischief. The breathing was shallow and râles were heard in the upper as well as the lower parts of the chest. Cold still intense.

Twenty-fifth day.—A comfortable night, having had four hours and a half continuous sleep. At this date stimulants began to flush him. During the tetanic period he remained under all circumstances unusually pallid. There was evidently now extreme dilatation of the cutaneous arterioles, either the result of the bromide and chloral or the removal of the tension-factors, for the paroxysms had entirely left him.

Twenty-seventh day.—Bronchial irritation worse. To-day his chest was choked up with viscid phlegm, again tending, though in a different direction, to suffocation. Pulse 120, and thrilling under the finger. Breathing 40, face much flushed, the tint being partially cyanotic. For some days he has taken no chloral, but a mixture of ammonia, bromide of potassium, bark, and senega.

Thirtieth day.—General condition of chest not improved. Breathing shallow (50), pulse 100, and to-day, for the first time, showing indications of halting. At times the purplish tint on the face passes into a dusky grey. Temperature 100°; still able to take plenty of nourishment.

Thirty-first day.—My patient died; just forty-one days since receipt of the injury to his finger, and thirty-one since the onset of tetanus.

Such are the facts of this distressing case. Nothing succeeds like success; yet, in spite of its fatal termination, I claim for this case that it is an illustration of the value of chloral hydrate in tetanus. But for the intensely cold and frosty weather, my patient in all probability would have recovered. The first series of tetanic symptoms were undoubtedly controlled by the chloral, and so were the second, though not in such a marked degree, for it might be urged that these tetanic symptoms, purely reflex in character, had, like other reflex irritations, simply worn themselves out. In chloral, with its recognised power of relaxing muscular spasm and abolishing reflex action, we have, as it seems to me, the remedy for all forms of tetanus; but it should be given at once and in large doses, and certainly not withdrawn till all reflex tendency has subsided.

Rothwell, Northamptonshire.

A CASE OF SYPHILITIC ENLARGED SPLEEN IN A CHILD.

By W. J. TYSON, M.B., F.R.C.S.

THE following case is interesting as illustrating how a very large spleen under treatment may become imperceptible, the patient remaining perfectly well, and also as showing that at times the syphilitic poison seems to concentrate itself in one organ, and there exhausts itself. The family history is a profusely specific one, leaving little doubt as to the cause of the splenic enlargement.

The mother, now thirty-nine years of age, has been married nineteen years, during which time she has had thirteen children, and is expecting another next month. The third, fourth, and ninth were still-born; the fifth at ten years old became stone-deaf, and is so now; he had interstitial keratitis. At the present time there are remains of an old iritis; the incisor teeth are notched, and the molars of both jaws are rimmed. The thirteenth had soon after birth a well-marked buttock-rash.

The mother I saw in July, 1875, suffering from a breaking-down gumma of the soft palate, and also perforation of the septum nasi. Since this she has had at various times localised headaches in the region of the temples, coming on always in the evening, generally about seven; this pain being always relieved markedly by mercurial preparations.

The eleventh child, a boy, the subject of this paper, one of twins, was born in May, 1875. Soon after its birth the mother states that the abdomen was enlarged, but he was not seen by me until May 26th, 1877, then two years old. He was pasty-looking. The spleen extended in a downward direction for three and a half inches, reaching the crest of the ilium; in front it approached closely to the umbilicus. The liver was not enlarged. No albumen present in the urine. He was ordered mercury with chalk, one grain every morning and evening; and one grain of iodide of potassium with ten minims of syrup of iodide of iron to an ounce of water, three times a day. On Aug. 1st the spleen was decidedly smaller, and on Oct. 20th it was only one inch below the margin of the ribs. There are no more notes of the case until Sept. 16th, 1878; at this date the spleen was imperceptible and the child in excellent health. The above medicine was taken, as far as I can remember, more or less regularly for about a twelve-month.

Remarks.—I believe that there have been very few cases recorded of large syphilitic spleens in children becoming imperceptible, the child remaining well. I have seen the child this day (Aug. 24th, 1880), and he is perfectly well and free from all visible or palpable syphilitic changes. As these cases improve under the ordinary syphilitic remedies, one would naturally suppose the change in the spleen to be of a specific character, but so far this has not been proved to be so. The change is not an amyloid one. In Dr. Gee's two post-mortem cases, the enlargement seemed to be a simple hypertrophy, and in one there was some thickening of the capsule.

Folkestone.

CASE OF

PERFORATION OF MEMBRANA TYMPANI FROM ASCARIS LUMBRICOIDES.

By LEWIS W. REYNOLDS, M.R.C.S. ENG.

ON March 3rd I was called to see a woman, aged thirty-five, three or four months advanced in pregnancy. She was in a low nervous state, and had been suffering since Christmas from nausea and vomiting. About two weeks before she had vomited several round worms, and about the same time suffered severely from dyspnoea and intense pain in the chest and abdomen. Shortly before my arrival she had vomited two, and three more were discharged from the nostrils, her nose bleeding first for three hours. I prescribed four grains of santonine powder, to be taken at bedtime; after taking which four worms were passed per rectum, for the first time. The santonine was followed next morning by fifteen grains of compound scammony powder, when a great many more were passed per rectum. Three or four hours after taking the second powder, and having previously suffered all night from intense earache, a neighbour discovered a worm protruding from each ear and both ears bleeding; the same day three others came away from the ears, two from the left and one from the right. The following morning, March 5th, her husband drew another from the ear, and again on March 8th; this last was four inches long with the diameter of a small goosequill. A large number were also discharged, each day by the bowel, making in all seventy-four.

On March 10th, and again on March 13th, my patient vomited a large quantity of dark blood, and complained at the same time of a feeling of tenderness in the abdomen, for which I gave demulcents.

On March 17th, in the evening, I was called to see her,

and found her perfectly insensible, having been so since mid-day; her temperature was below normal, but with a fairly good pulse; she was roused again about midnight. The attack appeared to me hysterical. From this time she has gradually improved in health, but has had occasional attacks of diarrhoea.

May 12th.—For the last few days blood has trickled from her ears and down her throat, which she coughs up. On examination with the auriscope, there is now, as there was in March, excoriation of either meatus and a large perforation of both membrana tympani, but the sense of hearing is very little impaired.

Remarks.—The history of this case appears at first almost incredible; but there can be no doubt the membranes were perforated by the passage of the ascarides. In addition to being vomited, some must have crawled up the œsophagus into the fauces, thence some found their way into the nasal passages, and others into the Eustachian tubes, perforating the tympanic membranes and being discharged by the external auditory meatus.

High Wycombe, Bucks.

A Mirror OF

HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

UNIVERSITY COLLEGE HOSPITAL.

[THROAT DEPARTMENT.]

CASES OF PARALYSIS OF THE LEFT VOCAL CORD.

(Under the care of Dr. POORE.)

THREE cases of this form of paralysis have lately been under observation, and since the cause of the paralysis was probably different in each case they form an interesting group.

The first patient, a man aged forty-eight, a cabman, complaining of hoarseness and occasional attacks of dyspnoea, was sent into the surgical wards under the care of Mr. Heath because a laryngoscopic examination made elsewhere had led to the diagnosis of a polypoid growth in the larynx. Mr. Heath sent the patient to the throat department for examination, and it was then at once determined that no growth existed, but that the left vocal cord was completely paralysed. The erroneous diagnosis of growth had probably arisen from the appearance presented by the oblique distortion of the glottic aperture which is so common in these cases, and from the fact that the left cord was almost completely hidden by the left ventricular band, which was somewhat swollen. Laryngoscopic examination produced on two or three occasions violent attacks of dyspnoea. The cause of the paralysis was not at first very obvious. The neck presented no abnormality. The chest was well formed, and without any abnormal prominence. The expansion of the left side of the thorax when compared with the right was slightly deficient, and on very careful percussion an exceedingly trifling deficiency in resonance was detected in the second left interspace, close to the sternal border. On auscultation no abnormal heart sound or bruit was audible, but the respiratory murmur was somewhat weaker on the left side than the right, and on applying the stethoscope in the second left interspace a slight pulsation was communicated to the head of the auscultator, which pulsation was scarcely appreciable to ordinary palpation. Taking all the symptoms together it was considered highly probable that an aneurism existed in the third part of the arch of the aorta, which by its pressure upon the left recurrent laryngeal nerve produced the paralysis of the left cord, and by its pressure upon the left bronchus caused the slight deficiency in respiratory power on the left side. He was admitted into the medical wards, and after rest in bed his attacks of dyspnoea became less urgent, but the paralysis of the cord remained unaltered. When he left the hospital and returned to his work his dyspnoea returned, and the symptoms of aneurism,

which were most obscure at first, became well developed and undoubted.

Remarks.—This case is of much interest, as showing the great value of the laryngoscope in the early diagnosis of aneurism and other thoracic tumours, since without its use to stimulate the physician to a very careful examination of the chest, the slight and doubtful symptoms of aneurism which at first were present would in all probability have escaped detection.

The second case was that of a horsekeeper, aged fifty, who came to the hospital suffering from hoarseness and some difficulty in breathing, and general weakness. A laryngoscopic examination showed a well-marked paralysis of the left vocal cord. There were no indications whatever of the presence of aneurism or other thoracic tumour. The larynx, however, appeared somewhat prominent, and there seemed to be some undue solidity and bulk about the neck, although no distinct tumour was anywhere observable. A few weeks after his first visit he came to the hospital with a piece of meat stuck in the upper part of his gullet, which was removed by the house-surgeon, and a similar accident happened to him a few weeks later. A further examination showed that there was no paralysis of the larynx; and on trying to pass an œsophagus bougie with great gentleness into the stomach, an obstruction was encountered not far below the upper extremity of the gullet. It was highly probable that the obstruction of the œsophagus and the pressure on the recurrent laryngeal nerves which caused the paralysis of his left cord, were due to the same cause. Whether this was malignant or not was never clearly made out, as the patient disappeared when the hospital was closed for repairs.

The third case was that of a shoemaker, aged sixty-four, who was sent to the throat department on October 15th, 1879, from one of the other departments of the hospital, suffering from almost complete aphonia and great shortness of breath. On examining the larynx the fact of complete paralysis of the left cord and slight laryngeal catarrh was fully established. On examining the chest, the left side was seen to be smaller than the right and almost motionless during respiration. There were the ordinary signs of pleuritic effusion rising to the level of the second rib in front, third rib in axilla, and the spine of the scapula behind. Above the level of absolute dulness in front the resonance was defective, especially towards the left sternal border. The right lung presented all the signs of emphysema, and the general form of thorax was of an emphysematous type, with a large antero-posterior diameter. The superficial arteries were everywhere tortuous and pulsated visibly, the right carotid appearing to pulsate rather more forcibly than the others. The heart-sounds were normal, the radial pulses were equal, and there were no indications whatever of thoracic aneurism or other tumour. The history of the onset of the illness was that of acute pleurisy, the patient stating that he had been taken suddenly ill about three months previously with a stitch in the side and sternum. Failing to discover any other cause for the paralysis of the left cord present in this patient, it seems warrantable to conclude that the thickening of the left pleura has implicated the recurrent laryngeal nerve at its origin, a condition which is enumerated by Niemeyer among the causes of paralysis of this nerve.

Temporary immobility of the left vocal cord was present in a middle-aged woman who was suffering from moderately severe laryngeal catarrh, with a good deal of mucous exudation. On first examining the larynx the left cord was seen to be completely immovable, and a diagnosis of paralysis was hastily made, but during a violent attack of coughing the cord, which was apparently mechanically fixed by tenacious mucus, freed itself, and was then seen to move with perfect freedom. This patient completely recovered.

NEWARK HOSPITAL.

OPIMUM POISONING; RECOVERY.

FOR the following notes we are indebted to Mr. J. D. T. Reckitt, house-surgeon.

Ann B—, aged forty-nine, carried on a truck to the hospital by two policemen and her husband, was admitted at 6.30 P.M., Feb. 11th, 1879, perfectly comatose, with stertorous breathing, and a pale, ghastly countenance. The pupils were contracted to a very minute point, and the conjunctivæ were insensible to touch. The breath smelt strongly of spirit, but not of opium. She was totally unable

to stand; in fact, there was complete muscular relaxation, with an extremely feeble pulse. When admitted an hour and a half had elapsed since drinking some laudanum. The husband stated that she had been drinking more or less for some weeks, and was habitually intemperate, gin being her favourite beverage. She often suffered from toothache and pain in the leg. To-day she had applied some laudanum to her leg, and had been drinking gin freely. She was supposed to have taken nearly an ounce of laudanum, purchased of the druggist. She was not an habitual opium eater.

The stomach-pump was immediately applied, and a pint or so of warm water injected. This somewhat roused her and excited vomiting of stained fluid, but without the smell of opium. Strong solution of ammonia was held to the nostrils, which had a decided impression, and after a time, and by means of loud shouting, she was induced to swallow a mustard emetic, which immediately caused free vomiting. Half an hour after this the pulse had improved in tone. Half a pint of the strongest coffee was then given, which, however, she did not retain long. One hour after admission she had still a very strong desire to sleep. The application of the wet towel to face and chest, and ammonia to the nostrils was therefore freely practised; and two hours after admission she was taken into the open air and promenaded by two attendants. The woman was very noisy, and inclined to resist, saying she wished to sleep, but the efforts to keep her awake were steadily persevered with until 2 A.M., when a full dose of compound spirit of ammonia was given, and she was taken to lie down for an hour. The pupils were nearly natural at 3 A.M., though she was then very sleepy. She was indulged with an occasional walk in the ward until 7 A.M., when she ate a fair breakfast, and at 12 o'clock she was discharged, being escorted to the police-station by two policemen.

Remarks.—From the appearance of the patient on admission, the assistant-surgeon, Mr. Smith, who was present during the first part of the treatment, concurred in an unfavourable prognosis; but happily the patient was fairly roused at the commencement, and kept so by the passive motion, until the state of the pupils indicated safety. Thus the ordinary treatment was enough to overcome what appeared dangerous poisonous effects.

KASHMIR MISSION HOSPITAL.

DISLOCATIONS OF THE HIP-JOINT.

(Under the care of Mr. E. DOWNES.)

FIVE cases of this accident have been treated within a comparatively short time. Two were recent cases, and both into the obturator foramen. In these two cases there was lengthening and eversion. Both were reduced at once by manipulation—viz., by flexing the thigh on the abdomen and rotating inwards, and adduction.

The other three were on the dorsum ilii, and were all three old cases.

One was of three months' standing, and though reduced under chloroform easily, and at the time most satisfactorily, the case did not turn out well. The man was old, weak, and infirm; and after the splint had been applied about a week he complained very much of pain, and suffered from diarrhoea—in fact, it was thought that he might die. The splint was taken off at his urgent request, and he unwisely and contrary to expressed entreaties, insisted on flexing the limb. The consequence was that after awhile the limb could hardly be straightened, and was found to be decidedly shortened, and there was great thickening near and above the trochanter. The man became so weak that his life was despaired of, but he finally so far recovered that after some two or three months, when he left the hospital, he used to walk about with the aid of a crutch. The thickening about the trochanter remained, but the pain disappeared; the leg and thigh were somewhat flexed and could only be straightened with difficulty, but there was no inversion or eversion; there was, however, about two inches of shortening. As far as could be made out, the head of the femur was in the acetabulum.

The other two cases are the more interesting ones, and were much alike. The first was seen in December, 1878. The patient was a young man about twenty, strong, healthy, and fairly muscular. The femur was dislocated on to the

dorsum ilii; the position of the limb, with the foot pointing across the instep of the other foot, left no room for doubt. He said that it had been in that position for about six months, and there seemed to be no reason for doubting this statement, for he said that the accident had occurred from a fall from a mulberry-tree which he had climbed for the sake of the fruit and the mulberry season is from the beginning of June to the middle of July. The first inclination was to leave the limb alone, but the young man begged that something should be done. He was placed under chloroform, and the thigh was forcibly flexed on the abdomen, and then brought down and abducted, and rolled outwards. After one or two attempts, a crack was heard and felt, as if the neck of the femur had been broken, but the limb came down to its natural position, with the head in the acetabulum. There was free motion and no crepitation. There was very little shortening; the limb was put up with a long splint. The patient afterwards complained very little of pain, and the splint was worn for a fortnight. At the end of this time the splint was removed, and there was not much shortening. After a few days he complained of some pains on pressure in the position of the head of the femur. Day by day a thickening in that region became more and more apparent, and the limb became shorter. The splint was re-applied, but without effect, and at last it was left off. After the patient had been in hospital a month he went home. There was then no pain to speak of; the thickening was decided, not only over the head of the femur, but in the position from which it had been reduced. There was distinct shortening of the limb of about an inch, but there was good motion at the joint, and no inversion or eversion of the limb. Notwithstanding the shortening he had a useful limb, and walked well with a stick.

The third case was very similar. The patient was admitted in December, 1879. Like the previous patient, he too had fallen from a mulberry-tree about six months before, and the head of the femur had been dislocated on to the dorsum ilii. He was a lad of about fifteen. He crawled into the out-patient room with the dislocated limb shortened nearly three inches, and the femur pointing across the sound thigh at some height above the knee. He was placed under chloroform, and the dislocation was reduced even more easily than in the former case; no crack was heard when the head of the bone entered the acetabulum, and there was a little shortening—about one-third of an inch—after reduction. In the former case there was no shortening at all immediately after reduction was effected. Extension was tried perseveringly, but the shortening remained; there was no crepitation; the motion of the hip-joint was free, and there was neither inversion nor eversion of the limb. The limb was put up with a long splint. After about a week he took off the splint himself in the night. It was not re-applied, and he never complained of pain again. There was no thickening about the head of the bone, and the shortening did not increase. He left the hospital in a month, with a very good limb.

Remarks by Mr. DOWNES.—It may be thought that the success was not very great in these three cases; for in the first case there was considerable shortening and great thickening about the joint; in the second, there was nearly an inch of shortening and some thickening; and in the last, though there was no thickening, there was one-third of an inch of shortening. It may be even thought possible that the reduction was not real, but possibly only a change of dislocation on the dorsum ilii to that in the sciatic notch; but I feel sure that this reduction was fully effected in all three cases, though I cannot explain the shortening and thickening which occurred subsequently in the two former cases. My reason for thinking this are—(1) that in the two least successful cases there was no shortening whatever, or, at any rate, extremely slight shortening at the time that the reduction was effected; (2) in all three cases the motion of the hip-joint was perfectly free after reduction, and in the two latter cases continued to be so; (3) there was neither inversion nor eversion of the limb at any time in any of the three cases.

Regarding the amount of success achieved, even in the first and least successful case no harm was done, on the contrary, he left with a better limb in every way than before the operation. In the last two cases the limbs were very useful ones when they left hospital, though on admission they were perfect cripples. The last two cases are further interesting because there are very few records of dislocation of the femur of such long standing having been reduced by

simple manipulation. The public fancy that bone-setters succeed in cases considered unfavourable by surgeons; but after the experience of these cases we should do well to be careful in deciding that a case is "best left alone," as in being over-rash. It may be observed that Orientals have not the muscular development of Europeans; their hip-joints also are very pliable, owing to their habit of always sitting down cross-legged; it is therefore hardly to be expected that the same successful results could be obtained in the case of Europeans with as little trouble as I had with my Kashmiri patients.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Dilatation of Central Canal of Spinal Cord.—*Pyocephalus.*—*Fibroid Tumour of Uterus.*—*Myeloid Tumour of Tibia.*—*Fatty Tumour of Larynx.*—*Fatty Tumour of Scalp.*—*Acute Necrosis of Tibia.*—*Osteitis of Femur.*—*Paralysis of Cranial Nerves in Congenital Syphilis.*—*Fracture of Coracoid Process.*

THE first meeting of the Pathological Society for the present session was held on Tuesday last, Oct. 19th. The President, J. Hutchinson, Esq., occupied the chair. The number of specimens exhibited was less than usual, but the interest of the meeting was well sustained throughout.

Dr. NORMAN MOORE showed three specimens. The first was a Spinal Cord removed from a woman, aged twenty-two, married, recently in St. Bartholomew's Hospital. Two years previously she began to lose power in the left arm, and eighteen months later in the right arm; she had complete power in the legs. There was partial and varying anæsthesia above the deltoid muscles. The breathing was hoarse, but there was no growth, thickening, or other obvious change in the larynx to account for it. Death occurred suddenly in an epileptiform attack. At the autopsy the ventricles of the brain were found greatly distended with clear fluid, and the central canal of the spinal cord was dilated to the size of the finger. The case was of interest from the small amount of symptoms produced by such an extensive change in the cord, and from the rarity of hydrorachis, apart from imperfection of the bony walls of the spinal canal. The second specimen was the Brain of a child, aged five months, who came to the Metropolitan Free Hospital with slight cervical opisthotonos; the eyes were normal. It was admitted into St. Bartholomew's, and ten days later the temperature rose to 101°2', and even to 103°6', and on the thirteenth day the child died in a fit. The child had been quite well till a week before it was seen, when it had a fit and cervical opisthotonos. The lateral ventricles of the brain were very much dilated, and each contained more than one and a half ounces of pus; their lining membrane was intensely injected; the pus extended also through the fourth ventricle into the sub-arachnoid space and canal of the cord, and there was abundant lymph around the medulla oblongata. Drs. Barlow and Gee have published twenty-five cases in which, after symptoms of slight cervical opisthotonos, the autopsy has revealed meningitis with lymph, especially about the base of the brain. Dr. Moore thought that his case showed a later stage of the same affection, and that the pyocephalus came on with the sudden rise of temperature. The third specimen was a large Calcified Uterine Fibroid, found by Dr. Godfrey of Jersey, while making the post-mortem in a case of cirrhosis of the liver. There had been no symptoms referable to the tumour during life.—Dr. F. TAYLOR had shown a spinal cord with a large cavity in it some time ago, and then had referred to the literature of the subject and found references to many similar observations. He asked if an examination had been made to prove the relation this cavity bore to the rest of the cord, for it was at present an open question whether these cavities are dilatations of the central canal, or arise from degeneration of the cord, or softened tumours. They are always seated towards the back of the cord involving the posterior columns. In most of the

cases the symptoms have been slight, or inconsistent with the extent of the cavity. Dr. Moore's case was the largest cavity he had seen or read of. In his own specimen the cavity extended from the mid-dorsal region to the lumbar enlargement, and there was a separate cavity in the neck, with dilatation of the ventricles of the brain. In some cases the central canal has been found separate from the cavity.—Dr. N. MOORE had only made a naked eye examination of the cord. He had previously seen a case in which there was during life loss of power in the arms, and post mortem a small cavity in the cord, which was evidently a dilated central canal.—Dr. EWART referred to a case of a woman of middle age who died from insidious ingravescent paraplegia, in whose spinal cord was found a cavity four inches long and a quarter of an inch in diameter, tapering at each end, and occupying the mid dorsal region. He had seen a less degree of the same change in a child.

Mr. MCCARTHY exhibited a specimen of Myeloid Sarcoma of the Head of the Tibia. Early in this year a woman, aged twenty-three, came to the out-patient room of the London Hospital, complaining of pain in the right knee. She was strumous looking, and appeared to be ill. On examining the knee there was nothing the matter with the joint, but on the inner side of the head of the tibia there was a small, irregular, painful and tender swelling; the skin over it was red, and fluctuation was to be detected. The woman was admitted to the wards and considered to be suffering from a suppurating bursa. The rest in bed quickly led to the disappearance of the redness, heat, and pain, though the fluctuation continued. A day or two later the swelling was found to pulsate, but this varied in intensity very much from day to day. There was no bruit, and if the femoral artery was compressed the pulsation ceased, but returned gradually on removal of the pressure over the artery. Blood withdrawn by a small trocar showed giant cells. Amputation was performed, and the application of Esmarch's bandage caused fracture of the head of the bone. On opening the joint it was found that the growth had spread up the crucial ligaments, and the lower end of the femur was therefore removed. Although treated antiseptically, the temperature continued high, and there was a very profuse discharge of dark thin fluid from the wound for several days, with excruciating pain on any movement. Death occurred from exhaustion on the twelfth day. At the post-mortem the wound was found to be nearly healed; the bone healthy; but the supra-patellar pouch of synovial membrane was found inflamed, covered with lymph and containing pus. Here lay the probable cause of death. The head of the tibia was entirely replaced by the tumour, except at the back, where a piece of bone one-sixteenth of an inch thick remained. The cartilages of the tibia were intact, but between the joint surfaces where there was no cartilage the tumour had destroyed the bone, and spread up into the crucial ligaments. The case was of interest, partly from the slight symptoms the tumour produced.—The PRESIDENT called attention to a fresh specimen of Myeloid Tumour of the Femur that he had placed on the table.—Mr. BUTLIN remarked that there were only two or three cases where the tumour had spread from the tibia to the femur through the crucial ligaments; he had seen one case where an ossifying round-celled sarcoma of tibia had thus grown, and the lower quarter or one-third of the femur was full of the tumour; as an example of the less degree of malignancy of these central tumours, he mentioned that he knew this patient to be alive and well four years and a half after amputation through the thigh.

Mr. SYDNEY JONES showed two Fatty Tumours. One was as large as a Tangerine orange, with a pedunculated attachment to the right aryteno-epiglottidean fold. It was met with in a man forty years of age; on opening his mouth nothing abnormal was seen, but when he gave a peculiar gulp the tumour was brought up and lay on the dorsum of the tongue. It was removed by freely dividing the mucous membrane of the pedicle and turning it out. A small cyst lined by stratified scaly epithelium was found in it. The other specimen is described in THE LANCET for Oct. 9th, page 587.—Mr. R. PARKER mentioned a small fatty tumour of the tongue which had been sent to him by the President.—Mr. MORRANT BAKER stated that a child was brought to the Evelina Hospital who by a gulp brought into the mouth a tumour the size of the thumb, which was attached to the soft palate by a broad pedicle. He ligatured the pedicle and cut off the growth, which consisted of fat fibro-cellular tissue and a central rod of cartilage. He

thought that possibly Mr. Jones's case was a foetal development of some kind long unnoticed.—Mr. MACCORMAC referred to a fatty tumour which he had removed from under the scalp over the parietal eminence. It was as large as a bun, weighed five ounces and a half, was firmly moulded over, and in places adherent to, the pericranium. The outer part of the tumour was pure fatty tissue, but in the centre of the mass was a cavity full of ordinary sebaceous matter. The patient was a girl aged fourteen, and the tumour had only been noticed two years previously, when it was the size of a bean.

Mr. MORRANT BAKER (for Dr. Gregory White of Bournemouth) showed a specimen of Acute Necrosis of the Tibia. A boy, eleven years of age, was struck on the leg with a fir cone; two days afterwards he complained of pain below the knee. On admission to the Bournemouth Cottage Hospital three days later the temperature was found to be 103°, and the skin of the upper half of the leg was red, glazed, and swollen; an incision was made, and pus evacuated; and subsequently a profuse discharge continued. A month later amputation through the thigh was performed. The specimen was a good example of osteo-myelitis with necrosis. Mr. Baker referred to the often trivial injuries alleged to be the cause of most severe osteitis, frequently accompanied by septicæmia, and ending fatally.—Mr. GODLEE thought that there was evidence of the constitutional, rather than purely local, origin of this disease, in that more than one bone was sometimes affected at the same time—as the femur and radius; that the children were usually ill for some little time before the local lesion appeared, and that often there was no history of injury whatever.—The PRESIDENT reminded the Society that Mr. Simon wrote some years ago on what he called "Necrosal Fever," and then pointed out that many bones might be affected. He himself had seen many examples of multiple necrosis, and had now under his care a girl who had lost nearly the whole of the shaft of one tibia, after which the tibia and humerus of the opposite side were attacked in a similar manner. He did not think that the children were always ill before the disease came on, but believed that there was always an injury, which might, however, be very slight. In this form of multiple necrosis one bone was attacked first, and the others subsequently, and, in his opinion, secondarily, as a result of the first—as truly so as is the case in infecting tumours. He had noted that the secondary form was never so severe as the primary, and that it was not very uncommon to find a threatening of suppuration, which was not carried out. He imagined that in such forms of inflammation there was a parallel condition to what is held to occur in new growths; that from the primary area of inflammation products were discharged into the blood current which lodged elsewhere, and set up the secondary disease. He had not seen a marked tendency to pyæmia in cases of multiple necrosis, though no doubt it may occur.—Mr. C. HEATH alluded to the multiple necrosis after typhoid and scarlet fevers, as evidence of the constitutional origin of necrosis. Mr. Marcus Beck, who had studied these cases closely, thought that there was a specific fever in acute necrosis; but Mr. Heath believed there was usually to be obtained a history of injury to a previously healthy child. He had sometimes thought multiple necrosis to be pyæmic in nature, but he had never found an abscess in the lung or liver in such cases.—Mr. GODLEE explained that he had not referred to a previous condition of chronic ill health, but believed that he had seen cases where there was fever before any sign of local mischief.—Mr. HOWSE asked what evidence there was of necrosis in this case.—Mr. BAKER replied, that there was a distinct central sequestrum almost separated from the rest of the bone. He had seen several cases of most acute septicæmia with acute necrosis, where there was a pustular eruption, pyopericardium, and death in about four days.—The PRESIDENT mentioned a case of acute necrosis of the clavicle, which had died exactly as Mr. Baker had described.—Mr. HEATH explained, that he was quite familiar with such cases; his previous remark had reference to cases of multiple necrosis in which he had not met with distinct evidence of pyæmia.

Mr. MORRANT BAKER also showed the lower half of a Femur removed from a patient in St. Bartholomew's Hospital suffering from abscesses and sinuses in the lower end of the thigh, with severe pain and hectic. Amputation was performed. The femur was very much thickened, with new bone thrown out both around and within it, but the outline

of the original shaft was still distinct. He thought it an example of the middle stage of osteitis. Referring to the common use of the term "expansion of bone," he remarked that there is no such thing as a marked separation of the lamellæ of compact bone, and that the condition so named was really due to a deposit of new bone from the periosteum and endosteum, with subsequent obliteration of the outline of the original bone. The condition of necrosis without suppuration, or intra-osseous necrosis, he held to be the outcome of a chronic osteitis, and not a sudden death of the bone. Previous to the amputation the man had had two attacks of hæmorrhage, and twelve hours after the operation he sank from continuous oozing of blood from the whole surface of the wound. He had seen other examples of this condition, which he thought was a traumatic hæmorrhagic diathesis; in several of the cases there was albuminoid disease.

Mr. NETTLESHIP brought forward a living specimen—a girl aged fourteen, of stunted growth, having distinct evidence of congenital syphilis. She was affected on the right side with partial anæsthesia of the parts supplied by the first and second divisions of the fifth nerve, complete paralysis of the sixth nerve, and partial of the third and fourth. There was also opacity of the cornea, old iritis, choroiditis, and probably retinitis; it was impossible to tell the exact condition of the optic nerve, but vision was fair. The right eye was apparently markedly smaller than the left, which might perhaps be connected with an obvious asymmetry of the bones. There was old keratitis and choroiditis on the left side, but no paralysis. He was unable to say whether the seat of the lesion was in the orbit or the cranium; there were no symptoms of disease in either.—The PRESIDENT stated that there had been many recent additions to our knowledge of brain and nerve disease in inherited syphilis. He himself had published two or three cases of ocular paralysis, but it was bilateral, giving evidence of a central origin; he had never met with a case where there was distinct evidence of pressure on the trunks of nerves.

Mr. SHATTOCK showed a specimen of Fracture of the Coracoid Process of the Scapula found in an elderly woman. The fracture extended obliquely back from between the attachments of the pectoralis minor and the conjoined biceps and coraco-brachialis muscles. The fragment was united by a broad band, and was not displaced. There was no sign of injury to the shoulder-joint. It was not a case of ununited epiphysis, because the line of fracture was not that of the junction of epiphysis and diaphysis, nor did the fragment include the whole process. There was no history to the specimen.

The following specimens were shown by card:—1. Cartilage Tumours in the centre of the ends of the Bones of the Metacarpus and Fingers—a drawing. 2. Congenital Solid Tumour on the end of Toe of Infant, adherent to the bone—a drawing. 3. Congenital Tumour on the end of Finger of Infant, containing a cyst with cartilage—a drawing. 4. Congenital Fibro-cystic Naevoid, tumour of the cheek in a child—a drawing. All by the President.

The meeting then adjourned.

MEDICAL SOCIETY OF LONDON.

Recovery from Symptoms of Organic Brain Disease.

THE first ordinary meeting of the 108th session of this Society was held on the 18th instant, F. J. Gant, Esq., President, in the chair. In the course of his opening remarks the President reminded the Fellows of the projected meeting of the International Congress in London, and stated that no efforts would be spared to make that gathering an historical success.

Dr. HUGHLINGS JACKSON then read a paper on a Case of Recovery from Symptoms of Organic Brain Disease. The case was one of supposed hysteria, double optic neuritis with nearly complete blindness, severe headache, no vomiting, loss of smell; no deafness; reeling gait; absence of patellar-tendon reflex; doubtful lightning pains. Recovery under mercurial inunction, except of anosmia and absence of patellar-tendon reflex. The patient was a well-nourished woman, twenty-two years of age, admitted into the London Hospital on Dec. 22nd, 1879. Menstruation was regular;

there was no evidence of syphilis. In August, 1878, she was run over by a cart, her legs being injured above the ankles. In May, 1879, she went into service, and was quite well except for a "weakness in her legs." This "weakness" increased, and two days before admission she could not stand at all, and took to her bed. During the week before admission there was a weakness of the right arm, which would "go and come;" afterwards "pins and needles" in this limb, and then weakness of the left arm set in. Her sight began to fail two or three weeks before admission. *Symptoms of local gross organic disease:* (a) double intense optic neuritis (with mere perception of light); (b) intense headache, from the misery of which she was silent and very quiet. On her recovery it was ascertained that smell was entirely wanting. She averred that she used to smell well before her illness. Dr. Jackson was doubtful whether anosmia was in her case a localising symptom or not. It may have been owing to pressure, direct or indirect, on the olfactory bulb; or, what is quite hypothetical, to an olfactory neuritis. *Localising symptoms:* (a) absence of patellar-tendon reflex—an exceedingly important symptom, especially as her gait was abnormal, without paraplegia. The reflex was still absent when she left the hospital on March 25th. It may have been so long before she had the other symptoms, but of this nothing could be learnt. (b) Pains in limbs. At one spot a little above the left knee she had occasionally a dart of sharp pain, followed by a dull aching; it would come and go. She had no severe pain except in the head. It could not be averred that the pains were those characteristic of posterior sclerosis. (c) Reeling gait. This was noted carefully. When admitted she could scarcely walk at all, and not without help. Her gait then was not like that of locomotor ataxy. As she improved a little it could be better analysed. It was evidently a reel—a drunken-like walk. Apparently she had good power in her legs, and, using popular language, though inexact, there was "disorder" of coördination without "paralysis." (d) Other symptoms. There was some slight weakness of the left arm, with a slightly feeble grasp. These symptoms were very slightly marked. Some tenderness of the lower part of the spine was found. No very local tender spinal spot was revealed, either by the application of a hot or cold sponge, or by manipulation. There was no spinal curvature, no atrophy of any muscles, no defective sensation, and no vesical trouble of any kind. Progress: rapid recovery. Iodide of potassium was at first prescribed in doses of five grains three times a day; but on January 4th mercurial inunction was ordered in addition. The dose of the iodide was smaller than that usually given in such cases. Under this mixed treatment she rapidly improved. From what was practically blindness she became able to read on January 26th No. 1 of Snellen at six inches with her left eye, but with the right only No. 3. On the day of her leaving the hospital, March 23rd, she could read No. 1 very easily with her left, and with slight difficulty with her right eye. Practically her sight was quite good. She felt well, and except that the patellar-reflex was still absent, and that she could smell nothing, she was considered to be free from symptoms. Dr. Hughlings Jackson then considered the case from several points of view. He referred to cases of recovery from symptoms induced by tumour of the brain; cases in which after little illness there was post-mortem evidence of tumour. He discussed also the question of syphilis, pointing out that a syphilitic tumour sometimes gave rise to symptoms similar to those produced by glioma or other "foreign body." He did not think that the mere fact of his patient's recovery under anti-syphilitic treatment necessarily over-ruled the conclusion that the intra-cranial disease was syphilitic. He spoke of the importance of the routine use of the ophthalmoscope, both as sometimes negating the diagnosis of hysteria, and also as leading to early treatment.—Dr. ALTHAUS said the great difficulties in diagnosis of brain disease could be traced to two classes of cases—viz., those in which coarse lesions, as hæmorrhage, softening, abscess, atrophy, and tumours were found after death, yet no symptoms had existed during life; and others in which the gravest symptoms, pointing to severe organic changes, were observed, and the patients recovered under treatment. He alluded to hemi-anæsthesia occurring from disease of the posterior part of the internal capsule, and the same affection as occurring in Charcot's hystero-epileptic women, in whom the disturbance was purely functional. He also related a case resembling in many points that described by Dr. Jackson, and in which he had made the diagnosis of

tumour in the right cerebral hemisphere. In this case the administration of mercury and iodide of potassium led to recovery, although the patient had never shown any symptom of syphilis.—Dr. BROADBENT remarked upon the interest and value of the communication, the case affording Dr. Jackson an opportunity for the refinements in diagnosis which he had placed so clearly before the Society. He had, no doubt, seen many instances of recovery from far more serious symptoms of organic disease of the brain, as had Dr. Broadbent and others; and in this case the symptoms formed a distinct category, indicating the seat of the disease, and no one would doubt his diagnosis of a coarse lesion in or affecting the cerebellum. Dr. Broadbent thought the course of symptoms and rapid recovery were best explained by supposing the lesion to be syphilitic, and he cited a case of a young woman, recently under his care, suffering from headache, vomiting, convulsions, double optic neuritis, and paralysis of the left third nerve. She had certainly not acquired syphilis, but there was a scar on her forehead of a suppurating node (which had not healed until she took iodide of potassium), and no doubt she was the subject of hereditary syphilis. She rapidly recovered under large doses of the iodide; but about twelve months after was readmitted with paralysis of the right sixth and seventh nerves. He had also under treatment a case of hemiplegia in a young man, obviously due to inherited syphilis. The loss of patellar-tendon reflex was presumptive evidence of syphilis; for, as Dr. Gowers had recently stated, probably 75 per cent. of cases of locomotor ataxy were due to syphilis; and this case might be one of incipient ataxy. With regard to optic neuritis, he confirmed from many cases the fact so often insisted upon by Dr. Jackson, that this may exist without noticeable affection of sight; and in the present case he was inclined to attribute the blindness to pressure on the optic tracts or nuclei by the disease in the cerebellum. He held the view that optic "neuritis" was really ischæmia, due to strangulation of the nerve and its vessels just behind the eyeball, by effusion into its sheath; and he believed the neuritis, with numerous hæmorrhages (not, of course, the ordinary albuminuria retinitis) seen in some cases of renal disease, had the same causation.—Dr. DOWSE asked whether Dr. Jackson had met with the absence of patellar-tendon reflex when no actual posterior sclerosis existed; and said that in his opinion the phenomenon might be due to inhibition.—Dr. JACKSON replied in the negative.

MEDICAL OFFICERS OF HEALTH SOCIETY.

AT a meeting of this Society, on Wednesday, Oct. 13th, held at 1, Adam-street, Adelphi, the President, Dr. Bristowe, delivered the inaugural address of the session.

Referring to a promise made at the beginning of the last session, Dr. Bristowe said the subject of his address would be to discuss relations of medical officers of health to their duties. Dr. Bristowe said any intelligent layman would believe that if the mortality of a certain district was exceptionally high the sanitary authority of the district had neglected its duties. If it were shown to him that the deaths were due to diseases over which a sanitary board had no control, he would probably acquiesce under protest, and take his final stand on deaths from infectious diseases. It would not be easy to convince him he was in error, and if he were convinced he would say "I convict you of incompetence to deal with those matters of which sanitary science professes to take cognisance." Dr. Bristowe did not agree with this argument or conclusion, but considered that sanitary science had done much to diminish the prevalence of small-pox, cholera, and enteric fever.

The practice of vaccination has reduced the mortality from small pox to a degree which it is almost impossible to appreciate, and these benefits are maintained even though weak-kneed politicians not only hesitate to make vaccination strictly compulsory, but actually seem to contemplate the granting (as Sir W. Jenner puts it) of licences to contract and propagate disease. We have power to enforce a single effectual vaccination, but even this may be evaded by any parent who chooses to pay a fine or undergo imprisonment. It is essential that the operation be repeated at the age of puberty. The only effectual remedy is to revaccinate all those who are exposed to contagion. If infantile vac-

cination and revaccination at early puberty were made absolutely compulsory, and if, when small-pox has broken out in a house, revaccination were made compulsory on the members of the household, epidemics of small-pox would never arise, or would be strangled in their birth.

The poison in enteric fever is contained mainly in the alvine discharges of patients. It is by the pollution of water and food that the disease is propagated. Improvements in our system of drainage have involved diminution of enteric fever in London. That enteric fever is the one disease in regard to which medical officers of health are directly serviceable is beyond dispute.

The prevention of cholera constitutes one of the greatest sanitary triumphs resulting from the almost complete abolition of superficial wells and the presence of a purer water supply.

We have no special proof that the contagion of diphtheria resides in the emanations from sewers.

Our powers of enforcing disinfection are interfered with by the apathy and antagonism of those whose duty it is to aid. In the great majority of cases no information, except in case of deaths, reaches us; doctors and the family prefer to hush the matter up.

Among other diseases which kill are inflammatory diseases of various kinds. The removal of dampness tends to improve the health of inmates, but the influence of damp rooms is little compared with that of daily exposure to cold and draughts on the doorsteps and in the gutter.

Mortality tables are invaluable guides to us in the performance of our duties; they yield important information upon the distribution of diseases and the time of their occurrence, but they must not be at once accepted as evidence of the influence of sanitary labours.

The relations of medical officers of health to the vestries or district boards which employ them is a matter of great importance. It is doubtful whether any advantage would be gained by making the appointments of medical officers of health permanent; if the salaries were not assured to them they could easily be got rid of by the diminution or discontinuance of the salaries, and it would be difficult to enforce the sanitary laws in the teeth of those who are placed in authority, nor in the metropolis has there been a case in which the vestries have exercised their powers arbitrarily or unjustly.

To a considerable extent medical practitioners look with suspicion upon health officers: it behoves the latter not to do anything to justify attitudes of this kind.

In conclusion, Dr. Bristowe pointed out that it is not the law which gives the medical officer of health the chief power for good, but the moral influence he acquires amongst those for whom, and with whom, he acts.

Reviews and Notices of Books.

On Atrophy of the Stomach and the Nervous Affections of the Digestive Organs. By SAMUEL FENWICK, M.D., F.R.C.P. Lond., Physician to the London Hospital. London: J. and A. Churchill. 1880.

PERHAPS more errors occur in the diagnosis of stomach affections than in the case with the diseases of any other organ. It is true that where "coarse" pathological changes have taken place, such as ulcer, cancer, or chronic gastric catarrh, there is generally little difficulty in arriving at a definite conclusion as to the nature of the lesion; but where the alterations of tissue are not so well marked, and where the mischief seems chiefly to arise from qualitative and quantitative changes in the composition of the gastric secretions, then it is we find a difference of opinion often expressed. In the present volume Dr. Fenwick presents us with a series of cases which will, we believe, serve as a useful guide to many who are called upon to decide upon the real nature of some of these "obscure" stomach affections. The chapters relating to atrophy of the stomach will be read with much interest, and Dr. Fenwick has already added considerably to our pathological knowledge in this direction. In the cases cited by him the atrophy was undoubtedly a morbid condition, manifesting itself primarily in the walls of the stomach,

and not accompanying or induced by any other disease. In all, the symptoms were remarkably similar, as was the morbid condition of the stomach discovered after death. The patients were all males varying from forty-five to sixty-two years of age, a time of life in which the vital powers begin to fail, and when degeneration of tissue is most likely to take place. Marked anæmia was noticed from the first; microscopic examination of the blood, however, showed no increase in the number of the white corpuscles, and no abnormal appearance could be detected in the coloured cells. Dr. Fenwick also discusses the relation of gastric atrophy to other forms of "idiopathic anæmia," and throws out a hint that some explanation may be found for the anæmia in Addison's disease as the result of changes in the gastro-intestinal canal. These changes, Dr. Fenwick believes, are of the nature of chronic gastro-intestinal catarrh; the attacks of vomiting, one of the earliest symptoms of the disease, the want of appetite, the cardalgia, and the diarrhoea which is usually such a prominent symptom, point conclusively to the presence of this condition. Admitting, therefore, that chronic gastro-intestinal catarrh is invariably present in Addison's disease, it becomes necessary to inquire how it is to be accounted for. Dr. Fenwick believes it to arise from interference with the function of the nerves supplying the gastro-intestinal tract, caused by disease of the supra-renal capsules. For if, as he observes, section of a sympathetic nerve causes the dilatation of the vessels of the part to which it is distributed, we can see that the morbid state of the nerves and ganglia of the stomach and intestines will be apt, if our present physiological doctrines be correct, to give rise to permanent catarrh of these structures. The other phenomena of the disease, Dr. Fenwick remarks, seem to lend support to this view, especially the failure of the heart; and he arrives at the conclusion, which has also been entertained by others, "that death in Addison's disease is not the result of an interference with the functions of the supra-renal bodies, but that it arises from the destruction of the numerous and important nerves that are situated in their vicinity." Dr. Fenwick's remarks upon atrophy of the stomach in persons affected with cancer of various organs will be read with interest and profit. In the consideration of the nervous affections of the digestive organs the author approaches debateable ground. He cites some very interesting cases of "anorexia nervosa," a disease first described by Sir W. Gull under the term "apepsia hysterica," and subsequently by Dr. Wilks. No pathological explanation has hitherto been forthcoming to account for the strange inappetency. Dr. Fenwick, however, very plausibly suggests that it may be due to either "anæsthesia or a perversion of the sensibility of the nerves distributed to the stomach, analogous to what we sometimes observe with respect to the cutaneous nerves in hysterical females." Idiopathic neuralgia of the stomach and abdominal viscera is an affection on the existence of which some physicians have expressed doubts, holding that frequently recurring pain, localised to one particular spot, is generally found to be the result of actual disease. This view, however, cannot be accepted by those who have had experience of malarious diseases; intense neuralgic pain, accompanied by rigors and followed by sweating, and yielding to treatment with quinine and arsenic, is not infrequent in persons living or who have lived in malarious districts. Many of Dr. Fenwick's cases were of this nature. The concluding chapter treats of the gastric neuroses of the vaso-motor system; two out of the three cases given in illustration seem to us in their character closely to resemble the *crises gastriques* which often precede or accompany the development of ataxic symptoms.

In conclusion we congratulate Dr. Fenwick on the production of a work which, while interesting to the pathologist, is of greater value to the practitioner as presenting him with a clinical account of some of those obscure affections of the stomach which are constantly coming under his notice.

An Atlas of Human Anatomy. By RICKMAN JOHN GODLEE, M.S., F.R.C.S., Assistant Surgeon to University College Hospital, and Senior Demonstrator of Anatomy in University College. London: J. and A. Churchill. 1880.

WE have already noticed the earlier numbers of this excellent atlas, but we must congratulate Mr. Godlee on its completion, and on the improvements in the later plates. Some of the earlier drawings were scarcely as distinct as we could have wished, but in the more recent ones no trace of imperfection exists; and for accuracy, clearness, and intelligibility they leave nothing to be desired. The series, which consists of twelve parts containing forty-eight plates, will form a most excellent guide to the student whilst dissecting, and its study will do much to bring back to the advanced practitioner anatomical details which may have escaped his memory. He will thus be materially aided in planning the steps of an operation or in arriving at the diagnosis of a difficult case. The parts are all represented half the natural size, and although some would appear less complicated if somewhat larger, we must allow that this uniformity has in other respects great advantages. The explanatory text is concise, well written, and contains many valuable suggestions for the surgeon. Mr. Godlee's labour of four years has been well bestowed, and editor and publishers deserve great credit for having added so useful a work to English anatomical literature.

Anatomy, Descriptive and Surgical. By HENRY GRAY, F.R.S. Ninth Edition, by T. HOLMES, M.A. Cantab., Surgeon to St. George's Hospital, &c. London: Longmans, Green, & Co. 1880.

GRAY'S Anatomy is so deservedly popular and well known that it is unnecessary for us to do more than call attention to the issue of this new edition. It differs but little from the preceding, except in some corrections in points of detail and in containing some illustrations from Klein's Atlas of Histology. The artistic finish of the illustrations in the early editions was so prominent a feature that we are sorry to see badly-executed drawings—such as Nos. 370, 394, and 438—perpetuated in the later editions. We would suggest that these should be replaced in the next issue by figures which a little extra care in the drawing and shading would make much more intelligible to the student, and more worthy of a place in Gray's Anatomy.

Spirit Gravities, with Tables. By THOMAS STEVENSON, M.D. Lond., Fellow and Examiner in Chemistry of the Royal College of Physicians of London; Examiner in Forensic Medicine in the University of London; Lecturer on Chemistry and on Medical Jurisprudence in the Medical School of Guy's Hospital, &c. London: Van Voorst. 1880.

THESE tables are similar to those of Mr. Hehner which we lately noticed. Mr. Hehner, however, based his on the determinations of Fownes, whereas Dr. Stevenson adopts the older experiments of Gilpin, confirmed in part by Drinkwater. Dr. Stevenson adduces reasons which appear to us satisfactory for his choice, and draws attention to one or two points of ambiguity in Fownes's otherwise excellent experiments. The two sets of tables differ by little, the highest variation, and that an exceptional one, being about 5 per cent. of proof spirit. Gilpin's work is known to have been admirably executed. It is, indeed, really marvellous when we consider that it was done nearly ninety years ago.

ABERDEEN UNIVERSITY COURT.—At a meeting held on the 12th inst., the following gentlemen were appointed examiners for graduation in medicine for the forthcoming year:—Dr. W. J. Walsham, London; Dr. Robert Smith, London; Dr. F. Buchanan White, Perth; Dr. J. W. Miller, Dundee; Dr. David Greig, Dundee; and Dr. John Barclay, Banff.

The Lancet Commission ON THE MEDICAL USE OF WINES.

IV.—RED BURGUNDY WINES.

THE numerous red wines from the Cote d'Or, although not so widely known or so much consumed in this country as the clarets from the Gironde, are great favourites with connoisseurs, and secure a large, though perhaps a somewhat more select sale. By many authorities the Cote d'Or is thought to be even more favourably circumstanced for the cultivation of the grape than the claret district; its soil is remarkable for the large quantity of iron with which the carbonate of lime is pervaded, and some consider this of exceptional importance in developing the perfect characteristics of the grape. Burgundy wines are deeper in colour, more full-bodied and generous, and possess a more typically vinous, if somewhat less delicate, flavour and bouquet than other red wines of similar quality and price. As a rule, they suffer from the disadvantage of not preserving their best qualities beyond a certain age, for after ten or twelve years keeping many of them become somewhat thin, although Santenay and Corton wines are exceptional in this respect, and retain their especial characteristics for a much longer period. Hence, although the best vintages of late years are probably those of 1865 and 1868, yet wines of 1870 are now in excellent condition; and those of 1874-75-76 are very fair samples, and will still further improve. Almost every village in the Cote d'Or gives its name to a wine, but for practical purposes, medically, they can best be taken in three classes. The cheap Burgundies are either the ordinary red Burgundies, such as inferior growths of Mercurey and Beaune, or very new specimens of some of the higher-classed wines. The better Beaunes, and the wines of Nuits, Volnay, and Pommard, form a second group. Corton may be taken as a link between this division and the highest, although very fine specimens of Volnay make the latter a dangerous competitor for pride of place. The superior Burgundies include some of the grandest wines that are known, such as Romanée, La Tâche, Richebourg, and Musigny, in addition to the better known Chambertin and Clos-de-Vougeot. From the adjacent districts of Mâcon and Beaujolais a large quantity of wine is now imported, and as these are popularly, though erroneously, classed with the true Burgundies, it will be most convenient for us to discuss their medicinal value at the same time. Whilst a few of them are really first-class wines, the majority are cheap and more suited for ordinary use, and hence come into competition with the cheaper clarets and Burgundies than with the more select varieties of these wines. Besides ordinary Mâcon, Moulin-à-Vent and Thorin wines are the best known of that group; from the Beaujolais districts those from the vineyards of Chénas, Fleurie, and Morgon are almost the only ones known by distinctive names in this country. The wines of Mâcon and Beaujolais are derived mainly from a different kind of grape from that which is most cultivated in the Cote d'Or; they are paler in colour, less spirituous, possess less body, and are more astringent than the true Burgundies. They are usually considered to occupy an intermediate position between the clarets in ordinary consumption and the less expensive of the red Burgundies, &c.

Typical examples of Mâcon [submitted by C. Ward and Son] and of Beaujolais [Gallais], both of 1875 vintage, and at 24s. per dozen, were analysed. The former, though a full-bodied wine, was remarkably soft and delicate to the palate, whilst the latter was very astringent, although a very sound wine, and without any trace of acidity.

	(M.)		
	Mâcon In 100 vols.	Beaujolais In 100 vols.	
Total solids ...	2.02	2.09	
Grape-sugar ...	.08	.07	
Fixed acid ...	.38	.38	
Volatile acid ...	.22	.22	
Tannin ...	.12	.20	
Absolute alcohol	by weight ...	9.00	9.57
	by volume ...	11.17	11.87

The Beaujolais showed a very marked proportion of tannin, but this was less than in some of the clarets we analysed. The amount of grape-sugar and of fixed acid was not excessive, and the percentage of alcohol very little more than that which is generally found in clarets. The more generous character of these wines will recommend them to many, and there is no reason why they might not be drunk in all cases in which we have recommended red clarets. Beaujolais is of course preferable when a wine of marked astringency is indicated.

For purposes of comparison we selected a true Burgundy wine, rather new, but sound in quality, and with a full vinous flavour [submitted by James Campbell], and marked 18s. per dozen.

	(N.)	In 100 vols.
Total solids...	...	1.73
Grape-sugar ...	...	.08
Fixed acid ...	...	.31
Volatile acid ...	...	.27
Tannin ...	...	.13
Absolute alcohol { by weight ...	...	9.64
{ by volume ...	...	11.96

The amount of total solids is very small, as in some of the clarets, whilst the percentage of alcohol is rather larger than in the Mâcon, and almost the same as in the Beaujolais. The tannin is very small, and in other respects no well-marked difference could be detected.

Higher-priced Burgundies—viz., Beaunes, Pommards, and Volnays, vary from about 30s. to 50s. per dozen, and many excellent specimens were submitted by various merchants [Fearon, Feltoe, Ward, &c.]. They were typical, full-bodied, high-flavoured wines. Any of them might be taken with advantage in suitable cases, and it is especially from this class that conclusions on the medical use of red Burgundy should be drawn. Medicinally they have little to differentiate them from one another, although age, bouquet, and flavour will have much influence in determining a personal choice. An analysis of a very good Beaune [Ward] of 1875 vintage at 34s. per dozen gave the following results:—

	(O.)	In 100 vols.
Total solids ...	...	1.78
Grape-sugar ...	...	.07
Fixed acid ...	...	.33
Volatile acid ...	...	.22
Tannin ...	...	.19
Absolute alcohol { by weight ...	...	9.57
{ by volume ...	...	11.87

As superior examples we should also include two specimens of Corton, remarkable for delicacy and softness—one of 1874 vintage [Burgoyne], at 48s. per dozen, and another more expensive of 1870 vintage [Ward].

The highest priced first-class Burgundies range from 80s. to 120s. per dozen, and these, of course, include the finest wines of France. Their expense almost precludes their being prescribed medicinally; but as they may exceptionally be of importance, we analysed two varieties. They were both wines of superior merit, and in every respect worthy of especial praise. One was a Chambertin of 1870 vintage, at 78s. per dozen, grown by Groffier, of Vôsne-Romanée [submitted by Campbell], and the other was a Romanée of the same vintage, at 84s. [Fearon & Sons].

	(P.)	Chambertin. In 100 vols.	Romanée. In 100 vols.
Total solids ...	...	1.86	1.49
Grape-sugar ...	...	.01	.01
Fixed acid ...	...	.37	.33
Volatile acid ...	...	.30	.20
Tannin ...	...	.11	.12
Absolute alcohol { by weight ...	...	11.15	11.00
{ by volume ...	...	13.81	13.62

The chemical characteristics of these grand wines are, the increased percentage of alcohol, the almost complete absence of sugar, and the low proportion of tannin. For diabetic patients who can afford so expensive a luxury, these high-class red Burgundies appear to be especially well fitted.

The therapeutic value of red Burgundy wines is very marked, but the potency of their effects must make physicians somewhat cautious in recommending them, although in many types of disease no class of wine will produce so great benefit. They are well fitted for convalescents from fevers and other acute affections, and are superior to all

other wines in cases of anæmia, general debility, feeble development, and cases of mal-nutrition not depending on gastric or intestinal irritation. Even if such be present, they may frequently be prescribed with benefit, although lighter, and especially sparkling wines agree better if the irritability be a marked symptom. In most cases in which iron and cod-liver oil form the routine treatment, a wine-glass or two of good Burgundy with dinner is an excellent adjuvant. Primarily somewhat stimulating, these wines in their after-effects are markedly sedative, and hence many patients, weak in physical powers, but excitable and highly nervous in temperament, derive more good from them than from other classes of wines. In some cases this sedative influence may render unnecessary the ordinary soporifics, and chloral, opium, and bromides be now and again dispensed with. They do not aid the digestion as clarets often do, nor can they be taken as refrigerants; in fact, Burgundy is a very powerful wine, must be ordered with great care, and taken in small quantities only. It is said to favour the development of obesity, but we much doubt if this be a fact when the wine is taken in medicinal quantities. The excessive eating with which Burgundy-drinking is so generally accompanied, has, perhaps, as much to answer for in the production of this condition as the mere consumption of the wine. It is stated that in the Burgundy districts gout is not a prevalent disease, even among the growers and exporters of the best wines; but gouty patients can only take it sparingly, if indeed it be ever advisable. Bilious and plethoric people cannot take this class of wine with safety, and in many of these patients headache and a sense of fulness and discomfort are induced by even small quantities. The amount of sugar is so small that it may be safely ordered for diabetics, and the superiority of the best wines in this respect has already been referred to. The amount of fixed acid is much the same as in clarets; this, with the lower percentage of grape-sugar, make it even more valuable in many cases of rheumatism and neuralgia. It is important to remember that the best red Burgundies contain more alcohol than the corresponding clarets; and that in even the cheaper varieties, including Mâcon and Beaujolais, a similar difference exists. White Burgundies of the highest class, such as Montrachet, contain even more alcohol than Romanée or Chambertin, and as a large amount of unfermented grape-sugar is also usually present in such wines, they are indicated in different cases of disease, and cannot be safely substituted for one another.

NEW ENTRIES AT THE MEDICAL SCHOOLS.

THE following are the returns of the new entries at the medical schools of London and the provinces. When not otherwise specified, the number given must be understood to include all kinds of entries. St. Bartholomew's, as usual, heads the list, with a total of 170 new students, 20 of whom have entered to hospital practice or to special courses of lectures. Next comes the London Hospital, with 137, of whom 53 are special. Then follow University College, with 101 (in addition to 50 students preparing for Preliminary Scientific M.B. Examination of London University); Guy's, with 101 (11 special); St. Thomas's, with 91, of whom 55 are first-year's men; King's College, 69 (60 first-year, 9 second-year); St. George's, 61 (44 first-year); Middlesex, 50 (33 full curriculum); Charing-cross, 45; Westminster, 23 (3 partial). Of the Provincial Schools, the Cambridge school counts 57 students actually dissecting, 30 of these for the first time; the University of Durham College of Medicine numbers 54 new entries—29 full, 25 partial; Leeds has 41 (1 dental); Bristol 26 (4 partial); Queen's College, Birmingham, 22.

KING'S COLLEGE MEDICAL DEPARTMENT, ENTRANCE SCHOLARSHIPS.—Mr. John Power, Mr. Gray, and Mr. Thomas Arthur Collinson have been each awarded a Warneford Scholarship of the value of £75; and Mr. Charles Robert Hodges, one of £50. Mr. Ernest Pane Alphonse Mariette has obtained a Sambrooke exhibition of £60 for proficiency in General Literature and Science; and Mr. Albert Carters a Clothworkers' exhibition in Science of the value of £50.

THE LANCET.

LONDON: SATURDAY, OCTOBER 23, 1880.

"WITH a cause which in itself was unassailable, the medical staff have thrown away their advantages by injudicious letter-writing; and they have now no choice but to accept, for a time, the false position in which they have placed themselves." This is how *The Times*, which may be regarded as an exponent of the calm judgment of the community on the main question at issue, views the situation at Guy's Hospital; and the following is the opinion formed by the same impartial authority as to what the situation described practically involves. "According to the position they have taken up, they must submit to the risk of seeing injurious rules enforced, of seeing patients maltreated, of seeing the treasurer and the matron deciding, ignorantly and therefore often wrongly, on purely medical questions." It would be difficult to indicate a state of matters more unsatisfactory or humiliating, and, we fear, the utterly disastrous nature of the position apparently accepted by the medical staff of this hospital is not exaggerated in this outlook.

We are not in the confidence of the medical staff of Guy's Hospital, for the obvious reason that whatever other excellent qualities they may possess they have no confidence in themselves, probably because they have no confidence in each other. If the little band at Rorke's Drift had not held together, but each gallant member of the shattered corps had elected to fight the battle his own way, from his own personal coign of vantage, and with a special eye to his own safety, the result would not have been either creditable or satisfactory. This is what the physicians and surgeons attached to Guy's Hospital have been doing, and the result of the policy adopted is precisely what everyone who knew what was going on must have anticipated. We had in our possession on Wednesday last information which rendered the course taken by the Governors at their meeting of Thursday inevitable. The staff had hauled down its flag on the matter of principle by withdrawing a letter which, if not altogether wisely worded, was in fact and spirit a simple and manly statement of the facts, and the Governors had determined among themselves to make the most of a submission instigated, as they assumed, by a selfish fear of the consequences, from a body of professional men who had rashly taken up a position of defiance they were not prepared to defend. The medical staff of Guy's Hospital is composed of men for whom individually we, in common with the whole profession, have the highest respect, but as a body entrusted with the guardianship of public and professional interests, and accidentally placed in a position wherein they stood charged with the matured judgment of the medical profession on a question affecting the interests of the sick poor, at a great crisis in the history of hospital management, they have conspicuously failed. We will not say that they have betrayed their trust, but it has slipped from feeble hands palsied by the fear of the tempest their own rashness and want of tact had raised.

What remains to be done in the emergency? Is the medical staff of Guy's, as a body, content to carry on the medical business of this institution while the Governors, according to the express terms of their resolution, "maintain in its integrity the power to govern the hospital entrusted to them by law." It is *practically* a condition of the withdrawal of the resolution which "required" the senior physician and the senior surgeon to resign, that the subsequent resolution, by which the Governors virtually declare their intention to persist in the system of management of which the staff complained, "must be accepted by the medical staff." The withdrawal of the demand for resignation was an act of grace following upon the "unreserved" submission of the vanquished. Under these circumstances, we wait to see what course the staff as a whole, and Dr. HABERSHON and Mr. COOPER FORSTER individually, will elect to pursue. If, as we hinted last week, it had been a condition of the new start in this painful business that the Governors should acknowledge their error in attempting to manage a medical institution without medical aid, it might have been expedient to try the experiment of life and work under the existing *régime*; but no such acknowledgment has been made. On the contrary, the Governors have formally declared their determination to "maintain" their position. The only change in the situation is that the medical staff has abandoned the ground which it had taken up.

This is a true statement of the facts. It is idle to pretend that any new light has been thrown on the nature of the overtures made to the Governors when they consented to admit two members of the staff to the Taking-in Committee. All that is now *known* as to the status to be accorded to the representatives of the medical faculty at this subordinate board was known, or might have been known, months ago, when the original proposition was discussed; and, when taking a moderate view of the then situation, we counselled the staff to accept the proposals made to them. Subsequent events have shown that the relations between the medical staff and the Governors were, even at that time, so strained that a mutual understanding was impracticable. In short, the medical faculty at Guy's has allowed itself to be fretted and cajoled into a position wholly incompatible with self-respect, and the sooner and the more boldly it cuts itself adrift from a false and unsafe mooring the better will it be for its own reputation, and the credit of the profession to which its members belong. The policy and action of this body, as such, are unworthy of the distinguished reputations of its members as individual physicians and surgeons. It seems to have been embarrassed and misled by want of confidence in itself and in the profession. The interests of the sick poor, which are directly involved in this controversy, ought to have been paramount. The fate of the hospital, of the school, and of the physicians and surgeons attached to the hospital and the school, respectively, should have been left out of the question of policy. All responsibility as to the institution and the pupils would have devolved on the Governors if the medical staff had simply and boldly pursued the path of duty. If the Governors had closed the hospital, and broken their business contract with the pupils, the issue raised would doubtless have been adjusted. In any event, these were questions for the Governors, not for the staff.

The medical profession does *not* counsel the medical staff

of Guy's Hospital to carry its policy of submission farther. Public opinion will *not* justify the surrender of the interests of the sick poor. The principle which demands medical control for a medical charity is one which cannot be asserted and waived at will. The practical proposition that *nursing* is an integral part of treatment, to be performed under medical direction, and not to be regarded as a specialty entrusted to a separate department, is too obvious to be gainsaid or lightly set aside. In brief, the issues at stake are too great and too grave to be trifled with. If the medical staff at Guy's Hospital would retain the respect of the profession and the public as a representative body of medical men, it must pause before it decides to accept a compromise which is not merely humiliating, but cripples while it degrades.

WE are glad to learn on the best authority, that of the Vestry Clerk of St. Pancras, that the reports, published in several of our leading daily contemporaries, of a recent meeting of the Sanitary Committee of that parish, were entirely fallacious in attributing to Mr. SHIRLEY MURPHY, the local medical officer of health, a statement that the London registrars were in the habit of registering deaths without medical certificates in a wholesale manner. It appears that in fact Mr. SHIRLEY MURPHY only made a representation to his sanitary authority, deploring, as we have done again and again, the imperfect and dangerous condition of registration law, which permits the registration of any deaths without the production of a medical certificate, or other satisfactory evidence of the true cause of death. Reforms of all kind are too frequently retarded, instead of promoted, by exaggerated statements of the evils to be redressed, and on this account alone we regretted the over-statements which were last week falsely attributed to Mr. SHIRLEY MURPHY with regard to the registration of uncertified deaths in London. We rejoice to see that he, as well as one or two of the medical officers of health of Wandsworth District, has formally brought this important matter before the local sanitary authority; and we trust that every other medical officer of health will do his utmost to impress upon his sanitary authorities this dangerous flaw and laxity of registration law, as a preliminary step to pressing upon the Government, through the Home Secretary or the President of the Local Government Board, the necessity for further legislation which shall secure the due certification of all causes of death previous to registration. It is eminently desirable, however, that with a view to bringing the matter before the Government, by deputation or otherwise, some agreement should be arrived at as to what remedy ought to be proposed for the present dangerous and unsatisfactory state of the law. It should in the first place be clearly understood that nothing short of new legislation can effect the desired reform, as the Registrar-General and his local registrars are powerless, under the present state of the law, either to obtain medical certificates concerning a certain proportion of the deaths that occur, or to refuse to register such deaths because no such certificates are forthcoming. Neither has the Registrar-General any authority to secure the holding of inquests in cases where no satisfactory evidence of the cause of death can be obtained. The only means under the present state of the law to obtain evidence of the cause of an uncertified death is the holding of an inquest, but it is

very rare for a coroner to hold an inquest with this object. We have good reason for believing that most of the best registrars would gladly be spared their present unpleasant responsibility in the matter of uncertified deaths; they are instructed to refer all cases of death from violence, as well as all cases attended by suspicious circumstances, to the coroner before registering the death. It is, however, impossible in very many cases for the registrar to know whether there are any "suspicious circumstances" connected with an uncertified death he may be called upon to register. Coroners, moreover, seldom give a certificate concerning a case brought under their notice, in which they consider an inquest unnecessary, which would alone afford satisfactory evidence that the registrar had acted in accordance with his instructions. Registration in London is more efficiently carried out, as regards the certification of causes of death, than in the provinces, on account of the small proportion of unqualified medical practice in the metropolis. In devising a system for the certification of those deaths which now remain uncertified, it should therefore be remembered that in Wales and in some parts of England the proportion of uncertified deaths, instead of being less than 1 per cent., as it was in London last quarter, is 12 per cent. and upwards. It is evident that the expensive formality of an inquest cannot be necessary in so large a proportion of cases, and yet it is as certain that the present system is fraught with the gravest dangers. It will be wise to urge upon the Government when the coroners question is dealt with, as it must be ere long, that the questions of uncertified deaths and of apparently unnecessary inquests should be fully considered in their relative bearing on each other.

ACCORDING to modern theories, diabetes is supposed to depend, to a large extent, perhaps entirely, upon derangement of the vaso-motor mechanism of the liver. This point in the pathology of the disease has been the subject of a recent series of investigations by M. LAFFONT, which have been published in the *Gazette Médicale de Paris*. CLAUDE BERNARD, as is well known, showed that division of the cord between the seventh cervical and first dorsal vertebræ arrested the effects of the "diabetic puncture" of the floor of the fourth ventricle, and hence concluded that the path of the nervous influence was by the splanchnic branches of the sympathetic, and that the glycosuria is the result of an irritation, not of a paralysis, of the nerves, since the latter would not be removed by a second division of the path. M. LAFFONT has endeavoured to ascertain the truth of this opinion, by stimulating the first dorsal pair of nerves by faradisation, and observing the effect of this stimulation on the vessels of the liver. In the first series of experiments he opened the spinal canal, and divided the cord at two spots, isolating a segment corresponding to the first and second dorsal pairs. He next exposed the liver, and observed changes in its vascularity by the naked eye. The observations were made upon dogs. On irritation of the isolated segment of the cord, the liver was observed to present disseminated congestion, accompanied by a corresponding injection of the intestine, and turgidity of the spleen. The view that the morbid influence is irritative rather than paralytic is thus confirmed.

BERNARD also found that the stimulation of the central

extremities of the vagus increased the amount of sugar produced; while BEZOLD ascertained that similar stimulation caused, in curarised animals, a fall in intra-arterial pressure, which, LUDWIG and THIRY showed, was due to dilatation chiefly of the abdominal vessels. VULPIAN attributed this effect to the simultaneous stimulation of the central extremity of the depressor branch of the vagus. M. LAFFONT has endeavoured to ascertain whether this latter view is correct, and he found that intermitting stimulation for an hour of the central extremities of the depressor nerves, by means of a weak faradaic current, produced actual glycosuria, the sugar amounting to from twenty-five to forty-nine grammes per litre of urine. This fact had, indeed, been already ascertained by FILEHNE, who stated further that the faradisation of the central extremities of the pneumogastriacs themselves in the rabbit does not cause glycosuria. The latter fact is not corroborated by LAFFONT. He was able by such stimulation to cause a glycosuria amounting to from eight to seventeen grammes of glucose per litre, and believes that it is due to the asphyxia produced by this stimulation.

In another series of experiments it was found that painful stimulation of any mixed nerve, frequently repeated, caused glycosuria at the end of a certain time, amounting, in different animals, to from four to nine grammes of sugar per litre. Next, the effect of division of the first two or three pairs of dorsal nerves on the glycosuria resulting from puncture of the floor of the fourth ventricle was investigated in rabbits. Threads were placed around the roots of the first two dorsal pairs, and, the effect of the diabetic puncture having been ascertained, the nerves were torn through by means of the thread. The effect was that the sugar fell from twenty and forty grammes per litre to seven or twelve grammes. The effect of this operation on the vascular phenomena caused by stimulating the central portions of the pneumogastric or depressor nerves was then examined. It was ascertained by means of a cannula introduced into the carotid or crural artery. In the dog, the stimulation of the central extremities of the pneumogastriacs with a strong current caused always an enormous increase of pressure, while feeble stimulation produced, on the other hand, a considerable diminution of pressure. The roots of the first three or four dorsal nerves were then torn through, and after this the feeble stimulation, which had before caused a fall in the blood-pressure, produced a considerable rise. The result was the same in the rabbit, with the exception that a strong stimulation of the depressor nerves never caused an increase in the blood-pressure. Thus the separation of the dorsal nerves prevents the effect upon the circulation otherwise caused by the stimulation of the pneumogastric or depressor nerves.

What is the effect on the abdominal circulation of stimulating the peripheral extremities of the upper dorsal nerve roots? Since all the roots could not be simultaneously excited, the first pair only was stimulated, the animal being under the influence of curara. A fall in the blood-pressure resulted, not considerable in degree, because under the influence of curara there is already dilatation of the abdominal vessels. The pressure was estimated in the splenic artery, or in one of the branches of the mesenteric artery. It was thus ascertained that the stimulation of

these nerve roots by a weak faradaic current caused always a fall in the arterial pressure in the abdominal organs if the root is carefully isolated. The least extension of the current to the spinal cord itself caused an increase of pressure.

The conclusions drawn from these experiments confirm the view that the glycosuria which results from the stimulation of the central extremities of the pneumogastric nerves in the dog, the depressor nerves in the rabbit, and the sensory nerves generally, is the result of an impression conveyed to the bulbar vaso-dilator centre, the path from which is by the cervical cord, the first dorsal nerve roots, and the sympathetic and splanchnic nerves. It is conjectured to be by an action upon this centre that certain cardiac and general diseases may cause glycosuria. These effects, and those of the diabetic puncture, are prevented by the separation of the upper dorsal nerve roots, while the effect of stimulation of these divided roots shows that they contain dilator nerves for the vessels of the abdominal viscera.

WE have lately inserted several letters on the question of cheap methods of doctoring. We have not been able to give a place to all the letters; but those who defend low charges for professional services cannot complain that their side of the question has not had a fair hearing. We were the more anxious to give this, as the profession of late has been much scandalised at the bold way in which advice and medicines have been offered to the public, as if they were very cheap and valueless wares indeed. Those who are much condemned ought to have an opportunity of defence. Moreover, we confess to feeling that the problem of giving medical service to the poor on proper terms is one that is full of interest. The poor must have a doctor. They can do without lawyers, and perhaps even without clergy, but the great human art of medicine is in constant demand by all sorts and conditions of men. None of the experience yet collected is conclusive or satisfactory. The old gratuitous system has, to say the least, been abused; the club system applies chiefly to *men* the least exigent section of the community in a medical respect; the provident dispensary system is too systematic for large sections of the community, and even where it is adopted is exacting and not very profitable to medical men. We, therefore, are not disposed to dismiss with a hasty and contemptuous condemnation those who try to bring multitudes of people under legitimate medical treatment who would otherwise go to the chemist, or remain untreated, or run up medical bills without the power or the intention of paying them.

Our readers will judge for themselves how far such practitioners have made good their defence. Their letters are very interesting, very ingenious, and show considerable experience, and no little medical ability. They are evidently written by principals, who if they themselves could see patients in reasonable numbers, at reasonable charges, would be doing great service to the community. But a close inspection of their letters, and of such letters as that of "M.D.," will show that there are many gaps in their case, and many statements which would require very severe criticism before they could be accepted, and many others which tell against the system which they are adduced to support. Our correspondent, "L.R.C.P. Edin.," for ex-

ample, states that the shilling a week system does not injure other practitioners; and that the drug bill of a dispensary paying £500 a year does not exceed £70. This estimate is confirmed by "M.D. Lond.," who tells us that he sees sometimes over two hundred patients a day. This gentleman discusses the question—How is it that these cheap private dispensaries are often disreputably conducted? His answer to this is the difficulty of finding suitable men, which he defines as men of business capacity, honesty, punctuality, a little capital, and fond of work—such men, in fact, as make the assistant-physicians of out-patient departments of hospitals, *plus* considerable administrative talent into the bargain. To expect all this in one man, and to make the system depend on such a rare combination in one man, is to pronounce its failure and impracticability. We will not too closely criticise the fine estimates of the cost of drugs, though we do not think so lightly of the cost of providing and dispensing drugs in a proper and palatable form. Some of our correspondents do not hide their contempt of medicines. We do not share that feeling. Rich people have many ways of getting well, and restoring their strength. The poor are particularly dependent on good, sound, suitable medicines and advice, tendered by a man of good judgment. Can this be done by the ablest and strongest man if he has to see two hundred a day—or even one hundred a day? We think not. The work must be scamped. It is a very different thing from the case of the out-patient department. There the physician has students and clinical clerks and assistants at his elbow, to each of whom he can assign various duties; but even he is often jaded by seeing half the number twice a week.

What is likely to happen when such crowds throng the cheap dispensary, but that the principal will employ assistants—probably unqualified, as in the damaging case quoted by "M. D."—who may have both to see patients and dispense medicines—with what leisure, or care, or ability, we must leave our readers to imagine.

Finally, the gentlemen who have so ably defended charges that seem to us calculated to bring physician and medicine into contempt, have conspicuously avoided one feature of their system—the entire absence of any pretence of selecting cases or persons. To open doors at a given hour to see all and sundry persons for a shilling a week, is virtually to invite the patients of other medical men, and to offer an inducement to the mean and the thoughtless to get that for sixpence which they should pay five sixpences or five shillings for. It is therefore a direct way of underselling medical brethren. The system has its advantages. It procures ready money, and to judge from some ostentatious facts, a good deal of it. It shortens the undoubtedly trying period of a medical man's life, that in which he has to wait. But it does not hold high the principles by which physicians in all ages have commanded the respect of the public and of each other.

DR. GEORGE KING, superintendent of the Calcutta Botanical Gardens, has, we understand, been chosen by the Indian Government to discharge the duty of selecting a site on the Andaman islands for the experimental cultivation of the chinchona. Meanwhile the trees planted in Bengal are said to be paying handsomely, some 400,000 lb. of bark having been harvested.

Annotations.

"Ne quid nimis."

FOGS.

THE attention which is being directed to the subject of our London atmosphere will, it is to be hoped, bear some fruit, for there can be no doubt that the question is one of great importance, and that the present condition of the air we breathe is nothing short of a grave national calamity, and one which calls for the active interference of the Legislature. In a city, situated as London is, on the estuary of a great river, fogs must be expected, and all that we can hope to do is to prevent the foggy atmosphere from being fouled by smoke, and thus to reduce the evils and inconveniences to a minimum.

We will briefly epitomise the evils of our dirty London air. As regards health these evils are *acute* and *chronic*. The acute evils are shown by the returns of the Registrar-General. Last winter the death-rate was more than doubled chiefly by the increase of mortality from pulmonary disease. In 1873 the same alarming mortality occurred; and the smoke proved fatal also to a large number of the beasts exhibited at the Smithfield Show, no less than ninety-two of them having to be removed from the Agricultural Hall to be slaughtered at once, or "recovered," if possible, in the country. We need say nothing of "fog casualties," which are also to be reckoned among the acute evils, and serve to swell the death-rate.

The chronic evils attendant upon our atmosphere are, we believe, more serious, though attracting less attention, than the acute evils. The chief of these is the almost complete absence of sunlight for a great part of the winter. That sunlight is absolutely necessary for the proper development of both plants and animals, is a fact so generally accepted as to need no arguments from us. To what extent anæmia, rickets, and the general feebleness of the children of the London poor are attributable to want of light we cannot accurately determine, but that it plays an important part in the causation of many states of constitutional feebleness is universally admitted. On this account we felt constrained some years ago to recommend the removal of the Bluecoat School; for the Cimerian darkness of Newgate-street is not fitted for the development of young creatures who ought during their school life to double or treble their body weights. Our suggestion (which is soon to be carried out) would not have been necessary had London been blessed with a clear atmosphere. Some of the great endowed schools of London have already been removed to the country, others are to follow, and thus the citizens will be deprived, mainly by this foul atmosphere, of those educational advantages provided for them by benevolent ancestors. We remember once meeting a sporting gentleman who pooh-poohed these notions about sunlight and purity of atmosphere being necessary for the healthy development of the young; but when we asked him if he would like to keep a Derby favourite in a London mews and train it in Hyde-park, he altered his tone, and evidently did not approve of any blasphemous comparisons between mere babies and thoroughbred yearlings. In these days of competition, when every child is, willy nilly, entered for a race as soon as born, the question of a favourable situation for healthy development is doubly important.

Besides the absence of light there is the positive evil of the presence of artificial light during the greater part of the twenty-four hours, so that we are compelled to breathe air laden with the products of combustion, even during the daytime. If London blacks could be abolished, London ought to become a very favourite winter residence. It is one of the best drained, best sewered, best paved, and cleanest city in the

world; and having a temperature some degrees higher than the open country, and its resources for intellectual enjoyment being unrivalled, it ought to form, in winter, a focus of attraction to all classes. As it is, however, physicians are obliged to forbid patients to come to town in the winter if there is the slightest suspicion of lung disease, and are constrained either to keep them in the country or to send them abroad in search of fresh air and sunlight. It is recognised, also, that London is a bad place for convalescents, and that for complete recovery from illness a removal from town is absolutely necessary. The effect of this upon the value of house property, upon trade, and, lastly, upon the pockets of our own profession in London, we need not stop to inquire. The only wonder is that anybody not actually compelled will consent to live in a town where flowers cannot be made to grow, where sunlight is a rarity, where all we touch is smutty, and where the very statues in the streets succumb to the biting acidity of the atmosphere. To set off against all this positive evil there is the hypothetical antiseptic power of the smuts, which is said to be as inimical to disease germs as to other forms of life. Be this as it may, it is certain that we have our share of so-called zymotic diseases in London.

There is little doubt that the nuisance is extending. As the population increases chimneys increase also, and there are now, at least, as many chimneys as persons in this overgrown town. As the smut-producing area is being increased, it is obvious that the central parts of that area are certain to be overcast whenever the wind is much short of half a gale, no matter what may be its direction.

The evil being so great and so ruinous to the inhabitants, it behoves us to set to work seriously to remedy it; and we have no doubt that it only needs a little wise legislation in order to greatly mitigate, if not to entirely cure it. Suppose a law were passed simply disallowing a chimney to vomit forth blacks, what are the remedies to which we might have recourse? First, there is the employment of smokeless fuel, such as gas, coke, anthracite, peat, and wood. The rich would still be able to enjoy the luxury of an open fireplace without at the same time sending forth a shower of blacks from the chimney tops; and gas might certainly be used for all mere heating and cooking purposes. Possibly a supply of hydrogen might be forthcoming for heating purposes, which should be at least as economical as coal. It is needless to say that during the past few years great improvements have been made in stoves of all kinds. We now derive a far greater amount of available heat from a given quantity of fuel than formerly was the case, and a very small amount of pressure is needed to make the employment of such stoves universal. At present houses are built without a thought for their economical and efficient warming, and the dozens of houses which are finished every day in London and its neighbourhood have all the faults of construction observable in those which are two centuries old.

Something might at least be done to prevent the low chimneys of mews from sending their blacks directly into the windows of the drawing-rooms and bedrooms of the big houses adjoining them, and if no chimney of a furnace or fireplace in which coal or wood is consumed were allowed to be of a less height than, let us say, sixty or eighty feet, we should be relieved of some of the disadvantages of living in a land the wealth of which is largely dependent upon coal.

WHAT IS A COLD BATH?

THE season of the year when very many people who have experienced pleasure and advantage from a daily cold bath have to discontinue the practice is come. Months will elapse before the return of genial weather will allow of their indulgence in what may be termed man's natural stimulant. Among the young and robust there are a large

number who are able to bathe even in the depths of winter; the advantage of so doing is, however, questionable. But let it be once well understood what a cold bath really is, and the course by which we can avoid Scylla and Charybdis will be obvious. A cold bath is not necessarily a bath in water of the temperature of the atmosphere. A bath is truly and really cold when it produces a certain physiological effect—a slight momentary shock followed by pleasant and lasting reaction. These effects are for the majority of people most pleasantly obtained by bathing in water about 35° to 40° below the temperature of the body—the usual temperature of unheated water in June and July. Bearing this in mind we can enjoy our physiological “cold” bath as safely and pleasantly at Christmas as at Midsummer, and there is no necessity for the most timid or weakly to discontinue his morning tub because the summer weather is over. When the water sinks below a temperature of 60°, let it be heated to that point and then used, and we shall still have our “cold” bath, though of heated water. The daily stimulant effect of such a bath is so beneficial to the great majority of persons and is of such marked service in maintaining health, that it is very important to have it widely known that a cold bath may be taken all the year round provided cold is not mistaken to mean “at the temperature of the outer air.” To heat our bath during the winter months is too often thought to be unmanly, while in reality it is truly scientific, and to bathe in unheated water all the year round, whatever the temperature that water may be, is to prove oneself an ignorant slave of outward circumstances.

OUR MILITARY PRISONS.

IN the report on the discipline and management of the military prisons for the year 1879, recently presented to Parliament, the Inspector-General, Colonel Sir E. F. Ducane, R.E., says nothing whatever of the health of the prisoners. In the appendix, it is true, there are extracts from the reports of the medical officers of most of the prisons, the general tenour of which is that the state of health of the prisoners has been satisfactory. There is also a “return of sickness during 1879,” which enables us to test the accuracy of these reports, and which yields some remarkable results. During the year 1879 there were on the average 2170 soldiers constantly undergoing imprisonment in the United Kingdom. Of these 1180 were in civil prisons, 437 in military prisons, and 553 in the military division of Millbank Prison. The military prisons were six in number, including Millbank under that head, and it is to them only that the return of sickness applies. They were Millbank, Gosport, Glencorse (in Scotland), Cork, Dublin, and Limerick. The cases of sickness in them during the year amounted to 400 per 1000 of the average daily number of prisoners, the proportion constantly sick to 37·69 per 1000, and the average duration of the cases to 34·41 days. There is no column in the table for deaths. In the extract from the report of the medical officer at Millbank two are stated to have occurred in that prison; none are reported in the other prisons, but this may possibly have arisen from prisoners occasionally being sent to the military hospitals when seriously ill, whose deaths, if they occurred there, would not appear in the prison returns. The results above stated show the proportion of cases to have been scarcely half, but their duration double that which occurs among troops serving in the United Kingdom, and the average constantly sick to have been about 2½ per 1000 less than among the troops. It is probable that the lower ratio of cases is due to the men not being exposed to those causes of disease which arise from their dissipation or recklessness, while their long duration depends upon the care taken to prevent men escaping any part of their punishment for trifling causes. But we calculate the results for each of the prisons separately there will be

found to exist so striking a diversity as to require some explanation. This is clearly shown in the following table :—

	Ratio per 1000 of strength. Cases.	Constantly sick.	Average duration of cases.
Millbank..	238.9	41.39	63.24 days.
Gosport ...	700.0	42.27	22.56 "
Glencorse..	560.0	28.85	18.80 "
Cork	1280.4	30.79	8.75 "
Dublin	227.5	32.76	52.56 "
Limerick..	392.9	17.29	16.06 "

The enormously high proportion of cases at Cork, with the very short average duration, would lead to the supposition that too great facility existed there for getting upon the sick list for trifling causes, while the low ratio at Millbank and Dublin, coupled with the long average duration, would tend to show that great care was taken to prevent prisoners escaping any portion of their punishment for mere trifling ailments. The great range in the proportion of cases and in their duration would seem to call for a searching inquiry into the manner in which the different prisons are conducted, and the duties of the medical officers are discharged. As no information is given in the report as to the diseases which have prevailed among the prisoners, it is impossible to form any conjecture of the causes of the great differences which exist. We can only call attention to the subject in the hope that the Inspector-General and the military authorities may institute a searching inquiry with a view to determine how far these differences arise from preventable causes, and whether they may not in some instances depend upon inefficient or injudicious management. It is to be regretted that no information is given as to the sickness among the soldiers confined in the civil prisons, as a comparison of the health of the men under the two different systems might prove of practical value in ascertaining the relative merits and defects from a health point of view, as far as soldiers are concerned, of the civil and military prisons respectively.

AN EDISONIAN ANÆSTHETIC.

READERS of *Punch* will remember an amusing parody of Edison's mode of announcing his discoveries, in which the parturient mountain and muscicular abortion were illustrated, if we remember aright, by an elaborate description of a new life-restoring beverage, which proved to be an infusion of tea. Truth is stranger than fiction, or at least as remarkable, and the parody of the satirist was—unless the *English Mechanic* has hoaxed its readers and many other respectable journals—a true prophecy. Physicians have been blundering for some hundreds of years in attempts at the relief of pain by external applications, but it has been reserved for Mr. Edison to solve the problem by a stroke of genius! They have discovered that various substances, organic and inorganic, lessen sensibility and relieve pain, and have used them singly and in various combination, and will look with eagerness, not unmixed with misgivings, for the addition to their armamentum which Mr. Edison offers them. Their misgivings will not be misplaced. The inventor of the phonograph, and of the electric lamp of the future, gravely proposes as his latest invention to mix certain familiar anæsthetics together to make a new one. In the words of the *English Mechanic*, "Mr. Edison's idea is to use a compound (*sic*) of a number of the most powerful chemical substances which act anæsthetically, and which have no effect upon each other. The invention further consists in placing in such compound various menstrua (*sic*) for dissolving the substances, which menstrua shall have no chemical action on each other, or upon the substances beyond effecting their solution. The object of placing in one compound all of the most powerful chemicals which act anæsthetically is to ensure the action of one of them—that is to say, if one does not act, the other may. The ingredients which are used

are hydrate of chloral, chloroform, ether, nitrite of amyl, morphia, camphor, alcohol, oil of peppermint, salicylic acid, and oil of cloves." Such is the precious compound which Mr. Edison is alleged to have "invented." It is scarcely an exaggeration to say the discovery is on a par with that of a sportsman who should propose to load his gun, at one and the same time, with a bullet, small shot, and a tallow candle, so that the charge may be equally available whether his mark be a stag, a sparrow, or a deal board.

SURGEON-MAJOR HANNAH.

THE General Commanding the Allahabad Division has issued the following Brigade Order touching the death of Surgeon-Major Hannah, in the terrible landslip at Naini Tal: "It is with the deepest regret that the Brigadier-General Commanding has learnt that, in the very serious calamity which occurred at Naini Tal, owing to a landslip on the 18th instant, many valuable lives of officers, soldiers, and others, have been lost, and that among these, Captain Goodridge, of the 35th N. I., and Surgeon-Major Hannah, A. M. D., attached to B Brigade, 4th Battery, R. A., stationed at Allahabad, have perished. Brigadier-General Cobbe was unacquainted with Captain Goodridge, but he deplores his sudden and premature death. From personal knowledge, he can testify to the great loss sustained by the death of Surgeon-Major Hannah, whose unsparing exertions during the late cholera epidemic will still be fresh in the minds of many. He is sure that Dr. Hannah will be sincerely regretted by every officer and soldier who has had occasion to know him in his professional capacity, while many will lament the loss of a friend taken thus suddenly in the prime of life and usefulness."

CONVALESCENT HOME FOR SCARLET-FEVER PATIENTS.

WE are glad to learn that a scheme has been set on foot by Miss Mary Wardell for the establishment of a convalescent home for the reception of scarlet-fever patients. There is no disease which needs such careful tending during convalescence, but the period during which the patient is dangerous to others is so long, that it precludes the possibility of his being sent to any of the ordinary convalescent institutions. The establishment of such a home would not only be of undoubted use to the patients themselves, but, by preventing them from returning too early to their ordinary vocations, it would lessen the risk of infection to others. Miss Wardell's scheme is still in embryo, but we feel sure that it only needs to be ventilated in order that it may soon enter upon its real life and pursue a career of very great utility. Of moral support Miss Wardell has no lack. The heads of our own profession, and many leading members of the aristocracy and philanthropy concur in approving the scheme and wishing her God speed. The sinews of philanthropy, after all, however, is money, and we trust that many will be found to put their hands deep into their pockets enable a site to be purchased and a suitable house to be commenced upon it forthwith.

UNINFLAMMABLE TISSUES.

THE French Société d'Encouragement pour l'Industrie Nationale has awarded to M. Martin, of Paris, a prize of 1000 francs for his preparations for rendering wood and textile fabrics uninflammable. For wearing apparel, &c., a mixture of sulphate and carbonate of ammonia, boracic acid, borax, starch and water is used, and several other preparations for similar uses are described. All seem well adapted for their purpose, although no remarkable novelty can be observed in them.

We have repeatedly urged that the use of some such preparations in theatres should be made compulsory, and

cannot help regretting that the Lord Chamberlain, who exercises so paternal an authority over the dresses which actresses wear, should be unable or unwilling to compel their safety from fire. Frightful accidents happen from time to time on the stage from the neglect of precautions which are well known and inexpensive, and such accidents, affecting as they do the safety of the audience as well as of the performers, are a disgrace to our stage censorship.

ANTISEPTIC INFLATION.

MR. J. HOLDEN WEBB, of Melbourne, has recently published a paper in the *Australian Medical Journal* describing and advocating a new plan of rendering old sinuses and putrid abscess cavities aseptic. At first such cases were dealt with by injections of carbolic acid lotion; more recently Volkmann has introduced his sharp spoons, by means of which the unhealthy granulation tissue forming the walls of such passages and cavities can be removed, and inasmuch as there is good ground for believing that septic organisms not only exist in the putrid discharge but also infest the secreting walls of such cavities, this must be considered, and, indeed, has proved, a valuable adjunct to the simpler plan of injections only. In dealing with very large cavities, irregular and sacculated, such as are particularly met with in connexion with disease of the spine, it is obviously very difficult, if not impossible, to inject fluid so thoroughly that it shall penetrate into every corner and exert its germicide property on every part, and in these cases also the use of Volkmann's sharp spoons is necessarily limited within very narrow bounds. It was for such cases that Mr. Webb tried inflation with carbolised air, as being more likely to give success. His apparatus is simple. Into a Florence flask he puts some crystallised phenol, and through the cork, which fits tightly, he passes two glass tubes, one passing to the bottom of the flask, the other only just beyond the cork. These tubes are bent at right angles just above the cork. To the long tube a Richardson's bellows is fixed. When in use the flask is raised on a stand, the acid melted and heated by a spirit lamp, and air forced by the bellows through the acid in the flask, and by the shorter tube into the cavity to be inflated. All the force of the hand is used in the inflation, the cavities being tightly distended, and although it "often makes the patient drowsy for some hours afterwards, and sometimes renders the urine smoky," Mr. Webb has not met with any ill effects. Thymol inflation has been followed by disagreeable sickness. In his paper cases of old sinuses, spinal and other abscesses, submitted to this treatment are detailed, and it is stated that the results in correcting septicity of discharge, and therefore in checking suppuration, fever, and hectic, and hastening recovery, have been very satisfactory.

THE PATHOLOGICAL SOCIETY'S DEBATE.

THE debate on Rickets will be opened on Tuesday, Nov. 16th, by Dr. Hilton Fagge. It will assist the Secretaries of the Society if gentlemen who intend to speak will inform them of the fact, so that suitable arrangements may be made. The debate will of course be quite open, and no previous notice to the Secretaries is necessary before taking part in it. The subject is well chosen, the duty of opening the debate wisely allotted, and we may expect a valuable discussion.

THE HERTS CONVALESCENT HOME.

THE new building of this institution is to be opened under royal and noble auspices at St. Leonards on the 28th inst. It is gratifying to be assured that the institution will be governed by a managing committee, the constitution of which will be satisfactory to all parties. The existence of such a committee makes the institution a public one, and throws

on the public the pleasant and binding duty of supporting it. We do not quite understand the restriction implied in the title. Is it that only Hertfordshire men are to be allowed the pleasure of contributing, or that Hertfordshire patients only are to share and use the institution?

MANAGEMENT OF NATURAL LABOUR.

DR. J. W. SINGLETON, of Paducah, Ky., in a paper read before the Tri-State Medical Society on the Management of Natural Labour, argues strongly in favour of the use of the abdominal bandage before delivery as well as after, and of a dose of ergot of rye just before delivery. There is a tendency to what our American brethren call "hyfalutin" in Dr. Singleton's style of writing, but his strong advice in favour of the bandage and ergot may be recorded, the more so as he attributes to them the fact that, during twenty-five years' practice, he has never had a serious case of post-partum hæmorrhage. There is still to be found, or to be heard of, now and again a practitioner who does not apply a binder after delivery. This, we think, a great omission, and there is something to be said for having it placed before delivery, so as to exercise a little gentle pressure on the abdomen and uterus before delivery takes place.

HOSPITAL SUNDAY IN CUMBERLAND AND WESTMORELAND IN 1880.

THE sum of £1176 13s. 11d. has been obtained for the benefit of the five principal medical charities connected with the counties of Cumberland and Westmoreland in the present year, and the sum of £10,349 2s. 11d. in the eleven years since the fund was established. The names of the institutions which participate in the collections are as follows:—The Cumberland Infirmary, the Carlisle Dispensary, the Carlisle Fever Hospital, the Cumberland and Westmoreland Convalescent Institution, at Silloth, and the Whitehaven and West Cumberland Infirmary. Each charity has a medical representative on the committee of the fund.

THE Royal Free Hospital has, it is stated, become entitled to a moiety of the estate of the late William Birks Rhodes, valued at £78,000; the other half going to the National Life Boat Institution.

DR. AQUILLA SMITH has been re-elected for the ensuing year a representative of the College of Physicians in Ireland, on the General Medical Council.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Hampstead (estimated population 45,500). — Dr. Edmund Gwynn, in making this, his first, annual report as medical officer of health for the parish of St. John, Hampstead, has injudiciously followed the course of adapting his report to the practice followed in other parochial reports for his district. His report refers to the twelve months ending March 25th, 1880—to a period, in fact, not comparable with the yearly period included almost invariably in reports of this kind throughout the kingdom, and more especially with the returns of the Registrar-General. The inconvenience of adopting this course is made sufficiently obvious in the report itself; as, for example, we find Dr. Gwynn using the Registrar-General's computed death-rate for England and Wales for 1879—that is, for the year ending in December; while he gives the death-rate for Hampstead for the twelve months ending the 31st March following, not even keeping

to the parochial year, the 25th! Again, in Table V. of his report, relating to the mortality from the principal zymotic diseases in Hampstead during the ten years 1870-79, Dr. Gwynn adopts the ordinary year, no guidance being given as to the distribution of the deaths in the parochial year followed in the report. Evidently much more is lost to Hampstead in the removal of the means of comparison of the vital statistics of the place with those of other places than is gained by adapting the form of the report to that of others with which it has nothing in common.

The birth-rate of Hampstead for the year ending the 31st of March, 1880, was 22.98 per 1000 inhabitants; the death-rate 13.07, or, deducting the deaths of non-residents, 12.4. The low birth-rate is attributed in part to the large proportion of persons well advanced in life among the inhabitants, and of domestic servants employed. The very low death-rate, notwithstanding that we are disposed to esteem Hampstead very highly as a healthy place of residence, suggests that the population may have been estimated at too high a number. Dr. Gwynn has, happily for his district, to make a very uneventful report. Since the closure of the small-pox hospital, no death from that disease has occurred in Hampstead, but this does not imply that the parish has been free from the disease during that period, for it appears that several cases occurred, two of which were sent to the Homerton hospital, and one to Highgate. The result of the cases so sent is not stated. Dr. Gwynn has a remark on water cisterns which deserves notice. He says: "Whilst the cisterns of our poorer neighbours are well looked after by the sanitary inspector, there is often considerable neglect on this head in houses of a better class." The following observations on new buildings are also worthy of attention: "The rapid strides that building has made during the past year in this parish deserve remark. The majority of the newly-erected houses are spacious and well-fitted with modern sanitary requirements. Additional accommodation is yet needed, both for the poor native to the place, and for those attracted hither by the building operations. To meet their requirements a class of cheap houses spring up, built often with inferior materials. Although the plans for their drainage have been submitted to, and approved by, the Vestry, yet bad workmanship, together with inferior fittings, soon give occasion for complaints, only too well-founded. The habits of the poor—washing, cooking, and living in the same room—rapidly lead to dirty walls and ceilings, which require the constant supervision of the sanitary inspector. Planned for the use of one family, they are not adapted for lodgings, the cooking appliances are inadequate, and the closet accommodation is often poor. The problem of providing fitting buildings for the poor is a difficult one to grapple with. The difficulty consists in supplying the accommodation for families whose bread-winner earns little more than 22s. per week. It is obvious that from three to four shillings per week for rent is all the strain such an income will bear, and this is the value of one small room in Hampstead. Overcrowding becomes, to a certain extent, inevitable. Whilst seeking to avoid pauperising the labouring man, it is for this class that relief must be sought. Hitherto it has been found that the tendency of charitable bodies, such as the Peabody Trustees, has been to draw down the better class of well-to-do work-people to the superior accommodation provided rather than to raise the lowly."

TYPHOID AT CHURCH COPPENHALL.

An "alarming" outbreak of typhoid fever is reported to have occurred at Church Coppenhall, near Crewe. Thirty cases were notified in a few days, and of these four had already died. The locality is stated to be entirely without sewerage, "slops" and surface drainage finding their way into the ditches and hollows by the roadside. The water-supply until very recently was derived wholly from shallow wells, or from surface ponds, and much of it was, and still is, necessarily greatly polluted. Within the last few weeks, however, a main has been carried to the place from the London and North-Western Railway Company's Water-works at Crewe, but as yet few of the inhabitants have taken a supply from thence. It is to be feared, moreover, that the high rates charged for the Company's water will interfere with any rapid extension of its use. The rector and surveyor have been diligently at work endeavouring to induce householders to take their water from the new source, and a house-to-house visitation has been made by them; but we are given to understand that until some

measures are taken to secure the sewerage of the village, there will be little hope of effective removal of the conditions upon which the outbreak seems to have depended.

SCARLET FEVER IN PADDINGTON.

It would appear as if the recent extensive prevalence of scarlet fever in Paddington was about to be shown to have originated from infected milk, and that the outbreak would closely parallel in the circumstances of its occurrence the outbreak of typhoid fever which occurred in Marylebone a few years ago, and which also was traced to infected milk. The suspected milk was derived from certain farms near Thame in Oxfordshire, and in two of them Dr. Stevenson, the medical officer of health for Paddington, on inspection has discovered numerous cases of scarlet fever, some in a state of convalescence, affecting the milkers among others. From farms in the same neighbourhood came, it will be remembered, the infected milk which caused the outbreak of typhoid fever in Marylebone. A writer in the *Globe* of Thursday states that the milk is no longer supplied from the Thames districts, where the cause of the late outbreak of scarlet fever has been traced.

A deputation of the Sanitary Committee of the Corporation of Leeds recently waited upon the Board of Guardians of the town with reference to dealing with cases of infectious disease. The Corporation, as sanitary authority, had been called upon to remove many cases to the House of Recovery (Fever Hospital), and it found considerable difficulty in discriminating those cases which should, as pauper cases, be dealt with by the Board of Guardians, and those, as non-paupers, which should be dealt with by the Corporation. The Sanitary Committee asked the assistance of the Board in removing the difficulty they felt, more especially as the Corporation had to pay a greater sum per week for the treatment of cases sent to hospital by them than the guardians. The clerk of the guardians pointed out that the law was precise as to the duties of the guardians in the matter, and it would not admit of the arrangement suggested by the deputation. Pauper cases must be dealt with by the relieving officers in the first place, and in an appointed way; whereas the sanitary authority could give sole attention to the necessities of the public health. Whereupon the spokesman of the deputation observed that, if the law stood in the way of such common agreement between the guardians and Corporation as the deputation had hoped to be possible on the subject, there was an end of the matter.

Dr. Goldie's report on the sanitary condition of Leeds for the month of September shows the lowest excess of births over deaths he has yet had to record. This is accounted for by the very high death-rate of the period, which was 27.9 per 1000 population, as compared with 18.2 for the corresponding period of 1879. The mortality amongst infants under one year was no less than 300.5 per 1000 born. Commenting on infectious diseases prevalent during the month, Dr. Goldie says he has found that by posting the infected districts with large precaution bills he has to a certain extent drawn public attention to the danger of exposing the infected amongst the healthy. Parents have become more circumspect both with regard to the treatment of the cases in their own families and to the precaution of avoiding needless contact with families already infected. "The whole secret of prevention," he adds, "lies in this and complete isolation." Dr. Goldie has some observations on the provision of infectious-disease hospital accommodation in Leeds, which show that the sanitary authority has by no means given the attention to this subject which would be anticipated from the authority of so important a town.

The outbreak of scarlet fever still appears to continue at Chesham. Considerable difficulties are experienced in inducing parents to send their children to the sanitary authority's hospital, and the want of tact displayed by the authority in the beginning of the outbreak impedes its efforts to deal effectually with the outbreak now.

A motion was submitted to the rural sanitary authority of Ware, on the 5th inst., to the effect that in the opinion of the board the medical officer of health for the rural sanitary authorities of Bishop's Stortford, Hertford, Ware, and Buntingford unions, and the Stortford urban sanitary authority, "cannot efficiently discharge the duties of his office unless he is restricted from engaging in private practice within the limits of his district." It was pointed out in

the course of the discussion which followed, that, by the terms of the motion, the holder of the office would not be prevented from entering upon private practice outside the limits of the district, and the motion was lost by nearly two votes to one.

A deputation of the Local Rights Association was received by the Metropolitan Board of Works at its meeting on the 15th inst., and, with reference to the action of the Board in regard to their clearances and to dwellings for the working classes, urged the serious injury suffered by working men from removal, and contended that the Board should seek power to erect dwellings for them at the lowest practicable rents.

At the last monthly meeting of the Whitby Local Board, Dr. Taylerson, the medical officer of health, stated that although there had been 4000 visitors in the town during the quarter, the death-rate had kept under 15.0 per 1000 population, and the general state of health of the place had been better than it had ever been before.

The metropolitan sanitary authorities appear to be taking up the question of mortuaries vigorously. Bethnal Green has just completed one, St. Giles-in-the-Fields has decided to erect one, and now St. Pancras is considering the propriety of building one.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

The rate of English urban mortality continues satisfactorily low. In twenty of the largest English towns, estimated to contain in the middle of this year a population of seven and a half millions of persons, or nearly one-third of the entire population of England and Wales, 5334 births and 3073 deaths were registered last week. The births exceeded by 149, while the deaths were 202 below the average weekly numbers during 1879. The deaths showed a decline of 44 from those returned in the previous week, and were equal to an annual rate of 21.4 per 1000, against 21.3 and 21.7 in the two preceding weeks. The lowest death-rates in the twenty towns last week were 15.4 in Bristol, 18.5 in Wolverhampton, 19.0 in Sheffield, 19.8 in Manchester, and 20.0 in London. The rates in the other towns ranged upwards to 25.5 in Sunderland, 26.7 in Oldham, 28.9 in Hull, 29.7 in Leicester, and 30.6 in Salford. The high rates in the five last-mentioned towns were mainly due to excessive zymotic fatality. During the thirteen weeks ending on 2nd inst., the death-rate in the twenty towns averaged 23.2 per 1000, against 23.8 and 18.3 in the corresponding periods of 1878 and 1879.

The deaths referred to the seven principal zymotic diseases, which had been 912, 657, and 617 in the three preceding weeks, further fell last week to 564; of these, 232 resulted from diarrhoea, 14 from scarlet fever, 75 from fever (principally enteric), and 56 from whooping-cough. The annual death-rate from these seven diseases averaged 3.9 per 1000 in the twenty towns, and ranged from 1.7 and 2.8 in Newcastle-upon-Tyne and Plymouth, to 7.0 and 8.7 in Sunderland and Salford. The death-rate from diarrhoea did not exceed 0.9 per 1000 in London, but ranged upwards to 3.3 in Leeds, 4.1 in Wolverhampton, and 4.2 in Salford. The deaths from scarlet fever corresponded with the number returned in the previous week, and showed the largest proportional fatality in Sunderland, Salford, Oldham, and Liverpool. Measles was somewhat prevalent in Leicester. The death-rate from enteric fever was excessive in Liverpool, Bradford, and Leeds. Small-pox caused six more deaths in London, but not one in any of the nineteen large provincial towns. The number of small-pox patients in the Metropolitan Asylum Hospitals, which had been 105, 95, and 92 at the end of the three preceding weeks, further declined to 85 on Saturday last; 16 new cases were admitted to these hospitals during the week, against 24 and 14 in the two previous weeks. The Highgate Small-pox Hospital contained nine patients on Saturday last.

The deaths referred to diseases of the respiratory organs in London, which had steadily increased from 124 to 266 in the five preceding weeks, further rose to 273 last week, and exceeded the corrected weekly average by 31; 164 resulted from bronchitis, and 68 from pneumonia. The annual death-rate from lung diseases was equal to 3.9 in London, and 4.9 in Liverpool.

HEALTH OF SCOTCH TOWNS.

In eight of the largest Scotch towns, having an estimated population of rather more than a million and a quarter persons, the annual death-rate last week averaged 22.4 per 1000, against 18.8 and 19.6 in the two preceding weeks; this rate exceeded by 1 per 1000 the average rate in the twenty large English towns. The rates in the eight Scotch towns ranged from 19.1 and 20.4 in Paisley and Leith, to 25.3 and 27.4 in Perth and Edinburgh. The fatal cases of the seven principal zymotic diseases in the eight towns which had been 134 and 116 in the two preceding weeks, rose again to 135 last week; they included 52 which were referred to scarlet fever, 23 to fever, 20 to diarrhoea, 18 to diphtheria, 18 to whooping-cough, 4 to measles, and not one to small-pox. The annual death-rate from these seven diseases averaged 6.4 per 1000 in the eight towns, and exceeded the rate from the same diseases in the twenty English towns by 1.4 per 1000. The zymotic death-rate in the eight Scotch towns ranged from 1.5 and 1.9 in Aberdeen and Perth, to 6.2 and 8.8 in Leith and Edinburgh; the high death-rates in the two latter towns were due to scarlet fever fatality. The fatal cases of scarlet fever in the eight towns, which had been 45, 33, and 30 in the three preceding weeks, rose to 52 last week, and included 23 in Glasgow, 22 in Edinburgh, and 5 in Leith. The 23 deaths referred to fever (including typhus and enteric, or typhoid) also showed a marked increase upon recent weekly numbers; 15 occurred in Glasgow and 5 in Edinburgh, showing in each case an exceptionally high rate of fatality. The 20 deaths from diarrhoea showed a further marked decline from the numbers in the four previous weeks, which had decreased from 69 to 46; the largest proportional fatality from this disease occurred last week in Edinburgh and Dundee. The deaths attributed to acute diseases of the respiratory organs (bronchitis, pneumonia, and pleurisy) rose to 98 in the eight towns last week, from 76 and 66 in the two preceding weeks; the annual death-rate from these diseases last week was equal to 4.0 per 1000 in the eight Scotch towns, against 3.5 in London.

HEALTH OF DUBLIN.

A further slight decline from the recent excessive rate of mortality occurred last week in Dublin. The annual death-rate in the city has slowly but steadily decreased in the past five weeks from 39.3 to 33.0. During the thirteen weeks which ended on Saturday, 2nd inst., the death-rate in the city averaged, however, no less than 34.6 per 1000, against 21.3 in London, and 21.8 in Edinburgh. The 199 deaths in Dublin last week were 2 less than those returned in the previous week, and included 50, or 25 per cent., which were referred to the seven principal zymotic diseases, showing a further decline of 2 from recent weekly numbers; 14 resulted from diarrhoea, 10 from fever (including typhus and enteric), 9 from scarlet fever, 8 from whooping-cough, 4 from small-pox, 3 from measles, and 2 from diphtheria. The annual death-rate from these diseases was equal to 8.5 per 1000 in Dublin, whereas it did not exceed 3.0 in London, and was 8.8 in Edinburgh. The fatal cases of diarrhoea, which had been 44, 33, and 22 in the three previous weeks, further declined to 14 last week, but were equal to an annual rate of 2.3 per 1000, whereas in London the rate from diarrhoea did not exceed 0.9. The 10 deaths referred to fever showed an increase of 3 upon those in the previous week. The deaths from scarlet fever and diphtheria were also more numerous, whereas those from measles and whooping-cough showed a decline. The 4 fatal cases of small-pox exceeded the number returned in any week since the middle of August. The rate of infant mortality showed a further slight decline last week, but the proportion of deaths under one year during the thirteen weeks of last quarter were equal to 252 per 1000 of the births registered, while in London the proportion during the same period did not exceed 164 per 1000.

SUMMER DIARRHOEA IN 1880.

The prevalence and fatality of infantile diarrhoea have been exceptionally severe among the urban population of England during the past summer. In the twenty large English towns dealt with in the Registrar-General's Weekly Return, no less than 8292 deaths were referred to diarrhoea during the thirteen weeks ending 2nd inst., against 7675 and 2245 in the corresponding periods of 1878 and 1879. These deaths were equal to an annual rate of 4.4 per 1000 of the estimated population of the twenty towns. The diarrhoea

rate was 3·3 per 1000 in London, and averaged 5·6 in the nineteen large provincial towns. The lowest death-rates from diarrhoea last quarter in the provincial towns were 2·4 in Bristol, 3·3 in Oldham, and 3·8 both in Portsmouth and Plymouth; the rates in the other towns ranged upwards to 6·8 in Norwich, 7·8 in Hull, 8·4 in Salford, and 10·6 in Leicester. Thus, notwithstanding the marked general increase in the fatality of diarrhoea last quarter, the same towns are to be found at the top and bottom of the list as in former years, when the mortality from this cause was much lighter. Year after year, the least fatality of diarrhoea occurs in Bristol and Oldham, and the greatest in Hull, Salford, and Leicester. The average fatality of diarrhoea in the twenty towns last quarter showed but a slight increase upon that which prevailed in the corresponding period of 1878, but the relative rates in the several towns in the two summers varied considerably. In Hull, for instance, the rate last quarter was 7·8 per 1000, and 2·4 lower than that which prevailed in the summer of 1878; in Salford and Leicester, however, the rates showed last quarter an excess of 2·0 and 1·6 per 1000 respectively. The fatality of other diseases of the zymotic class were last quarter below the average in the large English towns, but in consequence of the exceptional mortality from diarrhoea, the annual death-rate from all causes in the twenty large towns averaged 23·2 per 1000 of the estimated population, against 20·4, 23·7, and 18·3 in the three preceding corresponding quarters. Assuming that the rate of mortality in these twenty towns bore the same relation to the rate of mortality in the whole of England and Wales which usually prevails in the third quarter of the year, we may estimate the death-rate last quarter in the entire country at nearly 21·0 per 1000, which would exceed the rates which have prevailed in any corresponding quarter since 1870 and 1871, when they were 22·0 and 21·1 per 1000 respectively. Until the publication of the Registrar-General's Quarterly Return we shall have no authentic figures showing the total cost of the late hot summer, especially to infant life, but from local reports upon the health of many urban sanitary districts there is good reason to believe that a marked excess prevailed throughout a large proportion of the manufacturing and mining populations of the Midland and Northern counties.

RATES OF MORTALITY IN EUROPEAN CITIES.

The rates of mortality in most foreign cities compare most unfavourably with those that prevail in the large towns of the United Kingdom. In the second quarter of this year the annual rate of mortality in twenty of the largest English towns, having an aggregate population of about seven and a half millions of persons, averaged only 20·4 per 1000; whereas in twenty European cities the rate averaged 32·4. This remarkable excess in the death-rate signifies that the mortality in the European cities was 59 per cent. higher than that in the English cities, or, in other words, in equal numbers living, 159 died in the foreign cities to each 100 in the English cities. This marked excess in the death-rate in foreign cities is pretty constant, but the rates last quarter showed more than the usually wide variations; they ranged from 19·9 and 21·3 in Christiana and the Hague, to 39·8 in Buda Pesth, 40·5 in Munich, and 54·8 in St. Petersburg. In Madrid the rate was equal to 37·3, and in Monaco 40·5. In three of the largest Italian cities high rates also prevailed, 30·2 in Milan, 32·2 in Naples, and 33·7 in Rome. In Paris the rate was but slightly lower, it was 29·9 against but 19·4 in London, the excess being in a great measure due to the fatality of zymotic disease; the deaths in the three months included 1043 from diarrhoeal diseases, 691 from small-pox, 595 from diphtheria, 485 from typhoid fever, 343 from measles, 127 from whooping-cough, and 110 from scarlet fever. The death-rate last quarter was equal to 35·8 in Bucharest, 39·7 in Odessa, and 40·6 in Lemberg. The interchange of mortality statistics between different cities will doubtless tend to call attention abroad to the high death-rates which are still continually reported, and we note with hopeful interest that most of the European and American States now publish side by side with their own local mortality statistics, a selection of those reported in all parts of the civilised globe. With the rapidly increasing facilities for intercommunication no nation can now afford to regard with indifference, if only on selfish grounds, sanitary neglect among the peoples with whom they hold constant intercourse.

HEALTH MATTERS GENERALLY AT HOME AND ABROAD.

INFECTIOUS-DISEASE HOSPITALS.

The account given by Sir John Rose Cormack, M.D., at the Social Science Congress, of Dr. Bertillon's inquiry into the presumed influence exercised by the small-pox hospitals of Paris on the prevalence of that disease in their immediate neighbourhood does not, it appears to us, call for any modification of the opinion we expressed when the results of the inquiry were first published. Granting that Dr. Bertillon was right in the statistical evidence he gave of a greater prevalence of small-pox in the neighbourhood of the hospitals than elsewhere in Paris, his inference that this prevalence depended upon some general diffusion of small-pox contagion from the hospital building, and not upon the more familiarly known ways of the spread of small-pox, seemed to us to be almost wholly gratuitous, and had no more claim to a scientific conclusion than the popular opinion formed to the same effect by a section of our general population with regard to the influence of the metropolitan small-pox hospitals on their neighbourhood. We regret to find Dr. Cormack so far adopting Dr. Bertillon's inference as to use the phrases, "a poison-charged drift of epithelial scales," "the epithelial drift," &c.; and we think there must be a misprint in the reporter's statement of the proceedings of the Congress, when Dr. Cormack is represented as stating, in effect, that the poisonous epithelial drift may extend a quarter of a mile and then prove infective. Dr. Cormack's statements did not carry conviction to those of his hearers most capable of judging of the question, as, for example, Sir Robert Christison, Dr. Littlejohn, Dr. Semple, Dr. Wallace, Dr. Andrew Wood, Dr. Acland, &c. Dr. Acland's observations to the effect that the spread of the disease round the Paris hospitals probably arose from the fact of their being ill-managed, was of greater importance than Dr. Cormack perhaps apprehended. At any rate, it is owing to the fact that Dr. Bertillon's remarks and inferences from his inquiry as to the dissemination fail to indicate that due care was given by him to eliminate the ordinary modes in which the contagion of small-pox spreads before he called to his aid the theory of a "poisonous epithelial drift," to use Dr. Cormack's words, that we have been unable to repose confidence in that theory.

CITIZENSHIP IN SANITARY WORK.

Hitherto voluntary associations for watching the operations of sanitary authorities within their districts, seeing that they duly exercise the functions entrusted to them by the law for the benefit of the communities under their charge, and cultivating a healthy opinion among the persons concerned in regard to those functions, have, as a rule, as in the case of the Tottenham Sanitary Association, been confined to the wealthier sections of society. We remark, with no little gratification, the extension of associations of this sort among the sections of society who do not claim to be wealthy, and who, we infer, include many artisans and others of the so-called labouring classes. Our attention has been attracted by the proceedings of a meeting called together by the Local Rights Association for Promoting Rental and Sanitary Reform, and which appears to give much attention to the sanitary condition of houses and places, with a view to exercising such influence as the Association possesses in procuring improvement where needed. One remark in the report of the proceedings somewhat grates upon our feelings. It is to the effect that "the Association would continue to point out to their wealthy neighbours the danger of contagion arising from these (insanitary) causes. We venture to think that the efforts of the Association would be much more profitably directed, both as regards their wealthier neighbours and the public generally, if they were concentrated upon the sanitary authorities with a view of keeping them up to the mark in the performance of their duties. In doing this they would much more effectively reach neglectful individuals of the wealthier classes than by direct appeal to them. Moreover, we should like to see this Association, itself an indication of a move in this direction, if we err not, giving special attention to the cultivation of sounder notions of healthy house-requirements among artisans and other labouring classes. The curse of so-called "jerry-building" which has fallen upon the outskirts of the metropolis, the suburbs, and wherever building has sprung

up largely in the land, will never wholly cease unless house occupiers themselves are enlisted against it. So long as jerry-builders can find persons who will accept *their* notions of what constitutes a building and the health requirements thereof, so long this class of builders will continue, and be able to set the most active authority at defiance. There are abundant indications that dwellings, particularly cottage dwellings, improve in structure and arrangement with the improved requirements of occupiers, and this is a cardinal bit of experience which sanitary reform associations should work upon.

OUTBREAK OF TYPHOID FEVER IN CORNWALL.

The village of Newlyn East, a few miles from Truro, and near the north coast of Cornwall, is alleged to be the scene of an alarming outbreak of typhoid fever. Out of a population of about 1600, the large proportion of 80, mostly adults, are said to be stricken with typhoid. The medical officer of health believes the origin of the fever to be due to the drinking of water polluted by sewage matter, and that its rapid spread is chiefly attributable to overcrowding and defective sewerage. The village is exceptionally well situated, as it stands upon high ground and is swept by the Atlantic breezes. Six years ago, when the population was about 700, there was a similar epidemic in the village, eighty persons being attacked, sixty lying ill at the same time. Mr. Chambre Vigurs then fought the battle single-handed, and had only five deaths. On the present occasion he estimates that not less than 100 persons have been affected. The worst is now believed to be past. Mr. Edlin, of Plymouth, has lent Mr. Vigurs some assistance. The sanitary authorities of St. Colomb have now locked up the pump which supplied the supposed source of the infection. This might have been done earlier, as pure water can be obtained within the distance of half a mile. Two trained nurses from the South Devon Hospital are now on the spot. The publicity given to the matter by the *Western Morning News* has done good service.

The children at the district schools at Brentwood have been suffering rather extensively from ophthalmia, though the affection is not of a serious type, and the majority of the patients are now convalescent. The disease made its appearance in July last, and spread rapidly for a time. Out of a total of 660 children, 138 are now under treatment. Of these, about twelve are confined to the wards with more or less severe complications. We understand that, at the request of the managers, Mr. Nettleship has visited the schools and consulted with the medical officer, Mr. Albert W. Wallis, and that a report has been submitted on the subject.

A memorial has been presented to the Prime Minister by the Corporation of St. Ives, Huntingdonshire, representing the serious injury to which their borough and district are exposed, in property and health, by the frequent floods of the river Ouse, owing to the impediments interposed to the free flow of the river in its course. The memorialists pray that some measure may be promoted in Parliament which shall enable them to remove these impediments.

A gentleman writing to the *Liverpool Daily Post*, in the hope of directing attention to the advantages which families may derive from the use of infectious disease hospitals, gives interesting experiences in his own family from the use of the London Fever Hospital, and the Netherfield Institution for Infectious Diseases, Everton, Liverpool. It would be well if this gentleman's example were more largely followed.

We referred a short time ago to the advantages, in a public-health point of view, claimed for foot-paths constructed of wood. But equal advantages are claimed, we find, for foot-paths constructed of brick, and the advocates of brick have this in their favour, that they can indicate examples of this sort of foot-path in confirmation of their statements, as, for example, at Brighton.

YORKSHIRE ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.—The annual meeting of this Association was held at Sheffield in the Mayor's parlour. Papers were read by Dr. Hime, medical officer of health, Sheffield, on "The recent Outbreak of Diarrhoea at Sheffield," and by Dr. Drew of Chapeltown on "Sanitation in Utopia." A number of objects of special interest to medical officers of health were on view, and the proceedings terminated with a social meeting at the Wharnccliffe Hotel.

REPORT OF THE LOCAL GOVERNMENT BOARD.

I.

THE public-health portion of the Ninth Annual Report of the Local Government Board may, for our purpose, be conveniently divided into two parts—the one relating more particularly to sanitary work, the other to the operation of the Sale of Food and Drugs Act, 1875, which is given considerable prominence in the present report. We shall give attention to the sanitary work first.

During the financial year ending the 25th of March, 1879, the expenditure of the urban sanitary authorities of England and Wales was £18,663,757, and of the rural sanitary authorities £445,517. At the same date the outstanding loans of the urban sanitary authorities amounted to £56,591,080, and those of the rural sanitary authorities to £642,617. The aggregate rateable value of the urban sanitary districts at the date in question was £49,753,326. The greater portion of this indebtedness of sanitary authorities has been authorised by Parliament, but £18,824,168 of the sum has been sanctioned by the Local Government Board under the Public Health Act. Of this eighteen millions, £14,937,310 was sanctioned for sanitary improvements in urban districts other than schemes of improvement under the Artisans and Labourers' Dwellings Improvement Act, 1875; £1,176,045 for sanitary improvements in rural sanitary districts; £1,840,979 under the Artisans and Labourers' Dwellings Improvement Act, 1875; and £444,000 for sewerage works undertaken by joint sewerage boards. In the course of the year to which the report refers loans were sanctioned to urban sanitary authorities of £1,088,819 for sewerage and sewage disposal, and of £293,880 for water-supply; and to rural sanitary authorities of £191,097 for sewerage and sewage disposal, and £75,473 for water-supply.

The further experience of the Local Government Board as to the appointment of medical officers of health has led them more strongly to deprecate the appointment for small districts. They hold it inexpedient to employ district medical officers as medical officers of health, each acting within the area assigned to him as poor-law medical officer, and have been advising sanitary authorities, as opportunities have occurred, either to combine with adjoining sanitary authorities in a joint appointment for a considerable area, or, where that was impracticable, of appointing one medical officer of health only for the district within the jurisdiction of the authority, and in the latter case, of selecting for the office a medical practitioner free from the calls upon his time entailed by the performance of duties under the Poor-laws. The efforts of the Board appear to have been successful with sanitary authorities in this direction, and we may assume that the policy of the Board is now definitely settled in this matter.

The report refers to the loss sustained by the Board and the public service by the resignation (from failing health, soon followed by the death) of Dr. Seaton, and justly adds, "it is worthy of especial record that the organisation of the present successful system of public vaccination in this country is in great part due to his labours."

With regard to public vaccination, the report gives the completed returns of the vaccination officers for the year 1877. These, in the opinion of the Board, afford conclusive evidence of the efficiency with which, on the whole, the machinery established by the Vaccination Acts of 1867 and 1871 is working. Of 887,947 children, whose births were returned by the several vaccination officers of England and Wales as having been registered in 1877, more than 86 per cent. had at the time of closing the returns been registered as successfully vaccinated, nearly 9 per cent. as having died early and unvaccinated, and a minute fraction (0.13 per cent.) as having contracted small-pox without being vaccinated. A further small proportion (about 0.1 per cent.) were certified as "insusceptible of vaccination" in consequence of the operation having been three times performed without success; and in these cases the parents would be exempted from any further liability to penalty under the Vaccination Acts, although the children would be as liable to take small-pox as if no attempt had been made to vaccinate them. The returns further record cases amounting

to 0.75 per cent. of the whole, in which vaccination was temporarily postponed on account of the children's state of health. The proportion of children not coming within the above categories amounts to about 3.8 per cent. of the whole, the large majority being cases which, on account of the removal of the parents after the registrations of the births, the vaccination officers were unable to trace. No doubt, it is observed, such cases are especially numerous in years when, as in 1877-78, trade is bad, and there is much movement of labourers from place to place, sometimes in search of work, sometimes in search of cheaper quarters.

"It thus appears," the report continues, "that of the entire number of children born, only about $4\frac{1}{2}$ per cent. remain unaccounted for as regards vaccination in the returns. This proportion is larger by a small fraction than that of the children similarly unaccounted for in 1876, but is smaller than in previous returns, the percentage in the six years 1872-77 being 5.1, 4.8, 4.8, 4.7, 4.3, and 4.5 respectively. Making allowance for a not inconsiderable number of cases in which children have been vaccinated, although vaccination has not been certified, or the certificate has not been registered, and for those in which vaccination, postponed at the times when the returns were made up, has been subsequently performed, we may safely assume that the proportion of children born during these six years and now living without protection against small-pox is considerably less than 4 per cent."

The district in which the largest proportion of children escape vaccination is the metropolis. This is attributed chiefly to the migratory habits of certain classes of the population. The number of children who escape yearly from vaccination in London, or of whom there is no proof of vaccination, is stated to be about 9000, and so far as they really are unvaccinated they constitute a serious danger and widen the field of small-pox.

The awards given to public vaccinators in recognition of excellence of work done and careful observance of the instructions and regulations on the subject amounted to £16,906 17s. 4d. The applications to the National Vaccine Establishment for supplies of vaccine lymph during the year were 9410, and to meet them 36,633 charges of lymph were issued. The question of "animal vaccination" was under the consideration of the Board, but since the period to which this report refers the Board has determined upon certain measures with regard to this subject which render further allusion to it here unnecessary. Numerous inquiries were undertaken by the medical department of the Board with reference to outbreaks of disease and other sanitary matters, more particulars as to which will be here deferred until the special report of that department appears.

The number of annual reports sent by medical officers of health to the Board, in accordance with their instructions, during the year amounted to no less than 1403. The reports, it appears, present great diversity, but on the whole, the Board says, they exhibit progress from year to year, in correctly appreciating the questions with which the medical officer of health has to deal.

An inquiry has been instituted (or rather return called for) by the Board relating to the sanitary condition of the various districts, which have been the subject of special inspection by their medical inspectors since 1871. The report of the inquiry (or return) will be presented to Parliament, and will be looked for with much interest.

The Board has received several petitions from local authorities in favour of a general compulsory enactment that all householders, or all medical practitioners, should notify to the sanitary authority the outbreak of infectious disease. The Board, however, holds that further experience is required of the working of such schemes on the subject as exist under local Acts, before venturing to introduce a general measure. The Board, however, thinks it may be necessary to strengthen the hands of sanitary authorities with reference to the closing of schools on account of local epidemics of infectious disease.

Numerous other subjects touching sanitary administration enter into the report, for which, however, we must refer to the report itself.

On the 11th inst. a bust of Lord Provost Boyd was presented to the Royal Infirmary of Edinburgh by Sir Robert Christison. An inscription on the pedestal of the bust states that the erection of the new Royal Infirmary was due to the exertions of Lord Provost Boyd.

THE SERVICES.

THE AFGHAN WAR—KANDAHAR.

WE have received a letter from a correspondent with the Kandahar Army giving us some particulars of the force in occupation since the disaster of the 27th July. He describes the time as having been a most anxious one, not so much on account of scarcity of provisions or water as the intense heat of the weather, added to the confined space occupied by the garrison with the numbers of native followers, horses, and transport animals. In food the chief want was vegetables, of which there were none to be had, except some preserved cases fortunately stored by the Commissariat before the siege began. There was a fair supply of lime-juice, and this was issued to the troops daily as long as it lasted. Scurvy did not actually appear during the time the garrison was shut up, but a good number of cases were developing a scorbutic taint. The sickness up to the time of relief by General Roberts was not heavy, but the Bengal Division brought in no less than 860 sick; of these only 240 were Europeans, the rest native troops and followers. The cases were chiefly malarial and sun fevers, diarrhoea, and general debility, induced by the long marches, privations, and exposure. Surgeon-Major Preston, who was wounded in the arm and through the loins at the action of Maiwand when in medical charge of the 66th Regiment, left for India with a convoy of sick on the 7th September, and was doing well. At the sortie of the 16th August the medical officers and subordinates were most assiduous and zealous in their efforts to dress and bring in the wounded. Surgeon-Majors Giraud, Keith, Arnott, and Kelsall were with the attacking party. One hospital assistant and five doolie bearers were killed while carrying in wounded men; ten doolie bearers wounded. Great praise is given to these native bearers for their pluck and steadiness; they were often under hot fire, but showed no sign of disobeying orders, even at imminent risk of their lives. It was decided by Dr. Hanbury, the Principal Medical Officer of General Roberts's force, that a section of the Field Hospital should accompany each brigade into action on the morning of Sept. 1st, when the General determined to attack Ayoo Khan. Stretcher parties in charge of medical officers and subordinates were formed to convey the wounded from the field to the dressing stations and on to the Field Hospitals. As on the 16th, they did their work admirably, calling forth loud encomiums from the General and his staff. The total killed and wounded in this action was 237; the latter were comfortably housed in European privates' tents—six beds to a tent, instead of the regulated number of eighteen. The native sick were also amply provided for and attended to. On the march from Cabul to Kandahar only two Europeans died—one from dysentery, the other committed suicide. Of the Sepoys only seven died, and of the native followers twenty-one succumbed during the journey—a total that must be considered remarkably small when the arduous and trying nature of the march is remembered. That the medical officers did their duty with a will is proved by the fact that not one was ever absent from duty a single hour from Cabul to Kandahar—a fact of which their Surgeon-General is justly proud.

THE MEDICAL OFFICERS' MESS, ALDERSHOT.

General Sir Daniel Lysons and staff dined with the officers of the Army Medical Department on Wednesday, the 13th, in their new mess-room in the South Camp. By the kind permission of the officers of the 7th Dragoon Guards, the band of the regiment attended during dinner.

MEDICAL OFFICERS SERVING WITH THE KURAM FORCE.

To the Editor of THE LANCET.

SIR,—In your number of the 14th August, you give lists of the medical officers employed in Afghanistan. But your correspondent has only given the names of the Army Medical Department; leaving out all those of the Indian Medical Service, which in this force form half the medical staff and in the other divisions a much larger proportion, I believe.

I enclose a correct list of the Kuram Force Staff (Medical).
The Khyber line Divisions are now broken up.

Yours faithfully,

A. F. DALE,

Deputy Surgeon-General, P. M. O., Kuram Force.
Kuram, Sept. 22, 1880.

Deputy Surgeon-General A. J. Dale—Principal Medical Officer.

Army Medical Department.

Surge-Major T. Wright, European Base Hospital.
" W. O'Halloran in medical charge E-3 R. A. Kohat.
" R. Jackson " 2-8 Regt.
" J. J. O'Reilly " Depôt Hospital, Thall.
" T. W. Patterson " 1-8 R. A.
" W. M. Harman " 85th K. L. I.
Surgeons W. Donovan, doing duty with Base Hospital.
" R. H. Quill, in medical charge C-4 R. A.
" J. C. Dorman " Depôt Hospital, Kuram.
" J. Boulger, doing duty Depôt Hospital, Thall.
" P. H. Johnstone doing duty with Base Hospital.
" P. G. Jeners " Depot Hospital, Kohat.

Indian Medical Department.

Surge-Major G. Griffith, in medical charge 18 Bengal Cavalry.
" H. Compique, Deoli Irregular Force.
Surgeons W. N. Keefer in medical charge Native Base Hospital.
" J. E. C. Ferris, 1st Bengal Cavalry.
" W. E. Griffiths, in medical charge 20th Punjab Infantry.
" J. Crofts, in officiating medical charge 21st P.N.I.
" S. F. Bigger " 13th N.I.
" G. M. Nixon " 5th N.L.I.
" G. W. P. Dennys " 13th B. Lancers.
" S. C. Sarkies " 29th P.N.I.

Deputy Surgeon H. Kendall, who was promoted to the rank of Surgeon-General in last Saturday's *Gazette*, remains at Chatham as Principal Medical Officer of that district until he is retired on full pay, in January next.

ARMY MEDICAL DEPARTMENT.—Deputy Surgeon-General Henry Kendall, M.D., to be Surgeon-General, vice H. G. Gordon, M.D., granted retired pay; Brigade Surgeon John Ogilvy, M.D., to be Deputy Surgeon-General, vice H. Kendall, M.D.; Surgeon-Major William Skeen, M.D., to be Brigade-Surgeon, vice J. Ogilvy, M.D.; Surgeon-Major Emil Becher, M.D., is granted retired pay, with the honorary rank of Brigade Surgeon; Surgeon-Major Thomas Allen Thornhill, M.B., is granted retired pay, with the honorary rank of Brigade-Surgeon; Surgeon-Major Francis Patrick Staples has retired upon temporary half-pay; Surgeon-Major Alexander Johnston, M.D., from half-pay, to be Surgeon-Major. The undermentioned Surgeons to be Surgeons-Major:—Alexander Haldane Stokes, M.B.; George Roderick Triphook, M.B.; James Scanlan, M.B.; George Corry; Francis Arthur Davy, M.D.; Alexander William Duke, M.D.; Robert Mark Bradford; Henry Stannard; Richard Dawson Bennett; Thomas Faris, M.B.; and Hugh Brady White.

VOLUNTEERS.—1st Norfolk (Artillery) Corps: William Mallam Vores, M.B., to be Acting Surgeon; dated Oct. 20th, 1880. 1st Buckinghamshire (Rifle) Corps: Cadwallader Brooke Wolseley, M.D., to be Acting Surgeon; dated Oct. 20th, 1880. 1st Worcestershire Corps: Honorary Assistant Surgeon Cecil Webster resigns his commission; dated Oct. 20th, 1880. 10th Lancashire Corps: John Murray, M.B., to be Acting Surgeon; dated Oct. 20th, 1880.

ADMIRALTY.—In accordance with the provisions of Her Majesty's Orders in Council of Feb. 22nd, 1870, and Feb. 4th, 1875, Staff-Surgeon Alexander Crosbie, M.D., has been placed on the Retired List of his rank from the 8th inst.

Royal Naval Artillery Volunteers (London Brigade).—Arthur Price, M.R.C.S., to be Surgeon.

Surgeon J. A. Langdon has been appointed to the *Firefly*.

Correspondence.

"Audi alteram partem."

ON THE IMMEDIATE TREATMENT OF STRICTURE OF THE URETHRA.

To the Editor of THE LANCET.

SIR,—In my letter to you of Oct. 2nd, I omitted to refer to Mr. Holt's second note, in which he stated that there was a false passage in one of the fatal cases at King's College Hospital. As I mentioned that Mr. Henry Smith had had a death, and as it was to his case that Mr. Holt's remark applied, I think it only just to Mr. Smith to state that the false passage existed months before he even saw the patient, and had apparently nothing to do with the fatal result. If Mr. Holt had honoured the meeting at Cambridge with his presence, and stated, as he has done in his note, that he had been fortunate enough not to have had a fatal case in private, I should have asked him for information as to certain cases about which it is possible I might have been misinformed. Much good will come out of the discussion which has taken place in your columns. It was not known at the meeting that Mr. Christopher Heath had had five deaths, for, although that gentleman had published successful cases of the operation, *in extenso*, in THE LANCET, he had not enlightened the profession with the details of his fatal ones. My remark as to how few of the deaths had been published was based on a list I had with me at the meeting of upwards of thirty cases terminating fatally, which had occurred to different surgeons in this country, of which I had been accidentally informed by various members of our profession. In reply to Mr. Harrison, I would say that I am not aware that any advocate of internal urethrotomy has ever asserted of it, as Mr. Holt has done of rupture, that it was "free from every danger immediate or remote." I have yet to learn that such an affirmation can be made of any operation on the urinary organs: "A scratch in the urethra may cause death" (Gouley). As Mr. Macnamara has omitted to specify what were the "unsupported" charges to which he refers, I am unable to notice his letter. The advocates of internal urethrotomy are to be congratulated on Dr. Lyster's accession to their ranks. His example is just another illustration of what is to be seen all over the world of surgeons abandoning rupture and taking to cutting. If anyone can show me an operation which is attended by less risk, and followed by better results than internal urethrotomy, I will at once say "I am already converted; my heart is with him."

I remain, Sir, your obedient servant,

Portman-square, Oct. 18th, 1880.

W. F. TEEVAN.

CHIAN TURPENTINE IN CANCER.

To the Editor of THE LANCET.

SIR,—I am sorry to see in to-day's LANCET that Prof. Clay accuses me of having "made an attack upon him." I had no such intention. If, however, to make a pains-taking, scrupulous, and detailed trial of Chian turpentine in the treatment of uterine and other cancer, and to publish my results, is to attack him, then I am guilty. If to declare my intention still further to prove or disprove its efficacy is attacking him, I am guilty. If to invite Mr. Clay to watch a case with one of my colleagues or myself, and to treat that case as he shall choose, or to allow us to see one of his cases, if this be attacking him, I am guilty. If to utter no single word in criticism of Mr. Clay's theories or facts is to attack him, then, and then only, I am guilty.

Indeed, Sir, Prof. Clay's severest critic has been Prof. Clay himself, whose own words (quoted in my letter of the 9th) tell of pain relieved, hæmorrhage checked, infiltration lessened, and cancers "literally melting away" in a time varying from four days to at most a few weeks. Sure nothing quicker was ever achieved by magic or spell in the Middle Ages—

"Eye of newt, or toe of frog;
Wool of bat, and tongue of dog,"

never worked more mightily. And yet in the same breath

THE MASON SCIENCE COLLEGE has made a good beginning forty-four students having already entered.

Mr. Clay complains that others with whom the drug has proved uniformly worthless have not tried it long enough, or have used the wrong turpentine, or, worse still, as in the instance of Mr. Lawson Tait and myself, he replies only by an unworthy innuendo.

In conclusion, let me say that since I began this letter I was asked to see a patient in consultation with a gentleman (name and address enclosed) who has been under Mr. Clay's care (which case, curiously enough, turns out to be one of those referred to by Mr. Lawson Tait), and is still taking his pills. She informs me that the pain grows worse, and on examination her doctor tells me that the progress of the cancer has not been affected by the Chian turpentine since he examined her when Mr. Clay first saw her. In short, the case is in a condition of active growth.

Sincerely hoping that a cancer cure may be discovered which will be useful in other hands than those of the publisher,

I remain, Sir, yours, &c.,

J. HICKINBOTHAM.

Broad-street, Birmingham, Oct. 16th, 1880.

To the Editor of THE LANCET.

SIR,—Mr. Clay's letter avoids all the points raised in those of Dr. Hickinbotham and myself, and his retiring under the shelter of an insinuation will do little to establish his assertions.

The claim of the cancer-curer has been put forward so often and so vainly that any repetition of it must at once be met with incredulity. Mr. Clay's method of publication is not such as to overcome that, and there is nothing to be heard in Birmingham to diminish it. Mr. Clay's communications appeared in the local daily papers, and since that we have heard of cases of all kinds of cancer flocking to him, and of his retailing to them his mixture and his pills. But not a word has reached us about a cure, save that one case of Dr. Drury's, which so unfortunately died with symptoms, as described to me, uncommonly like those of an ordinary death from cancer. Of this case, still more unfortunately, no post-mortem is recorded.

Surely, if this drug has the effect claimed by Mr. Clay, his colleagues must know something of his astonishing cures. But I cannot learn that they do. The details, scant though they are, which Mr. Clay gives of his cases, are quite sufficient to show that he has not attached sufficient importance to two very common incidents in the history of uterine cancer, and this omission fully explains all that he has written on the subject. Let him submit his cases to his colleagues, or other competent observers, that the actual existence of cancer may be beyond dispute; let him cure a single case, and he will have no reason to complain of the congratulations he will receive from the profession in Birmingham, as elsewhere. On the contrary, let him maintain his present attitude, and no language will be too strong for his condemnation.

I am, Sir, your obedient servant,

Birmingham, Oct. 18th, 1880.

LAWSON TAIT.

To the Editor of THE LANCET.

SIR,—In THE LANCET of July 10th last you kindly inserted a letter from me respecting a case of scirrhus cancer of the uterus, which had apparently derived great benefit from the Chian turpentine as recommended by Professor Clay. Will you allow me to state that since that letter appeared the patient has gradually become worse: secondary symptoms, such as phlebitis and blocking-up of the femoral veins, constipation, alternating with severe and almost uncontrollable diarrhoea, vomiting and inability to retain food on the stomach, &c. &c., soon setting in. And now the cancerous cachexia and emaciation, repeated floodings, and offensive discharge, indicate too plainly that the end is not far distant.

That the turpentine appeared for a time to check the advance of the disease, and also to cause a decided diminution in the size of the tumour, I cannot deny; and as my patient persevered so steadily in taking the pills obtained from the firm of chemists in London whence Professor Clay kindly advised me to obtain them for her, I regret very much having now to give such an unsatisfactory account of her.

Will the gentlemen who wrote to me respecting the further

result of the treatment in this case kindly "accept this intimation."

I remain, Sir, yours obediently,

J. E. KENYON, L.R.C.P. Lond., M.R.C.S. Eng.
Park-road, Bradford, Yorks, Oct. 12th, 1880.

HASTY NOTES BY A RAMBLER.

THE PENNSYLVANIA HOSPITAL AT PHILADELPHIA.

THIS hospital, which now holds two hundred beds, was established about 1751, and with its foundation Dr. Franklin was intimately connected. It gives one the impression externally of an old-fashioned English house, massively, yet commodiously put together. Within are found the most modern and approved arrangements. Perhaps exception might be taken to the resident officers' rooms, one medium-sized room being scarcely sufficient accommodation as the common sitting-room and bedroom of two officers. At the same time, even in this room there is something that will hardly be seen in any hospital in our metropolis—viz., telephonic communication with each member of the staff, and the city central office. While waiting for the doctor, who very kindly acted as showman, it was not a little astonishing to hear verbal inquiries from the police-court concerning the progress of a poor fellow who had that morning been stabbed.

The wards are of good size, not at all overcrowded, with painted walls. The floors are either polished or painted. The absence of fireplaces, and the excellence of the ventilation, are perhaps the most remarkable features in the hospital. It appears that since 1876 they have had in use forced ventilation by fans and flues, arranged both for heated and cold air. In the basement is a revolving fan, eight feet in diameter, and thirty inches wide, driven by steam. This fan, which is calculated to supply 30,000 cubic feet of air per minute, is placed at the orifice of a large fresh air-duct, which leads to the chamber containing the steam-coils for heating (these coils may be in action or not, according to the season of the year) and thence by large smooth flues to all parts of the building. Along the middle of the wards, on either side, are iron supports from floor to ceiling, which communicate at their bases with these smooth air-flues. For about eighteen inches up from the floor the supports are perforated, and through the perforations hot or cold air is continually pouring into the ward. The supports are perforated at the top as well as at the bottom, and through their upper ends they communicate with ventilating flues which carry the foul air away through the roof. I was assured that the wards are always fresh; that there is no difficulty in regulating the temperature; that draught is never complained of; and, what is more important than all, that during the last four years traumatic erysipelas and septicæmia, which were prevalent before, have been almost unknown.

In reply to inquiries concerning the nursing arrangements, I received some exceedingly strong testimony in favour of male attendants in male wards, and was informed that in Philadelphia, except at one or two Catholic institutions, male attendants were invariably employed.

The jerking and jarring of the patient consequent on moving the hospital iron bedstead, whose castors are notoriously faulty, is got over by means of a small carriage with india-rubber wheels of ample size, which is rolled under the bed. By a simple arrangement of screws and levers, the carriage lifts the bedstead off its legs, and permits of its being moved in any direction without discomfort to the patient.

Until the year 1873, accidents, whether drunken or otherwise, were admitted to the wards at all hours of the night—a deplorable arrangement indeed. In consequence of the injustice that was thus done to patients in the hospital, "recent accident wards" were constructed not far from the entrance. These wards contain six male and four female beds. Here all in-patient cases are first placed, and those arriving during the night are kept until next day. And that the accidents proper should not be disturbed by those brought on by drink, there are separate

wards with one bed each, apart from the rest, for the benefit of inebriates.

There is a good pathological museum attached to the hospital, which is carefully looked after by a "microscopist," who is reckoned among the staff of resident officers. In freezing specimens for section-cutting they use rhigolene, one of the first products that come over in the preparation of rock oil. Its specific gravity is '625, and it boils at less than 80° F. They prefer it to ether, on account of its quicker action. For inhalation ether is the anæsthetic most commonly employed. Of late they have used bromide of ethyl, but with what success I failed to gather.

The total absence of clinical clerks and dressers could hardly fail to be remarked, the house-surgeon's assistant taking the form of a four-wheel go-cart fitted with every requisite. Clinical study in the medical curriculum is apparently unnecessary. I was assured that at Jefferson College, which is one of the leading medical schools in this country, a man might take his degree in medicine and go forth to practise his profession *without having ever seen a case!*

IRELAND.

(From our own Correspondent.)

THE contest for the Presidency of the College of Physicians, which was expected with considerable interest, did not take place last Monday, Dr. Hayden having at the last moment withdrawn his candidature, and permitted Dr. Johnstone, ex-Master of the Rotundo Lying-in Hospital, to be elected President unopposed.

The annual conferring of degrees by the Queen's University took place last week at Dublin Castle, the Duke of Leinster, Chancellor of the University, presiding. His Grace referred to the increasing prosperity of the University, and the steady advancement during the academic year just closed; the number of students on the rolls having advanced from 920 to 958. The Prize Essay on the Poetry of Wordsworth, to which was added the Peel Prize, was very favourably reported to the Senate, and was written by Mr. Walter W. Fisher, an undergraduate in medicine of the Queen's Colleges at Belfast and Galway.

At a meeting of subscribers to the Cork Fever Hospital held last week, the report of the Committee of Management, in reference to certain irregularities which were alluded to at the recent inquiry, was adopted. The report found that Dr. Adderley substituted whisky for brandy in the treatment of the boy Crawford from economical motives, but that the medical staff were not aware there was no brandy in the hospital for a considerable time; also that he neglected to carry out the medical directions as to packing, and shaving, and blistering the head of the patient; although the directions about the first procedure might not have been sufficiently definite; and that in administering claret after milk instead of the brandy, as directed, he was to blame. The committee further reported that Dr. Jones's prescription book was removed from the hospital, and they have directed that in future every facility shall be given to the medical officers to take extracts. The physicians for the future are to hold consultations, and the committee have determined that they shall not prescribe any medicine that is not named in the Pharmacopœia, approved of by the medical staff, and sanctioned by the committee. These constitute the principal matters referred to in the report, but as showing that the hospital has done good service I may state that since its foundation in 1822, it has received 113,463 patients, of whom 6185 died, being a mortality of close on 5½ per cent. When these figures are compared with the returns of the Cork-street Fever Hospital in Dublin, it is found that from 1804 up to the 1st of last March, 204,080 patients were under treatment, of which number 15,032 died, representing a death-rate of about 7½ per cent. A meeting will be held on the 4th prox. to elect a successor to Dr. Adderley, when it is probable that the report of the committee suggesting certain alterations in the bye-laws will be formally adopted.

You recently alluded to the inquiry conducted by Dr. MacCabe, in reference to certain irregularities which had arisen in the management of the Kilmainham Small-pox Hospital; and last week the Local Government Board forwarded Dr. MacCabe's report to the Guardians of the South Dublin Union. The charges brought forward by a former

patient of the hospital were considered to be substantiated; but these irregularities mainly occurred during the time Keeley was employed as a pauper wardsman; and the inspector directs the Board's attention to the fact, that the witnesses who had been patients in the hospital bore testimony to the care and kindness with which they had been treated, and to the abundance and excellence of the dietary. The Local Government Board are of opinion that it is never advisable to trust to pauper inmates the administration of stimulants to patients who are so ill as to be unable to claim their rights, or to complain to the superior officers that the stimulants have been withheld; and believe that the remedy lies in the appointment of a responsible paid nurse for night duty. They also make suggestions for the custody of patients' clothing, and recommend that a distinctive dress, or uniform, should be adopted for the inmates.

John I. Donovan, M.D., of Ballincollig, has been appointed to the Commission of the Peace for the County of Cork.

Dublin, 19th October, 1880.

Obituary.

J. PEARSON IRVINE, M.D., F.R.C.P.

DR. PEARSON IRVINE was the son of a medical practitioner at Galgate, Lancaster. After taking the degree of Bachelor of Arts in the University of London, he commenced the study of medicine at the Liverpool Medical School, and after working there for two years he entered at University College, London, in 1863. His quiet and yet genial manner, hard work, and conspicuous ability, soon gained him the regard and esteem of his fellow students. His ability and diligence earned for him distinguished honours at the University of London, where, in 1864, he obtained at the First M.B. examination the exhibition in Anatomy, the medal in Physiology, and honours in Chemistry and Materia Medica, and also at the Second B.Sc. examination the University Scholarship in Geology, and honours in Chemistry and Biology. In the following year his studies were rudely interrupted by the death of his father, and, for family reasons, he had to leave London, and, having qualified, to take his father's practice. He worked in it for several years, and only resumed his duties in London in 1869. He took the M.B. degree in the following year (being awarded the gold medal in Medicine), and the Doctor's degree in 1871.

He intended at one time to settle in Liverpool, where he was well known and esteemed, and he actually practised there for a time. Circumstances, however, led to a change in his plans, and, after marrying, he came to London in 1874, and was soon afterwards appointed assistant physician to Charing-cross Hospital. He lectured there on Auscultation and on Forensic Medicine, and was Demonstrator of Morbid Anatomy.

Dr. Irvine's published writings were not very numerous, for he was one of those who worked much and published comparatively little. All that he wrote, however, was characterised by careful observation and thoughtful comment, and many of the facts which he recorded, although they excited little attention at the time, will probably be often referred to in the future. The subjects on which he chiefly wrote related to diseases of the vascular system and acute specific diseases. At the Pathological Society he was a frequent exhibitor, and some of the most remarkable cases of aneurism brought before the Society of late years were shown by him. The condition of the heart and great vessels in chlorosis long engaged his attention, and the subject was discussed by him in an elaborate paper, read three years ago before the Medical and Chirurgical Society—a paper which contained many important observations, but, to the general surprise, did not find a place in the Society's "Transactions." His most valuable work, however, related to the acute specific diseases. A series of illustrations of the occasional obscurity of the diagnosis of these affections, published three years ago, contains many important practical facts; but his most important contribution to medical literature was the series of articles on Relapse in Typhoid Fever, contributed a year ago to a contemporary. His last work was to expand these into a short treatise on the subject, which is, we believe, just ready for publication, but will be,

alas! posthumous. The practical character of his writings, directed, no doubt, by the knowledge which he gained in earlier life by personal experience of the needs of the practitioner, gives to his work a special value, and would probably have soon secured to him a substantial reward in professional success.

As a teacher Dr. Irvine was most successful. He had a firm grasp of facts, a logical precision of thought, and a clearness and readiness of expression, which are the necessary qualifications for effective teaching. As a colleague, his considerate and kind nature, invariable courteousness; his willingness to oblige, and wisdom of counsel, endeared him to his associates, who now mourn his loss. He was always the same. The writer recalls him as a fellow-student, junior and senior, as a practitioner in Liverpool, and as a friend of later years—frank and sincere, honest hearted, and true to others, willing to serve even at the cost of self-sacrifice, modest and retiring, yet never shrinking at the call of duty. The promise of a successful and brilliant career was just opening before him when his last illness came. Overwork, the altar on which have been sacrificed so many bright young lives in our profession, was the ultimate cause of his death. His devotion to his profession is attested not only by what he published, but by the piles of manuscript that he has left. He thought less of himself than of his work, which he loved "not wisely, but too well."

THE LATE LORD JUSTICE THESIGER.

THE following facts in connexion with the fatal illness of Lord Justice Thesiger, whose death took place on Wednesday last, will be read with interest:—

Lord Justice Thesiger had scarlet fever when two years old, followed by inflammation of the left ear. He was deaf of the affected ear more or less, and suffered from occasional attacks of pain with discharge ever since. Three or four years ago he consulted Mr. Dalby. Finding perforation of the tympanic membrane he advised artificial protection, which gave him the greatest relief and comfort.

Towards the end of his last autumnal holiday, while bathing in a rather rough sea, he was knocked on the left ear by a wave, the organ being at the time, there is reason to believe, unprotected. Fresh mischief soon followed in the affected ear, accompanied by considerable pain in the head. Pyæmic symptoms supervened about a fortnight ago. There was no evidence of meningitis, or cerebral abscess or inflammation extending to the mastoid cells. There was, however, *tenderness along the carotid of the corresponding side*, and considerable stiffness of the neck, which pointed to the inflammation having extended along the internal jugular vein. No collection of matter could be detected anywhere. During the last week he lost all pain in the head. Congestion in base of one lung came on three days before he died, which spread very rapidly. His breathing becoming much embarrassed, he rapidly sank, his mind being perfectly clear almost to the last.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AT a quarterly meeting of the Council of the Royal College of Surgeons, held on Thursday last, Mr. Savory was re-elected to the Court of Examiners, Mr. J. Hutchinson was elected member of the Court, and Mr. Timothy Holmes examiner in Dental Surgery, in succession to Mr. F. Le Gros Clark.

A communication was received from the General Medical Council to the effect that, after the year 1881, Mechanics would be added to the list of compulsory subjects in the preliminary examination. Sir James Paget gave notice of motion that, after 1881, the College give up to some general educational or examining body the charge of its preliminary examination. Mr. Holden gave notice of motion that the President's annual report to the Fellows of the College be discontinued. Mr. A. E. J. Barker, F.R.C.S. Ireland, was elected *ad eundem* Fellow of the College.

Medical News.

UNIVERSITY OF DURHAM. — At the first examination for the degree of Bachelor in Medicine, which terminated on the 8th inst., the following candidates satisfied the Examiners:—

Ainsley, Thomas George, M.R.C.S.
Barley, David Henry.
Clowes, Herbert Alfred, M.R.C.S.
Dodd, Anthony.
Dowding, A. W. Woodman, L.R.C.P., M.R.C.S.
Eastes, Frederick.
East, Frederick William Allen.
Fenwick, Henry Marshall.
Kempster, William Henry.
Rudd, Walter Edgar.

Seven candidates failed to satisfy the Examiners, and were referred to their studies for six months; and one candidate withdrew.

APOTHECARIES' HALL. — The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Oct. 14th:—

Catfield, Arthur, Burnt-Ash-lane, Lee.
Graham, Robert, Upper Kennington-lane.
Sisley, Richard, Park-row, Albert-gate.
Steer, William, Courtenay-terrace, Salcombe.
Williams, Augustus Fredk., Ravensthorpe, Northants.

The following gentleman also on the same day passed his Primary Professional Examination:—

Goddard, Walter Horace, St. Mary's Hospital.

COLLEGE OF PHYSICIANS IN IRELAND. — The following have been elected to the Fellowship of this College:—

Hatchell, Joseph Henry.
Sibthorpe, Charles, (Professor of Pathology,
Madras Medical College.)

At a meeting of the Fellows held on St. Luke's Day the following office-bearers were elected for the ensuing year:— President: George Johnston. Vice-president: Walter George Smith. Censors: John Hawtrey Benson, Reuben J. Harvey, Arthur V. Macan, Walter George Smith. Treasurer: Aquilla Smith. Registrar: J. Magee Finny. Examiners in Midwifery: Fleetwood Churchill, J. R. Kirkpatrick. Additional Examiner in Medicine and Chemistry: George F. Duffey. Additional Examiner in Materia Medica: J. Wm. Moore. Additional Examiner in Anatomy: W. G. Smith. Professor of Medical Jurisprudence: Robert Travers.

HARVEIAN SOCIETY OF LONDON. — The Harveian Lectures will be given by Dr. James E. Pollock, on Dec. 2nd, 9th, and 16th, "On the Prognosis and Treatment of Chronic Diseases of the Chest in relation to Modern Pathology."

MR. F. SUTTON, Public Vaccinator, Willingham District, Gainsborough Union, has been awarded the sum of £8 15s. for efficient vaccination in his district. Third time in succession.

THE LATE MR. THOMAS E. SCOBELL. — The friends of this gentleman have placed a handsome brass tablet in Plympton St. Mary Church, and presented an altar frontal in memoriam.

THE LONDON HOSPITAL MEDICAL COLLEGE. — Mr. Frank Hichens has obtained the Entrance Science Scholarship, of the value of £50, and Mr. E. Bryceson that of the value of £30; and Mr. S. Ashley has obtained the Buxton Scholarship of the value of £30, and Mr. H. Guinness that of the value of £20.

ST. GEORGE'S HOSPITAL MEDICAL SCHOOL. — Mr. Arthur Shield has obtained both the William Brown Exhibitions of £100 per annum, tenable for two years, and £40 per annum, tenable for three years, and Mr. Bradshaw and Mr. Taylor have obtained the Brackenbury prizes in medicine and surgery, value about £30 each.

UNIVERSITY OF ABERDEEN. — At a meeting of members of the University Council of Aberdeen, held on Monday in the Temple, with reference to the approaching election of Assessor (Professor Hunter in the chair), the following resolutions were unanimously agreed to:— Moved by D. Ferrier, M.A., M.D., F.R.S., Professor of Forensic Medicine, King's College, London, and seconded by the Rev. Peter Forsyth, M.A.,—"That in order to adapt the curriculum of Arts to the wants of the professions room

should be found for such subjects as Chemistry, Botany, History (Modern and Ancient), Political Economy, Modern Languages, and a more extended course of English Composition and Literature; and as it is impossible to enlarge the present curriculum, candidates for degrees in Arts should be allowed to select some of the above-mentioned subjects in lieu of Higher Mathematics, Greek, or other existing compulsory subjects." Moved by Stephen Mackenzie, M.D., F.R.C.P., and seconded by the Rev. John Gibb,—"That as Dr. Bain accepts the principle of option for the Arts degree, this meeting strongly urges the members of Council to vote for Dr. Bain as Assessor."

CAMBRIDGE UNIVERSITY.—At a Congregation held on Oct. 14th the following gentlemen were appointed Examiners:—First M.B. Examination: Dr. Anningson, Caius; Professor Dewar. Second M.B. Examination: Dr. Watney, St. John's; C. Creighton, King's. Third M.B. Examination: Dr. Reginald Thompson, Trinity; Dr. Galabin, Trinity. Medical and Surgical Degrees: Mr. Luther Holden, F.R.C.S., President of the Royal College of Surgeons; Mr. Thomas Bryant, F.R.C.S. Dr. Cheadle, of Gonville and Caius College, was appointed Assessor to the Regius Professor of Physic.

PERTHSHIRE MEDICAL ASSOCIATION.—The annual meeting of this Association was held in the Directors' Room at the Infirmary a few days ago, when the following were elected office-bearers for the year, viz.:—Dr. Robertson (Stanley), President; Dr. Fleming, Vice-President; Dr. Graham, Treasurer; Dr. Baird, Secretary; and Drs. Bramwell, Nairne, M'Naughton, Laing (Bridge of Earn), and Gillespie (Methven), Members of Council. The President made a few introductory remarks; after which, a paper was read by Dr. M'Callum, which elicited considerable discussion. The Society now numbers about fifty members.

SOUTH DURHAM AND CLEVELAND MEDICAL SOCIETY.—The seventh annual meeting of this flourishing society was held at the Stockton Hospital on the 12th inst., when the following were elected officers for the session 1880-81. President: R. W. Foss, M.D., Stockton-on-Tees. Vice-Presidents: G. Middlemiss, Darlington; W. J. Williams, M.D., Middlesbro'. Committee: J. R. Fothergill, M.D., Darlington; J. Farquharson, Stockton; J. R. Pearson, M.D., South Stockton; C. Young, M.D., Yarm; J. Rawlings, Hartlepool; J. W. Eastwood, M.D., Dinsdale-park; J. B. Peacock, Darlington; J. A. Malcolmson, M.D., Middlesbro'; Robert Smith, M.D., Sedgefield. Hon. Secretary: J. R. Morison, M.B., Hartlepool.

THE GERMAN PHARMACOPŒIA.—The Imperial Government of Germany has appointed a commission, which has already commenced its sittings at Berlin, for the revision of the German Pharmacopœia. The commission consists of twenty-seven members, of whom sixteen are professors from various Universities, five are apothecaries, and the remaining six are eminent practising physicians or surgeons. The Prussian War Office has deputed two military doctors and a military apothecary to attend the sittings. Dr. Schmidt, professor of pharmacy at the University of Halle, will act as secretary to the commission, which is presided over by Privy Councillor Dr. Struck, director of the Imperial Sanitary Department.

NORTH-EASTERN HOSPITAL FOR CHILDREN.—On the evening of the 9th instant a conversazione was held at the North-Eastern Hospital for Children, Hackney-road, and more than two hundred guests assembled at the invitation of the President, committee, and medical staff of the institution. The hospital, which was founded thirteen years ago, is placed in one of the poorest and most densely populated districts of the metropolis, precautions being taken that none but fit subjects for treatment shall be admitted to the benefits of the charity. The originator of the institution is stated to have been a lady, a member of the Society of Friends, who took a single room in the district as a dispensary. Subsequently two houses were secured, and in June last new wards were formally opened by her Royal Highness the Duchess of Connaught, and permission was given to name one the "Connaught Ward." The number of beds in the extended hospital is sixty, and in the Convalescent Home at Croydon eight beds were provided. Since the opening 146,000 patients have been relieved, and the average number of out-patients weekly is nearly 1000. The new wards display the most recent improvements for securing

comfort, cleanliness, and ventilation. Communication by telephone is provided all over the building, and there is a complete isolation-ward, which is connected only by telephone with the rest of the building. There has been a most ingenious adaptation of the great flat roof, which has been securely railed in and turned to the purpose of a playground, whence the little sufferers may obtain occasional glimpses of the outlying country. The cost of the construction of the new wards and offices, together with that of the freehold, is about £21,000; and one result of opening the wards is that there is an expenditure in excess of income estimated at £700 a year. There is a debt remaining on the building of about £600, and the expenditure for the past three years has been £400 in excess of income. New subscriptions are therefore much needed.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.—The usual quarterly court of this Society was held on Wednesday last, Oct. 13th, at 5 P.M., in the Library of the Royal Medico-Chirurgical Society. The President, Sir George Burrows, was in the chair. Applications for relief were read from sixty widows and seventeen orphans; it was resolved that a sum of £1219 10s. be recommended to be granted at the next meeting of the directors. The acting treasurer reporting favourably of the state of the finances of the Society, the court had the satisfaction of voting a Christmas present of £5 to each widow and £2 to each orphan on the list of recipients, and £4 to each orphan on the Copeland Fund. One member was elected. No deaths were reported among the members or recipient of grants, and only one orphan was declared ineligible from age to receive any further assistance.

BEQUESTS AND DONATIONS TO MEDICAL CHARITIES.—Mr. T. Veasey, of Baldock, bequeathed £50 to the Hitchin Infirmary and £300 more after the death of his wife. Mr. Henry Ludlam, late of Piccadilly, bequeathed £1000 to the St. George's and St. James's Dispensary. Mr. J. Surman Surman, late of Swindon Hall, Cheltenham, bequeathed £2000 to the Gloucester Infirmary, and £1000 each to the Cheltenham General Hospital and the Dispensary. By the will of the late Mrs. Susan Gorely, of Dover, the following legacies have been left: to the Margate Sea-bathing Infirmary £5000; to the Dover Hospital £1000; to the Hospital for Diseases of the Throat £500; to the Kent County Ophthalmic Hospital £1000; to King's College Hospital £5000; to the Kent and Canterbury Hospital £2000.

Medical Appointments.

Intimations for this column must be sent DIRECT to the Office of THE LANCET before 9 o'clock on Thursday Morning, at the latest.

- ALFORD, H. J., M.D., M.R.C.S.E., has been appointed Public Analyst for the County of Somerset.
- BARTON, T. B., M.D., L.R.C.S.I., L.M., has been appointed House-Surgeon to the West Kent General Hospital, vice Harris, resigned.
- BISS, C. Y., M.B., M.R.C.P.L., has been appointed Honorary Physician to the Western General Dispensary, Marylebone-road.
- BODKIN, P. J. T., L.K.Q.C.P.I., L.R.C.S.I., has been appointed Medical Officer for the No. 1 Dispensary District of the Tuam Union.
- BRYDE, J. C., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer of Health for the Rural Sanitary District of the Runcorn Union. £120 per annum.
- CURRIE, A. S., M.D., M.R.C.S.E., has been appointed Medical Officer for the Lydney District of the Chepstow Union, vice Tuckwell, resigned.
- DANIELL, G. W., M.R.C.S.E., L.S.A.L., has been reappointed Medical Officer for the Blandford Urban Sanitary District. £10 per annum.
- DAY, E. J., M.R.C.S.E., L.S.A.L., has been appointed Public Analyst for the Borough of Bridport.
- DENHAM, J. K., L.K.Q.C.P.I., L.R.C.S.I., has been appointed Demonstrator of Anatomy at the School of Surgery, Royal College of Surgeons, Ireland.
- EVANS, A. L., L.R.C.P.L., M.R.C.S.E., has been appointed Medical Officer for the Fourth District of the Lymington Union.
- FIELD, A., M.B., C.M., has been appointed Medical Superintendent of the Lunatic Asylum, and Visiting Physician of the Lazaretto, Barbadoes.
- GORDON, J. J., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Assistant Medical Officer and Dispenser at the Workhouse and Infirmary, Islington.
- GRAHAM, W., M.D., has been appointed Medical Officer of Health for the Urban Sanitary District of Middleton and Tonge.
- LANGDON, J. W., M.R.C.S.E., L.S.A.L., has been appointed House-Surgeon to the Royal Westminster Ophthalmic Hospital, vice Murray, resigned.

LINEKER, Mr. E. H., has been appointed Medical Officer for the Stanfords District of the Castle Ward Union.

MCNEILL, J. P., M.D., has been appointed Public Analyst for the Borough of Tiverton.

MILICAN, K. W., L.R.C.P.Ed., M.R.C.S.E., has been appointed Medical Officer for the Kington District of the Stratford-on-Avon Union.

MUTER, Mr. J., has been reappointed Public Analyst for Bermondsey. Remuneration by fees.

NAPIER, Mr. J., has been appointed Public Analyst for the Borough of Southwold. Remuneration by fees.

O'CONNOR, Mr. T. B., has been appointed Medical Officer to the Army and Navy Club, vice Miller, resigned.

PARDINGTON, G. L., L.R.C.P.L., M.R.C.S.E., L.S.A.L., has been appointed House-Physician to the General Lying-in Hospital, York-road, Lambeth, vice H. C. Wright, resigned.

PEARCE, A., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for the Eleventh District of the Kingsbridge Union.

REID, J., M.D., M.B., C.M., has been appointed Public Vaccinator for No. 3 District of the Fulham Union.

SCOTT, J. W., M.R.C.S.E., L.R.C.P., L.S.A.L., has been appointed Medical Officer for No. 3 District of the Wolverhampton Union.

SMITH, C. C., M.B., M.R.C.S.E., has been appointed Medical Officer of Health for the Redditch Urban Sanitary District, vice Page, whose appointment has expired.

THOMPSON, C. S., M.B., C.M., has been appointed Medical Officer to the Bideford District of the Bideford Union.

THORNLEY, J., L.R.C.P.Ed., L.R.P.S.G., has been appointed Medical Officer for the Sharples District of the Bolton Union.

TURNER, J. E., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer to the Tuam Union Workhouse.

WHITE, R. P., M.B., C.M., has been appointed Assistant House-Surgeon to the Halifax Infirmary, vice Hammond, who has been appointed House-Surgeon.

WHITELEY, G. W., L.R.C.P.Ed., M.R.C.S.E., has been appointed Medical Officer for the Rickmansworth South District of the Watford Union.

WILSON, J. S., M.R.C.S.E., L.R.C.P.Ed., F.R.G.S., &c., has been appointed Medical Officer to St. Ann's Dispensary, St. Ann's-road, Stamford-hill.

Births, Marriages, and Deaths.

BIRTHS.

CUTHBERT.—On the 10th inst., the wife of W. W. Cuthbert, M.D., of Debenham, Suffolk, and eldest daughter of S. Grimwade, of Upper Tulse-hill, of a son.

DUKES.—On the 20th inst., at Sunnyside, Rugby, the wife of Clement Dukes, M.D., of a son.

GILL.—On the 15th inst., at Bootham, York, the wife of H. Clifford Gill, Medical Superintendent of the York Lunatic Hospital, of a son.

HUME.—On the 8th inst., at 57, Westgate-road, Newcastle-on-Tyne, the wife of G. H. Hume, M.D., of a son.

HUTCHISON.—On the 10th inst., at Chipping Norton, Oxon., the wife of G. Wright Hutchison, M.D., M.R.C.P.Ed., of a daughter.

MACNALT.—On the 20th inst., at Glenridding Lake, Ullswater, Westmoreland, the wife of Frank C. MacNalty, A.B., M.B. Dub. Univ., of a son (Arthur Salisbury).

STERICKER.—On the 16th inst., at Tollington-park, N., the wife of William Stericker, M.B., of a daughter.

MARRIAGES.

FRASER—TRENCHARD.—On the 14th inst., at St. Augustine's Church, Honor Oak, by the Rev. Dr. Morgan, Donald Alexander Fraser, M.R.C.S.E., L.S.A.L., eldest son of P. Gordon Fraser, Esq., late Colonial Treasurer and Member of the Executive and Legislative Councils of Tasmania, to Elizabeth, eldest daughter of E. P. Trenchard, Esq., of Woodville, Honor Oak.

MILWARD—LOCKHART.—On the 14th inst., at Christ Church, Edinburgh, William Clement Milward, M.B., Surgeon, Army Medical Department, to Elizabeth, eldest daughter of Miles Lockhart, Esq.

O'DWYER—RINGWOOD.—On the 19th inst., at Rochester, by the Rev. G. Eden Peake, Thomas Francis O'Dwyer, M.D., Surgeon-Major, Army Medical Department, to Henrietta Matilda, third daughter of the late Rev. John Ringwood, of Crom, co. Fermanagh.

PITMAN—EVANS.—On the 12th inst., at St. Leonard's Church, Seaford, by the Rev. W. H. M. Buck, William, son of the late Dr. Robert Pitman, of Highgate-hill, to Nellie, second daughter of Edwin Evans, Esq., of Twyn House, Seaford, Sussex. No cards.

STEPHEN—ANDERSON.—On the 14th inst., at St. Mary's, Putney, James Stephen, M.D., of Peterhead, to Agnes, daughter of the late G. G. Anderson, Solicitor, of Peterhead.

STIVEN—THOMSON.—On the 9th inst., at All Hallows', Allerton, Liverpool, Edward W. Fleming Stiven, M.D., of Sunderland, to Annie, daughter of Walter Thomson, Esq.

DEATHS.

BROWNE.—On the 11th inst., at Renaragh, co. Donegal, William Browne, M.D., aged 64.

HOPGOOD.—On the 8th inst., Thomas Hopgood, M.R.C.S.E., L.A.C., of Chipping Norton, Oxon., aged 67.

HOGG.—On the 18th inst., at Connaught-square, Hyde-park, John Hogg, M.D., formerly of Gower-street, London, and of Truro, Cornwall, at the close of his 77th year.

IRVINE.—On the 15th inst., at Mansfield-street, Portland-place, James Pearson Irvine, M.D., aged 38.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

INTERNATIONAL MEDICAL CONGRESS, 1881.

STATE MEDICINE SECTION.—Officers Elect: President, John Simon, Esq., C.B., D.C.L., F.R.S. Vice-Presidents: Dr. George Buchanan; Surg.-Major Professor de Chaumont, F.R.S.; Deputy-Surgeon-General Norman Chevers, M.D.; Dr. Douglas MacLagan, F.R.S.E.; J. Netten Radcliffe, Esq. Secretaries: Professor Corfield, M.D.; Dr. Thorne Thorne.

SUBJECTS FOR PAPERS AND DISCUSSION.—On the first day, Measures by which to prevent the Diffusion of different Communicable Diseases from country to country, or within the limits of any single country, will be discussed—e.g., 1. Yellow Fever, Cholera, Plague. 2. Enteric Fever. 3. Syphilis. 4. Glanders, Hydrophobia, Anthrax. On the second day, the Influence of various articles of Food (not including Water) in spreading Parasitic, Zymotic, Tubercular, and other Diseases, will be debated. On the third day the subjects will be: (1) Conditions to be imposed on the legally-qualified Practitioners of one country who may seek authority to practise in another country. (2) Precautions to be taken in Medical Nomenclature and Classification to guard against False Statistical Conclusions.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET OFFICE, October 21st, 1880.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radiation in Vacuo	Max. Temp. in Shade	Min. Temp.	Rain fall.	Remarks at 8.30 a.m.
Oct. 15	30.31	N.W.	42	41	..	54	38	..	Overcast
" 16	30.01	N.E.	52	50	..	56	39	..	Foggy
" 17	30.07	N.E.	54	50	..	57	43	..	Foggy
" 18	30.08	W.N.W.	50	48	75	59	46	..	Foggy
" 19	30.05	N.E.	49	44	..	50	43	..	Cloudy
" 20	29.68	E.N.E.	35	35	..	41	32	0.50	Snowing
" 21	29.81	N.	37	36	..	49	30	0.26	Overcast

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Letters relating to the publication, sale, and advertising departments of THE LANCET to be addressed "To the Publisher."

LONDON FOGS.

DR. ALFRED CARPENTER's paper, read before the Social Science Congress in Edinburgh, "On the Causes of Fogs in Large Towns," and his subsequent raising of the question of London fogs in particular in a letter published in the columns of *The Times*, come very fitly after Dr. Mitchell had directed attention to the influence of the persistent fog of the autumn and winter of 1879-80 upon the mortality of the metropolis. Dr. Carpenter attributes our metropolitan fogs to unconsumed carbon in the air, and suggests, in view of prevention, the adoption of gas as much as possible for cooking and other purposes in order to reduce smoke, and a tax on fire-grates not constructed to consume their own smoke, together with a rigid enforcement of the law as to smoky chimneys.

A. W. S.—Our correspondent should combine with other practitioners in the neighbourhood to represent to the Registrar the invalidity of the certificates signed by an L.M.

Ambulance.—Dr. Weatherly's Ambulance Lectures are published by Griffith and Farran, St. Paul's-churchyard.

CERTIFICATION OF INSANE PAUPERS.

To the Editor of THE LANCET.

SIR,—A board of guardians contract to pay their medical officers £5 per annum each for certifying to all the so-called pauper lunatics in each district, such arrangement being a rider to the general contracts. It often happens that those certified to as paupers are maintained directly or indirectly by friends after admission to asylum. Does that make them private patients, and therefore improperly admitted and detained? The Lunacy Law, I believe, states the fee to be 10s. 6d. to 21s. per case, and I have a strong impression it is not legal for guardians to contract for this service. Would you or your correspondents kindly inform me on the matter, as some thirty or forty cases per annum are certified to by each surgeon for the above amount, which, in my opinion, is totally inadequate for the services rendered.

I am, Sir, yours &c.,

SUBSCRIBER.

Oct. 13th, 1880.

CURIOSITIES OF ADULTERATION.

IN a recent report presented to the Corporation of Salford by the borough analyst, Mr. J. Carter Bell, several curious illustrations are given of forms of adulteration apparently in ordinary use. The report referred to 154 samples, consisting of 52 milks, 49 breads, 17 teas, 5 coffees, 3 peppers, 4 sugars, 11 wines, 1 baker's mixture, and 5 waters. Of these, 24 were adulterated, consisting of 9 milks, 9 wines, 5 breads, and 1 butter. The five breads contained a chemical compound which is known by the name of baker's mixture. This is now being sold in Salford to bakers for the purpose of mixing with inferior flour. It is made from phosphates of alumina, lime, and magnesia, with sulphuric acid and hydrochloric acid, and Mr. Carter Bell found that it has the effect of spoiling the bread, and making it injurious to health. It also contained a considerable amount of arsenic, the consequence of its being made from impure materials. Mr. Carter Bell also examined nine samples of so-called unfermented wines and two of ordinary tent wines. Of these nine samples, three bearing labels stating that the bottle contained "pure grape juice," "virgin fruit of the vine," &c., consisted of sugar, tartaric acid, salicylic acid, and colouring matter, with a considerable quantity of copper, the result, doubtless, of ignorant or careless manufacture. Grape juice was, in Mr. Carter Bell's opinion, entirely absent. Another sample, labelled "Pure and genuine unfermented fruit of the vine," was evidently a composite article artificially made, and so carelessly prepared as to contain alcohol. One sample of unfermented wine imported from abroad contained some grape juice; but the presence of alcohol and an abundance of yeast cells showed that fermentation had not been arrested. One example was labelled "The selected wine of the Temperance Fraternity." This was an ordinary low class fermented wine, containing a large amount of alcohol. Of the nine samples of the so-called unfermented wines, only one was genuine and was what it professed to be, "Pure grape juice entirely free from alcohol." The samples of tent were sweet and highly alcoholic wines, one sample containing as much as 40 per cent. of proof spirit. This wine had evidently been strongly brandied, no natural wine containing anything like this proportion of alcohol. The number and variety of these so-called unfermented wines testify to a large demand for articles of this class; but the examinations pointed to the necessity of a very careful discretion in their selection. Three samples of water taken from the lodge of a manufactory were so highly contaminated with sewage matter as to make them dangerous to health.

Weak Sight.—There are no advantages, optical or ophthalmic.

MEDICAL ASSISTANTS AND THEIR RELIGIOUS PERSUASION.

To the Editor of THE LANCET.

SIR,—Kindly permit me to make a few remarks under this heading on behalf of medical assistants, with the hope that they will be broadly considered by the respectable and unprejudiced members of the profession.

I am a medical assistant, and lately had occasion to advertise in THE LANCET for a re-engagement. To my advertisement I got several replies from medical men both in town and country practice, the majority of whom desired to know my religion. My answer was, "I am a Roman Catholic," at the same time mentioning I had lived with several Protestant gentlemen, and that my religion never caused the least inconvenience to them, or interfered with me in any way whatever in the discharge of my duties. To my astonishment, I received replies expressing regret that my religion was Roman Catholic. One was couched in the following words:—"The majority of my patients are Protestants, and I fear it (your religion) would be disagreeable for me as well as for them. Only for that I should be glad to accept you as my assistant." The other replies I received were of a similar character.

Now, Sir, surely it is time this bigotry and fanaticism, which still seem to infect the minds of some members of the profession, ought to give place to a more healthy condition. We can well understand how the evil prevails among ministers of religion; but its existence in medical men appears to me to be a mockery and a farce. How few members of this class we find attending church or chapel themselves; certainly their duties do not always prevent them, and yet they make the strictest inquiries about the poor hard-worked assistant's religion, as if it were a part of his duties to administer the word of God "to his household." I consider that the religion of a candidate ought never to debar him so long as his other qualities in every respect were found to be satisfactory. I am certain, however, that the competent and respectable man who may sometimes be placed in this position meets with sympathy from the generous and high-minded, of whom, thank God, our profession can boast a vast majority.

I fear, Sir, I have trespassed too much on your valuable space; but the subject, I hope, will answer as an apology from,

Yours &c.,

October, 1880.

SAUVE QUI PEUT.

Migrator.—A letter addressed "Medicus, Bazaar Agency, 179, North-street, Leeds," will reach the gentleman referred to.
C. F. H.—The hood is, we believe, of crimson silk, lined with white satin, worn over an ordinary master's gown.

Mr. J. MacCormac, (Lindley.)—The woodcut has not yet come to hand.

MEDICAL LEGISLATION IN COLORADO.

COLORADO would appear, owing to efficient legislation in Central States, to be overrun with quacks and pretenders to medical science. At the last meeting of the Legislature, the State Society accordingly appointed a Committee to present specified matters which require legal adjustment, and a Bill for the regulation of the practice of medicine was the outcome. This measure is the object of unsparing ridicule by the *Rocky Mountain Medical Review*, which characterises the Bill as "a squib, a parody, or, as Orpheus C. would say, a 'sarkasm.'" Our contemporary gives the leading features of the scheme as follows:—Five physicians are to be appointed by the Governor as an examining board; they are to prepare one thousand questions and publish the same. Each and every physician is to present himself for examination, and must answer six questions upon each branch of medical knowledge; these questions being chosen by lottery from among the thousand. There is to be a paraphernalia of tin boxes, locks, keys, envelopes, and seals, and provision is made that no candidate during examination shall be allowed to absent himself for any purpose without being attended by two members of the examining board, and even then for not more than fifteen minutes. Finally, after the board has examined all the candidates, they in turn are to be examined by a committee selected by the late examiners! For this work the gentlemen appointed, presumably practitioners of standing, are to receive the handsome remuneration of three dollars per day, they being employed, it is calculated, about "thirty days in each year."

Surgeon-Major, 7th Bengal Cavalry.—The case is one for local help.

THE CRISIS AT GUY'S HOSPITAL.

To the Editor of THE LANCET.

SIR,—The very humiliating position in which the representatives of the medical staff of Guy's Hospital have placed themselves and their colleagues by withdrawing themselves from their self-asserted position—let that position be tenable or not—is at once a sad loss of dignity to themselves and humbling to the whole profession. Removed from the dignity, either assumed or real, of a factor in the conduct and management of one of the greatest of our national charities, which, in common with all the hospitals of this country, is dependent for the very essence of its utility on the unremunerated services of members of the hospital profession; for without these services where would these charities be?

A sense of satisfaction ran through the profession, that at last one of its chief representative bodies had asserted its claims to a voice in the management of one of the oldest and most renowned of our medical charities; and had the whole staff of Guy's resigned, rather than yield, surely no respectable member of the profession would have accepted office in their place, and the profession would have stood by them and supported their action. As it is, I feel, and others will equally so, I am confident, that the Guy's staff have sacrificed their credit and the fair fame of the profession. Never has such an opportunity occurred for the profession to assert itself in a spirit at once honourable and benevolent, and never has such an opportunity been so injudiciously lost.

Had the staff of Guy's persisted, the profession would have been at one with them, and said of them, with Addison, "It is not in mortals to command success; we have done more, Sempronius—we have deserved it." Whereas now it must feel, in the language of a higher authority "A city divided against itself cannot stand." Such is the position of the staff of Guy's Hospital.

I am, Sir, yours obediently,

October, 1880.

A GENERAL PRACTITIONER.

Dr. K. M., (Pest.)—Dr. Seaton's Handbook, published by Macmillan, Bedford-street, Strand.

R. M.—Wilson's Handbook of Hygiene (Churchill).

A. J. M.—Not right, but law.

THE USE OF IMPURE MATERIALS IN ERECTING BUILDINGS.

To the Editor of THE LANCET.

SIR,—I notice in your issue of October 9th some remarks by a correspondent on the necessity of using pure water in preparing mortar for the erection of new buildings. But how much more probable is it that another material of which mortar is largely composed contains a much larger proportion of impurity, and is more likely to produce the bad effects which I, too, have often found to arise in newly-built and plastered buildings. Road-sand, which is so much used in making mortar, is the sifted sweepings of the streets and roads of and near towns, and contains a large quantity of droppings of all sorts; and though this is often stored in large heaps till wanted, and partly exposed to the oxidising influence of the air, yet it is merely the outside of the heap which is thus purified, and the inside retains and afterwards gives out as gas abominations which are so antagonistic to health. Corporations and other bodies have the power of preventing the construction of erections which are not in accordance with the requirements of their bye-laws. How much more serviceable would be the will and the exercise of it in forbidding the use of material which contains such unhealthy germs, and which really does produce not unfrequently such unhealthy results.

Yours faithfully,

J. H. GRAMSHAW, M.D., &c.,

October, 1880.

Medical Officer of Health for Gravesend.

M.D. Edin.—For the French B.A. a candidate must be at least sixteen years old, and upon registering his name for examination he must produce the following papers:—1. His certificate of birth. 2. A formal application to be admitted to examination, written in his own hand, and countersigned by his father or guardian if he be a minor. The same formalities are required for the B.Sc. The programmes of these examinations can be obtained from the publishers, who are Delain, 66, Rue des Ecoles, for the Baccalauréat ès-lettres, and Hachette, 79, Boulevard St. Germain, for the Baccalauréat ès-Sciences. As regards the curriculum of the Faculty of Medicine, "M.D." should consult the forthcoming Students' Number of the *Progrès Médical*, or the *Guide de l'Étudiant*, published by Delahaye; or a book by Dr. Hardwicke, entitled "Medical Education and Practice in all parts of the World" (Churchill, 1880).

Kentigern.—Friday, November 5th.

COLOUR-BLINDNESS AND RAILWAY EMPLOYÉS.

To the Editor of THE LANCET.

SIR,—I cannot but think that Mr. Biggs's letter on the above subject in your last issue is calculated, if it produce any effect at all, to do much harm by inducing a false security.

Your correspondent seems to imagine that because certain railway companies have enjoined that candidates for employment in their service shall be tested as to their colour perception, it may be assumed that this is efficiently done; yet he admits that he himself for some time used a test which he subsequently found to be utterly untrustworthy. It is true that since that discovery he has adopted another method, which is certainly original, but which, as it seems to me, is much more open to fraud and other sources of fallacy than the test which it superseded. The contemplation of such a treasure as a library, containing scores of books bound in all the colours of the rainbow, must have added much to your correspondent's serenity, or he would never have been "satisfied" by the candidate picking out a few books of conspicuous hues. Putting aside altogether the question of fraud on the part of the candidate, to which the test is obviously remarkably open, he stands a fair chance of honestly passing, even if he is colour-blind. He has to pick out four books; the blue and yellow hardly ever cause any difficulty; the red and green remain, and it is just these colours which confuse the colour-blind, but the latter does not confound all shades of red with all shades of green. Given a red and a green of equal intensity, the one or the other will seem to him the darker according as he is red- or green-blind. They will appear to him as shades of one colour, and, if off his guard, he may call them both by one name; but he knows by experience that the one shade is what other people call red and the other green. He probably looks upon the distinction as an unnecessary refinement, but considers it prudent to humour the crochets of the examiner, and names the colours accordingly correctly; yet such a man would be totally unfit to act as a signalman or driver, as he could only distinguish red from green when the two colours were seen together, and would even then confound some shades of the one colour with some of the other.

The essentials of a good test are that it shall be quite independent of the names of colours; that it shall be simple and rapid, applicable to large numbers at a time, and secure against fraud. The only test which has hitherto been found to fulfil all these conditions is Holgrem's. This test depends on the comparison of different colours, Berlin wools being the material employed. It is not the more pronounced colours which are most useful in detecting colour-blindness (though these serve to determine its nature), but the pale greens, drabs, and greys which the colour-blind always confound.

Your correspondent implies his belief that the prevalence of colour-blindness in this country has been exaggerated. Our data are not yet sufficient to enable us to determine whether this is so or not; but out of the 920 medical men present at the meeting of the British Medical Association at Cambridge in August last, 745 were tested as to their colour-perception. Of these, 19 were found to be defective in this respect; so that even if we suppose, which is, of course, most improbable, that all those who were not tested had normal colour-perception, we have amongst an educated body of men more than two per cent. whose sense of colour is defective.

That more facts are needed everyone will admit, and it is to those who hold appointments like your correspondent's that we must look for such facts. If those who hold such posts would test all employes using the same tests and record their results, much valuable information would be obtained.

A medical man in Wales is carrying out Holgrem's test on a large scale, and I shall be happy to give anyone having similar opportunities the details of the tests which he is employing, which are identical with those used at Cambridge. It will be a relief to such to learn that the possession of a chromatic library is not a *sine qua non*.

I remain, Sir, yours truly,

W. ADAMS FROST, F.R.C.S.

Wimpole-street, Oct. 18th, 1880.

A Tutor.—We cannot afford space for the publication of the long list of names of those who passed the Arts examination for the Fellowship and Membership of the Royal College of Surgeons at Burlington House in September last. We are informed that 108 passed for the Fellowship, and 258 for the Membership, making a total of 366. The rejections were for the Fellowship 8, and the Membership 114. The examinations take place half-yearly.

TREATMENT OF CHOLERAIC DIARRHŒA BY THE HYPODERMIC INJECTION OF MORPHIA.

To the Editor of THE LANCET.

SIR,—Mr. Hardman will, doubtless, be glad to hear that the treatment of the above disorder which he so strongly advocates (*THE LANCET*, Oct. 2nd) has in my hands proved equally successful and gratifying.

A case of very severe diarrhœa which occurred in my practice some three years ago, in which I used the injection, impressed me very much by reason of the rapid change from a condition of great gravity to one of comparative ease and safety. Everything swallowed was immediately rejected; the dejections escaped without control into the bed; the eyes were deeply sunken and dull; the voice little more than a whisper; and cramps and capillary congestion of the surface general. I think it was the utter impossibility of anything being retained by the stomach in this case which suggested the subcutaneous method to me. I injected one-third of a grain of morphia, and within half an hour all the symptoms, but especially the cramps and purging, were relieved.

I have used this method of treatment in indicated cases ever since, and not unfrequently have heard the patient say he was "never purged after the injection."

I may add that lately in a case of subacute gastritis from alcoholic excess, the vomiting was quickly checked by the injection of one-sixth of a grain of the alkaloid, the usual remedies being of no avail. The same good effect was noticed in three separate attacks.

I am, Sir, yours faithfully,

Darlington, October, 1880.

L. EASTWOOD.

To the Editor of THE LANCET.

SIR,—I reside in a manufacturing district, and am in the habit of recommending several of my patients in the summer to go to Blackpool, believing it to be a health-resort, where pure air can be breathed, and wasted energies revived. I am, therefore, very much astonished to read in your journal of Oct. 2nd the article on Diarrhœa by Mr. Hardman, of that town. He gives the history of only thirteen severe cases, as he says, taken at random from a considerable number of which he has the notes; and as, according to the dates given, almost all these cases occurred in one week, I should certainly like to know what is the cause of so much diarrhœa in Blackpool. There are nine medical men there, and if each one gets his average of such cases, there must have been in August last some hundreds of cases of this complaint in the town; and in the interests of myself and other medical men, who advise their patients to go to Blackpool, I must ask Mr. Hardman to explain how it is that such a serious *insanitary* condition is allowed to prevail! for until this is removed I shall certainly refrain from sending patients to Blackpool for their health.

Summer diarrhœa generally affects young children; but all these cases are in adults, which renders the matter much more serious.

Yours &c.,

M.D.

Oct. 6th, 1880.

INFANTILE DIARRHŒA AT WIDNES.

To the Editor of THE LANCET.

SIR,—In *THE LANCET* of the 2nd inst. you quote some remarks said to have been made by the chairman of the Widnes Local Board, and you very properly add that "this statement convicted the Local Board of the grossest negligence with reference to the removal and deposit of refuse."

As I am responsible for the statement which was made, will you permit me to say, for our credit's sake, that I also expressly stated that as soon as our inspector observed that the condemned fruit was taken by the children he at once took measures to have all such material destroyed, or placed out of reach; and this very obvious precaution has been, to the best of my knowledge, uniformly observed.

Yours truly,

EUSTACE CAREY,

Chairman of Health Committee of the

October, 1880.

Widnes Local Board.

USE OF ALCOHOL IN PNEUMONIA.

SURGEON JOHN HOYSTEAD, Station Hospital, Hyderabad, writes as follows on this subject:—

"When quartered at Fort Dakka (four stations up the Kyber line route to Cabul) it was my privilege to treat successfully numerous cases of pneumonia occurring in the 35th Punjab Native Infantry, all of a low type, with liquid rusty sputa and rapid hepatisation. Before my arrival at Dakka, one and occasionally two men were dying daily from that disease. The morning of my arrival at the Fort one man died of pneumonia, and I took charge of eight desperate cases. I remained at Dakka two months, and lost but one case, a very old soldier, with worn-out constitution and double pneumonia. The secret of success in the treatment of these cases was the immediate exhibition of alcohol, rum or brandy, in large quantity, from six to eight ounces in twenty-four hours, the ordinary stimulating plan of treatment with carbonate of ammonia, &c. &c., and constant counter-irritation to chest-walls, no doubt also assisted nature. Generally quinine, in ten-grain doses night and morning, was employed to hit the malarial complication. My object in placing such patients upon a liquor ration from the first was, if possible, to prevent the disease running into its secondary and tertiary characteristics, which it usually did with terrible rapidity when unassisted by art."

Dr. Williams—The Calendar of the College of Surgeons contains the names of 1215 Fellows, 558 of whom obtained the distinction by after examination. The Members of the College number nearly 16,000.

COMMUNICATIONS, LETTERS, &c., have been received from—Sir J. Paget, London; Professor Bentley, London; Dr. Humphry, Cambridge; Professor Buchanan, Glasgow; Surgeon-Major Ringer, Laugharne; Sir Joseph Fayrer, London; Mr. L. Tait, Birmingham; Mr. Biggs; Mr. A. Clarke, London; Mr. Shirley Murphy; Dr. S. Mackenzie, London; Mr. MacCormac, Lindley; Mr. Pattinson; Dr. More, Rothwell; Dr. J. Campbell, Dublin; Mr. Gibb, London; Dr. Wadham, London; Dr. Barnes, Carlisle; Mr. M. Scott, London; Mr. Hardman, London; Mr. Gillespie; Mr. Frost, London; Dr. Armstrong, Newcastle-on-Tyne; Dr. Skeritt, Clifton; Mr. Slater, Halifax; Dr. Saundby; Mr. Gaddes; Mr. H. Wyman-Jeffreys; Dr. Murray; Mr. Forster; Dr. Henry, Rochdale; Mr. Nixon, London; Mr. E. B. Aveling, London; Messrs. Muddall Brothers, London; Mr. North, York; Dr. J. Hickinbotham, Birmingham; Mr. McEwen, Alnwick; Mr. A. W. Wallis, Brentwood; Mr. Richardson, Rusholme; Mr. Blackett, London; Mr. N. Sweeting, London; Mr. Stradling, Lisbon; Mr. Wahab, London; Mr. F. Clarke, London; Dr. Macnaughton Jones; Dr. Irving, Largs; Mr. J. Horsfall, Leeds; Mr. Jones, Ruthin; Dr. Duncan, Croydon; Mr. Christy, London; Deputy Surgeon-General Dale; Mr. A. C. Ayer; Mr. N. C. Collier; Surgeon-Major McEann; Dr. Heineman, New York; Miss Haslam; Mr. Eustace Carey; Mr. Clarke, Bodmin; Dr. Budd, North Tawton; Mr. Hopgood, Stoworth Wold; Mr. Vigurs, Newlyn East; Dr. Strahan, Beverley; Dr. Harding, Whittlesea; Dr. T. Taylor, London; Dr. Eberle, Easingwold; Dr. Norman Moore, London; Messrs. Eade and Caulfield, London; Messrs. A. and C. Black, Edinburgh; Mr. Low, Newcross; Mr. Hoggett, Norwood; Messrs. Young and Postan; Mr. Hunt, Hull; Mr. Pring, Dudley; Messrs. Smith and Son, Dublin; Dr. Gill, Canterbury; Messrs. H. and A. Layman, London; Mr. Blount, London; Mr. Saunders, Manchester; Mr. Roberts, Festiniog; Dr. Gill, Bootham; Mr. Johnston, Warwick; Messrs. Krohne and Seseman; Mr. Corsellis; E. W. L.R.C.P. Ed.; A. J. M.; A General Practitioner; Kentigern; A Looker-on; R. M.; W. J. L.; D. M. R.; Locum Tenens; A. S. G.; Dr. K. M., Perth; A Medical Officer of Health; H. W. G.; Magnus; L. L. S., Frome; T. V. P., Newtown; Locum; B. F. W.; South Hants; P. D.; Medicus, Warwick; Disgusted; Ambulance; &c. &c.

LETTERS, each with enclosure, are also acknowledged from—Mr. Bell, Burton-on-Trent; Mr. Worsley, Ryde; Mr. Willoughby, Daventry; Messrs. Cow and Co., Streatham; Mr. Freedman, Bristol; Mr. Walker, Dover; Dr. Andrew, Shrewsbury; Mr. Oliver, Notting-hill; Mrs. Alban, London; Mrs. Pratt, Liverpool; Mr. Young, Chilton Polden; Mr. Sloane, Bradford; Mr. Richardson, Brynwgwyn; Mr. Moorhouse, Ellesmere; Dr. Harding, Whittlesea; Rev. E. Collett, Retford; Messrs. Jacobs Brothers, Chelmsford; Mr. Rutter, Notting-hill; Mr. Elliott, Manchester; Mr. Field, London; Dr. Charteris, Arcachon; Mr. Fraser, Weston-super-Mare; Mr. Jackson, Sheffield; Mr. Lloyd, Sittingbourne; Mr. Jackson, Leeds; Dr. Macnalty, Ullswater; Dr. Walker, Aldbrough; Mr. Pollard, Brompton; Mr. Schofield, Frome; Mr. Nuttall, Bradford; Mr. Bain, Huntingdon; M.R.C.S., London; M. N.; W. F.; Medicus, Winston; E. J.; Delta; Fides, Sheffield; C. D.; M., Clapham; M.D., Twickenham; R. Y. H.; R. B. M.; B. B., London; R. B. T.; L. M., Northampton; P. P., South Lambeth; Negotium; M.R.C.S., Walham Green; M.D., Cromer; H. W.; Alone; M.D., Chadwell Heath; J. E., Exeter; E. N.; Medicus, Hinderwell; L. R. H., Kentish-town; W., Putney; Medicus, Chesham; X., Edinburgh; Statim, London; D. P., Hackney; D. M. A.; J. S. B.; J. H.

Chemists' Journal, Deutsche Medicinal-Zeitung, Pharmaceutical Journal, La Independencia Médica, L'Union Médicale, Science, Church of England Temperance Chronicle, Barbadoes Agricultural Reporter, Scarborough Mercury, Education, Revue d'Hygiène, Indian Daily News, Jersey Weekly Press, Western Daily Mercury, Le Naturaliste, Englishman, Leicester Chronicle, Redditch Indicator, Halifax Guardian, Canadian Journal of Medical Science, &c. &c., have been received.

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Medical Diary for the ensuing Week.

Monday, Oct. 25.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS. — Operations, 10½ A.M. each day, and at the same hour.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL. — Operations, 1½ P.M. each day, and at the same hour.

METROPOLITAN FREE HOSPITAL. — Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL. — Operations, 2 P.M.

ST. MARK'S HOSPITAL. — Operations, 2 P.M.; on Tuesday, 9 A.M.

MEDICAL SOCIETY OF LONDON. — 8½ P.M. Mr. William Adams, "On Cases of Paralysis, with Contraction of one Leg following Pelvic Abscess in Women, and of both Legs following excessive loss of Blood after Miscarriage."

Tuesday, Oct. 26.

GUY'S HOSPITAL. — Operations, 1½ P.M., and on Friday at the same hour.

WESTMINSTER HOSPITAL. — Operations, 2 P.M.

WEST LONDON HOSPITAL. — Operations, 3 P.M.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY. — 8½ P.M. Mr. Henry Morris, "On a Case of Aneurism of the External Carotid, in which, after failure of the Ligature of the Common Carotid, the old Operation was successful." — Mr. Savory, "On a Case of Abscess in the Neck, which in its course destroyed a large portion of the Carotid Artery, Jugular Vein, and Pneumogastric Nerve."

Wednesday, Oct. 27.

NATIONAL ORTHOPÆDIC HOSPITAL. — Operations, 10 A.M.

MIDDLESEX HOSPITAL. — Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL. — Operations, 1½ P.M., and on Saturday at the same hour.

ST. THOMAS'S HOSPITAL. — Operations, 1½ P.M., and on Saturday at the same hour.

ST. MARY'S HOSPITAL. — Operations, 1½ P.M.

KING'S COLLEGE HOSPITAL. — Operations, 2 P.M., and on Saturday at 1 P.M.

LONDON HOSPITAL. — Operations, 2 P.M., and on Thursday and Saturday at the same hour.

GREAT NORTHERN HOSPITAL. — Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL. — Operations, 2 P.M., and on Saturday at the same hour.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN. — Operations, 2½ P.M.

HUNTERIAN SOCIETY. — 8 P.M. Dr. Herman: "Notes on some Cases of Dysmenorrhœa." — Mr. Waren Tay will exhibit some Patients.

Thursday, Oct. 28.

ST. GEORGE'S HOSPITAL. — Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL. — 1½ P.M. Surgical Consultations.

CHARING-CROSS HOSPITAL. — Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL. — Operations, 2 P.M., and on Friday at the same hour.

HOSPITAL FOR WOMEN, SOHO-SQUARE. — Operations, 2 P.M.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM. — 8½ P.M. Consideration of Laws and Election of New Members. Mr. Hutchinson, "On a Case of Intracocular Hemorrhage"; Dr. Hughlings Jackson, "On the Eye Symptoms in Locomotor Ataxy"; Mr. Higgins, "On Hypocleral Cyclotomy." — 8 P.M. Living Specimens: Dr. Gowers, "Optic Neuritis from Intracranial Disease (two Cases)"; Mr. Nettleship, "Double Iritis with a Growth on one Iris"; Mr. J. E. Adams, "Peculiar Opacities in the Vitreous after Injury."

Friday, Oct. 29.

ST. GEORGE'S HOSPITAL. — Ophthalmic Operations, 1½ P.M.

ST. THOMAS'S HOSPITAL. — Ophthalmic Operations, 2 P.M.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL. — Operations, 2 P.M.

Saturday, Oct. 30.

ROYAL FREE HOSPITAL. — Operations, 2 P.M.

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An Address ON THE TREATMENT OF PUERPERAL FEVER.

*Delivered before the Midland Medical Society at Birmingham,
Oct. 20th, 1880,*

By J. MATTHEWS DUNCAN, M.D.

ALTHOUGH only a few years ago it was far otherwise, the remark may now pass unchallenged, that there is no such disease as "puerperal fever," whose treatment is yet my subject for this evening. That name has been for a century in constant use, and indicates, though with deplorable lack of precision, a group of diseases for whose designation it may meantime be, for convenience sake, retained. Whatever designation we may adopt, we experience no difficulty in recognising the diseases meant, and there is no hesitation in ascribing to them the highest place in importance to lying-in women who suffer and die, as well as to medical men who observe and treat. Their baneful influences, including their mortality, exceed those of any other group of diseases of childbed. It is truly said that childbearing proves fatal to every hundredth mother, and it may be added that, of this fatality, the far greater part is due to these diseases. How enthusiastic does the study of them become when we contemplate the reduplicated danger of mothers who have just borne a first child; how grave and awful when we regard the rapidly-increasing perils of mothers who count their children by numbers that rise higher and higher into the physiologically excessive.

It is misleading to estimate the importance of puerperal fever by death alone. The habit of doing so is easily accounted for. Mortality is a result, plain and infallibly ascertained and numbered. The modern science of statistics, and the connected statistical arguments deal almost exclusively with death. In most writings it is implied that escape from early death is recovery—an error which it is only necessary to mention in order to ensure its recognition. Death is a simple result, final, unconditioned pathologically—an end, to which various pathological routes may guide. So-called recovery is not its antithesis in practice, whatever it may be in theory. In many cases so-called recovery is anything rather than restoration to health; it is merely an escape, more or less narrow, from early death. The escape is generally into paths which lead to health ultimately; often it is into paths which lead to death more or less directly, more or less slowly, and after a lapse of months or even years. Recovery as antithetic to death is a very indefinite matter. Puerperal fever ends in death or in survival of the immediate attack. Such survival may be in good health or in wrecked health, or it may be in grave and progressive disease.

A good deal of undesirable mystery and much of positive error has been propagated in this subject by the long-continued and still persistent practice—a mere practice, now, without any rational basis—of regarding puerperal fever as occurring chiefly in epidemics. In its prevalence it has a seasonal variation, which Buchan and Mitchell have traced, and which closely resembles that of erysipelas; but it has no periods of epidemic raging; or, rather, none have been demonstrated. Individual epidemics of cholera, small-pox, scarlet fever, measles, and other diseases, have been well described; cycles of epidemics of these diseases have been pretty well traced, but no such demonstration or tracing has been made in the case of puerperal fever. Histories of many so-called epidemics have been written, but their descriptions fail to prove the reality of their epidemic character. Were this disease prevalent in epidemics so frequent as authors ask us to believe, we should be able to give from statistical data a complete account of them in their individual and in their grouped or cyclical characters, but statistics afford no evidence of the occurrence of any epidemic. The group of diseases called puerperal fever is ever with us, its frequency varying slightly, never rising very high, never sinking very low, always governed by an average. This

average of deaths in every community is an average of awful calamity, which we struggle to diminish by treatment, glad to escape from the task of encountering the additional evil that would be raised by epidemic prevalence.

In a meeting of practitioners such as this I make these preliminary remarks as a mere exordium, well knowing that nothing is required to heighten your sense of the interest and importance of the subject. Medical studies do not blunt the sensibility or harden the heart. Who is there so callous as not to be moved by the enthusiasm of a physician when he stands at the bedside of a young wife suffering, and, perhaps, dying, in giving life and joy to others? All of us are frequently in this responsible position, and I dare to say that none of us feels quite satisfied in it. There is not the vacant, hopeless, observation of acute hydrocephalus, nor the melancholy soothing of cancer, but the restless care of a fever, the watching narrowly with a view to judicious interference, watching, well done in proportion to the depth of knowledge and the quickness of intelligence and the warmth of sympathy; interference, judicious in proportion to the wisdom and experience and skill of the watcher. The wisest feels most deeply the want of more knowledge. The most experienced feels most acutely how little power he has to govern a case, how often he is a mere looker-on.

Our topic for this evening is the treatment of puerperal fever—how to interfere judiciously, how to govern a case, how to conduct mere management. My remarks are thrown into the form of an address, suited, I hope, in some degree, for this occasion. I do not propose to elucidate any special point, to drive home a scientific argument, to suggest a novel treatment. Such are the objects of the communications which will be laid before you during the session. Mine is to give an address according to the invitation with which you have honoured me, not to read a paper. An address has its own useful place in our meetings; but it is never to be forgotten that the work of our societies is not the hearing of addresses, but the attentive listening to, and careful scrutiny of, papers, generally short, and occupying narrow limits, embodying the results of original observation and reflection. An address may be, as this is, an attempt to review the past, and to sketch the present, condition of a great matter.

In puerperal fever, as in most diseases, practice is more based upon theory than upon our often too much vaunted experience. We condemn old practices chiefly because we have new theories. There can be no doubt that this is a just proceeding, if our new theories are not mere fancies but based on increase of knowledge; and accordingly I shall show the connexion of our new treatments with our new theories. However flimsy these theories may be, they are our guides, and they delight and encourage the inquiring spirit of the human mind. Cullen and Heberden based their therapeutics on Hippocratic observation. The Hunters and Laennec on morbid anatomy. The moderns specially on histology and chemistry. Bacteria and sepsin rule us to-day, while mere inflammation has lost its supremacy. We do not see in our change of treatment evidence of any change in the disease, but the reflection of our increase of knowledge.

A great old obsolete plan of treatment is not to be regarded as erroneous or bad, and so contrasted with ours. Such plans were not the fruits of caprice, nor the *ipse dixit* of great and famous physicians, but represented the knowledge and wisdom of their times. I have lived long enough to see the gradual decadence of the antiphlogistic treatment of Gordon, with its venesection and leeching and blistering. Heat of skin, rapidity of pulse, and abdominal pain were the notes of inflammatory disease which was to be attacked and cured if possible. Since these days much confusion of doctrine has prevailed, and there have been many variations of treatment. The view that the disease was a special fever occurring in many forms, such as are described by Ferguson, led to correspondingly various treatments, which were not materially affected by the great phlebotic discovery which in this country we associate with the name of Robert Lee. Indeed, since the days of antiphlogistics, no great therapeutical plan has been common, for no great medical doctrine has prevailed. The profession has relied much on special drugs in the hope of curing rather than treating the disease whatever it might be; and latterly many have devoted themselves to treating symptoms. Some years ago we heard much of medicines to make the pulse slower; now, in accord with our temperature diligence, we have great stress laid on reducing it.

Living among great physicians, and, as a young practitioner, willingly submitting myself to them, I have seen several changes of treatment. In my earliest days, as a hospital resident and for some time subsequently, while bleeding was a decaying treatment, the great remedy was calomel and opium, and I well remember the improvement in the prognosis which was based on the fortunate but rare occurrence of pytalism. Gradually the calomel disappeared, because it almost always produced painful and debilitating diarrhoea, and it was replaced by blue-pill. Then the mercurial disappeared entirely; and, under the influence of the teaching of Graves, opium alone became the great resort; and this medicine still keeps its place as a valuable adjuvant in treatment. While its great utility is incontestable, I feel bound to record that I have often seen it act injuriously from its being used in far too large doses. The last treatment which had a passing pre-eminence was the copious administration of food and alcohol. I have been in practice during the whole existence of this modern and still-surviving plan—not a mere spectator or willing subject of older advisers, but taking an active part in the management of grave cases. Experience has taught me that there is no more delicate work in practice than the arrangement of the food and drink; and no part of treatment have I seen so overdone, with the result of producing intense present discomfort, as well as an injurious influence on the progress of the cases. This mismanagement has always been the excessive administration of alcoholic stimulants, apparently under the belief that if a little is good more is better, and that excess is scarcely attainable and not to be feared. The practice was derived from London, and I hope London will have the honour of putting an end to it. Stories of quantities administered, that are scarcely credible, are probably still in all your memories; and I can testify from my own knowledge that they are not exaggerated. Great practitioners boastfully narrated how much they had succeeded in pouring into their patients, and this when they were not in a short critical period of weakness; and the brandy practice and boasting extended even to the treatment of babes!

Although I have seen no treatment by ipecacuanha, yet there have been in my time several "cures" introduced, which have fortunately passed quickly into oblivion. The search for "cures" is, as yet at least, a wild-goose chase. We have a long course to pursue in acquiring intelligence regarding the disease to be cured before we can hope even for a well-established plan of treatment.

It is not uncommon, nowadays, to confine the name of puerperal fever to septicæmia and pyæmia occurring after delivery. It appears to me, however, to be better, even on mere theoretical grounds, to include all the ordinary diseases of the lying-in chamber, which are accompanied by fever, and which may be fatal. In practice we cannot meantime maintain the limitation to septicæmia and pyæmia, because in many cases we cannot be sure of our diagnosis, and because a case may begin as one disease and be complicated with another as it advances.

In addition to septicæmia and pyæmia, which are the result of the growth in the blood of certain micrococci having the power of rapidly multiplying, we have sapræmia, or mere poisoning by the chemical products of putrefaction, and we have simple or traumatic inflammatory fever.

Simple inflammatory or traumatic fever is often very alarming on account of the severity of the symptoms, also on account of the extent of the inflammation. There seems to be in addition to the influence of traumatism, in some cases, a temporary inflammatory diathesis, the region of the womb being not the only one attacked, but, in addition, the kidneys or the organs in the chest, or the encephalon, or all at once. Sometimes the inflammation attacks the remote parts, while the womb and its neighbourhood are unaffected by it. But most frequently the disease is a parametritis, or a perimetritis which may become so extensive as to form a general peritonitis.

In these cases, when pain is great, the pulse quick and hard, the skin hot and dry, there is generally much benefit derived from the old antiphlogistic regimen and treatment; but now the regimen and treatment are not used with what we may call the rigour and severity of our predecessors. Patients are generally allowed soup daily, in addition to the appropriate quantity of slops, that is, bread and milk and tea. Venesection is rarely practised. I have neither used the lancet, nor do I remember hearing of its use for the last twenty years. Leeching is frequently resorted to, the site being above the groins on one or on both

sides, that side of course being preferred in which there happens to be most pain. Not fewer than a dozen leeches are applied, and the bleeding may be encouraged to a loss, always only vaguely estimated, and varying according to the hardness of the pulse and the constitutional condition of the patient. The leeching may be repeated if necessary. It is generally followed by well-marked relief of pain and some improvement of the general condition.

While bleeding is most relied upon in the earliest days of the fever, blistering has occasionally a place in the later days. Poulting is always used. The very painful turpentine stupe is a common application; but in some cases the blister is of great value. It gives much less pain than the turpentine stupe, often, indeed, very little pain, and its effects are not so transitory; besides, it causes a copious transudation of serum and subsequently of pus. The blister should be large, even to covering the greater part of the abdomen between the umbilicus and pubes. It should be an old-fashioned rising blister, the *emplastrum lyttæ*; not such blistering as is nowadays much, and perhaps usefully, employed in other cases, where a blistering fluid raises very rapidly the epithelium, producing little irritation, the skin being only slightly and temporarily reddened. Great irritation and effusion of serum copiously are what is desired here.

Opium is almost always used, and there are great variations in the quantity given, and in the preparation that may be preferred. A good dose of one or two grains at bedtime, to procure sleep, is an almost constant prescription. Advantage is often also found in using the drug during the day if it does not stop the secretions, dry the mouth, and destroy the inclination to take and the power to digest food. In cases where there is much pain, and especially a state of nervous agitation of body and restlessness of mind, the repeated daily use of the drug is most valuable. Many rely upon the copious administration of opium, without any regard to the peculiarities of the case, considering the continued moderate narcotism it produces as the most favourable condition for the patient's recovery. I do not adopt this view of the utility of opium and its preparations, and therefore do not press its use as an object in itself, but use it freely when it does not disagree, as a stimulant narcotic to allay restlessness, to soothe pain, to procure sleep.

In severe cases, with much local peritonitic tenderness, a mercurial is advantageously combined with the opium. Many have a special confidence in the calomel, but I hold that it is generally best given as the simple blue pill, about six grains in the course of the day. Or the blue ointment may be applied on the abdomen or elsewhere. Should evidence of hydrargyrimus appear, the further action of the drug is checked by partial or complete discontinuance of it. Many eminent practitioners, especially in Scotland, make no use of mercurials in any form of puerperal fever.

Ever since I began practice there has been less, and still less, of what is, or used to be, called heroic practice in inflammatory cases; and now it is not uncommon to see them indiscriminately treated by opium and stimulants, with poulticing locally. My own judgment of this important practical matter is that a large number do well on this plan if it is conducted not heroically but gently; that, indeed, in many delicate women, with attacks of slight severity, it is the best plan of treatment. But the antiphlogistic regimen and treatment, as I have sketched it, is proper for the majority of cases, demanding of course such modifications as may adapt it to the peculiarities of each individual example.

The next class of cases, that of sapræmia, or of simple putrid intoxication—poisoning not by an organism multiplying in the blood, but by the passing into it of the chemical products of putrid decomposition—is one upon which much light has been recently thrown, and with the most beneficent results in practice. Like the other forms of the so-called puerperal fever, this I shall treat as a separate entity, and it frequently is so. But it may be combined with the traumatic fever of inflammation, and it is especially liable to be combined with septicæmia and pyæmia. Indeed it has long been, and still is, the habit to speak of septicæmia and pyæmia as diseases of putrefaction, but this is a mistake. Putridity of the discharges is not an essential part of these diseases at all, though it often accompanies them. The organisms which cause septicæmia and pyæmia probably take no part in putrefaction. They live in the discharges, and are conveyed or pass into the blood, where they multiply indefinitely. The organisms which cause

putrefaction, whether the bacterium termo, or others in addition, may pass into the blood with the putrid fluids to produce sapræmia, but they do not survive, far less grow therein.

We have, then, in sapræmia, when uncomplicated, a very simple problem. Putrid ichor is absorbed or flows through the uterine sinuses, or otherwise, into the circulation. Its poisonous constituents are eliminated rapidly from the blood; for if the supply is stopped the sapræmic phenomena quickly disappear. When once in the blood it does not increase in it, ferment-like, independently of any further supply. Sapræmia is kept up by a continuous supply of the poison. It disappears when the supply from without is stopped. To stop the supply is the problem of cure.

Fætor of the discharges has to be searched for in all cases of puerperal fever. It may be easily discovered by its strength; or it may be concealed, especially if the patient is kept very clean, and if vaginal deodorising washes are used. The finger, if there is suspicion, or even the whole hand, carefully carbolised, may be passed into the uterus, to find the fætor and its cause, and peradventure to remove them. There may be putridity of discharges alone, but generally there is some decomposing substance, and more than mere bloodclot, a patch of membrane, and probably of chorion, a small bit of placenta, or some hypertrophied decidua mass. Sometimes the putrid fluid is retained *in utero*, and it may be discharged in great gushes, flowing at successive intervals.

(To be concluded.)

CASES OF ANEURISM ILLUSTRATING DIFFICULTY IN DIAGNOSIS, AND THE USE OF ESMARCH'S BANDAGE.

BY WALTER RIVINGTON, M.S. LOND., F.R.C.S. ENG.,
SURGEON TO THE LONDON HOSPITAL.

(Concluded from page 610.)

THE more we see of aneurism the more we see how liable the very best surgeons—may I add the very best physicians?—are to make mistakes in diagnosis. Perhaps it is as well occasionally that it should be so, for the greatest misfortune that can happen to any practitioner is that he should deem himself immaculate. An aneurism may be mistaken in several ways. The surgeon may be fully alive to the possibility of the tumour before him being an aneurism, but may consider that the evidence points to another affection more strongly, as, for example, to malignant tumour. The conviction may or may not be strong enough to lead to action on that basis. In its minor subdivision this mistake was exemplified in the case of the aneurism of the anterior tibial artery. The reverse error of mistaking a malignant tumour for an aneurism is not uncommon. The surgeon may tie, or be about to tie, a large artery on this supposition. One instance of this kind has come under my observation. The artery was not tied because consultation suggested the right diagnosis. In my paper on Intra-orbital Aneurism, in Vol. 58 of the Medico-Chirurgical Transactions, I have adduced some instances in which the common carotid artery has been tied for malignant disease in the orbit, mistaken for aneurism. A paragraph from the paper having appropriate relation to the topic of my present communication may here be quoted:—

“Encephaloid cancer, when very vascular, may be, and has been, mistaken for an aneurismal tumour, for it may possess both pulsation and bruit. Its onset is often obscure, and the case will be still more obscure if the orbital tumour exists alone, and if its development has followed an injury. Loss of vision, exophthalmos, pulsation, noise in the head, and bruit, ceasing when the carotid artery of the corresponding side is compressed, are symptoms of cancer and symptoms of aneurism. Moreover, the encephaloid tumour, projecting outwardly, may yield a soft, semi-fluctuating sensation, peculiarly liable to deceive even the experienced practitioner. In M. Lenoir's case the carotid artery was tied under the impression that the tumour was aneurismal.

The disease had followed a fall on the back of the head, and the only symptoms of differential value were the light whispering character of the bruit, the irreducibility of the tumour, and its extension towards the temporal fossa. Pulsation may be present without bruit, and the diagnosis will then be more obvious. In Mr. Nunneley's case of cancer of the orbit the carotid artery was tied, and this checked the progress of the disease, various opinions having been expressed in regard to the nature of the case. Its exact character was only ascertained at a late period of the disease. Here the diagnosis of cancer was rendered probable by the existence of multiple tumours, and by the continuation of the orbital tumour into the zygomatic fossa. The existence of a tumour in the left temple, in Szokalski's case, continuous with the orbital tumour, and the subsequent appearance of a tumour on the left iliac crest, as well as the slight effects of ligature, are suggestive of cancer.”

A very puzzling case of aneurism in which the nature of the tumour was for some time doubtful came under my care not long ago at the hospital. The varying conditions of the tumour gave rise to two distinct schools of thought amongst the observers of the case, and I learned from Mr. Treves, then the surgical registrar, that the students were divided into two hostile camps, one camp championing the view of abscess, and the other the view of aneurism. My own mind was kept for a week in a state of oscillation. The case was one of aneurism at the bend of the elbow, and is so instructive that some account of it may be acceptable.

Herman C—, aged sixty, a feeble, worn-out man, who had been at one time a large speculator on the Stock Exchange, was admitted into the London Hospital early in February under the care of Dr. Hughlings Jackson. He was suffering from heart disease, and a loud systolic murmur could be heard with the stethoscope. Three weeks before admission he had noticed a lump at the bend of the left elbow, and had experienced a feeling of soreness in all his fingers, and in his thumb, which became blue from congestion. At this time the tumour was of the size of a hen's egg. It was situated underneath the deep fascia, and just at the bifurcation of the brachial artery, which lay in front of it. One-third of the tumour was on the inner side of the bifurcating brachial, and two-thirds on the outer side. An impulse appeared to be communicated to it from the brachial artery, which could be traced over it to its bifurcation. On grasping the tumour between the fingers, the inner side expanded, not the outer. The pulse was feeble at the wrist. Pressure on the inner side of the tumour checked the radial pulse; pressure on the outer side had no effect. The notes taken by Mr. Treves state that, “on compressing the brachial artery, and letting it go, pulsation at once returned to its original condition. There was no gradual filling by several successive beats, but at one bound the tumour became of the same size, and as vigorous as ever. Stopping the brachial did not appear to diminish the size of the tumour in the least. The bruit was soft, and an exactly similar one could be produced over the carotid by pressure with the stethoscope. The measurement round the limb over the aneurism was 10½ in. on Feb. 8th. By the 15th the tumour had increased in size; the linear thrill over it was not so distinct, and the bruit was confined to the line of thrill.” Mr. Treves's notes add, “There is apparently now no lateral pulsation. Pulsation is much more marked on the inner than on the outer side. Abscess theory now pretty generally held.”

This account represents the condition of the tumour when the patient was first seen by myself at the request of Dr. Hughlings Jackson. On careful examination I could not satisfy myself of the existence of lateral or expansile pulsation, either in the extended or flexed condition of the elbow-joint, nor could I hear a bruit. The brachial could be readily traced to its bifurcation over the elastic swelling. I was unable to offer any decided opinion as to the nature of the case. A few days later the patient was transferred to my care, and was kept for more than a week quiet in bed, with ice applied to the tumour. On one occasion I thought I detected a heaving movement in the tumour, and heard a slight bruit, but both were so gentle that it was impossible to form any definite diagnosis. The glands in the axilla were not enlarged. The tumour might have been anything almost—aneurism, malignant tumour, or innocent tumour, or abscess. In favour of aneurism were the earlier history of the case, the situation of the tumour, and the coexistence of cardiac and (as I thought probable) aortic disease. At this time the tumour was increasing in size, for on the 25th it

measured twelve inches and a half in circumference, and had begun to press upon the median and ulnar nerves. There was a peculiar numb feeling in all the fingers, and in the thumb of the left hand. The patient could not close his hand well; on being asked to clench his fist, he did so in a very laboured and imperfect manner. The contour of the swelling was less regular, and seemed to have become flattened, the surface being more extensive and the margins more abruptly defined. On the 27th the diagnosis was still further complicated by the occurrence of rigors, lasting for three hours—from 10 P.M. on the 26th to 3 A.M. on the 27th. The temperature rose and the tumour increased in size. No satisfactory explanation of these symptoms could be offered, but it was stated that the patient had had ague years ago, and had been constipated for the last day or two. My impression is that patients who are the subject of heart disease and disease of the aorta are more prone to rigors than healthy persons, and I believe also that rigors occur occasionally in patients with fatty heart who are approaching their dissolution. At least I have met with one or two cases of rigors which could not be explained on any other basis.

On the 4th of March a careful examination under ether proved that the tumour possessed obvious pulsation. During extension of the elbow-joint, when the fascia covering the tumour was stretched, no pulsation could be felt; but when the elbow-joint was flexed a heaving movement on the inner side became obvious. The existence of bruit was doubtful. There was no pulse at the wrist. The following day both pulsation and bruit were very distinct. I found the pulsation evident over the whole tumour and of an expansile character, and a moderately loud and rough bruit. This fresh aspect of the case at once determined the diagnosis of aneurism, and I gave instructions for the application of digital compression to the brachial artery without delay. Digital compression was carried out under the superintendence of my house-surgeon, Mr. J. R. Andrew Clarke, who had paid great attention to the case throughout, and succeeded in arresting the bruit and pulsation after twelve hours' application. Hypodermic injections of morphia were given during compression. The day after the apparent consolidation of the tumour the patient was attacked with diarrhoea, and, when that had ceased, with hiccough, which caused him great distress, and would not yield to treatment. From this time he gradually sank, and he died at 5 A.M. on Monday.

The post-mortem examination, which was conducted by Mr. McCarthy, showed extensive mitral disease with large vegetations attached to the valves, a little basic pneumonia and pleurisy which had supervened shortly before death. A large aneurismal dilatation of the first part of the arch of the aorta, including also a portion of the transverse part, was found. The kidneys were fatty, and incipiently granular. In the spleen were signs of embolism. A good deal of serous fluid existed beneath the pia mater. On dissecting the parts at the bend of the elbow the brachial artery was found passing over the tumour, and dividing into radial and ulnar. At the point of bifurcation, on the under aspect of the vessel was a true aneurism, the size of a small bean. This had burst at some time or other, for it was found to communicate by a tiny slit-like hole with the tumour behind. The tumour was filled with coagulated blood of the consistence of red currant-jelly, but at its anterior part there was a mass the size of a bantam's egg of laminated fibrin, perfectly decolorised and free, in the blood cyst. The wall of the aneurism was formed by the condensed fascia in the intermuscular interspace.

It is probable that the false aneurism resulting from the rupture of the small true aneurism had been undergoing consolidation, and that the laminated fibrin which was the result of this process had been displaced, perhaps by excess of clinical inquiry, thus allowing blood to pass beyond it. The varying symptoms of the tumour were due to the blocking of the aperture at one time and its freedom at another. The inner side of the sac was very thin. On the radial artery was a second very small fusiform aneurism in process of formation.

A more serious mistake is to overlook aneurism altogether. The kind of cases in which this is apt to occur is where the aneurism is not in its usual position directly over the course of a large artery, but on one side, or seemingly altogether away from the artery. In my second case the aneurism of the popliteal artery was on the inner side of the limb, and when small and, possibly, without any very marked pulsation, it was regarded perhaps as an enlarged bursa connected

with one of the tendons. Another example of this kind came under my observation some years ago. I was asked to see a patient, and give my opinion as to the nature of a swelling which he had on the anterior aspect of the left thigh just above the patella. Whenever I am asked to look at a tumour, especially in the hospital, I always direct my mind in the first instance to aneurism, wherever the tumour may be situated. The case to which I refer might have been an enlarged knee-joint due to distension of the synovial pouch under the quadriceps tendon, or it might have been an abscess, for which it had been mistaken, and almost treated by incision. My own mind being already on the *qui vive*, and having an aneurismal bias, I at once examined for pulsation and bruit, and found both very plainly marked. It was an aneurism of the popliteal artery, which had come forward to the front of the limb, instead of remaining in the popliteal space. I mention this and the other cases, including one of my own, in which the diagnosis was either altogether at fault or uncertain, with the object of throwing out a useful hint to others. All the cases were under surgeons of reputation and experience, and when we find the great luminaries of surgery—men like Liston and others greater clinically than he—liable to be deceived, how much more the lesser lights which circle near them, and before them "pale their ineffectual fires." Then is suggested the practical question, How can such mistakes be avoided? My belief is that error would be much less common, if practitioners generally made it a rule in a case of tumour to answer the question first of all, Is this tumour an aneurism? and examine for pulsation and bruit as a routine exercise. When a tumour is over a large artery almost everyone instinctively makes the inquiry, but if it is away from it or at the side of it, or even behind it, or over a small artery, or if the mind of the practitioner is off its guard, very frequently abscess is suggested and aneurism is overlooked. Routine inquiry would obviate many mistakes. Then, if after inquiry the diagnosis be doubtful, it will be a good second rule to treat the case as an aneurism by measures which do not involve any detriment to the case if it should prove to be an aneurism after all. In situations where it is practicable, and in conditions under which it is not prejudicial to apply them, Esmarch's bandage, digital and instrumental compression, should be brought into requisition to throw light upon the case. The effect of Esmarch's bandage in emptying the sac of an aneurism, and rendering it flaccid, may remove any remaining doubts.

DIPHTHERIA AT ST. GEORGE'S HOSPITAL.

By T. WHIPHAM, M.B.,

PHYSICIAN TO THE HOSPITAL.

(Concluded from p. 650.)

CASE 5.—On April 14th, 1880, Alfred A—, aged one year, was admitted, under the care of Mr. Pick, into the Drummond ward (on the next floor and immediately above the Queen's ward, in which the patient Annie B— died on the morning of the 25th) on account of an old fracture of the femur.

This child was noticed by the nurse to be ailing on the evening of April 25th. Next day it was much worse, and considerable swelling was observed on both sides of the neck, and of the parts below the angles of the lower jaw especially. The throat was freely and frequently sprayed with a solution of sulphurous acid (1 in 40), and eight ounces of port wine were ordered, with as much milk as it could take; the child refused beef-tea. The nurse reported that it would not drink more than three-quarters of a pint of the milk during the day.

On April 27th, symptoms of asthenia became hourly more manifest, and he died at 2.15 A.M. on April 28th. The temperature was not observed, and no urine could be obtained for examination. No post-mortem was permitted, but Mr. Shield, the house-surgeon, examined the mouth after death, and found the fauces and tonsils covered by diphtheritic membrane.

It was subsequently ascertained that the mother of this child,

who was with him during his fatal illness, was afterwards attacked with diphtheria, but happily recovered. His nurse-maid, who was admitted with him into the hospital, and who nursed him, complained of sore-throat on the day of his death. She had a severe attack of follicular tonsillitis, and in a few days was perfectly convalescent. No false membrane existed in her case, nor had she any symptoms of diphtheria.

With a view of tracing if possible the origin of the disease in the case of the C— children, I applied to my colleague, Dr. Barclay, medical officer of health for Chelsea, who informed me that two deaths from diphtheria were reported to him as having occurred on January 29th and February 14th in Victoria-yard, which is distant about half a mile from King-street, but since the latter date he knew of no fatal case of the kind until April 19th, when the C—s were attacked. Dr. Barclay also informed me that on the cases being reported to him he at once made inquiries at the school; no children were known to have had diphtheria; nor have any of them been subsequently affected. By the kindness of Dr. Barclay I accompanied him on May 7th and inspected the house No. 22, King-street. We found the C—s occupied two rooms on the ground floor, which were fairly clean and lighted by good windows, the house being one of the better class of artisans' residences, and the street of good width. They also had the basement floor, on which were two rooms—a kitchen in front and a small room behind it. In this small room, which contained by measurement 560 cubic feet, slept the four children and their uncle, a lad of about twenty; the window of this room, which did not close accurately, opened into an airy back yard. On the right (in the yard) was a water-closet, on the left was a zinc cistern with a broken wooden cover, and between the cistern and the water-closet was a drain, which on the occasion of Dr. Barclay's first visit was uncovered by the bell-trap. Many repairs had been executed previously to our visit on May 7th (for instance, a defective portion of the water-closet pipe, as mentioned below, had been cut away and replaced by new), but it was elicited from the occupant of the upper part of the house that the supply pipe to the water-closet had leaked for some time, and that in consequence the water supply to the closet had been, to say the least, very defective. The cistern itself was perfectly clean, and was so when Dr. Barclay examined it at the time of the outbreak; it contained no waste-pipe, and the supply appeared to be constant. There was one outlet from this cistern, which supplied the house by means of an ordinary tap, which was in good order. The pipe was then carried across the back yard, a distance of about fourteen feet, and terminated in the water-closet. Immediately outside the closet and just above the untrapped drain, which evidently came direct from the water-closet, was the leak above mentioned. We learned further that another family occupied the upper part of this house, but they all had escaped infection. The family of C—s were seven in number; the father and mother slept in the room immediately above that occupied by the four children and their uncle; and of these, three children were infected and died—one in the house and two in St. George's,—while the remainder of the family escaped.

As soon as these children were found to be ailing—i.e., April 19th or 20th,—the fourth, a boy, was sent to No. 8, King-street, on the opposite side of the street and some distance further down. On the evening of May 1st, a girl aged sixteen, daughter of the occupier of the house No. 8—who used to be away all day at her work, about a mile and a half distant, in a neighbourhood in which no diphtheria is known to have occurred,—complained of pain and swelling below the angle of the jaw on the right side, and on the evening of May 5th died of diphtheria. On these premises were two cisterns: one solely for the supply of the water-closet, and placed above it in the back yard; the other, a slate tank, which was used for the house, was in a back room the dimensions of which were greater than those of the small room in which the C—s' children slept. The cistern was a large one, and was raised on posts, so that the top of it, which was unprotected by any cover, was within about six inches of the ceiling. The occupier, who used the room as a carpenter's shop, informed us that about two years ago he tried to clean out this cistern, but that the deposit from the water had choked both the pipe to the kitchen and the tap; that he had experienced so much difficulty in clearing the pipe and tap that he had made no subsequent attempt to clean the cistern. No further defect could be discovered in the sanitary arrangements of this house, and the occupier assured us that no bad smells arose from the drain (trapped) leading from a sink situated immediately below the cistern.

Dr. Barclay, on May 7th, received notice of the fatal case in No. 8, King-street; and was further informed that from the grating communicating with the main drain at the top of the street, which was about a hundred yards from No. 8, but less than half that distance from No. 22, foul smells constantly arose, which annoyed the inhabitants of the street. At the time of our visit, however, the street had been well watered with carbolic acid, the smell of which overpowered everything else, and we were unable to detect any foul odour arising from the grating in question.

An important question arises in connexion with these cases—viz., as to the source of the infection. With regard to the patients in the hospital perhaps the most remarkable is that of the girl B—, who was in Queen's ward with pneumonia. The disease was presumably conveyed to her by the child E. C—, who lay in a bed nearly opposite for two hours and a half, on April 21st. In making this statement, however, it must be mentioned that a child came under Dr. Dickinson's care into Crayle ward, exactly opposite to the Queen's, on April 12th, and died next day of diphtheria, and that the two wards are in the charge of one head nurse. If the disease was conveyed to B— from Dr. Dickinson's patient, the period of incubation must have been at least eight clear days; if, on the other hand, she was infected by the child C—, the incubation period was very short—i.e., the child was admitted about noon, and B— passed a very restless night on April 21st–22nd, with return of her delirium, unconscious evacuation of fæces and urine, and this after having shown very decided symptoms of improvement in the earlier part of April 21st. In the majority of recorded cases the period of incubation of the disease was short, and the presumption, I think, is that the patient B— was infected by the child E. C—.

In the case of the child A. A—, who was attacked while under treatment in a surgical ward, it has been stated that this (the Drummond) ward was on the floor immediately above the Queen's ward, where the patient B— died on the morning of Sunday, April 25th, and that the child was noticed to be ailing on the same afternoon. It is therefore possible that the infection spread from the one floor to the other, but if so it is a noteworthy fact that no other patient in the Drummond ward took the infection. So far, however, nothing is proved by it, for instances are of frequent occurrence in which diphtheria attacks one or two persons only in the same house, all the inmates of which are in constant communication. The escape of the nursemaid of this child and that of the boy in the C— family, as recorded above, are cases in point.

There was, however, another possible origin of the disease in the case of this child. In the Princess ward, which is opposite to the Drummond, an extra night-nurse was in attendance on a special case, and during the illness of probationer S—, she was directed to take beef-tea, &c., to her, she being isolated in a room on the top floor at the opposite side of the building. During the night of April 24th and 25th this night-nurse at frequent intervals went backwards and forwards between the Princess ward and the room where the probationer lay. At 5 A.M. on April 25th she crossed the Drummond ward in order to fetch a pail from the scullery, and walked straight out of this ward again into her own ward (Princess), without stopping even to speak to anyone.

A third possible source of infection in the case of the child Alfred A— was suggested, and for a time accepted—viz., that probationer S—, after the death of the C— children, visited the Drummond ward, and so carried the infection with her. On careful inquiry, however, I learned that the probationer invariably went to her own apartment by the staircase on the men's side of the house (the Drummond ward being on the women's side); that on the night when the C—s died no one saw her on the women's side, and that there was no reason for her having departed from her usual custom of using the staircase on the men's side.

Further, the superintendent of nurses informed me that, to her certain knowledge, the probationer after leaving the bodies of the two children in the separation ward went immediately upstairs to her own room, and changed all her clothes. These she carried down by the same staircase to the disinfecting room on the basement, where they were locked up by the superintendent herself.

What, then, was the source of infection in the case of this child in the Drummond ward? Did the infection spread

upwards from the Queen's ward on the floor below, or did the night-nurse, who was in constant attendance upon the probationer, convey it to the child by merely crossing and recrossing the Drummond at 5 A.M. on April 25th? If so, the period of incubation must have been a matter of, at most, twelve hours; while the infection must have been conveyed by a person, who had been in contact with the disease, passing at some little distance from the foot of the child's bed. The present state of our knowledge of diphtheria forbids our denying such a possible source of infection. I cannot, however, but think it more probable that the disease was communicated by the patient B—, who died in the ward below on the morning of April 25th, and who showed symptoms of the disease two days previously. In confirmation of this theory it should be stated that both the Queen's and Drummond wards are at the north side of the hospital, and that the main staircase runs immediately outside the door of each. In the ordinary course of events the ventilation would be upwards from the Queen's to the Drummond. The doors of the wards in St. George's are always open; there would, therefore, be more or less direct communication between the two.

In this supposition I am borne out by a remark contained in an extremely interesting paper in St. George's Hospital Reports, vol. ix. p. 706, by Dr. William Ogle. "So far as my experience goes," he writes, speaking of contagion, "diphtheria requires, as a rule, subject doubtless to no few unexplained exceptions, a very much closer and more prolonged intercourse than other zymotic diseases." It is true, however, that his remarks apply to diphtheria "as it ordinarily presents itself in country places"; and he goes on to say that "the ordinary social intercourse between neighbouring cottages is seldom close and intimate enough to effect the transmission." Such being the result of the experience of one who has seen much of diphtheria, it seems far more probable that the child in Drummond was infected from the ward below, than that he contracted the disease from a nurse who merely crossed the ward at some distance from his bed.

Apart from the interest which is necessarily attached to the period of incubation in zymotic diseases, and which, so far as diphtheria is concerned, remains doubtful in these cases, any facts bearing on contagion are of importance. It may not, therefore, be out of place to call attention to the fact that probationer S—, who nursed the C—s, exposed herself unnecessarily during the two days on which she was in attendance on them, for by her own confession she was guilty of the folly of kissing them. On the other hand, the mother of the children, who was also in constant attendance on them, hung over them and, as I am informed, repeatedly kissed them, escaped. Further, probationer S— and another nurse occupied the same bedroom, and the two occupied the room together so late as the night of April 23rd, when the probationer was already suffering from sore-throat. Until Saturday at midday probationer S— took her meals as usual in the nurses' dining-room with her fellows. None of these took the disease.

We have also this fact before us, that of four persons who were in constant attendance on a most malignant form of diphtheria, none of whom were known to have previously suffered from the disease, two became affected while the other two escaped—i.e., 1st, probationer S— and their mother nursed the C— children, and both kissed them; of these two the probationer died, while the mother was unaffected. 2nd. The nursemaid and his mother attended the boy Alfred A—, and the mother contracted the disease, while the nursemaid had merely follicular tonsillitis. It would be manifestly absurd to attempt to generalise from one or two cases, but at the same time the above facts are remarkable as having a possible bearing on the question of idiosyncrasy.

The origin of the disease in the case of the young woman who died at No. 8, King-street is obscure. Three possible causes have been mentioned: (1) That she might have contracted the poison from the grating of the main drain, which emitted foul odour; (2) that the boy C—, who was removed to the house from No. 22 on April 20th, conveyed the infection; and (3) that the disease was due to the unsanitary condition of the cistern in the back room of the house No. 8. It is of course impossible to form any definite opinion as to which of the three possible causes was operative in this case; but probability attaches itself to the first. It seems unlikely that the boy C— conveyed

the disease, seeing that a period of eleven days elapsed between his removal to the house and the first symptom of diphtheria in the girl; moreover, the child himself escaped entirely. With regard to the third possible cause it must be noted that, with the exception of the girl who died, none of the inmates of No. 8, who all drank of the water from this cistern, contracted the disease.

The difficulty of tracing the origin of an outbreak of diphtheria in a large town is of course great, and much caution must necessarily be exercised in drawing conclusions under doubtful circumstances. So far, however, as the investigation could be carried, the facts seem to point to the origin of this outbreak in the inhalation of sewer gas in the case of the inmates of the house No. 22, King-street. The source of the infection at No. 8 is very doubtful, but the poison was in all probability derived from the escape of foul gas from the grating of the main drain in the street; or was possibly conveyed by the child of the C—s, who was was received into this house from No. 22, where his sisters were suffering from the disease.

I may add that Mr. William Keen and Dr. Buchanan, whose practice lies in the neighbourhood of these houses, have, in reply to my inquiries, informed me that they had no knowledge of the existence of any other cases of diphtheria at the date of this outbreak. Measles, however, had been very prevalent in the West-end of London since the previous Christmas.

The result of treatment in the above cases was most unsatisfactory. The disease was clearly of a very malignant character, and stimulating as the treatment was, it seemed utterly powerless in arresting the fatal effects of the poison.

Green-street, Grosvenor-square.

FIVE YEARS' SURGICAL WORK IN THE CARDIFF INFIRMARY.

BY ALFRED SHEEN, M.D.,
SURGEON TO THE INFIRMARY.

(Continued from p. 616.)

THE following table exhibits the whole of the cases of

DEATH AFTER AMPUTATION.

Part.	Age.	Sex.	Time after Operation.	Cause.
Both legs	31	M	Few hours	Shock
" " " " " "	38	M	21 days	Pyæmia
Upper 1st 3rd thigh...	18	F	24 hours	Shock
Mid-thigh	21	M	3 hours	"
Lower 1st 3rd thigh...	52	F	1 day	"
Mid-thighs (both)	40	F	9 hours	"
Lower 1st 3rd thigh }	60	M	1 hour	"
Mid-forearm				"

The injury in each case was the result of railway smash.

Of amputations during this period, I have had 35 for accidents, and 11 for disease. There have been 7 deaths amongst the former, and none in the latter class. From the annexed tables it will be seen that, of 5 amputations in the forearm and arm, all recovered; and of 9 amputations below the knee, all recovered, except two cases of removal of both legs, both of which died. Then there are 7 thigh amputations, with 4 recoveries and 3 deaths, all the deaths occurring within twenty-four hours. The list of traumatic amputations is completed by 2 compound cases, both of which died within twelve hours of admission. In the thigh cases all the recoveries were under twenty years of age. Excluding the minor amputations of fingers and toes (10), there are 7 deaths in 25 cases, or 1 in 3½. Classifying these according to age brings out the following results:—

Cases.	Died.	
Under twenty....	10	1 ... Or 1 in 10.
Under forty.....	8	3 ... Or 1 in 24.
Over forty.....	7	3 ... Or 1 in 24.

These results agree in the main with those published by Mr. Callender, Mr. Bryant, and others, except in the case of those from twenty to forty years of age, where my death-rate is much higher; but this may have been from accidental circumstances, and, indeed, taking the small number of cases here dealt with, such statistics can scarcely be said to be of much value one way or the other.

Mr. Bryant states that "amputations for *acute* suppurative disease are most fatal, and should only be undertaken when strong necessity exists." In case No. 32—D. B.—, aged eighteen, compound fracture of both legs—the left leg became gangrenous on the ninth day, with profuse suppuration; the temperature was 104.2°, and the pulse 140. Next day the pulse was 160, the temperature 104.4°, and the patient was suffering intensely. Amputation had been advised on admission, and it was only now, after earnest entreaty, that he consented to have the limb removed (without his father's permission, however), and the result was almost marvellous. The operation was done antiseptically at 3 P.M., with the temperature at 104°. At 9 P.M. the pulse was 134, the temperature 99.6°, and the improvement in the general condition of the patient was remarkable. For eleven days there was a good deal of discharge, from some failure, probably, in carrying out the details of the antiseptic treatment; but the patient was discharged, quite well, in a little over one month.

In almost all the amputations here tabulated, antiseptics in some form or other have been employed, the use of the drainage-tube being universal, as also Esmarch's bandage; in suitable cases silver wire or carbolic catgut sutures, and carbolic catgut ligatures in all cases. In those cases where the antiseptic system has been carried out (spray, gauze, &c.), I have been especially pleased with the results. In one case—a Syme's amputation for disease of the tarsus—terebene was used, the lint being kept constantly saturated with it, as suggested by Mr. Waddy. The operation was performed on August 16th, 1877. On the 22nd there was a somewhat disagreeable odour, and the dressing was removed for the first time on the 27th, when there was a slight discharge of pus. The temperature all this time was never higher than 99°. The terebene was then replaced by carbolic-oil dressing. From Sept. 6th to 8th the stump was tender, and there was an erysipelatous blush, with red lymphatics, and a temperature of 102° to 103°. Tincture of aconite, one minim every quarter of an hour four times, and then every hour, was prescribed; and the temperature was normal on the morning of the 9th, and remained so. The aconite was then given at gradually increasing intervals, and stopped on the 13th. On Sept. 20th there was a repetition of this state of matters, with, on the 21st, pulse 112, temperature 103°. Aconite was given as before. In the evening, pulse 92, temperature 100°; and on the 22nd, pulse 80, temperature 99.4°; evening, pulse 80, temperature 97°. In May, 1878, he had a capital stump, on which he could jump without any pain.

The "Carden" E. S.—(No. 10), aged thirty-two, in April, 1878, died in May, 1880, of phthisis. In the "Carden" W. S.—(No. 11), aged forty-eight, hæmorrhage came on a few hours after the operation, necessitating a reopening of the stump to search for the bleeding vessel; this was not found, but there was no further hæmorrhage. The popliteal aneurism was dealt with antiseptically, and the temperature was normal throughout, except on the evening of the operation, and next morning, when it reached 100°. The case of J. J.—, aged fifty-one (No. 5 of amputations for disease), was treated antiseptically; the temperature was normal throughout; there were four subsequent dressings; and the patient was up in eighteen days.

R. H.—(No. 32). There was some tendency to a conical stump, which was obviated by means of a loop of strapping, and a weight attached to this and hanging over the end of the bed.

T. M.—(No. 11). Drainage-tube and carbolic oil. No rise of temperature throughout.

W. S.—(No. 13). No rise of temperature.

G. H.—(No. 9). Amputation through metacarpal bones; thumb left.

R. H.—(No. 20). Styptic colloid and drainage-tube. On removal of styptic the line of incision was completely healed, and without the slightest disturbance of its edges.

W. P.—(No. 10). Amputation through wrist, leaving the thumb, and obtaining a single flap from the palm.

D. B.—(No. 32). Antiseptic. No constitutional symptoms.

T. R.—(No. 12). Drainage-tube and styptic colloid. Styptic removed on the fourteenth day. Wound partially healed. All five catgut ligatures intact except one, which had cut through the tissues, but was still whole. Five days after, "sutures giving way."

T. R.—(No. 27, "Carden"). Antiseptic. Eight subsequent dressings. Detained on account of slow healing of superficial granulating surface. Slight bagging of pus on

the eighteenth day in this case, and the temperature went up for one day, but was otherwise normal.

Some years ago, at one of the Societies' meetings, a discussion took place on the value of different kinds of ligatures, which, I think, was called the "battle of the ligatures." If my memory serves me right, the catgut ligature came in for a pretty fair amount of condemnation, from the liability, as was stated, of secondary hæmorrhage following its use, and from a fear of its slipping and a dread that it might melt away before it had served its purpose. I believe such fears to be mythical. I have shown that a carbolic catgut suture will remain intact for a number of days, and I have never seen a case of secondary hæmorrhage following its use during the period covered by these reports. It seems to me to answer all the purposes of the best silk ligature, and has none of its disadvantages. We have used it now, exclusively, for the last ten years.

Besides the amputations, I have had seventy-three *operations of various kinds*, without, excluding the cases of strangulated hernia, a single death. The cases of hernia offer another painful illustration to the many now in existence of what the late Mr. Callender called "too late operations for hernia." All of them except one died, and it will be noted that the shortest time during which there had been symptoms of strangulation previous to admission was thirty-six hours. Some of these cases were already under medical treatment, and the delay is, therefore, all the less excusable. It is really difficult to write calmly about such cases. One case may be worth recording as offering a few points of interest.

J. K.—, sailor, aged thirty (No. 71), admitted Sept. 9th, 1878. In March last, whilst helping to lift a boat overboard, he ruptured himself, but felt no pain or inconvenience till three or four days after, when he had much pain, which was relieved by a linseed-meal poultice. He resumed work in a few days, and felt no further inconvenience till Sept. 5th, when he had pain in the lower part of the abdomen and in the course of the right inguinal canal. This increased on the 6th and 7th, and on the 8th he took to his bed and sent for a doctor, who endeavoured to return the hernia, and was under the impression that he did so; he subsequently gave a large dose of castor oil, which had no effect. The man, not getting any better, was admitted into the Infirmary at 6 P.M. on Sept. 9th. On admission the right scrotum and inguinal canal were much larger than the left, hard, thickened, tense, and painful to the touch. No impulse on coughing; hiccough. Pulse 100, full. No sickness or *anæsthesia*. He states that the bowel has never gone back since the accident. At 7.30 P.M. I manipulated the parts, under chloroform, but without any effect beyond some reduction of the tension, after which the patient expressed himself as being somewhat relieved. Ordered an enema and an evaporating lotion.—10th: Bowels relieved copiously three or four times. Hiccough has ceased. Pain less, though patient still complains of considerable pain over the tumour and inguinal canal. Pulse 96; temperature 101.4°. The case being somewhat obscure, after a consultation, I proceeded to operate, and in the course of the operation there were two points worthy of notice. When, by the escape of serous fluid, which was yellower than usual however, I thought I had opened the sac, I was rather put out by the appearance of the parts exposed, which did not resemble bowel or thickened omentum. On examining more carefully, it was found the fluid came from a small cyst which had been opened. I proceeded with the operation, and found the sac a quarter of an inch thick, empty, but giving out an excessively disagreeable smell, its internal surface being greenish and sloughy. The finger could be passed into the abdominal cavity by the canal. After the dressing a quarter of grain of morphia was given hypodermically; at 9 P.M. twenty grains of chloral. Hiccough troublesome. Has been sick once. Pulse 96; temperature 100.4°.—11th: Passed a fair night; bowels relieved once; sick once; constant hiccough, which ceased at 10 A.M. He gradually sank, and died at 9 P.M.

Necropsy.—Abdomen: Loop of small intestine, ten or twelve inches long, in right inguinal region, black in colour, with small blebs containing air on its surface, manifestly gangrenous. The gangrenous portion of the bowel had its convexity towards, and approached, the internal inguinal ring. The intestine was wholly within the abdominal cavity, and the gangrenous portion was adherent to other portions of the neighbouring bowel by a limited effusion of lymph. The gangrenous intestine, when divided, was found

to be much thickened. The sac of the hernia was throughout much thickened, and contained one or two cysts on its outer surface.

The case of elephantiasis labium (No. 52) occurred in a married woman, formerly a prostitute; it had been some years growing, and involved both sides. At the time of the operation she was seven to eight months pregnant. The

tumours were removed by the knife, and weighed two and a half pounds. Labour came on at the full time, before the wound had healed; a living child was born, and the woman recovered quickly.

During the five years covered by this report, no uniform system of dressing wounds after operations has been carried out, as will be seen from the tabulated list of cases. The

OPERATIONS.

No.	Age.	Sex.	Disease.	Nature of operation.	Days in hosp. aft. op.	Result.	Dressings.	Remarks.
1	32	M.	Fatty tumour, shoulder	Knife	—	C.	—	—
2	30	F.	Eplulis	Removal	11	C.	—	—
3	1	F.	Double hare-lip	Knife	20	C.	Styptic	—
4	10	M.	Wound, posterior tibial	Cut down and tied	19	C.	Carb. oil	—
5	36	M.	Popliteal aneurism	Tied femoral	34	C.	—	No chloroform
6	49	M.	Inflammation of eyeball	Removal	12	C.	Carb. water	—
7	2½	M.	Staphyloma	Removed eyeball	21	C.	"	—
8	4	M.	"	Abscission	17	C.	"	—
9	76	M.	Senile cataract	Flap	43	C.	Wet compress	One eye
10	62	M.	"	"	26	C.	"	"
11	60	M.	"	Modified linear and iridectomy	49	Failed	"	One eye, intra-ocular hæmorrhage
12	13	M.	Soft cataract	Needle	—	R.	"	"
13	17	F.	Diabetic cataract	"	—	R.	"	"
14	17	F.	"	"	—	R.	"	"
15	11	F.	Talipes equino-varus	Division of tendo Achillis	—	R.	Dry compress	"
16	4	F.	"	Ditto, and stiff bandages	—	C.	"	"
17	57	M.	Astragalus	Removal	39	C.	Carb. oil	—
18	16	M.	Tarsus	Removed dead bone	30	C.	"	—
19	48	M.	Necrosis, tibia	Removal	33	C.	"	—
20	30	M.	"	"	53	C.	"	—
21	18	F.	Necrosis, tibia and fibula	"	60	C.	Carb. oil & terebene	—
22	23	M.	Knee	Excision	84	R.	Styptic	—
23	23	F.	Fib. anchylosis, hip & knee	Straightened	—	Failed	"	"
24	20	M.	Wrist	Removed dead bone	27	C.	Carb. oil	—
25	36	M.	Bone of hand	Removed	10	C.	"	—
26	18	F.	Necrosis, humerus	"	74	C.	"	—
27	35	M.	Metatarsus	"	46	C.	"	—
28	35	F.	Cystic, breast	"	15	C.	Styptic	—
29	37	F.	"	"	30	C.	Sponges	—
30	53	F.	"	"	—	C.	Styptic	—
31	30	F.	Adenoid, breast	"	20	C.	Sponges	—
32	60	F.	Scirrhus, breast	"	31	C.	Carb. oil	{ No return; died from "wasting" 9 months after
33	64	F.	"	"	24	C.	Styptic	—
34	54	F.	Carcinoma, breast	"	56	R.	Antiseptic	Retd. in cicatrix soon after
35	45	M.	Cancer, tongue	Galvanic cautery	—	C.	"	—
36	44	F.	Sarcoma, thigh	Removed	54	C.	Antiseptic	—
37	44	F.	"	"	17	C.	"	—
38	28	M.	Medullary, thigh	Ecraseur	120	R.	"	Returned.
39	57	M.	Rodent ulcer, eyelid	Removed	70	C.	Carb. oil	—
40	46	F.	Epithelioma, nose	"	25	C.	Carb. oil, iodoform	{ No return; died of cancer of stomach within 12 months
41	62	M.	Epithelioma, angle of jaw	"	48	R.	Carb. oil	Died subsequently
42	54	M.	Epithelioma, hip	"	19	C.	Styptic	{ No return for 12 months; died subsequently from "wasting"
43	72	M.	"	"	12	C.	"	Second operation: large gap
44	60	M.	"	"	34	C.	"	Returned (
45	63	M.	"	"	18	C.	"	—
46	78	M.	"	"	25	C.	"	—
47	55	M.	"	"	10	C.	"	—
48	62	M.	"	"	18	C.	"	—
49	36	M.	Epithelioma, penis	Removed, knife	21	C.	"	—
50	57	M.	"	"	—	C.	"	—
51	36	M.	"	Removed, galvanic cautery	30	C.	"	—
52	22	F.	Elephantiasis, labium	Removed, knife	21	C.	Carb. oil	—
53	22	F.	Hypertrophy, clitoris	Galvanic cautery	30	C.	"	—
54	19	M.	Stone in bladder	Lithotomy	34	C.	"	—
55	28	M.	"	Lithotritry	165	C.	"	—
56	30	M.	Phymosis	Knife	23	C.	Carb. oil	—
57	54	M.	Hydrocele	Radical cure	8	C.	"	—
58	56	M.	"	"	12	C.	"	—
59	42	M.	Obstruction, rectum	Left colotomy	25	C.	Carb. oil	—
60	30	F.	External piles	Knife	46	C.	"	—
61	16	F.	"	Scissors	10	C.	"	—
62	56	M.	Fistula in ano	Knife	17	C.	"	—
63	24	M.	"	"	9	C.	"	—
64	33	M.	"	"	28	C.	"	—
65	31	M.	"	"	11	C.	"	—
66	49	F.	Femoral hernia	"	24 hs.	D.	"	5 days strangulated
67	45	F.	"	"	16 hs.	D.	"	"
68	42	F.	"	"	13 hs.	D.	"	"
69	25	M.	Scrotal hernia	"	12 hs.	D.	"	1½
70	23	M.	"	"	8 hs.	D.	"	3
71	30	M.	"	"	30 hs.	D.	"	4
72	58	M.	"	"	57 hs.	D.	"	3
73	40	M.	"	"	39	C.	"	2

drainage-tube has been invariably used where required, and silver wire or carbolised catgut sutures.

A. R—, aged thirty-seven (No. 29).—Cystic tumour of the breast. The edges were brought together by catgut sutures supported by broad pieces of strapping, and sponges, which had been soaked in carbolic-acid solution (one to twenty) for twenty-four hours, applied as a dressing,

these being kept in position by a bandage. A drainage-tube had been previously inserted in the wound. Fresh sponges were applied in two days, and in three days more, boracic ointment. All the sutures held till the seventh day, when one gave way. There was but very slight discharge, no bad odour, and the temperature was normal throughout.

M. G—, aged thirty-five, cystic tumour of breast (No. 28).

Incision six inches long. Drainage-tube, catgut sutures, and styptic colloid dressing. Dressing removed in thirteen days, and whole line of incision soundly healed except at its extreme points. Temperature normal throughout, except on one day, when it was 101° 8'.

M. W—, aged fifty-eight (No. 30).—Same disease and similar treatment. Styptic removed in nine days, and one-third of line of incision found healed. Temperature normal throughout, except on one day, when it was 100° 2'.

(To be continued.)

PAUSES IN RESPIRATION.

By WILLIAM O'NEILL, M.D., M.R.C.P. LOND.,
PHYSICIAN TO THE LINCOLN LUNATIC HOSPITAL, ETC.

SOME interesting cases which have lately been under my observation induce me to say a few words in reference to pauses in breathing. A pause in breathing is the most striking feature in that peculiar irregular breathing, marked by a series of ascending and descending respiratory acts, occasionally met with in some diseases of the heart and brain, and which was first noticed and described by the late Dr. Cheyne of Dublin, and subsequently by the late Dr. William Stokes of the same city. A case of "cerebral breathing" with nearly these characteristics presented itself to me a short time ago. The patient, who was suddenly attacked with apoplexy, became almost immediately comatose and paralysed on the right side. On the second day of her illness, on four or five occasions of about an hour's duration, the breathing assumed this form. The inspirations, which were of a blowing, almost of a whistling character, were about seven ascending and seven descending, the latter ending in the pause, which was usually about fifteen seconds in length.

What I wish, however, more especially to say is that the respiratory pause may be well marked, although the ascending and descending breathing acts may be more or less deficient, or even absent. Whether or not all those kinds of abnormal respiration which have a pause for their central phenomenon or symptom should be included under the category of Cheyne-Stokes respiration I am not prepared to say.

A lady who has suffered for several years from chronic bronchitis, emphysema of the lungs, great irregularity of the pulse, and hypertrophy, with dilatation of the right side of the heart, was attacked with an acute exacerbation of the chronic pulmonary affection in December of the past year. Edema of the ankles, which was generally present, rapidly increased, and in a few days the dropsy extended to the waist. After this the patient was unable to lie down, and, although very drowsy, she was afraid to go to sleep, for the moment she closed her eyes in sleep the breathing stopped, and was only renewed on her waking, which was generally after an interval of from twenty to thirty seconds. The apnoeal state, followed by a succession of inspirations, gradually increasing in force, and ending in the ordinary dyspnoea of the patient, were the phenomena present in this case. The ascending series of inspirations were present, but the descending were absent. It would appear that the moment the watchful and controlling care of the will was withdrawn from the respiration by sleep the breathing stopped, from some cause or other acting on the medulla oblongata, and which had been kept in abeyance during the patient's waking moments; and respiration was, I think, only renewed by the intensity of the stimulus of the *besoin de respirer*, which roused her to the urgent necessity of breathing. The immediate cause of the pauses was temporary, for as soon as the chest symptoms began to improve and the dropsy to subside, so did the pauses begin to pass away.

A case almost similar to the preceding came under my care in 1878. The pauses were perhaps longer and the series of inspirations more distressing. So frightened was this man of the stopping of his breathing that for a few days before his death he kept his wife by his bedside in order to prevent him falling asleep.

But, as I have said before, the respiratory pause may be present in a case without any other apparent deviation from the normal breathing. The patient may be respiring tranquilly and regularly when the pause occurs. He ends the act of breathing with an expiration, remains in a state of apnoea for a shorter or longer time, resumes breathing with an inspiration, and then goes on breathing naturally till another pause takes place.

I have seen two or three examples of this kind of respiration. Not long since I had a well-marked case of it under my care. A patient sixty years of age, who had always been a strong man, began to fall off in health and strength about ten or twelve months previously. His appetite failed, he gradually became thinner and paler, and suffered considerably from pains in his legs and soles of the feet. Latterly he complained of breathlessness and palpitations of the heart on exertion, of oedema of the ankles, of cough with a troublesome secretion of mucus in the throat, and of great depression of spirits and loss of sleep. On examination the lungs, kidneys, and other organs of the body were healthy, with the exception of the heart, which had a weak impulse and showed some evidence of enlargement. There was no bruit to be heard in the præcordial region, but the first sound of the heart was short and rather indistinct, the second comparatively loud and clear. About ten days before this patient's death he "fainted" on rising in the morning, but when I saw him a short time afterwards he had not only recovered from the attack but seemed inclined to make light of it. That night he was delirious for the first and last time. The next day he was better and sitting up, but on the following day I noticed that he paused for a few seconds in breathing. The pauses, which were the only deviation from natural breathing, and which at first occurred every twenty or thirty minutes, gradually increased in length and frequency, and when at the longest their duration ranged from eighty to ninety seconds. This almost unprecedented length of the respiratory pause showed the large amount of carbonic acid necessary to accumulate in the capillaries of the lungs in order to produce stimulus sufficient to set the breathing going. The respirations in the intervals of the pauses were about eighteen in the minute, the pulse 80 in the minute, and the temperature of the body 98°. The pauses occurred both when the patient was asleep and awake, with, I believe, equal frequency, and were generally accompanied with more or less insensibility. The nurse and relations thought the pauses were the longest at night. I have seen the patient get out of bed with the assistance of the nurse to go to the night-chair, and on his way attacked with one of these trance-like seizures. I have shaken him and spoken loudly to him in order to induce him to resume breathing, and although he moved his lips and made a slight effort to speak in response yet he did not respire for more than a minute. I have often felt the patient's pulse and examined his chest during the states of apnoea, but neither the strength, regularity, nor frequency of the pulse, nor action of the heart, was affected by them further than that I sometimes thought that the last eight or ten beats of the pulse were a little weaker, and a little more hurried than those which had preceded them. The chest during the pauses was quite motionless, and nothing could be heard by auscultation but the sounds of the heart strangely reverberating through it. Accompanying the apnoeal attacks was a gradually increasing aphonia which ended in a mere whisper, and a peculiarity of swallowing. The patient would take a mouthful of fluid, wait for a minute or two and then gulp it down; the action of swallowing generally caused some coughing. The cough and secretion of mucus into the patient's throat during the early part of his illness were a source of great annoyance to him, but, from first to last, there was no appreciable inflammation or congestion of the lungs. I noticed that during the patient's waking hours he hardly ever winked. The pupils of his eyes were apparently normal, the conjunctivæ were congested, and occasionally he complained of indistinctness of vision, and of flashes of light before his eyes. All through his illness, excepting when in a state of apnoea, until about six hours before his death, he was sensible, and knew his relations and those about him. He sometimes complained of slight headache, and of uneasiness in the region of the heart and stomach. The pulse was regular, although weak, and never varied from 80 in the minute until the end was drawing near, when it became very feeble and quick. The breathing also towards the close was more rapid, the pauses were more frequent and shorter, and the temperature never exceeded 99°.

Although no post-mortem examination could be obtained, the pauses were, I think, the result of some lesion which not only affected the medulla oblongata, but also other parts of the nervous centres, as evidenced by the loss of voice and the difficulty of deglutition. The patient suffered most probably from fatty degeneration of the heart; and the fainting fit, which seemed to have ushered in his fatal illness, may have been one of the cerebral attacks sometimes seen in fatty disease of the heart. When I saw the patient soon after the fit I thought it might have been caused by embolism, and the subsequent symptoms lend some weight to that hasty opinion.

It has been said that hydrate of chloral is a very useful remedy in Cheyne-Stokes respiration. It so happened this patient had been taking hydrate of chloral when the respiratory pauses came on, and it was fully tried, but without any good result. The patient was ordered plenty of nutriment, and medicines of various kinds were prescribed; but the medicine from which he derived the greatest benefit was dilute nitric acid in a bitter infusion. This mixture sustained his strength, freed him from the troublesome throat mucus, and quite subdued the cough, thus rendering him more comfortable in his latter days. I tried the inhalation of nitrite of amyl with persistency in this and a similar case, but unfortunately with no apparent benefit. The nitrite of amyl inhalations may, however, be of use in Cheyne-Stokes respiration proper, where the ascending and descending rhythm of inspiration are well marked. The inhalations were of great use in a case of this kind which I had under treatment more than five years ago. The patient suffered from intense renal dropsy with great orthopnoea, the breathing during the last few weeks of his life assuming well-marked Cheyne-Stokes respiration. This patient derived much comfort and relief from time to time from the inhalation of four or five drops of the amyl. On several occasions it restored and reinvigorated the breathing when it was about cease.

The respiratory pause, it would seem, may be the result of either functional derangement or organic disease, but evidently more frequently the result of the latter. In these cases I am of opinion that treatment, no matter how judicious, is of little or no avail; for when this symptom sets in it is generally the precursor of dissolution. I might add that it is a most impressive symptom, and requires to be only once seen to be for ever remembered.

Lincoln.

A CASE OF TRUE EASTERN LEPROSY.

By JAMES STARTIN, M.R.C.S. ENG., &c.

TYPICAL cases of true Eastern leprosy of the anæsthetic variety are rarely seen in this country. The notes of the following case may be of much interest to the profession, especially as there is, at the present time, a considerable controversy going on as to the true etiology of the disease in this country and abroad, some authorities ascribing the cause to the eating of bad fish.

E. McG—, aged forty-six, a native of Derbyshire, went out to India in 1858 at the age of twenty-three years with his regiment, and he remained out thirteen years. His father and mother are both natives of Ireland, and there was no family history of syphilis or skin disease. The patient stated that he himself contracted syphilis whilst in India, and was cured there. He was vaccinated three times in India from natives, and twice at home, and he has not had small-pox. He came home to England about ten years ago. He then noticed, as he was on his way home, a slight mottling of the skin, and felt a numbness in the hands and arms, and a feeling of pricking as of pins and needles in the fingers and arms. He states he had plenty of food and very little fish, a few sardines and other tinned fish, but this he had only occasionally, and it was fresh. But he had no fresh vegetables for some years. He had eaten a good deal of Indian corn made up as food at one time or another, and he does not attribute his disease to the eating of bad fish, as he says he had so little fish of any kind. He had had several bad attacks of ague and fever, which he said much weakened him, and he was often exposed very much to the climate.

When he first came under my notice he was covered with an eruption of brown maculæ or spots about the size of a sixpenny-piece, very slightly raised above the level of the

surrounding skin. He had also patches of brawny brownish skin quite insensible to a prick of a needle; in their centre, in different parts of the body, on the anterior surface of the bend of the elbows and forearm, were patches about eight inches long and three broad, also on the side of the neck, face, and ears, but smaller in size. The cutaneous nerves of the arm and forearm and the ulnar nerve could be seen and felt as tense and swollen cords, knotty and hard to the touch—a very characteristic and diagnostic feature in this disease, and being very well-marked in this case. He had also a tuberculous leprosy-looking sore on the left leg on the inner side, about four inches below the knee-joint, and he had also a brown anæsthetic patch over the left knee. The next important feature of the disease was that of considerable wasting of the muscles between the thumb and index-finger and the intermetacarpal spaces, and he lost the power of adducting or closing his fingers, or even of holding anything in his hands. A pail of water he would let fall from want of power to keep his fingers closed. The outer side of the little-finger and hand was quite insensible to puncture with a needle. The patient complained of feeling much depressed at times. The mucous membrane of the mouth, tongue, and lips was much affected with tuberculous patches, and very tender and sore at all times. At this period of the case I had a drawing taken of the patient, showing most of the features described. With regard to the treatment, I must say he has very much improved under the continued doses of chaulmoogra oil, taken first as an emulsion; then, as it returned very much, the capsules, of which he took as many as twenty a day; and he well rubbed the oil into the skin; he also took large doses of quinine, which he said he felt much better for.

He has now regained the use of his hands, and the anæsthetic patches are losing their insensibility, and the patient tells me that he feels much better and stronger, and the eruption is disappearing.

Now, with respect to diet, I ordered him, whilst he was in the hospital, a good diet, unstimulating, with plenty of fresh vegetables, which he much enjoyed, having had so little of them. As to the influence of bad fish as a common cause of origin of this disease, I confess I am very sceptical, this case in point of fact (and there could not be a more typical case, as was said by Sir Joseph Fayrer, Mr. Erichsen, Mr. Hutchinson, and several other eminent members of the profession, to whom I had the pleasure of showing it at the Medical and Chirurgical and Pathological Societies) could not be possibly ascribed to the eating of bad fish, for he had none. But I do firmly believe that the want of fresh vegetable food, and continued attacks of fever and ague destroying the nerve vitality, to be the principal causes of this case, and of others of leprosy. Most of the cases of this terrible disease occur in India, and, as I am reliably informed, the natives live almost on nothing, or whatever they can get, and it is amongst this class the disease is most prevalent. What can the supporters of the fish theory say to the fact that the natives on the borders of the great desert of Sahara never eat fish, and yet they get leprosy in its worst forms. And, again, the natives of Rawal-Pindi in the Punjab in India, and the natives who dwell on the Naga Hills in Assam, do not eat fish, and yet they get it too. Now the natives or the "Nuggs," who live in Arakan, live on fish, yet leprosy is seldom if ever seen among them. These and other important facts which I have elicited from reliable sources, from men who have seen many years' active service among the natives of India and Northern Africa, completely upset, in my opinion, the theory of the eating of bad fish as the origin of true leprosy. Neither do I believe leprosy to be a contagious disease.

Sackville-street, W.

DECALCIFIED BONE DRAINAGE-TUBES.

By SURGEON SHIRLEY DEAKIN, F.R.C.S. ENG., I.M.D.

IN an Indian station, far removed from surgical instrument makers, drainage-tubes are not often procurable, gutta-percha tubing even not being included among the articles of the small local store which does duty for a shop. Though native workmen are clever enough at copying an article from a pattern, they are very stupid in working from an engraving. Further, as regards bone drainage-tubes, all respectable Hindoos have serious caste objections to touching bones, so

that there might be difficulty in getting a workman to turn bone tubes after the method suggested by Dr. Neuber of Kiel, as given in MacCormac's "Antiseptic Surgery."

In the long bones of the limbs of poultry and small birds I have found capital drainage-tubes ready turned to hand. The bones, collected by the cook and well boiled to free them from the soft parts, are soaked for about ten hours in a mixture of one part of hydrochloric acid and two parts of water. Immersed for this time, they become sufficiently soft and flexible for use, and to be cut with ordinary scissors. The ends of the bone are now cut off with a pair of scissors, and the medullary canal well cleaned out with a thick wire or rat-tailed file. The bone tubes should then be boiled in a 5 per cent. solution of carbolic acid, to which some borax—an antiseptic procurable in every bazaar at a very cheap rate—has been added. The tubes are to be kept in a 5 per cent. solution of carbolic oil. If the ends of the bones are cut off with bone-nippers before being decalcified, they are very liable to split. If soaked too long in acid, the walls of the bone tube become too soft and gelatinous, and the lumen is liable to be closed by the pressure exerted by the edges of the wound into which the tube is inserted.

Allahabad.

A Mirror

HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

SEAMEN'S HOSPITAL, GREENWICH.

TWO CASES OF OBSCURE NERVOUS DISORDER.

(Under the care of Dr. RALFE.)

THE two following cases are of considerable interest. As no post-mortem examination was required in either case, the nature of the pathological conditions which were the active factors in the production of the symptoms described can only be conjectured. In the first case Dr. Ralfe thought the lesion to be possibly of a tubercular nature; the improvement that occurred under treatment with iodide of iron strengthens this supposition. In the second case the question may be raised whether the trembling was due to an imperfectly developed chorea following rheumatism, or whether the case should be regarded as an attack of acute spinal sclerosis passing gradually into a chronic form. The reports of the two cases are drawn up from full notes taken by Dr. H. Fonnartin, the house physician.

1. *Case of unilateral muscular atrophy; sudden supervention of delirium with epileptiform convulsions; improvement before discharge.*—W. D—, aged eighteen, from the training ship *Arethusa*, was admitted on May 15th. The family history was unknown. Among previous diseases he had had epistaxis every summer for years, and rheumatic fever (?) during five days two years ago. The patient attributed his actual illness to over-fatigue when tramping some months back, and a fall on the left leg about the same time. He said, however, he had only noticed his present condition six weeks.

On admission it was noticed that the patient could only imperfectly close his mouth, the left commissure remaining gaping. The tongue deviated towards the left side, the left half being also very much shrunk and atrophied. Speech was somewhat indistinct. There was cephalalgia, or rather left hemicrania, and there was numbness, loss of power, and muscular atrophy of the muscles of the left half of the body, the wasting of the left interosseous muscles of the left hand and the muscles of the calf of the left leg being most marked. He had constant pain in the left popliteal region, with semi-retraction of the flexor muscles of the leg on thigh, all attempts at extension or flexion being attended with much difficulty and pain. The walk was very unsteady, but exhibited no sign of ataxy. He had had no rigor, except one three mornings before admission. No vomiting or constipation. There was no history of infantile paralysis. Both

lungs were full of bronchial râles, especially on the left side. There was a noisy, loudly-barking cough, suggestive of paralysis of left vocal cord. The spasmodic condition of the patient prevented complete laryngoscopic examination. The urine was normal. Temperature was normal, and continued so throughout, except occasionally before and after the paroxysms hereafter described, when it rose to 99° F. Ordered ten grains of iodide of potassium, thirty of bromide of potassium, and thirty drops of the syrup of iodide of iron, with infusion of quassia, three times a day; two teaspoonfuls of cod-liver oil three times a day.

On June 25th it was noted that during the last four days the pain in the popliteal region had been worse, otherwise the patient was better. The cough was still troublesome. The appetite was improved, the patient was gaining flesh, and slept well. The lingual hemiatrophy was less marked, the speech more distinct, and the mouth was less deviated.

On the 30th he suddenly became restless, then delirious, with pupils dilated. A draught containing one drachm of bromide of potassium quieted him for some hours; towards morning he became unconscious and comatose, with constantly recurring clonic convulsions; then gradually he became delirious, imagining himself on board the *Arethusa*, working the rigging, and surrounded by negroes. After a time there was an intermission, and he became partially conscious, answered questions, swallowed liquids, said he saw everything black and that there was a mist before his eyes. Then he again became comatose, the convulsions re-appeared, followed by violent delirium, then an intermission, and so on throughout the day. Ophthalmoscopic examination was impracticable.

The attacks have continued since last note, but on the night of July 2nd he slept well, and next morning he was quiet and reasonable. Still he complained of mist before his eyes, but said it was less. Continued quiet till July 5th. In the afternoon of this date he became violently delirious, and had epileptiform convulsions. He had frequent similar attacks till July 18th, occurring usually toward evening, with quiet mornings. Then from July 18th till August 1st a quiet period occurred, with occasional occipital headache.

On August 2nd he had another seizure, with clonic convulsions, followed by delirium, succeeded by a quiet period till August 17th, when at 5 o'clock in the evening he became violently delirious; thirsty, and vomiting all he drank. He continued in this state till 5 P.M. the next evening (Aug. 18th), when he became unconscious, the vomiting, however, still continuing. On August 19th he was perfectly conscious, had no headache, and no vomiting, though there was slight nausea and pain at epigastrium.

From this date he made steady improvement. About the 23rd he began to get up every day, and on the 30th he was able to dress, stand, and walk about unaided. His walk was much improved compared with the tottering gait noticed on his admission. The cough had disappeared, the appetite was good, and sleep excellent. The lingual atrophy and wasting of the left leg were less marked, and the atrophy of the interosseous muscles of the left hand was not so apparent. He had gained flesh, was free from pain, and his eyesight was perfect. He left the hospital on a week's leave, but did not return. The treatment throughout, when he could be got to take medicine, consisted in bromide of potassium and syrup of the iodide of iron.

2. *Case of pyrexia accompanied with violent delirium, followed by tremulousness which persisted after convalescence was established.*—H. H—, aged twenty-four, able seaman, native of Finland, was admitted on April 23rd. His last voyage was from Haiti, where it was stated he contracted, seven months previously, fever, which lasted only one week. No further history could be obtained.

On admission the patient was so violently delirious that he had to be tied down in bed. The skin was hot and dry, but sometimes he broke into a profuse sweat; face flushed. Evening temperature 103.4°. Ordered ten grains of bromide of potassium and five grains of bicarbonate of potash, in infusion of quassia, three times a day.

On the 25th he was still delirious. There was marked pericardial friction. Urine clear, alkaline; no albumen; chlorides abundant; sp. gr. 1034. Constipation. Ordered enema of olive oil. Temperature: morning, 104.1°; evening, 102.4°.

On May 1st he was conscious and complained of pain at the præcordium. The heart sounds were weak, rapid, and distant. There was still some præcordial friction; the area of præcordial dulness was not increased. He was still con-

stipated. Since the delirium has disappeared an excessive tremulousness affecting his tongue, upper and lower limbs, has set in; this was produced only by voluntary movements, and the shaking was increased by a repetition of the same movements. The tremor seemed to be composed of a succession of very limited and rapid clonic spasms, the movements, however, did not approach to the extensive and disorderly actions observed in chorea. Temperature: morning, 103.2°; evening, 98.4°.

On the 10th the tremor still continued very excessive. Since the previous note pneumonia of the base of the left lung has developed. Constipation persistent. Temperature: morning, 100.2°; evening, 103.4°.

On the 18th the tremor was unaltered. The pneumonia was subsiding; pericardial friction no longer heard; constipation still persistent. Bedsores are forming over the sacrum and trochanters. Temperature: morning, 102°; evening, 98°.

On the 28th the tremor continued as violent as ever, although the patient in other respects was making satisfactory progress. The temperature, however, still remained high, and fluctuated considerably; in the morning it was 101.1°, and in the evening 103.2°. Up to this time he had been taking bromide of potassium with salines; to-day he was ordered fifteen grains of salicylate of potash every four hours. Still troubled with constipation.

On June 13th the tremor had not been influenced by the salicylate treatment, though the temperature had steadily declined and did not fluctuate so widely. Temperature in the morning 100°, in the evening 100°. The salicylate was discontinued, and half-drachm doses of bromide, three times a day, substituted.

The temperature became normal on June 18th, and remained so. The excessive trembling continued, however, till the middle of July, when an improvement was noticed first in the lower limbs, and he was shortly able to walk. The improvement, however, as regards the tongue and upper limbs was very gradual, and even on Aug. 5th, when the patient demanded his discharge, was still marked. In all other respects he was well and strong, he had gained flesh, the lung mischief had cleared up, and there was no murmur over the præcordium. It may be as well to mention that during the attack there was no pain or swelling in any joint, nor did the sweating continue after the first week.

SUSSEX COUNTY HOSPITAL.

LITHOTRITY AT ONE SITTING.

(Under the care of Mr. JOWERS.)

For the following notes we are indebted to Dr. John C. Uthoff, house-surgeon.

J. B—, aged sixty-two, a flyman for many years, was admitted Sept. 1st, 1880, suffering from symptoms evidently pointing to stone in the bladder. These symptoms have been gradually coming on for about two years. He was of medium stature, fairly healthy in appearance, with a florid countenance. The urine, when first examined, contained blood and albumen; slight deposit, showing microscopically a few uric-acid crystals; acid in reaction, sp. gr. 1018. The condition of urine varied, being on some days the same as above, on others alkaline, fetid, and containing much mucus, but no blood. The lungs, heart, and abdominal viscera were healthy.

On being sounded a stone was detected, which gave the impression of being a large and hard one. It measured slightly over two inches in its longest diameter, and about half an inch in its smallest. During the time he was in the hospital before being operated upon the urethra was dilated by catheters until a No. 16 could be passed without difficulty. This was done in order to accustom his urethra to the passage of a large instrument, and so of the lithotrite.

On September 17th chloroform mixture was administered and lithotritry performed. The stone was crushed without difficulty. The lithotrite was introduced six or seven different times, Thompson's (modified Bigelow), washing-out apparatus being used between each of the crushings. The whole operation lasted about an hour and a half. A morphia suppository was placed in the rectum, and the patient was wrapped in hot blankets, and put to bed with hot-water bottles to feet and body.

He recovered with scarcely a bad symptom. The scalding on micturition was but slight. He had only one slight

shivering the day after operation. The slight tenderness of the abdomen following the operation soon passed away, and by the ninth day he was all but well. On the twelfth day after the operation he got up, and on the sixteenth was discharged well.

The stone was entirely composed of uric acid, and the débris removed after the operation weighed just a little under the ounce.

TOXTETH PARK WORKHOUSE INFIRMARY.

HÆMORRHAGE INTO THE SPINAL CORD.—ANEURISM OF THE ARCH OF THE AORTA.

(Under the care of Dr. LYSTER.)

For the following notes we are indebted to Dr. Charles Woods, resident medical officer.

CASE 1. *Hæmorrhage into the spinal cord.*—Mary G—, aged sixteen, was admitted on January 7th, 1879, suffering from paralysis of the left leg below the knee, with œdema and anæsthesia, contraction of the leg on the thigh and the thigh on the abdomen, with extension of the foot. The girl was strong and healthy-looking, and stated that the paralysis came on suddenly about two months before as she rose from a chair on which she had been sitting for a few hours. The temperature of the body was normal, the faradaic excitement of the paralysed limb was intact, there was no local tenderness along the spine, and the only pain complained of by the patient was of a neuralgic form, shooting along the fibular nerve. In a few days large bedsores rapidly began to form (in spite of the utmost care and attention), followed by retention of urine, to relieve which a catheter was passed, the introduction of which invariably caused spasm. Incontinence of urine supervened, with paralysis of the rectum, and finally death from exhaustion on February 28th. The urine was alkaline, and free from albumen.

At the necropsy, made five hours after death, the spinal cord was removed, but was very soft, and when a transverse section was made the grey matter oozed out like reddish serum. Opposite, about the ninth dorsal vertebra, a clot about one inch long and a quarter of an inch wide, was seen lying lengthways in the posterior and lateral portion of the cord. Around it the cord was broken up, and it was surrounded by a wall of jagged tissue stained with blood, so that there was obliteration of the sound tissue round the clot, from which several processes emanated.

CASE 2. *Aneurism of the arch of the aorta pressing on the trachea and right bronchus.*—Mary M—, aged forty, charwoman, came under notice on the evening of Aug. 22nd, suffering from severe dyspnoea, accompanied by a whistling sound on breathing and coughing. The patient complained of a sense of constriction, and a difficult cough followed by the expulsion of some frothy mucus, and had a careworn, anxious appearance. The sterno-cleido-mastoid muscles were contracted and formed two rigid pillars on each side, whilst the chest walls were expanded to their fullest. On examining the chest the left side was resonant, but there was dulness on percussion over the right, which was retracted. No breath-sounds were to be heard over the right side, and but feebly over the left. The heart-sounds were very weak, and could barely be heard. It was concluded that the case was one of aneurism pressing on the trachea, and the patient was kept quiet and antispasmodics administered. The patient, however, died rather suddenly on the morning of the 24th.

At the necropsy, on raising the chest walls, the left lung was found overlapping the heart, but the right lung was not seen. The pericardium was firmly adherent to the heart and to the right pleura, which was completely united to the right side, tying down the right lung, which was very much diminished in size, carnified, and destitute of air. The adhesions were so firm that the walls of the heart (which were thinned and the consistence almost of brown paper) gave way in one or two places while the false membranes were being broken down. The heart and lungs were removed together, and an aneurism about the size of a large apple was found pressing on the lower part of the trachea, the right bronchus (blocking up the passage effectually), and the right pulmonary artery.

Remarks.—All authors agree that hæmorrhage into the spinal cord is of very rare occurrence, whilst some (*vide* "Ziemssen's Encyclopædia") affirm that it is perhaps

never spontaneous; and although a few cases of hæmorrhage under or upon the spinal membranes have been reported in the medical journals, I have only been able to find one case of hæmorrhage into the spinal cord (the true hæmatomyélie of Ollivier) reported in any of the medical journals or transactions of pathological societies.

The second case of aneurism strongly simulated laryngitis, and the question of opening the trachea was at one time debated. There was no appearance of any inflammatory action, but the pericardium being throughout adherent to the heart, evidenced at some former time inflammation of that membrane; and the state of the lung and chest wall undoubtedly points to previous pleuritis and effusion.

Medical Societies.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

Aneurism of the External Carotid, in which, after failure of the Ligature of the Common Carotid, the old Operation was performed successfully.—Abscess in the Neck, causing destruction of a large portion of the Carotid Artery, Jugular Vein, and Pneumogastric Nerve.

The ordinary meeting of this Society was held on the 26th inst., Mr. J. E. Erichsen, F.R.S., President, in the chair. Two papers dealing with the surgery of the neck were read. The first was an exhaustive account of a case of external carotid aneurism by Mr. H. Morris. In this case ligature of the common carotid was first attempted; but recurrence of pulsation and extension of the tumour compelled a final and successful operation of opening the sac, and securing the external carotid on the distal side. The other paper, which was by Mr. Savory, was one of remarkably extensive destruction of the great vessels and of the vagus nerve by an abscess.

The following is an abstract of the paper on a case of Aneurism of the External Carotid, in which, after failure of the ligature of the Common Carotid, the old Operation was performed successfully, by Mr. HENRY MORRIS, F.R.C.S. Elizabeth P—, aged forty-five, first came under care on May 20th, 1879, with an aneurism about the size of a walnut at the level of the hyoid bone, and just above the bifurcation of the right common carotid. It had been noticed eight months, and was growing. It was not the result of any injury. She complained bitterly of the pain it caused all over the right side of the head and neck, and of a distressing feeling of dryness about the throat and fauces. She could swallow nothing solid without great suffering; her voice was hoarse, and she spoke in rough whispering tones. Her sight and taste were unaffected. Digital and instrumental compression could not be borne. Diet and medicinal treatment were resorted to; but her symptoms becoming rapidly worse, on July 16th a catgut ligature was placed around the common carotid artery on a level with the omo-hyoid muscles where it crosses the cervical sheath. Four hours and a half afterwards faint pulsation returned in the aneurism, and continued more or less marked till August 12th, when the outline of the aneurism was quite lost, though some pulsation could still be felt along the line of the artery in the situation of, and for a little distance below, the seat of the aneurism. A sinus remained leading down to the part of the ligature, hard and surmounted with exuberant granulations, from which blood occasionally was discharged. At the end of September fresh swelling took place at the angle of the jaw, but there was no pulsation in it; with this exception all the old symptoms returned. On October 13th there was evidence of suppuration, so an incision was made, and a small quantity of pus was evacuated from the surrounding tissues. Relief was again obtained, but only partially and temporarily. Though the sinus over the ligature now closed, a similar one, from which blood occasionally escaped in small quantity, remained in the centre of the late incision. At the end of November pulsation was again felt, and the swelling, which had much subsided after the escape of the

pus, again increased; in fact, the aneurism had now evidently ruptured, was inflamed, and growing largely, and threatened to set up ulceration of the tense and distended skin. It was therefore treated in the following manner. The facial and superior thyroid arteries were first ligatured and then the sac was laid open, and all clots turned out. It was now seen that all the bleeding was issuing from the distal end of the sac, and could be checked by passing a tenaculum underneath it, and raising it. The incision was prolonged upwards sufficiently far to enable a silk ligature to be passed around the vessel beyond the sac, and in doing so a small artery and vein were cut, from which bleeding, easily controllable, occurred for the moment; this artery was probably the occipital. It was specially noticed that no blood had been passing into the sac from the internal carotid, yet that no clot was prolonged into it from the common carotid. The wound did well; the ligature separated on the seventeenth day. Convalescence was retarded by an attack of quinsy, which in the right tonsil ran on to suppuration; but the patient had quite recovered by the 12th of February, 1880, and still remains well. — *Remarks:* The return of the pulsation in the aneurism a few hours after the application of the ligature, the slow consolidation of the aneurism, the pulsation in the vessel on the proximal side of the sac, though not immediately above the ligature, the subsequent growth of the aneurism in spite of the complete obliteration of the common carotid, the violence of the hæmorrhage from the distal orifice of the sac at the time of the last operation, together with the absence of any bleeding from the internal carotid, prove how important a part the free anastomoses between the branches of the external carotids of the two sides of the neck, and between the branches of the external carotid and subclavian of the affected side, play in aneurism near the bifurcation of the common carotid. Moreover, it is suggested, and well-known cases and dissections are quoted to support the suggestion, that after the ligature of the common carotid no blood usually continues to reach the lower end of the internal carotid in the neck, and that therefore the anastomosing circulation within the skull is not the cause of the return of pulsation in these aneurisms, and therefore not a cause of the failure of the ligature. The practical conclusion arrived at is that, if the Hunterian ligation be employed in these cases, it would be best to supplement it by the simultaneous ligation of such branches of the external carotid as are easily accessible—viz., the temporal, facial, and superior thyroid.—The PRESIDENT remarked that the paper contained some valuable practical suggestions, to which he invited the attention of surgeons present—especially the question of the simultaneous ligation of the accessible branches of the external carotid in cases of aneurism of that artery, with a view to diminish the collateral blood-supply.—Dr. HILTON FAGGE referred to a case confirmatory of the views enunciated in the paper. It was a case of aneurism (he believed, at the origin of the external carotid) in a man who was hemiplegic on the same side. The common carotid was ligatured, and shortly after the hemiplegia disappeared. Some time after the patient died, and the cause of this singular fact was found in the position of the aneurism. It lay over the internal carotid, and probably compressed this vessel so as to diminish the supply of blood to the brain, until after ligature, when the shrinking of the sac relieved the internal carotid of this pressure. Supposing this explanation were correct, it confirmed the author's view; for if the circle of Willis had sufficed to carry on the circulation there would have been no reason for the hemiplegia occurring.—Mr. CRIPPS was not quite clear whether the diagnosis of external carotid aneurism was made before ligature was applied. If so, why was it deemed necessary to tie the common carotid below the omo-hyoid, seeing how much more dangerous that procedure was than ligature of the external carotid, the mortality after the former operation being as high as 1 to 3; after the latter, about 1 to 20 (Guyon). If the trunk of the vessel had been exposed, might not the external carotid have been secured below the aneurism? In spite of the confirmation given by this case to the collateral supply being mainly kept up through the branches of the external carotid, he did not think this could be always the case. In a paper he read before the Society two years ago he showed that in some cases the circulation was maintained by a recurrent flow in the internal carotid; and it was hardly conceivable on hydrostatic grounds that there should not be such a flow. In Mr.

Morris's case, however, when the sac was opened no bleeding occurred from the proximal end of the external carotid, and yet the clotting did not extend beyond the bifurcation of the common trunk. He thought also that the fact of the bleeding from the distal end, in spite of ligature of the facial and superior thyroid branches, rather detracted from the value of the suggestion to secure the peripheral branches in order to prevent this collateral flow of blood. He thought the supply of blood would be more effectually controlled if the external carotid of the opposite side were ligatured.—Mr. HOLMES was reminded of a case brought before that Society many years ago by Mr. P. Hewett. The surgeon—he believed Sir B. Brodie—had tied the external iliac for femoral aneurism. For a time the disease was arrested; then the tumour increased in size, and at first was so like a malignant growth that those who saw it were under much the same doubt as to its nature as Mr. Heath had been in the present case. The tumour continued to grow, and then pulsation recurred in it. Local pressure (which of course could not be applied in Mr. Morris's case) successfully prevented further extension of the aneurism. The man died subsequently from some other affection, and the preparation of the parts showing the cured aneurism and enlarged collaterals is in St. George's Hospital Museum. Referring to Mr. Cripps' criticism, Mr. Holmes said that it was clear from the extent of the tumour, which reached to a level with the hyoid bone, that it would not have been possible to have placed a ligature higher up than Mr. Morris had done. He agreed with Mr. Morris as to the additional security afforded by ligature of the main vessels which carry a collateral circulation, for although all the channels cannot be closed, yet the cutting off of several would much diminish the risk of recurrent pulsation. And in cases of aneurism of the neck the free anastomoses precluded any fear of gangrene following the ligature of these collaterals. He also concurred in what the author had said about the difficulty of diagnosing between an aneurism of the external and one of the internal carotid. The course taken by the blood in collateral circulation after ligature did not follow any hydrostatic laws, so many elements interfering—e.g., the internal carotid might be occluded by a small piece of clot.—Mr. HEATH hardly thought the plan of tying the branches of the external carotid practicable. Certainly some, as the maxillary branches, could only be secured at great risk. He would rather advocate the use of the galvanic current, or the injection of perchloride of iron, into the sac, to hasten coagulation, in addition to the ligature of the main trunk. He could not see how tying the opposite external carotid, as suggested by Mr. Cripps, would have much influence.—Mr. HULKE said that injection of the perchloride of iron was attended with great risk, unless the passage of blood was completely controlled. Many years ago, in some experiments upon the effects of such injection into the blood-stream, he had found that after injecting the fluid into the large vein that crosses the tendo Achillis in the dog clotting passed almost instantaneously into the main veins, and even into the heart, if the circulation were not arrested in the vein. But when the circulation was controlled on either side of the seat of injection, the coagulation was limited to that spot.—Mr. MORRIS, in reply, was surprised that an anatomist and surgeon of Mr. Heath's experience should have thought it a difficult matter to secure the superficial branches of the external carotid. Of course the deep branches would not be tied, but the occlusion of the accessible vessels would so far diminish the blood-supply as to put the aneurism in a more favourable condition for cure. It was not that coagulation did not take place in the sac—for there was abundant coagulum—but the free collateral supply allowed the clot to rest, and prevented it from consolidating. The description of many of these cases leaves the reader in doubt as to whether the blood-flow does enter the external carotid from below by a recurrent flow in the internal carotid, or whether the current is down through the external carotid and up into the internal. Certainly in this case it seemed to have taken the latter direction, and also in Hobson's case. The conditions of circulation with regard to the two carotids differed from those obtaining in other parts of the body, for there were large vessels bringing in blood from anastomosis on the same side, as well as possibly (sometimes) from the internal carotid. The recurrent pulsation was probably due to each additional influx of blood from these sources, and not to the direct influence of the heart. A similar explanation might be given of recurrent pulsation when both femoral artery and vein were tied, as in Porter's case. It was impossible to

tie the external carotid from the position of the aneurism. He referred to an essay recently published in the Transactions of an American Society, where the surgery of the carotid arteries were exhaustively dealt with.

The next paper, on a Case of Abscess in the Neck, which in its course destroyed a large portion of the carotid artery, jugular vein, and pneumogastric nerve, was contributed by Mr. WM. S. SAVORY, F.R.S. In this paper, after a short account of two instances, in one of which the internal jugular vein, and in the other the femoral artery and vein were laid open by an abscess, a case is related of a man who was brought to the hospital in a state of extreme prostration, the result of hæmorrhage, from a large orifice of an abscess at the left side of the neck, which had given way three days previously. He never fairly rallied, and died on the fourth day from his admission. On dissection the cavity of a large abscess was exposed, in the upper and lower parts of which portions of the carotid artery, jugular vein, and pneumogastric nerve were found. But a considerable piece of each was wanting. The opposite ends of the divided artery were from one and a half to two inches apart; the distance between the ends of the vein was rather more than this; the ends of the nerve were from one to one and a half inches apart.—Dr. J. HARLEY said that he had once excised about an inch and a half of one vagus nerve in a young dog, and no physiological effects whatever followed.—Dr. DOUGLAS POWELL asked whether the author could offer some explanation as to the reason why those vessels and nerves had been so widely destroyed by the abscess. Such an event must be very rare. Was it due to the pressure of the abscess or the cutting off of the blood-supply to the walls of the vessels?—Mr. SAVORY, in reply, said he could offer no further explanation than that the vessels were destroyed by the very intensity of the inflammatory process; for although it was well known that, from their peculiar structure, bloodvessels resist such destruction more than other tissues, yet he supposed their escape was only a question of the degree of inflammation.

The Society then adjourned.

CLINICAL SOCIETY OF LONDON.

Cross-legged Progression, owing to Double Hip Anchylosis.—Acute Intestinal Obstruction by Hernia, through Mesentery of a Meckel's Diverticulum.—Nephro-lithotomy.

THE ordinary meeting of this Society was held on the 22nd instant, Dr. E. H. Greenhow, F.R.S., President, in the chair. The communications read were of a highly interesting character. Mr. Clement Lucas drew attention to a curious mode of progression in two subjects of old disease of both hips, where the legs were crossed over one another. The patients were exhibited. A rare example of Acute Intestinal Obstruction was communicated by the President. Mr. Henry Morris related a case of Renal Calculus, which had been extracted by operation before the stone had excited destructive disease of the organ. Mr. Morris proposed to term this operation nephro-lithotomy; and the advisability of such interference in similar cases was generally admitted. The patient in this case also was shown to the Society.

Mr. CLEMENT LUCAS read a paper on "Cross-legged Progression (scissor-legged deformity), the result of Double Hip Anchylosis." The object of the paper was to direct attention to a peculiar and characteristic gait brought about by anchylosis of both hip-joints, and hitherto undescribed. Two patients were exhibited to illustrate the cross-legged mode of walking—one a boy, aged ten, and the other a man, aged forty-seven. In each case the disease had existed some time in one hip-joint before the other had become affected. Gradually, as the patient walked with the aid of sticks or crutches, the limb last attacked was carried across the other, and becoming ankylosed in this position compelled the patient to walk permanently cross-legged. The legs, placed in this position, suggest in their crossing the appearance of a pair of scissors. The author left it open to discussion how this position was acquired—whether as the simple result of the adduction which is so common a sequence of hip disease, or as the gradually developed, perhaps unconscious, action

on the part of the patient to place his limbs in the position most favourable for progression. Mr. Lucas gave the following explanation as the most probable: The patient, when commencing to walk on the convalescent limb, finds that by resting the other limb upon it, he can steady the inflamed hip and prevent the movements which caused him pain. At the same time by the oblique position the limb is shortened and rendered less liable to touch the ground. As recovery goes on in the hip last attacked, the patient from time to time tests its condition by dropping the supported foot on the ground and bearing a little weight upon it. Gradually he takes more and more weight from the crutches, still retaining the limb in the oblique position, and finally, the second hip having become ankylosed, he is able to throw aside his crutches and walk in the peculiar manner illustrated by these two patients. The author showed that in ordinary walking the forward movement takes place entirely from the hip, the knee movement being of service only to shorten the limb and prevent the foot touching the ground when in the act of being advanced. Hence, should both hips become fixed when the limbs are parallel, progression could only take place by twisting first one side of the body, then the other, to the front. The patient finds out for himself that by carrying one limb across the other, so as to render the knees oblique, the knee movement can be made to take the place of the hip movement, and knee-walking is thus substituted for hip-walking. In both the patients exhibited, the right leg—that last attacked—was in advance of the other. The first patient, a boy, aged ten, began to suffer from disease of the left hip when four and a half years of age, and attended as an out-patient at the Evelina Hospital. Fifteen months later, after a fall, the right hip became diseased. He continued under Mr. Lucas's care till June, 1877, when he was admitted into the hospital under the care of Mr. Morratt Baker. After resting in the hospital three months he was discharged, and again attended as an out-patient. For twelve months after his discharge he was kept lying during the greater part of the time; he was then allowed to walk with crutches, the left hip having become ankylosed. He was then sent into the country, and on his return it was found that he had learnt to walk with both legs, but that they were fixed in the scissors-like position. The second patient exhibited Mr. Lucas saw walking in the street, and diagnosed his condition by the light of the other case. This man, aged forty-seven, first began to suffer pain in the left hip in 1870. He was at the time employed as a coal-heaver. He sought advice at St. Thomas's Hospital, and afterwards at St. Bartholomew's. Subsequently he spent thirteen months in the Dalston Infirmary. After this, for a year he tried to work a little, but remained lame. Since that time he has gained his living by selling trifles in the street. In September, 1877, he began to suffer pain in the right hip. Up to this time it had been his custom to rest the greater part of his weight on this limb, but the pain now caused him to stand chiefly on the left leg. In the course of the winter he got into the habit of crossing his legs, but at first was able to unlock them at will. Later, he used to unlock them at night-time when he retired to rest, but gradually this became more difficult, and they are now firmly fixed in the cross-legged or scissors-like position.—Mr. CROFT said that amongst the cases of hip disease brought by him to the Society last session there was one of double ankylosis in a girl, but her condition was slightly different from those brought forward by Mr. Lucas, for in her case there was not so much displacement as in these. She walked with the right knee in advance of the left, and managed to bring one foot in front of the other in progression. There was much lordosis. Her progression was much improved by division of the left femur, below the great trochanter, and forcible breaking down of the adhesions on the right side. He did not think then that the curious condition shown by Mr. Lucas was a necessary outcome of double hip disease. In the child there was dislocation on both sides, with eversion and extreme adduction. It appeared from his history that the disease began on the left side first, and that the limb was flexed and adducted when he left the hospital, and he was obliged to cross the legs to maintain the centre of gravity between the two heels. It was very interesting that there should have been so much destruction of the head of the femur on each side as to lead to this displacement without any abscess. The other case might perhaps be similarly influenced, but he had not examined it. He would suggest that the femur should be

divided below the trochanter in the boy's case, first on the one side, then on the other, and the limbs brought parallel, for in his present state he would be debarred from ever obtaining active employment. That double hip disease does not incapacitate a man from active duties, he instanced the case of a village postman, the subject of this affection, who walks from the pelvis and knees.—Mr. HOWARD MARSH confirmed Mr. Croft's supposition as to the mode in which this condition had been brought about, and thought it showed the importance of trying to cure double hip disease without allowing adduction to take place. He believed the peculiar gait was due to the fact that the limbs were allowed to get well into a state of adduction, and they were extended on the trunk. In cases of congenital dislocation of the hip the knees are flexed when walking. In Mr. Lucas's cases there did not appear to be this flexion, and in order to maintain the centre of gravity they were obliged to cross their legs. He was in the habit of preventing the tendency to adduction in cases of unilateral disease by placing a splint on the outer side of the limb, to keep it straight, and a small splint from the knee to the outer side of foot, with a weight suspended to it. He did not think the peculiar gait was simply due to the double hip disease, for he had seen cases which walked like that one last mentioned by Mr. Croft. He concurred in Mr. Croft's suggestion as to the advisability of performing osteotomy in the boy's case.—Mr. LUCAS, in reply, said that he was obliged to Mr. Croft for showing how the peculiar position of the limbs in these cases was probably due to ankylosis in adduction. It was interesting that this position should be acquired, especially if they became ankylosed thus. Were the limbs almost parallel it would be impossible for any stride to be made without flexion of the knees; and Mr. Croft's case showed that even the knees tend to become adducted. The cross-legged position allows of the knee acting as a hip to a certain extent, and also permits the knee to have a certain forward movement. The only operative measure would be to divide the femur below the trochanter, or at the site of the original neck; but it was doubtful if much improvement would ensue, for the boy already can run at a great pace, and takes part in cricket and other outdoor games. If the femora were to be divided, and the limbs straightened, his activity would be reduced. If he operated, he would first divide one femur, and would try to prevent ankylosis. In reply to Mr. Heath, he said that he did not think the heads of the femora were dislocated in the man's case.—Mr. HEATH thought they were not dislocated in that case, and that being so, it was curious that the cross-legged position should be the same in the two cases.—The PRESIDENT nominated Messrs. Heath, Croft, and Lucas to examine the cases upon the question of dislocation, and to report to the Society.

The Secretary read a paper, contributed by the PRESIDENT, upon a case of Intestinal Obstruction caused by a Hernia through the Mesentery of a Meckel's Diverticulum, which had retained its attachment to the umbilicus. The patient was a boy, seven years of age, who was seized with severe pain in the abdomen in the evening of May 31st, 1880. The pain was referred to the umbilicus, and was relieved by the sitting posture. He had occasionally suffered from attacks of pain previously, but the bowels had been opened freely the day before the fatal seizure. Examination of the belly yielding negative results, a poultice containing laudanum was applied, and small doses of opium were given by the mouth. Vomiting set in on June 2nd, and recurred with varying severity several times in the course of the illness. The urine was scanty and of high specific gravity. Paroxysms of pain continued at intervals, and enemata administered daily brought away fecal masses almost to the last. The pain was less on the 4th and 5th, but it recurred severely on the 6th, with increased distension of the belly, and the child rather rapidly sank in the evening of this day. The vomiting was never fecal. The treatment consisted in sedative applications and the internal administration of opium and belladonna, as well as enemata. The post-mortem examination, by Dr. Coupland revealed commencing peritonitis, and about two feet of the lower part of the ileum were found hanging in a collapsed condition on each side of a cord-like loop. This loop was formed in the mesentery of a well-developed diverticulum, the upper end of which was attached to the umbilicus by an impervious cord half an inch long, the diverticulum itself being four inches in length. The gut, where it passed through the loop, was constricted and pale, but a small projecting portion at the origin of the diverticulum was of a deep purple colour.

Above the constriction the bowel was distended with fluid faecal matter; beyond it was empty. Dr. Greenhow remarked that he had been unable to find on record an exactly similar case to the above. When he first saw the case he was led to exclude intussusception and inflammation of the appendix caeci; nor did evidence of peritonitis supervene until the day before death. Complete obstruction did not take place until twenty-four hours before death, although the ileal coils might have been partially included in the loop for some time. The great relief obtained in the sitting posture was probably due to the fact that in that position the viscera were thrown forward towards the abdominal parietes. Abdominal section was entertained, but dismissed in the early days of the illness; and collapse supervened too rapidly upon the serious symptoms for operative interference. Even had this been attempted it is likely that the diverticular attachment would alone have been recognised and divided, the existence of the loop not being suspected.—Dr. COUPLAND explained that the constricting cord was probably formed by the relics of the omphalo-mesenteric vessels which accompany the vitelline duct to the umbilical vesicle, and which, if persistent, would naturally occupy the fore margin of the triangular fold of peritoneum forming the mesentery of the diverticulum. The ring was formed by this cord becoming detached from the diverticular mesentery. The cord passed on to the surface of the true mesentery just beyond the origin of the diverticulum.—Dr. SILVER asked the President as to two points suggested by the case—viz., as to the advisability of abdominal section, and as to puncture of the distended bowels. Although ovariotomy had taught that the peritoneal cavity might, with due precaution, be opened with impunity, at what period of a case is it advisable or safe to urge the procedure, supposing peritonitis were present? As to puncture of distended coils to allow of escape of gas, he had known this afford great relief and ward off impending death; but in these cases no peritonitis was present.—Dr. GREENHOW, in reply, did not think that in this case any operation was advisable, or that the constricting band would have been detected. No hard and fast line could be laid down as to the propriety of operating. The great relief afforded by enemata and the absence of peritonitis seemed to show that in this case obstruction was not complete until near the close. Nor was there any distension calling for puncture until within sixteen hours of death, and the question of puncture did not arise. He should hesitate, too, about advising puncture, especially in the presence of peritonitis.

A paper was then read by Mr. HENRY MORRIS upon Nephro-lithotomy, with a case in which the operation was successful. By the term "nephro-lithotomy" is meant the removal through a lumbar incision of a renal calculus from a kidney in which the pelvis is not dilated; and which, but for the presence of the stone, is presumably healthy. It is to be distinguished from the numerous cases in which the kidney is cut for the evacuation of fluid accumulated within it, whether as the result of a renal calculus, of tubercular disease, or some other cause, and to which from very ancient times the name "nephro-lithotomy" has been applied; as well as from those cases, also numerous, in which a stone has been removed after it has been detected through a sinus in the loin. The opinion of writers on the subject has been universally adverse to the attempt to remove a stone from the kidney unless it could be reached through a distended pelvis; the chief reason urged being the danger of fatal hæmorrhage if the excreting substance of the organ was cut or torn. The case described in the paper conclusively proves the feasibility of the operation, and in answer to the question, Is nephro-lithotomy feasible? and if feasible, is it safe? the author stated "that it is entirely due to his friend and colleague, Dr. Coupland, who advised the patient to undergo the operation, that an affirmative answer can now for the first time in the history of surgery be given with certainty to this question." The position of the question before this case occurred was reviewed; Marchetti's operation on the English consul, Hobson, was referred to; and six cases in which the operation was planned, but in which it proved abortive, were mentioned. These six cases were considered encouraging because all the patients recovered from the operation of exposing the kidney; and curiously enough obtained, at least for a time, relief from their symptoms.—*Case:* Maria M—, aged nineteen, a servant-girl of short stout stature, and with a remarkably rough scaly skin, had for eight years been subject at times to pain in her right side, accompanied occasionally with a feeling of sickness,

and even actual vomiting. In September, 1878, these symptoms became more pronounced; her urine became dark-coloured, and the pains so severe that she had to give up her situation and go under medical treatment. In April, 1879, she was admitted under Dr. Thompson into the Middlesex Hospital, and after treatment and rest so far improved that she went again into service. A life of activity, however, brought back the old symptoms, and she was readmitted into the hospital, this time under Dr. Greenhow. In less than a month she was again able to go out, but only to return a third time, with urine as dark as porter, and with the pains in the right loin and groin as severe as ever. When she was admitted under Dr. Coupland on Dec. 29th, 1879, her urine was acid, and contained no other abnormal constituents than blood; there was some tenderness, but no swelling, in the right loin. Again the urine cleared up, but the nephralgia was not relieved; consequently, on Feb. 11th, chloroform was administered and the right kidney exposed through an oblique lumbar incision. The right index-finger was then passed over the posterior surface of the kidney, and at once detected something faintly projecting from the renal substance near the hilus. The renal substance was incised at the spot with a probe-ended bistoury, and a mulberry calculus of triangular shape, weighing thirty-one grains, was extracted by means of a scooping movement of the finger-tip. There was no hæmorrhage at any stage of the operation. The upper end of the ureter was not dilated in the least, nor could the stone be felt there; it was consequently not interfered with. No attempt was made to examine the front surface of the kidney. The wound was brought together with three sutures, and a drainage-tube introduced between two of them. The patient made a good recovery. Urine ceased to flow through the wound on May 4th, and at the present time there is nothing whatever the matter with the patient excepting that a sinus of an inch and three-quarters still remains in the loin, and discharges about a drachm of pus daily. Thus the case shows that a calculus may be extracted from an undilated kidney by surgical operation without more risk than is amply warranted by the sufferings and general disability which the operation was designed to remove. But before the success of one case is allowed to influence treatment in others four questions require consideration. 1st. Can the diagnosis as to the disease, and the organ affected, be made with certainty? 2nd. What are the prospects of being able to complete the operation when a stone is found? 3rd. What are the dangers of the operation? 4th. What is the best result which can be hoped for from the operation, if successful? Mr. Morris gave arguments in answer to each of these questions in favour of nephro-lithotomy, and, finally, expressed his agreement with Mr. Charles Bernard, the author of an account of Marchetti's operation in the Philosophical Transactions of 1696, that many of the writers upon the subject of wounds of the kidney "ought not to have so magisterially exploded the operation," and hoped the operation would once again receive the consideration of the profession.—Mr. CLEMENT LUCAS had not the slightest doubt that nephro-lithotomy was both justifiable and practicable; and he had been for some time on the look out for a case which would call for such an operation. The successful results of nephrectomy supported the undertaking of other operations on the kidney. The lumbar incision is trifling, and the incision of the kidney itself is not dangerous. But it would be a serious objection if in every case a permanent urinary fistula was left; and he asked Mr. Morris if means might not have been taken to avoid this (e.g., by keeping the patient in the prone position), and whether he contemplated doing anything to relieve it?—Mr. MORRIS explained that no urine had passed through the sinus for a long time. It was now but a short sinus, discharging only a few drops of pus.—Mr. LUCAS said that his criticism then fell to the ground. He had the notes of a case of sinus in the loin, due to renal calculi which he had removed from the kidney, but on the suggestion of the President he did not relate the case, as the President pointed out the question before the Society was that of operation for the extraction of renal calculus without previous suppuration.—Mr. GOLDING BIRD congratulated Mr. Morris on the result of his case, and wished to add a seventh to the six he had mentioned where no stone was found. He had referred to this case at the Society last session. The patient was a lad, admitted into Guy's Hospital last autumn with an impacted calculus in the urethra. This was removed, but he began to suffer from intense renal neuralgia

on the left side, and from pain in the bladder, so that his life was rendered intolerable. Mr. Bird, thinking these symptoms pointed to stone in the left kidney, and the lad's misery being so great, he cut down on the organ, thoroughly explored it, back and front, but found nothing beyond a small nodule at one part the size of a millet-seed. He did not incise the kidney, but closed the wound. There was temporary relief, but then the pains returned; and Mr. Durham cut into the bladder, again without finding a calculus, but again with relief from the neuralgia for a time. Mr. Golding Bird did not know what had since become of the patient.—Mr. BARKER mentioned a case published in the *Berliner Medic.-Wochenschrift* a few weeks ago by Peters. There were symptoms of renal calculus, which the author verified by passing a trocar and cannula into the kidney, and striking a stone. Unwilling to subject the patient to the risks involved by cutting down on to the kidney, he left the cannula *in situ* for some time, and afterwards dilated the wound by tents until the sinus was large enough to admit the finger. He then passed in a lithotrite and crushed the stone before removing it. The fistula healed up completely. Within the last month Mr. Barker had himself operated on a case of renal calculus, which, however, proved fatal. The organ was readily exposed and incised, but the calculus was found to be of large size and branched. He removed part of it, and some pus escaped. Unfortunately a large portion of the calculus remained behind, and its extraction being difficult he was led to attempt the removal of the whole organ. But unable to enucleate it perfectly he found, after all, that it was easier to remove the calculus, which he accordingly did. Another point was the possibility of diagnosing a stone in the kidney. He saw the patient last February, and then made the diagnosis, which rested between renal calculus and tubercular disease. By passing a needle through the loin he struck the stone; and he believed this was the first time in which a renal calculus had thus been sounded *through the loin*.—Mr. BRYANT wished to support Mr. Morris as to the advisability of performing the operation. For as the operation was not one of great difficulty, it was not always of great simplicity, and should not be undertaken without grave consideration. Granting the diagnosis of stone in the kidney, and the want of relief in spite of medical skill, then there would be but little hesitation in the surgeon cutting down to remove the calculus. But all knew of cases where a calculus settles down, and the patient lives for several years no longer troubled by it; such cases might make one hesitate in arguing in favour of operation. The method of diagnosis alluded to by Mr. Barker was interesting from the fact that a stone in the kidney could be struck through a puncture in the loin, but he should doubt the expediency of such attempts in view of the important structures in the neighbourhood which might be injured. To clear up a doubt it might, however, be expedient to use these means. The procedure, however, was not quite analogous to the puncture of the intestine. He was pleased to hear such a case, and congratulated the physician and surgeon upon it.—Dr. GLOVER asked whether the occurrence of desquamation of the skin was coincident with the administration of turpentine? He had recently had a case of renal calculus under his care, in which the taking of this drug was followed by considerable desquamation, almost like that following scarlet fever.—Mr. HEATH, without wishing at all to detract from the value of the operation, ventured to remark that it was done under unusually favourable circumstances. The patient was young and the stone presented on the surface, so as to be readily identified. As it protruded the renal substance, there was not much of the organ incised. Mr. Barker opened the kidney in his case by means of Paquelin's cautery. He thought a puncture might be made in the loin for the diagnosis of calculus without any risk: it only required a fine aspirating needle, and the large vessels were far out of danger. In the case of a small calculus—as in Mr. Morris's case—it would be very fortunate if detection could be effected in this way.—Mr. MORRIS, in reply to Mr. Lucas, said that surgeons had always recognised the propriety of removing calculi when a sinus existed. He was glad to hear of Mr. Golding Bird's case, which added another to the list of those where the kidney had been cut down upon without a stone being found. Mr. Annandale, in a letter to him, said that he had operated on a gentleman and fairly handled the kidney without feeling a stone; but the operation was followed by recovery from the symptoms of calculus. So that these

cases would seem to imply that great relief might be obtained by the mere incision in cases of renal neuralgia. Mr. Annandale suggests that the incision acts as a counter-irritant. He had not read the case referred to by Mr. Barker, as recently published abroad. In Mr. Barker's own case was the pelvis distended or not? Was there much pus let out? If so it did not fall under the category of cases of nephro-lithotomy proper. Dawson had detected a stone by puncture through the loin. If acupuncture were used, it would be far more certain of success if applied to the kidney itself. He agreed with Mr. Bryant as to the dangers involved in this procedure. In reply to Dr. Glover, he said that the condition of skin was of long standing in this case, and it improved very much after the removal of the calculus. He concurred with Mr. Heath in the case being a most lucky one, from the small size of the stone and its projecting into kidney substance. But there was considerable incision and laceration of the kidney in the extraction of the stone.

The Society then adjourned.

MEDICAL SOCIETY OF LONDON.

Paralysis of Lower Limbs following Pelvic Abscess, on profuse loss of blood after Abortion.

At the meeting of this Society on the 25th inst., Mr. F. J. Gant, President, in the Chair, a paper was read by Mr. WM. ADAMS, entitled "Cases of Paralysis with Contraction of One Leg, following pelvic abscess in women; and of both legs following excessive loss of blood after miscarriage." The pathology of these two forms of paralysis with contraction in women is very different; one referring to damage done to the nerve trunks of the sacral plexus by inflammatory exudations, from which only imperfect recovery is likely to occur, and the other to some obscure affection of the spinal cord itself, probably involving slight structural change in the motor tract, from which a good, though not quite complete recovery may occur. In the *first class* the accumulation of pus in a pelvic abscess, instead of advancing, as it generally does, along the iliac region, and opening through the abdominal parietes, passes backwards and upwards, opening through the rectum or vagina. The nerve trunks of the sacral plexus become imbedded in lymph, which in time contracts, and, so to speak, strangles the nerves, leading to paralysis, with loss of sensation and motion, more or less complete on the affected side, from the hip downwards. The recovery from this condition in the case brought forward has been very imperfect. After a period of four years, the limb only being rendered useful in walking by mechanical support. In the *second class* the pathology is more obscure. In the case adduced, partial paralysis with contraction of both legs occurred within three weeks of a miscarriage, followed by excessive loss of blood, from which there seemed to be but little hope of the patient recovering. This condition was by some supposed to be the result of "myelitis from loss of blood"; by others, "spinal anæmia." Another suggested explanation was that it depended upon a purely functional derangement. Opposed to the last suggestion, Mr. Adams considered were two important objective symptoms: first, the muscular wasting and general atrophy of the legs; and, second, the peculiar atrophic condition of the skin, which was thin, white, and shiny; predisposed to tear on slight stretching, and corresponding to the so-called "glossy skin" described by Weir Mitchell, Charcot, and Paget as amongst the changes in nutrition of tissues resulting from nerve lesions. The conclusion, therefore, Mr. Adams arrived at was that structural changes had occurred in the motor tract of the spinal cord, from which considerable, though not complete, recovery has taken place up to the present time—six and a quarter years since the miscarriage. The muscles of the hip-joint, and some muscles of the legs, still remain partially paralysed, but she is able to walk with some assistance. The surgical treatment in the late stage of contraction consists in tenotomy and gradual mechanical extension, either by the use of instruments, or weight and pulley. Forceful extension should never be employed to overcome muscular contraction. With a view of promoting the recovery from the paralysis, Mr. Adams recommended galvanism, shampooing, passive motion, and warm clothing.—The PRESIDENT alluded to

the suggestions raised by the author as to the nerve pathology of these cases. He also pointed out the advantage of tenotomy, especially when combined with extension, in overcoming contractions.—Dr. ALLEN STURGE, who had examined the second patient referred to by Mr. Adams, stated that in the right leg there was very marked weakness of the flexor muscle of the thigh and of the muscles of the calf, complete paralysis of the tibialis anticus and extensor proprius pollicis, the extensors of the thigh and the peronei being nearly or quite healthy. In the left leg there was marked weakness of the psoas and iliacus, of the flexors of the thigh and of the calf muscles, the extensors of the thigh and the muscles in the front of the leg being healthy. The paralysed muscles were almost completely wasted, and their reaction to faradism was greatly diminished. The condition then was paralysis of groups of muscles in the two legs, with wasting and loss of electrical reaction, without loss of sensation or affection of the bladder—the exact condition seen in infantile paralysis. Dr. Sturge believed, therefore, that the lesion was the same as in the latter disease—viz., acute inflammation of the anterior horns of grey matter in the spinal cord. This condition is now well recognised as occurring in adults, and recently it has been met with as a sequel to typhoid fever and small-pox. May it not therefore occur after parturition or other acute exhausting disease?—Dr. ALTHAUS said that the paralysis in the first case was clearly owing to neuritis of the sacral plexus, the inflammation spreading from the pelvic cellular tissue to the nerves. The second case was more obscure, and he discussed the various probable conditions. He discarded the possibility of functional derangement without structural disease. Spinal anæmia occurred after hæmorrhage, not only from the womb, but also from the bowels or kidneys, after profuse epistaxis, and occasionally in chloro-anæmia, leading to paraplegia; but it was invariably recovered from under appropriate treatment. Ischæmia of the cord, due to embolism or thrombosis, was clearly not present in this case. There only remained meningo-myelitis, and, looking to the early rigidity, he thought that it probably was a case of pachymeningitis with compression of the cord by inflammatory products, especially of the lateral column.—Dr. ROUTH thought cases of pelvic cellular abscess passing into paraplegia must be rare. He had not met with one in his own practice, and he thought this might be due to his habit of opening these abscesses very early. He related a case he had seen in consultation, where paralysis with contraction followed a pelvic cellulitis; and vaginal examination under chloroform revealed a fibrous mass attached to the sacrum. The copious hæmorrhage in Mr. Adams' second case may have been due to a fibroid growth.—Dr. EDIS mentioned a somewhat similar case, where a lady, having fallen in the street, being four months pregnant, suffered from hæmorrhage, retroflexion, and septicæmia. The latter gave rise to much anxiety, although there was no evidence of local pyæmic deposit. Within six weeks from the accident paraplegia, with contraction of the legs and thighs, occurred. This was treated by forcible extension under chloroform and by mechanical appliances, with considerable benefit.—Dr. HERMAN advocated early aspiration of pelvic abscesses. He related a case recently under his care at the London Hospital where paralysis had followed pelvic mischief.—Dr. HEYWOOD SMITH asked for information as to the relative rate of absorption in abscesses opened by puncture and those allowed to open spontaneously.—Dr. DOWSE thought the symptoms of the second case pointed to meningo-myelitis.—Dr. HORROCKS believed the pathology of that case was similar to that found in infantile paralysis. The inflammation wholly destroying some motor nerve-cells and irritating others was sufficient explanation of the paralysis of some muscles and the contraction of others.—Mr. ADAMS replied, and the Society adjourned.

MIDLAND MEDICAL SOCIETY.

THE inaugural meeting for the session 1880-81 was held on Wednesday night, October 20th, at the Grand Hotel, Birmingham, Dr. Savage (President) in the chair. About 170 members and friends were present, including Drs. Thorburn (Manchester), T. and E. Underhill (Tipton), Parkes, Crabbe, Kely, George J. Lloyd, Melson, Warden; M'Munn, Millington, and Totherick (Wolverhampton); Wade, Malins, Sawyer, Lyle, Rickard, Clibborn, Hickinbotham,

Drummond, Thomas, Carter, Hinds, Vinrace, White, Bassett, O. Shaw, Hyde (Worcester), Messrs. Berry, West, Lowe, Hartill, Holbeche, Hollinshead, Gamgee, B. May, Chesshire, Lloyd Owen; Newnham and Lycett (Wolverhampton), Rhodes, Mann, T. W. Williams, Duncalfe, Yates, G. Elkington, E. A. Elkington (Newport), F. Jordan, Priestley Smith, Palmer, Clavasse, Archer, Lawson Tait, Bates, Harmar (treasurer), Garner and Eales (secretaries); Professors Poynting and Bridge, and Messrs. Adams and Ady (Mason College).

Dr. Matthews Duncan delivered the address, taking for his subject the treatment of puerperal fever (published in another part of our impression). At the close of the address a hearty vote of thanks was proposed by Mr. Berry, seconded by Dr. Bassett, and carried by acclamation. About sixty remained to entertain Dr. Duncan at supper. After the usual loyal toast his health was proposed by the President. Dr. Duncan in reply, proposed "Success to the Midland Medical Society." Mr. Lawson Tait proposed "The Visitors," to which Professors Poynting and Bridge replied. Mr. W. Thomas (ex-president) proposed "The Health of the Officers." Mr. Harmar (treasurer) and the secretaries having replied, the meeting separated after a very enjoyable evening. Before the address Professor Poynting showed some interesting physical experiments, including electrified water-jets and the phonendoscope. Messrs. Salt and Son and Mr. W. G. Mappin exhibited surgical instruments and appliances; Messrs. Southall Brothers and Barclay exhibited new and rare drugs and Mr. Gamgee's absorbent pads, and Mr. Bailey a collection of microscopes with beautifully prepared objects.

Reviews and Notices of Books.

A Text-book of the Physiological Chemistry of the Animal Body, including an account of the chemical changes occurring in disease. By ARTHUR GAMGEE, M.D., F.R.S., Professor in the Victoria University, Manchester. Vol. I. London: Macmillan & Co. 1880.

WRITING more than two hundred years ago, the Hon. Robert Boyle remarked that unless a physician was so instructed as to "know how heat and cold, fluidity and compactness, fermentation and putrefaction, viscosity, coagulation, dissolution, and such-like qualities, are generated and destroyed in the generality of bodies, he would often have very much to seek when he had to investigate the causes of preternatural accidents in men's bodies, whereof a great many depend on the presence, or change, or vanishing of some or other of the enumerated qualities in some of the fluids and solid substances that constitute the body." Since that passage was written the progress of pathological research has continued uninterrupted, and in the direction of histology the work accomplished must be considered eminently satisfactory. But when we come to ask what are the antecedent conditions which bring about the structural changes observed under the microscope, we find ourselves still on the threshold of inquiry, and we seem to pass at once from the domain of fact to the region of hypothesis. As yet we know little, if anything, of the variations that daily and hourly occur in the chemical composition of the blood, and which must have an important influence on the changes taking place in the tissues of the body. We have also yet to learn what mutual and separate action—physical as well as chemical—the constituents of every cell has on its growth and maintenance, and how far excess or diminution of one or more of these constituents—albumen, the hydrocarbons, salts, and water—influences oxidation and nutrition going on in the textures. The importance, however, of chemical research in this direction as an aid to pathological progress receives fuller recognition every day. Few hospitals are now without physiological and chemical laboratories in which students can obtain the manipulative skill as well as the theoretical knowledge which they require for practical work, and as the number of skilful workers becomes greater, so most certainly

will our knowledge develop with it, and become more extensive, more accurate, and, above all, more practical.

In the volume before us the author has considered the subject of physiological chemistry from a point of view which will recommend it rather to the biologist and the physician than to the chemist—that is to say, he has adopted a classification of the subject based entirely on morphological considerations. Nevertheless, care has evidently been taken that no chemical fact should be omitted which appears likely to throw light upon biological questions. The book is written in the interest of the truly scientific student anxious not merely to learn what has already been ascertained, but also to engage in original research for himself. In the present volume the chemical composition and the chemical processes relating to the elementary tissues of the body are treated of, the blood-lymph and chyle being also included. A second volume, however, is promised, in which the chemistry of the chief animal functions will be discussed.

The arrangement and plan of the whole work are excellent, and the student has here for the first time a book in the English language which is available for the study as well as the laboratory, the purely literary part serving as an introduction and reference to the student when engaged in working at the processes detailed in the practical portion of the volume. Professor Gamgee fears, however, that some may be disposed to think that he may have introduced too full a reference to the sciences of anatomy, physiology, and practical medicine; but we are inclined to regard these references, whilst adding greatly to the interest, as increasing the value of the work. Indeed, to the practical physician, the chapter which considers the changes the blood undergoes in disease is full of useful information and suggestion; the only fault is that it is too short, and, having read it, we crave for more information, and only regret that a field so rich has hitherto been comparatively neglected and yielded so little. Throughout this portion of the work Professor Gamgee has been careful to eliminate all crude chemical theories of disease, and has confined himself to the domain of experimental research, keeping before him the motto *Chymia egregia ancilla medicine, non alia peior domina*. Professor Gamgee's summary of the facts concerning the condition of the blood in diabetes, especially with reference to the production of diabetic coma from poisoning by acetone—*acetonæmia*,—is extremely interesting. As the author remarks, there are serious objections to accepting the acetonæmic theory of diabetic coma, since diabetics often evolve a most marked odour of acetone without exhibiting any tendency to develop this condition, and, further, since large doses of acetone are required to produce symptoms of poisoning, and even then these are by no means identical with those of diabetic coma. There is also a difficulty in accepting the view that the "peculiar terminal dyspnoea and coma of diabetes are due to lipæmia and fat embolism rather than acetonæmia," seeing that cases have been recorded in which, though the blood was lipæmic to a considerable degree, a most minute search at the hands of a skilled investigator failed to determine the presence of fat emboli; moreover the symptoms may occur when there is no excess of fat in the blood and no emboli are to be detected in the lungs, brain, or kidneys. In the present state of the question it is perhaps better to hold with Quincke, that the coma "is a condition which, like uræmia, is probably induced by a combination of circumstances, and by the toxic action of more than one product of tissue metabolism, amongst which may be the body which is excreted in the urine and is coloured red by perchloride of iron."

Space will not permit us to enlarge further upon the many interesting subjects treated of in this exhaustive and useful contribution to English science and medicine. Pro-

fessor Gamgee has produced a work which, when the second volume is issued, will be emphatically the text-book for the advanced student, and will be invaluable as a work of reference to the scientific physician.

Diseases and Injuries of the Eye. By GEORGE LAWSON, F.R.C.S., Surgeon to the Royal London Ophthalmic Hospital, Moorfields, and Surgeon to the Middlesex Hospital, &c. Fourth Edition. London: Henry Renshaw. 1880.

WE have on three previous occasions been able to recommend Mr. Lawson's work as the best of its kind in our language. Its good name will not suffer by the new edition. The work has been carefully and thoroughly revised. There is scarcely a page that does not show marks of improvement and revision, and here and there whole pages have been rewritten. As proof of the conscientious manner in which Mr. Lawson has done his work we may mention the following new articles: Pemphigus Conjunctivæ, p. 23; Sclerotomy, p. 79; Sarcoma of the Cornea and Sclerotic, p. 80; Mydriatics, p. 93; Myotics, p. 96; Prolapse of Iris (completely rewritten), p. 104; Cataract Operations (partly rewritten), p. 144; Nephritic Retinitis in Pregnancy, p. 172; Colour Blindness (completely rewritten, and illustrated by an excellent coloured plate), p. 220; Lacrymal Obstruction (rewritten, with drawings of modern probes), p. 290. Important additions have also been made to the articles on Foreign Bodies in the Orbit, p. 349, and on Herpes Frontalis, p. 343. In the next edition Mr. Lawson might extend the chapter on Glaucoma, especially as respects the pathology, and that on Diseases of the Optic Nerve. The chapter on Sympathetic Ophthalmia has been quite recently amplified by an article in the Royal London Ophthalmic Hospital Reports. Altogether the book is, for its size and pretensions, incomparably the best we know of both for the student and the practitioner.

THE IRISH GRADUATES' ASSOCIATION AND DR. MACNAUGHTON JONES.

THE following resolutions were passed at a late meeting of the above Association:—

1. The Council of the Irish Graduates' Association desire to convey to Professor Macnaughton Jones, of Cork, their sympathy with him under the trying circumstances in which he has been lately placed, and to express their opinion that he acted with the best of his judgment as a physician, and in accordance with the ordinary rules of professional propriety.
2. The Council also consider that the thanks of the profession as a body are due to Professor Jones for the able manner in which he defended the action of a medical attendant, responsible for the life of his patient, as no physician or surgeon should be held responsible for the result of treatment if due skill and care have been devoted to the case entrusted to him. They clearly recognise the incompetency of any non-medical authority to pass judgment on a purely medical question.
3. That a copy of this resolution be sent to the editors of the principal medical journals.

BEQUESTS AND DONATIONS TO MEDICAL CHARITIES.

Mr. R. L. Charrington, late of Carshalton, bequeathed £1000 each to the Earlswood Idiot Asylum and the Hospital for Incurables, Putney. Miss Ann E. Watts, late of Thornhill-crescent, Islington, bequeathed £1000 each to the Great Northern Hospital and the Royal Free Hospital, and £500 each to the London School of Medicine for Women and the East London Hospital for Children. The Misses Brooke have given £50 to the Adelaide Hospital, and a similar amount to Mercer's Hospital, Meath Hospital, and to the Building Fund of St. Mark's Ophthalmic Hospital, Dublin. The Bishop of Cork has given a donation of £50 to the Hospital for Incurables, Cork.

THE LANCET.

LONDON: SATURDAY, OCTOBER 30, 1880.

THE "nursing department" at Guy's Hospital has been again brought prominently before the public, and the "system" which the unhappy experience of the last few months has shown to be "in every respect mischievous," is apparently as mischievous as ever. On this occasion a nurse in the surgery ward attended to a "scalp wound," and sent the patient away from the hospital. The next day he returned, and on examination by a surgeon it became known that he had *also* a fracture of the skull. It is reassuring to be informed as a "deliberate opinion" that the lapse of time between his being sent away and his return the next afternoon did not in any way accelerate the death of this patient; but the fact remains that for a man who had been knocked down by a cart and sustained a fracture of the cranium to have his wounds dressed with a lotion and be sent away from a hospital, particularly when he was "not sober, but smelt of beer," was "not advisable." The nurse herself admits, looking back on the case, that the treatment adopted was not advisable, and we have it on the authority of a member of the staff that it was not. The nurse, however, did her best. She even seems to have taken considerable pains with the case. She made an examination round the wound as far as she could, and "came to the conclusion that none of the bones were broken!" Could any policeman have done more? The nurse of the surgery ward is clearly entitled to as much sympathy as we are accustomed to extend to the police when they blunder in their discrimination between the drunk and the dying. It may even strike the public that we are wont to be a little hard on the police for their blundering, seeing that a trained nurse specially retained on the "nursing department" of a large metropolitan hospital, and placed in charge of its "surgery ward," may fall into the same error.

The only fault in this case would seem to have been the effect of an omission to instruct the nurses that in cases of difficulty they might call in "further advice," and so distribute the responsibility; and that there would be nothing derogatory to the dignity of a representative of the "nursing department" in "consulting the surgeon." He would, in this instance, have coincided in the opinion that "none of the bones were broken," and then the surgeon's evidence would have been available to support the nurse's evidence, and no possible unpleasantness could have ensued. At the risk of offending the Governors of Guy's Hospital, we venture to suggest that some arrangement of this nature should be embodied in a formal rule. The nurse concerned in the present case said, "As to directions with regard to consulting the surgeons, I have had none directly." We cannot think the Treasurer, or even the Matron, could seriously object to giving such directions. There is nothing in itself humiliating in "consulting" a surgeon, and considering that, after all, Guy's Hospital was intended to be a comfort to the poor, it might be well to make this small concession. It would probably be deemed a pity to do anything which might

seem to imply that the institution could not be carried on by the Governors independently of the staff, but a mere formal consultation with one of the surgeons, or even a physician, in a case of obscurity should be gracefully tolerated. The only persons who could be reasonably expected to object to such an arrangement would be the medical officers. There used to be a feeling prevalent in the minds of medical men attached to hospitals that unless a patient applying for relief were at once seen by themselves, or one of their professional representatives, they would rather not have anything to do with the case. At some of the institutions within our knowledge—neither small nor unsuccessful in their way—the regulations were so definitive and exacting that if a nurse had presumed to uncover a wound or apply a piece of lint or sticking plaster, her zeal without knowledge would have been recognised and rewarded with instant dismissal. That was under the old system, when the dressers of a hospital acquired a practical knowledge of their art by themselves doing the whole of the dressing, and when every casualty was attended by an experienced student, in all cases of the least gravity under the personal superintendence of a qualified house-surgeon! In those days "nursing" was not a *department*, and nurses did not speak of "consulting" a surgeon, but simply acted as servants doing a master's bidding.

What will the Medical Faculty do under the circumstances? They have been told in no ambiguous terms that they *must* accept the system which makes the lay government supreme in all hospital arrangements. This is part of that system. Probably some new "directions" may be issued for the guidance of nurses, and in future these persons will "consult" the surgeon; but is the profession, and is the community, are the sick poor, to understand that the physicians and surgeons attached to Guy's Hospital agree to administer the charity on such terms? Is this a satisfactory discharge of public duty? Let personal interests and recondite considerations as to the school and the hospital be set aside, and the simple question receive a plain answer—can any staff, humiliated and subordinated as this medical staff has been humiliated and *is* subordinated, discharge its duty to the sick poor with credit to itself and the profession to which it belongs, or with a sincere feeling of self-respect, not to speak of dignity? We think not, and the profession thinks not. Already the staff at Guy's Hospital has "withdrawn" and "conceded" until the position it occupies is logically untenable and altogether incomprehensible. It is time the patient's standpoint was taken in this unhappy controversy. No medical man can be justified in lending his name and the authority of his status as a practitioner to a system of treatment by nurses, under the control of a treasurer, and matron, and governors who are all lay persons, doing, or affecting to do, medical work. The staff of a hospital cannot take the place of help-meets to the lay authorities. The institution is a medical charity, and all that relates to the treatment of patients must be directly under medical control. The existence of a "nursing department,"—which it seems is also a surgical department,—is fatal to the medical discipline of a hospital. The staff should pluck up courage to tell the Governors that they "must" accept the system public prudence and the interests of the sick poor require. If the Governors of Guy's Hospital are not prepared to accept the position to which common-

sense and public safety point, let the medical staff retire, and leave the future of this deplorably discredited hospital to unfold itself.

The announcement that at a meeting of the medical and surgical staff, and the lecturers, held last week, a resolution was passed earnestly begging Dr. HABERSHON and Mr. COOPER FORSTER "not to carry out their intention of resigning their appointments," will not fail to stir the profession with a feeling anything but sympathetic. There is no sufficient excuse or apology for the course pursued. The possible closing of the hospital and school might cause some private loss and a trifling public inconvenience, but what are such contingencies as these to the crying evil of a surrender of principle, and the creation of a grave scandal? It is time to tell the medical staff of Guy's Hospital that its policy is out of harmony with the conscience of the great body of practitioners to which it belongs. If the physicians and surgeons of this important institution are animated with a desire to uphold the honour of their profession, they must clear their position and revise their policy. We have no wish to ignore the efforts they have made, or to undervalue any successes they may have gained. It is much to have prevented the introduction of a sacerdotal system and sisterhood; but more remains to be done, and, rather than accept a position which must needs cripple them, they should resign.

THE operative measure brought before the notice of the Clinical Society at its last meeting by Mr. HENRY MORRIS is sure to attract attention and to receive criticism. It is one more instance added to the increasing list of cases where the propriety of surgical interference in the treatment of disease affecting an internal organ is to be duly considered. The time has gone by when such interference was regarded with mistrust and met with unflinching opposition; for it would seem that the fear nowadays is lest surgery should be too venturesome and should attempt too much. The justifiability of excising a calculus from the kidney in the earlier stages of its formation has, indeed, been often questioned, only to be sternly discountenanced. It was held to be a rash, absurd, and even a dangerous procedure by Sir BENJAMIN BRODIE and many writers on calculous disease, both before and since his time. And it must be confessed that there were grounds for this condemnation, not, however, those which made the measure a dangerous one in itself, for these have been shown to be of slight account; but those which argued from the facts of the known history of renal calculus—its frequent encystation or passage down the ureter into the bladder. "Nephrotomy," as distinguished from "nephro-lithotomy" (which Mr. MORRIS has termed the operation of excision of a stone from an undistended kidney) falls under quite a distinct category. For nephrotomy is applied to the incision of an organ already so diseased as to be past functional recovery. Nephrotomy has been long practised; nephro-lithotomy is quite a novel procedure. The objects of the operation are at least twofold—the one immediate, the other indirect. By nephro-lithotomy the surgeon seeks to relieve the patient from the more or less prolonged suffering entailed by the presence of so irritating a body as a concretion in the kidney. He also desires by the removal of this source of irritation to forestall those structural changes which so frequently ensue if a calculus re-

main in the organ. It is almost inconceivable that a stone should be lodged in the kidney without setting up such changes. They may be comparatively trifling; the stone becomes encysted in a calyx, and the secreting substance around it becomes atrophied and indurated. But at any time this calculus may be dislodged, and, if it be not small enough to traverse the ureter, may be arrested there or in the pelvis, and thus become the source of hydronephritic disorganisation; or by its presence it may excite pyelitis, with its long train of destructive disease. In either case the organ is rendered a useless encumbrance, if it be not an actual source of danger to life. Even where the stone traverses the ureter it enters the bladder, and after its passage from the kidney it may have to be removed by lithotritry or lithotomy from that viscus. It is obvious that much suffering and danger to life would be obviated were it possible always to remove the primary calculus or calculi from the kidney itself. This is what nephro-lithotomy is intended to do. Before, however, it can be regarded as an essential operation, it must be shown that other measures for relief are inadequate.

These measures are those which medicine affords, and it must be confessed that attempts at the solution of calculi by the long-continued administration of alkaline remedies are not so efficacious as might be inferred from their known action upon the urine. Many a case submitted to a most prolonged treatment has been apparently uninfluenced by it, and in the case of oxalic calculi no "solvent" administered by the mouth has ever had the least effect. Without wishing to take too pessimist a view of the medicinal treatment of calculus, it must still be admitted that the improvement is very slow, and the actual solution of the calculus probably very slight under any method of treatment. The part assigned to medicine lies really more in the prophylaxis of calculus than in its cure.

If, then, it came to be clearly recognised that a renal calculus, when formed, tends to increase, or at any rate to remain uninfluenced by remedies, that its very presence is a source of grave destructive disease of the kidney, as well as a continual cause of suffering, it will be more and more admitted that an operation for the removal of the calculus at the seat of its formation, instead of being absurd and rash, is rational and wise. Whether opportunities for such an operation will be frequent is doubtful, but it is probable that those cases where the early symptoms are most marked are just those where the calculus is most readily removed. The operation itself, except in the case of large branching calculi, as related by Mr. BARKER, should not be considered dangerous; and even the persistence of a urinary fistula may be set off as a very minor trouble compared with the great relief afforded by the removal of the stone. We feel then assured that the operation is a justifiable one, and are of opinion that it will become established in surgery; and it is not too much to hope it will, in course of time, almost supersede nephrotomy or nephrectomy, which are being had recourse to in more advanced stages of renal calculous disorder than "nephro-lithotomy."

THE approach of November terminates a most grateful lull in the strife of political parties, and calls Ministers to consider the complexion of their duty in regard to legislative

measures for the ensuing session. Superficial observers and keen partisans are apt to think that two or three great duties of the Ministry will swallow up all lesser ones. To promote the observance of the Berlin Treaty, and to preserve peace in Ireland, according to such critics, is work enough for any government. We do not think so disparagingly of the present Ministry. And amongst the minor pieces of legislation which we expect from them is a Bill for the Amendment of the Medical Acts. This kind of work is not sensational, and it does not appeal to the passions of partisans. But these are reasons rather for undertaking it than for declining it. The medical profession is expecting such legislation, and so are the medical schools and the licensing boards, in spite of a few indications of an attempt to believe that the change from a Conservative to a Liberal Ministry has brought some indefinable prospect of a new lease to old and thoroughly indefensible arrangements, and to a General Medical Council which has all the vices of an old body without the excuse of age.

We cannot bring ourselves to believe that the President and Vice-president of Council will be content with any slight excuses that may occur to them for neglecting a piece of reform that was in a fair way of being executed by a Conservative Ministry, and that contemplates improvement in both the process and the tests of medical education. It will be a heartless thing to allow successive generations of medical students to go on passing increasingly difficult examinations only to procure half diplomas. For ten years and more this system of half diplomas has been condemned by the Government and by public opinion, and by the opinion of the profession. The statesmen forming the existing Government, when last in power, framed a Bill in almost every way good, but defective in one respect. It contained no recognition of the gross faults of the Medical Council as a Council of Medical Education and Registration, and no provision for remedying them. But for this defect it must have passed triumphantly. A similar Bill brought forward now, with clauses amending the constitution of the Council, would be heartily supported by the profession, whose interests are not different from those of the public. Very plain facts have been adduced before a Select Committee showing the inefficiency and the costliness of the present Council, and that it is framed so as to do the greatest amount of talking and the least amount of work. All that the friends of reform ask the Ministry at present is to reappoint the Select Committee, granted by the last Government, which was dissolved with the Parliament, in the very middle of its work, and to give a fair hearing to those who wish to see medical schools and boards brought into harmony with existing opinion. It is known that some of the most eminent members of the profession were on the point of giving evidence before the dissolution. Is there anything in the dissolution to make their opinions less valuable, or the question of medical reform less urgent? Certainly not. We earnestly trust then that Ministers will include in their plans of work for the session of 1881 a Select Committee to be appointed early enough to report in time for legislation. There are no insuperable difficulties in the way. The profession is very unanimous in its demand for such a measure. Both parties in the State are committed to it. There can be no rest in the profession or in the

schools till it is passed. And the passing of it will lead to improved modes of teaching and examining medical students by which the public will be the gainers. There is opposition of course, but it is the kind of opposition that we expect and rather like. It is the opposition of interested and, in some instances, effete bodies. There could not be a greater libel upon the existing Ministry than to say that it waited for the support of such bodies before proposing measures of reform.

In a paper in the St. Thomas's Hospital Reports, 1880, Mr. WAGSTAFFE records the results of careful measurements of the femur and tibia in twenty-five cases of chronic disease of the knee-joint in young persons in whom the union of the epiphyses to the diaphyses may be presumed not to have occurred. The fact that lengthening of the femur may occur in such cases has been noted before, but this was an inquiry into its frequency or constancy, and whether it bears any distinct and definite relations to the position and kind of articular disease. In six of the patients only were the tibia and femur found unaltered in length, the sound limb being taken as the standard; but in two of these the disease commenced after the age of twenty, and they should, therefore, be excluded. In the nineteen cases in which alteration in length was found, the femur was lengthened in fourteen and shortened in one; the tibia was lengthened in four and shortened in six. In explanation of these facts, it is pointed out that the femur is much oftener the seat of disease than the tibia, and that the shortening of the tibia may be a part of the general malnutrition of the limb arising from interference with the circulation from enlarged glands in the groin. The manner in which disease of a bone may be supposed to increase its growth is by keeping up a chronic hyperæmia at the line of junction of the epiphysis and diaphysis, where the growth in length takes place; while a necrosis of the whole epiphysis, or extending to this line of ossifying cartilage, will cause shortening of the bone. Where the disease is purely synovial, or the articular surfaces are only quite superficially affected, there is not likely to be any effect produced on the length of the bone. In confirmation of these surmises it was found, on excising the joint in four of these patients, that in two, where no change in length of either bone was noted, the disease was purely synovial, or only affecting the bones superficially. In the two others, in each of which the femur was $2\frac{1}{2}$ cm. longer than its fellow, and the tibia normal, the disease "affected the femur with peculiar exclusiveness." In one of them there was noted acute congestion of the bone, not opposite to the tibial articular surface, but more deeply along the line of the epiphysis. The increase in the length of the femur was found to vary from .6 to 3.1 cm., and the average was nearly 2 cm. The practical deductions from these observations are, that by a careful measurement of the bones entering into a diseased joint the seat of that disease may be localised; if when long-standing no abnormality in length is found, it may be decided that the disease is synovial; if one bone is found lengthened it points to disease in it with hyperæmia along the epiphysial line, while shortening may be due to secondary general wasting of the limb, or to destructive disease of the bone reaching to the same line.

Annotations.

"Ne quid nimis."

THE SEAMEN'S HOSPITAL SOCIETY.

THE policy of the managers of the Seamen's Hospital Society is already beginning to bear fruit, and the withholding of a grant by the Common Council of the City of London shows that at length public criticism is being brought to bear on the conduct of the institution. It appears that the Seamen's Hospital Society holds an invested capital of £112,000, besides the use of the hospital premises rent-free from Government. The hospital is situated in Greenwich, on the side of the river opposite to the docks, and therefore inconveniently placed for the reception of sick sailors, who on their arrival in port have to be transported some way round or across the river before they are able to enjoy the rest and comfort which ought to be waiting for them close at hand. To maintain a hospital for sick sailors at a spot where no sick sailors land, is as absurd as it would be to place a casualty Hospital like St. Bartholomew's, for instance, on the top of Highgate-hill. The committee have partly seen this, and have so far condescended to stretch the assistance at their command, as to establish a dispensary where out-patients can obtain medicine without coming an afternoon's journey for it. But this dispensary does not touch the evil of having to transport sailors suffering from acute disease across the river. No wonder that increasing numbers of sailors seized with sudden and severe illness apply for admission at the hospitals on the side of the river on which the docks are situated. Moreover, it is difficult to see why the committee cling so fondly to their present building, seeing it is anything but fitted for a general hospital. Owing to the smallness of the wards, the expense of management and the difficulties of nursing must be in excess of what would be the case in wards of better construction, whilst there can be no doubt of their being less wholesome. The committee of the Seamen's Hospital love to pose as the friends of "poor Jack"; but really if they had his interests at heart they would provide him with a hospital better suited for his accommodation, and also place that accommodation near him, so that he might at once find refuge instead of having to seek for it in his hour of need. With a hospital building rent-free, accumulated funds of £112,000, and an obstinate adherence to a position which cannot be of the least value to the sick sailor, we do not think the Committee can make a very serious claim on private charity.

THE TREATMENT OF WHOOPING-COUGH IN GAS-WORKS.

A SERIES of recommendations on the treatment of whooping-cough in gas-works has been made to the Académie de Médecine. A commission was appointed some time ago consisting of three members, of whom M. H. Roger, the President of the Académie, is the sole survivor. He has presented a report to the Académie which is of some interest. Before considering the communication, he described the arrangement of the chambers for the purification of gas, and the chemical products which patients would breathe in them. The purifying chamber is a large room, with doors and windows freely open. Each contains twenty-four vessels, holding five cubic metres of depurating substance—lime and sulphate of iron, mixed with sawdust,—through which the gas has to pass. When the workmen are emptying and refilling one of these vessels the children with whooping-cough are placed around it, and inhale the vapours which escape. They are in an atmosphere containing ammonium sulphide, carbolic acid, and tarry products. The

statements made regarding the efficacy of this treatment are the following. M. Commenge records 169 cases in which the treatment was persevered with. In 20 the treatment failed completely, in 48 improvement was obtained, and 101 were cured. M. Bertholle merely states that, of 341 cases, 122 were improved and 219 were cured. Failures or deaths are not mentioned. M. Roger points out that these figures are too good to be quite satisfactory. A method of treatment which gives, of 510 cases, 490 ameliorations, and no death, would be indeed an admirable result. But besides the 490 cases improved there were, it appears, 671 cases not included because the treatment was not persevered in, and these probably include a large number of total failures. Moreover, the cases alleged to be cured were not carefully followed up. Evidently also slight and uncomplicated cases only can be treated in this manner. The remote situation of most gas-works, and the exposure involved in the treatment in winter, limit the application of this method. M. Roger thinks that it acts only upon one element of whooping-cough—the catarrh,—and that it is contra-indicated in febrile attacks of the disease, and would be positively dangerous in complicated cases. The method is, however, easy of use in some localities and in summer, and seems worthy of further trial in suitable cases, but it is desirable that its effects should be more exactly noted.

HOMŒOPATHIC PRACTITIONERS.

THE line of demarcation between homœopathic and regular practitioners continues sharply limited, in spite of the efforts of some homœopaths to break it down. Indeed, that it should be so is for the benefit of the follower of Hahnemann. He depends for his practice on the crotchets of his patients, who would not come to him were it not that they "believed (!) in homœopathy." This being so, the character of the practitioner is well known to his patients, and in suburban and country districts is well known also to the neighbouring medical practitioners. They can, and happily, as a rule, decline professional intercourse with one whose theories and practice are, as they believe, either foolish or dishonest, or both, and in any case fraught with peril to the sick. But medical men at a distance may know nothing of the character of any given practitioner, and, what is worse, they have no means of ascertaining. Homœopaths constantly endeavour, as every consultant can prove, to obtain consultations without declaring their mode of practice. Many a physician has been summoned by telegraph to a distance to find to his annoyance when he got to his destination that he was called to meet a homœopath. If he has his suspicions he may telegraph for information on this point, but if there is nothing to raise his doubts, he can scarcely do so, and has no means of learning the character of an unknown practitioner. Every qualified medical man's name appears in the Medical Directory. The list includes the names of probably hundreds of homœopathic practitioners, but in not a single instance is there any indication of the fact. The authorities of the Homœopathic Hospital lately sent, with characteristic audacity, to many medical men,—to all those connected with medical schools,—a circular descriptive of the arrangements of their hospital, and containing a list of the lectures, prizemen, &c. All of these are presumably practising homœopathy, but in not a single case is any intimation of the fact given in the Directory, nor, in the case of the physicians to the Homœopathic Hospital, is their appointment mentioned. We do not know whether this reticence is due to the fact that the Editor of the Directory declines to insert these appointments, or whether it is an indication that homœopathic practitioners are ashamed of their sect. Every medical man is assumed to be an orthodox (or, as we would prefer to say, a rational) practitioner, unless he is known to be a homœo-

path, and therefore those homœopaths whose names appear in the Directory without any indication that they are such are sailing under false colours.

"DENTAL SURGEONS," "SURGEON-DENTISTS," ETC.

It is interesting to notice the many proofs of ignorance or carelessness on the part of the public in reference to the working of the "Dentists Act." So far from that statute having any protective value for the community, it is, as we predicted it would and asserted it must be, a delusion and a snare. At present the Dentists' Register is a list of all the persons, with or without knowledge and qualification, who were, or claimed to be, in the habit of tooth drawing or making at the passing of the Act. Hereafter, that is to say, when the present race of "Dental Surgeons" shall have died out, the Register will comprise the names of those imperfectly educated and half-qualified persons who are simply licentiates in dentistry and nothing more, together with such fully qualified *surgeons* as may elect to have their names classed with the professors of a "specialty," which, in so far as it is *surgical*, cannot in the very nature of things have any *really* independent existence. We venture to think the number of medical men so minded will be exceedingly small. Meanwhile the drawers of teeth and hewers of jaw-bones luxuriate in the possession of a Register on which we regret to find the names of a few surgeons. They also call themselves "Surgeon-Dentists" and "Dental Surgeons" at pleasure, although there has been nothing surgical in their education, and they have no conceivable right to the title they claim. It is amusing to find members of the profession who short-sightedly or perversely agreed to accept the absurd phraseology of Sir John Lubbock's Bill, and, forsooth, thought it could "do no harm," now complaining of the results. They are simply the inevitable consequences of a serious misconception of the facts and a false policy. It would be ridiculous to pretend that we commiserate the surgeons, or greatly blame the "dentists" who have taken advantage of their weakness. At the same time we do pity the public who are victimised. The sooner qualified men take their names off the Dentists' Register and open up some new mode of marking themselves off from the mass of specialists, the better will it be for the country at large and a branch of the medical profession which has been practically stultified.

EXPERIMENTS ON SNAKE-BITE.

DR. ARTHUR STRADLING, of H.M.S. *Elbe*, writes to us to correct some errors in our account of his experiments with a rattlesnake, detailed in a recent number. His observations were not made with a view to the discovery of an antidote, but of a prophylactic, and were designed to discover a plan which shall render the body proof against the deadly effects of snake-bite. He writes: "The process, as I have it now, is so cumbrous and so perilous that in its present form it could never be of any practical use, and unless simplified would remain merely a matter of scientific interest. That it is capable of being simplified I feel certain. I am positive that I do much that is unnecessary, but it is difficult and hazardous to eliminate the useless from the useful, and it was through being in a hurry to arrive at a conclusion that I risked a certain omission in my affair with the rattlesnake. Three weeks afterwards I was bitten by a much larger one, nearly eight feet long, with at least a month's accumulation of fluid in his glands, and as active as a tropical day could make him; and this was attended with only local disturbance, by no means severe—nothing constitutional. Yes, my misadventure, nearly fatal as it was, has taught me much that was useful, much that will shorten my work, for I am determined to carry it out as far as I can myself.

Nothing that I do is wasted now. The grand *fact* is proved; the rest is a matter of detail—grave enough, no doubt, but only detail. I have no fear now that it may be said I threw my life away in pursuit of a visionary conceit. If I fail, someone else will succeed by avoiding the rock on which I come to grief. I commit everything, the smallest item, to paper before receiving a bite, and continue to note what I observe as long as I can hold the pen. That it will rank as a great discovery some day, I know, though I may not live to hear it hailed as such. So far I have completed the process with five distinct species of poisonous serpents, but whether each of the two hundred or so remaining species would require a separate course, or whether (as I believe) the venoms of many are identical, is uncertain. The difficulty of getting specimens renders my progress slow. All my experiments are made on myself; no animal will survive the preparation in its present form. If any man, in the medical profession or out of it, from a love of science, from a purely mercenary point of view, or for any other reason, or without any, will honestly join me and honestly share the labour and the risk, I will honestly share with him whatever *kudos* may attach to it eventually."

Dr. Stradling's work is evidently at present beyond the range of criticism. We trust, however, that he will take more care of himself in the future than in the past. If he falls a victim to what most would call rashness, but which is certainly remarkable self-devotion, we doubt whether any successor will be found to carry on experiments under such conditions.

FEMALE DRUNKENNESS.

THERE is a serious concurrence of opinion about the amount of female drinking that is going on in all classes of society. "Society" journals tell us that ladies only get through the monstrous duties of the London season by the help of stimulants assisted by chloral, and the daily newspapers give painful accounts of the drunkenness of poor women. Our contemporary the *Newcastle Chronicle* paints an appalling picture of this state of things in that town. It says: "If the police returns may be taken as a criterion, female drunkenness is fearfully on the increase in Newcastle. Scarcely a day passes but the Bench have a number of feminine inebriates to pass judgment on, and the number of confirmed cases that often come under their consideration is truly lamentable. . . . Amongst the many on Monday week was a young woman only twenty-one years of age, who actually made her fiftieth appearance, and another aged forty who for the forty-ninth time came up to answer the charge." Similar was the burden of the evidence before the Lords' Committee. We need not appeal to professional experience: it is only necessary to look about, and notice women of all classes, and of all ages, go in and out of the public-house unblushingly, not a few of whom, even in early life, present pictures of physical degeneration and ugliness which might well serve as a warning to their sex.

Whom shall we blame? Society, or the Legislature, or the Church, or ourselves as medical guides? There was a time when the profession might take a large share of blame. But that is not now. The profession, by its example and by its advice, is on the side of extreme temperance, and is constantly pointing out that alcohol can be taken only in its lighter forms by the run of people without harm of some kind. We shall not apportion the blame due to others. Our business is to record facts with the assurance, but without the details, of our own confirmatory evidence. Ladies should come to the rescue of their own sex. They have been slower than gentlemen in accepting the lighter forms of drink, and still evince an absurd preference for strongly fortified wines and for spirit. The Legislature should show itself ashamed of its past efforts. Of all useless and mocking

pieces of legislation in recent years the Habitual Drunkards Bill is the most so. We have good reason to know that it is absolutely a dead letter, and that not one Home, within the meaning of the Act, has yet been established. Mean-time, girls of twenty-one come up before helpless magistrates to be sent to prison for the fifty-first time.

DEATH OF DEPUTY SURGEON-GENERAL B. TYDD.

WE much regret to announce the death of Deputy Surgeon-General Benjamin Tydd, head of the statistical branch of the War Office, Whitehall-yard. Mr. Tydd was in his usual health on Friday last, and attended to his official duties at the War Office, returning to his country residence at Sevenoaks in the evening. On Saturday he was seized with symptoms of apoplexy, became rapidly unconscious, and expired on Sunday morning. Mr. Tydd entered the army as an assistant-surgeon on April 25th, 1851, and was shortly afterwards gazetted to the 23rd Royal Welsh Fusiliers, with which regiment he served throughout the Crimean campaign, being present at the action of Bulganac and the battle of the Alma (medal and clasp and Turkish medal). He was promoted surgeon in July, 1858, and remained with his regiment, the 23rd, for several years afterwards. In April, 1871, he became senior surgeon-major, and was transferred to the Royal Horse Artillery, proceeding to Bangalore in the Madras Presidency, in medical charge of the C Brigade, R.H.A. In March, 1879, he was promoted to the rank of deputy surgeon-general, and succeeded Sir Anthony Home, V.C., at the War Office on that officer's transfer to Cyprus. Mr. Tydd, who had been three times married, leaves a widow and several children to mourn his loss.

ARMY COFFEE TAVERNS.

WE are gratified to learn that steps are being taken to extend to the army the advantages of coffee taverns. Every one who has had anything to do practically with soldiers must be too well aware that drunkenness is the curse of the British army, and that very many men who have in them the making of splendid soldiers and excellent non-commissioned officers go to utter destruction from their inability to resist the fascination of drink. In our own time much has been done to improve the condition of the soldier, physically and morally, by providing him with the means of occupying his leisure time in a more rational manner than spending it in the public-house; but it is obvious that there is still wanting some counter attractions to the bright, cheerful-looking accommodation held out by it, and which can only be enjoyed on condition of contributing to its maintenance by the consumption of some of the stimulating drinks in which it deals. It is proposed now to establish coffee taverns, where all the advantages of warmth, light, and amusement may be enjoyed by the soldier outside the barrack gates without his being exposed to the temptation to indulge in intoxicating drinks, and to substitute tea, coffee, and other suitable refreshment in combination with recreation, books, &c., for the attractions of the gin palace and beershop. It is intended that these establishments shall be purely social, non-political, and unsectarian, and that they shall also be self-supporting. It is proposed to erect the first of them at Woolwich, and a committee has been appointed to take the necessary steps to do so. An appeal is made to military men especially, and to the general public, to contribute to so desirable an object by furnishing funds for the purchase of the necessary building. We cannot commend too highly so praiseworthy an attempt to raise the condition of the soldier, and to rescue him from those temptations which, alas! too often lead him into habits destructive alike of his physical and moral welfare, and from which, once contracted, he rarely, if ever, can emancipate himself.

THE INFLUENCE OF MUSIC ON THE CIRCULATION OF THE BLOOD.

DOGIEL observes that music excites both in men and in animals pleasant and unpleasant sensations, the effects varying with the individual and with the quality of the music. The Greeks long ago discriminated several forms of music according to their influence on the body, under the names of Phrygian, Lydian, Æolic, and Doric styles. Aristotle saw in music one of the most important means of education, and Plato considered it to be necessary that music should be studied from the thirteenth to the sixteenth year. Pythagoras held that music might be made serviceable in the treatment of various diseases. In short, the ancients were well aware that the human body is powerfully affected by music. Dogiel made a series of experiments both on men and animals, the results of which he sums up in the following propositions. (1) Music exhibits an influence on the circulation of the blood, both in animals and in man. (2) The blood-pressure sometimes rises, sometimes falls. These variations in the blood-pressure depend essentially on the influence of the excitation of the auditory nerve on the medulla oblongata, which is apparently in direct continuation with the auditory nerve. (3) The action of musical tones and pipes on animals and man expresses itself for the most part by increased frequency of the cardiac contractions, and hence it follows that the automatic centres of the heart act with greater energy. (4) The variations in the circulation consequent on musical sounds coincide with changes in the respiration, though they may also be observed quite independently of the respiration. (5) Strychnia increases the effect produced by stimulation of the auditory nerves on the circulation, whilst curara diminishes it. (6) Chloral hydrate, as well as ethyl alcohol and morphia (in a certain stage of the narcosis produced by them), diminish the action of the auditory excitation on the circulation. (7) The variations in the blood-pressure are dependent on the pitch and loudness of the sound, and on the tone colour. (8) In these variations of the blood-pressure the idiosyncrasies of the individual, whether man or animal, are plainly apparent, and even the nationality, in the case of man, has some effect.

THE ACCURACY OF THE MEDICAL REGISTER.

WE direct attention to an important advertisement in reference to the insertion in the Medical Register of changes of address or additional qualifications. There is perhaps a little red tape in the formalities necessary to be gone through, and these formalities have been the subject of some warm discussions between the General and the Branch Councils. After a six years' battle these discussions have ended in favour of the view of the Branch Councils. We are frequently receiving complaints of inaccuracies in the entries in the Register, some of them not to be easily explained. But by attention to the advertisement, registered practitioners will be able to blame the Council or its officers if there should be inaccuracies in their registration.

UNIVERSITY OF DUBLIN.

THE following resolutions were adopted by the Council at a meeting held on the 20th inst.: "1. That the Council are of opinion that in future instruction in surgery should be given by a course of lectures on the theory of surgery in the winter session, and a systematic course of demonstrations in operative surgery in the summer session. 2. That the secretary be directed to place on the College gate a notice that the Council will proceed at their next meeting, November 10th, to nominate to the Regius Professorship of Physic and to the Professorship of Surgery.

A YEAR'S WORK AT ST. BARTHOLOMEW'S HOSPITAL.

THE Medical and Surgical Registrars at St. Bartholomew's Hospital have just issued their annual report for 1879, from which it appears that the in-patients were 494 and 476 respectively on the first and last days of the year. The number of cases admitted during the year was 5820, making the total under treatment 6314; 5252 cases were discharged, including cured, relieved, and unrelieved. The deaths of patients were 586, exclusive of 37 cases brought in dead, and were equal to 10 per cent. of the completed cases. No less than 414 post-mortem examinations were made during the year. A table in the report shows the result of 467 cases of amputation within the hospital during the past ten years. In 110 of these cases, distinguished as primary and secondary operations, the mortality was equal to 20 per cent.; whereas in 357 cases of operation for disease the average rate of mortality did not quite equal 14 per cent. With regard to medical cases, the average duration of those that proved fatal during 1879 was twenty-one days, while the average stay in hospital of patients discharged was thirty-one days. The average stay in hospital of all surgical patients was nearly thirty-three days. The rate of mortality was equal to 17 per cent. among the medical cases; whereas the proportional mortality among the surgical patients did not exceed 5 per cent. It is to be regretted that, with the exception of the statistics of amputations, no table is given in this interesting report showing for comparative purposes a summary of the work in recent years. A retrospective table of admissions, recoveries, and deaths in recent years should invariably find place in all hospital reports, as it would materially add to the value of the statistics of the year to which the report relates.

CONGRESS OF ELECTRICIANS.

THE *Journal Officiel* publishes a report by the French Minister of Posts and Telegraphs, on the coming Congress of Electricians, and also a decree dated the 23rd of October, embodying the regulations, which are as follows:—

1. An International Congress of Electricians will be held at Paris under the presidency of the Minister, and will commence on the 15th of September, 1881.
2. Three vice-presidents will be chosen amongst the French, and three amongst the foreign members.
3. The Ministers of the Government of the French Republic, and all foreign Ministers who may take part in the Congress, will be *ex officio* members of the Congress.
4. The Palace of the Champs Elysées (Palais d'Industrie) will be placed at the disposal of the Commission authorised by the Government to organise at its own expense an International Exhibition of Electricity, to last from the 1st of August until the opening of the Congress.
5. The International Exhibition of Electricity will be placed under the patronage of the State.
6. The regulations of the exhibition will be submitted to the approbation of the Government, who will nominate the Commissary-General (M. Georges Herger).
7. The Minister of Posts and the Minister of Public Works are entrusted with the execution of this decree.

THE CELLS OF THE SPINAL GANGLIA.

THE structure of the cells of the spinal ganglia has been lately reinvestigated by Rawitz, who has employed a method advocated by Arnold. This consists in the immersion of the specimen in a 2 per cent. solution of acetic acid for four or five minutes, and then for from twelve to forty-eight hours in a 1 per cent. solution of acetic acid. They are afterwards teased out in glycerine, and finally treated with chloride of gold. The ganglion cells can be readily isolated, and appear to

be exclusively unipolar. The nerve-fibre from each courses first in a semicircle within the capsule before it leaves the cell. Apolar ganglion cells are frequent, but these are in no case separate, always lying within the same capsule as a unipolar cell. Besides the ordinary bean or club-shaped cells there are also small angular or cup-like structures, with short processes and large nuclei lying near the processes. Rawitz regards these as young cells. The supposed network on the surface of the ganglion cells he believes to be due to shrinking by the reagents. He was never able to see the spiral thread which Arnold has described as existing around the commencing nerve fibre, and regards it as an optical effect, due to folds in the outer sheath. The "polar nuclei"—i. e., an accumulation of minute nuclei near the place of exit of the fibre—he looks upon as belonging to the capsule, for they can, by proper treatment, be brought into view elsewhere in the capsule.

THE NEW ENTRIES.

THE information contained in the paragraph we published last week on this head requires to be supplemented by one or two additional particulars: Thus, St. Mary's Hospital School, the returns of which were then incomplete, has 25 fresh students in a total of 115. The Liverpool School counts 42 new entries (9 partial); whilst the figures given with respect to the University of Durham School need correction from 54 to 58 (29 being for part of the curriculum).

SYMMETRICAL NEURALGIA IN DIABETES.

DR. WORMS of Paris has called attention to the occurrence of symmetrical neuralgias in an advanced period of diabetes. He has recorded two examples—one affecting the sciatic nerve, and one the inferior dental,—and believes that the symmetry of the affection is a characteristic of this form, as also is its peculiar severity. It does not yield to the ordinary treatment of neuralgia—quinine, morphia, bromide,—and the pain varies in intensity with the amount of glycosuria.

THE death is announced of M. Peisse, whose name has been associated with medical literature for the last half century. M. Peisse studied medicine at Montpellier until 1826, when he settled in Paris. Although he still continued to follow the hospital clinics, the necessities of life prevented him from graduating, and compelled him to take up journalism. He was a constant contributor to the leading reviews, writing chiefly upon philosophical and medical subjects. In 1840 he translated into French a portion of Sir W. Hamilton, under the title of "Fragments de la Philosophie de W. Hamilton;" and a few years later published a French edition of Dugald Stewart's "Elements of the Philosophy of the Human Mind." His scattered articles on medicine were reprinted in 1857, under the name of "La Médecine et les Médecins." M. Peisse was an associate of the Academy of Medicine, and a member of the Académie des Sciences Morales et Politiques.

THE administration of carbolic acid in mistake for castor oil has received a fresh illustration in Glasgow Belvidere Hospital. The patient died in half an hour after taking the acid. In this case the bottles containing respectively the poison and the oil appear to have been similar in shape, colour, and size. After attention has been so repeatedly called to the obvious precaution of employing, for the storage of poisons, bottles of a shape and colour readily recognisable either in the presence or absence of light, it seems wonderful that accidents such as the above should still be of frequent occurrence. It is stated that in this case the grief of the nurse who administered the dose was so great as to induce serious illness.

ON the 23rd inst. the body of Mr. Francis Owen, M.R.C.S., of Leatherhead, was found in the Kennet and Avon Canal, between Hungerford and Kintbury. Evidence at the inquest showed that on the 21st, the deceased had left his home with the intention of going to Kintbury, but that, falling asleep in the railway carriage, he was carried on to Hungerford. It is supposed that in walking back along the bank of the canal to the former place (there being no vehicles at the station) Mr. Owen must have missed his footing and slipped into the water. The event has caused deep sorrow in Leatherhead, where the deceased, who was fifty years of age and the father of a numerous family, had been in practice many years.

DR. SPENCER, assistant librarian of the Royal College of Surgeons in Ireland, has resigned his appointment since August last, and has, we understand, been elected as medical officer to a dispensing district in the North of Ireland. The emoluments of the post are £100 per annum, and it is doubtful if the Council will elect another medical gentleman to fill the office, as from the small stipend attached they cannot expect any medical practitioner to retain it for any considerable period. The election will take place on November 18th.

THE Duke and Duchess of Connaught assisted, on the 23rd instant, at the ceremony of laying the foundation-stone of a portion of a new building situated at Mount Vernon, Hampstead, for the North London Hospital for Consumption. About a thousand persons were present, and a large number of purses were placed on the stone after it had been laid by his Royal Highness. In plan the hospital is a compact rectangular structure, about 163 feet long by 55 feet 6 inches deep. It is intended for 110 patients.

A NOTICE *in memoriam* of the decease of William Thomas Domville, C.B., M.D., R.N., Inspector-General of Hospitals and Fleets, which occurred some months ago, appearing in the obituary column of *The Times* of the 21st inst., several of our contemporaries fell into the error of regarding the announcement as referring to Dr. Henry Jones Domville, Inspector-General, R.N., who, we are happy to say, "is in a position" to correct the error.

THE Session of the Epidemiological Society of London will be opened on Wednesday evening, November 3rd, at 8 P.M., in the Council-room of University College, when the President, Sir Joseph Fayrer, will deliver an inaugural address, and Mr. Netten Radcliffe will read a paper "On Certain Appearances of Cholera since 1873 in the Countries lying between India and Europe."

A DISCUSSION on the Treatment of Typhoid at the instance of the Metropolitan Branch of the British Medical Association will take place at St. Thomas's Hospital on Nov. 10th at 8 P.M. Dr. Habershon will preside. The discussion will be opened by Dr. Bristowe; and Dr. Andrew Clark, Dr. Broadbent, Dr. Mahomed, Dr. Norman Kerr, and others will take part in it.

THE Belfast Graduates' Association have appointed the following medical gentlemen, among others, to co-operate with the Committee of Convocation and the London Graduates' Association in representing to the Prime Minister the views of the graduates of the Queen's University in Ireland—namely, Wm. A. McKeown, T. K. Wheeler, and Henry Whittaker.

THE School of Medicine of Edinburgh was opened on the 25th inst., in the Surgeons' Hall, with an address by Dr. F. W. Moinet.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Poplar.—The annual reports of the medical officers of health for this district, just issued, are for the year ending March, 1880. The practice of some officers of health, or sanitary authorities (we do not know which is to be blamed), of making their annual health-report for a twelve-monthly period not corresponding with that of the year, as ordinarily followed, is much to be deprecated.

Mr. Corner, the medical officer of health for the south district of Poplar, reports very favourably of the health of his district as measured by the rate of mortality during the year (18·8 per 1000 population). The fact of chief interest stated in his report, in connexion with the events of the year, refers to an outbreak of scarlet fever. Of this outbreak he says: "It was clearly shown that the disease travelled from child to child, house to house, and street to street, by the mingling of children from infected houses, first of the scholars attending the Glengall-road Board Schools, then of those at Christ-church and Pier-street Schools. Some instances were found of children attending school, or dispensary, or hospital, with infection still existing either in their persons or in those at home." Although the mode of dissemination of the disease was thus obvious, and both Mr. Corner and his colleague, Mr. Talbot, urged the utilisation of the authority's hospital for the isolation of cases, the authority refused to do so on the extraordinary ground that the number of cases was not deemed sufficient to justify them taking the step! In other words, the Poplar Board of Works, notwithstanding that they have a large infectious-disease hospital, recently erected at great cost, declined to make use of it for the purpose for which it was intended, and at the only time when such use could have been efficacious in arresting an infectious disease—namely, at the beginning of an outbreak. Doubtless the authority were under the impression that the hospital was much too expensive an agency to be put in action for a commonplace disease like scarlet fever. The outbreak of scarlet fever which, in the view of the authority, did not call for systematic measures of isolation on their part, gave rise to 117 cases and 34 deaths, in 68 houses, within the south district alone, before the close of 1879. Of these cases, three only were isolated by the Board of Works and six by the Board of Guardians.

The outbreak appears to have affected Cubitt Town particularly. Of this district Mr. Corner says that an examination of the houses "revealed a deplorably insanitary condition. Many had their kitchens flooded from time to time with rain, water, and sewage, rendering the basements damp and foul; others were damp from bad material and the absence of any means for preventing the rise of damp up the walls. Leaking roofs and spouts were common, as were defective traps and sinks, drains and closets, the indifference of tenants to these latter defects being general." In fact, Cubitt Town would appear to be much in the same condition as Canning Town, built under very similar local circumstances, in the neighbouring district of West Ham, across Bow Creek.

Of twelve cases of small-pox reported to the Authority nine were removed to their hospital. Probably not a single member of the Authority would entertain a doubt of the advantage gained for the community in the arrest of the contagion of the disease by this removal; yet a like advantage was refused in the case of scarlet fever! We must assume that the latter disease has not so much terror for the Authority as the former.

Mr. Corner has a remark, which deserves note, *à propos* of a painful case, on "the grave responsibility resting on medical men when called to cases of small-pox, in at once urging re-vaccination."

He gives also an instructive illustration of the value of the late Mr. Harry Leach's inquiry concerning the number of foul outfall sewers opening into the Thames notwithstanding the presumed interception by the Metropolitan Board of Works. In consequence of the result of this inquiry Mr. Corner inspected the whole of the riverside premises in his district, eighty-eight in number, and found in them no less than

forty-nine instances of privy outfalls into the stream. It is to be hoped that the other metropolitan medical officers of health of riverside districts have followed a like course in this matter to that adopted by Mr. Corner.

Mr. Talbot, the medical officer of health for the Poplar North District, reports on the whole as favourably of his district as Mr. Corner of the South District, but returns a higher rate of mortality (20·6 per 1000, as compared with 18·8). Mr. Talbot describes his district, which includes the greater part of Bromley and almost the whole of Bow, as, gauged by its death-rate, holding a position intermediate between a rural and a central metropolitan one. He attributes this favourable position to the operation of the Metropolitan Building Acts, in regulating the arrangement of buildings erected during the last few years. These Acts, he observes, "if erring, as some think, on the side of leniency as regards foundations, at any rate ensure thorough ventilation; and probably it is wiser to allow any miasm which might arise from the land a house is built upon to be dispersed by natural ventilation than to oblige the speculative builder to lay down a few inches of concrete; in fact, to build the house over a large trap, which would be tolerably sure, sooner or later, to prove defective and admit into the house at one place all the gases generated over the whole area; as a matter of fact, the houses put up of late as dwellings for artisans are not found to engender disease of any kind, nor is epidemic disease more fatal or more lasting in them than in houses built upon what is popularly supposed to be a more trustworthy foundation." This is the most noteworthy expression of opinion in the report. We give it without pretending to understand it. Mr. Talbot has somehow mixed up together questions of foundations and site; and comparative data of sickness and mortality derived from "houses put up of late" cannot be of much value. He is of opinion that to make the Sanitary Authority's infectious-disease hospital a success the admission must be free. We fully agree with him in this respect, and in the justness of his reasoning why such a course should be adopted by the Authority.

LONDON "DUSTING": ST. PANCRAS.

A report has been presented to the vestry of St. Pancras by the medical officer of health, Mr. Shirley F. Murphy, which ought to be in the hands not only of every vestryman of that district, but also of every vestryman in the metropolis. Great as is the continuous scandal of metropolitan "dusting" generally, in the course of the past and the present year, this scandal in the parish of St. Pancras assumed a magnitude previously almost unheard of. In the past summer, indeed, the operations of the Sanitary Committee of the vestry in procuring the removal of nuisances arising from the accumulations of the dry refuse of houses in dust-bins were brought to a standstill for some time from the negligence of the dust contractors, practically uncontrolled by the committee of the vestry, under whose regulation they presumably were. An indescribable state of nuisance from accumulated refuse grew up in the parish, and the ratepayers were helpless both against the contractors and an apathetic committee. The condition was not a new one, although latterly more accentuated, and from time to time the vestry have devoted a purposeless attention to it, allowing themselves to be easily foiled in any relief to the district by combinations of wharfingers and contractors, although the termini of the great lines of railway running to the north lie within the parish. Early in the present year, however, a special committee of the vestry, appointed to consider the question, called for a report from the medical officer of health on the subject, and this report is now before us. This report, after describing briefly the sanitary condition in which the parish is placed by the imperfection of the arrangements for "dusting," proceeds to point out the necessity for such arrangements being made as will admit of the frequent and systematic removal of the "dust" from houses (Parliamentary power being obtained to facilitate such arrangements, if necessary), and, finally, describes, from actual inspection of its action in other towns, a method in which the removal may be dealt with and in a measure utilised by the action of fire. These suggestions will add a greater gravity to the responsibility already existing upon the Vestry of St. Pancras, and other metropolitan Vestries, to deal effectually with the "dust" nuisance. Indeed, we are glad to learn as we write that Paddington has already been seeking information independently as to the disposal of

the "dust" of that parish in the way Mr. Shirley Murphy suggests. We could have wished that Mr. Murphy's report had contained some information on the feasibility of a daily removal of dust. He refers to the City and many Continental towns in illustration of such removal. But there are many places in Great Britain where a daily removal of dry refuse could have been studied with advantage in view of the adoption of such a practice in the metropolis. Let us hope that this report indicates an intention on the part of St. Pancras to deal with the subject seriously. We observe that the report was presented to the Special Committee for which it was prepared in May last; but if we ask what the Vestry has done since it must be confessed that there are too few empty dust-bins in the parish to echo a clear reply.

HOSPITAL PROVISION FOR INFECTIOUS DISEASES IN THE METROPOLIS.

There is little doubt that Sir E. H. Currie was right when, at the last meeting of the Metropolitan Asylums Board, he described the hospital provision for the isolation of infectious diseases on the north side of the Thames as inadequate (or, to use Dr. Forster's phrase, "altogether inadequate"); but there is equally little doubt that the Board was right in deciding that it was inexpedient to take measures to increase their hospital accommodation at the present time. The Board, indeed, would be singularly ill-advised to attempt to acquire additional sites for hospital purposes until the questions connected with the Hampstead Hospital are fully set at rest, and not improbably until the law relating to the acquisition of sites is amended. However ill-provided North-Eastern London may be with hospital accommodation for the isolation of infectious diseases at the present moment, having regard to the public-health point of view, it is seriously to be questioned whether it is incumbent upon the Metropolitan Asylums Board to take action to remedy the matter until the Legislature has taken measures to relieve it, and also sanitary authorities, from the very anomalous position in which they are now placed from the imperfect state of the law on the subject. It is to be trusted also that the public may have some better assurance of the capacity of the Board to deal with this question of hospital sites and increased hospital accommodation from a public-health point of view than it now possesses. We must take exception to Sir E. Currie's description of the removal of infected sick from various places on the south of the Thames all the way to Deptford Hospital, as a disgrace (on account of the distance over which some have to be carried) to a civilised community. It may be an unfortunate necessity, but having regard to the circumstances of the case and the provision of hospital accommodation for infectious diseases which has already been made in the metropolis as compared with other great civilised communities, to stigmatise this necessity as a disgrace is an abuse of language.

COMPULSORY VACCINATION.

At the recent North Wales Poor-law Conference, held at Bangor, a paper was read on "Compulsory Vaccination and its Results," by Mr. J. Oswald Bury, clerk to the Wrexham Union, from which we take the following instructive facts:—"Small-pox now rarely appeared in the Wrexham district, there having been only two deaths from it during the last nine years. In the sixteen years 1833 to 1853 the number of deaths in the union from small-pox was 315; but in the succeeding twenty-six years, after the passing of the Compulsory Vaccination Act, there were only 69 deaths from the disease. In the years 1838 and 1848 small-pox appeared to have raged in the district, and in several of the deaths registered he had found page after page, in many cases with six, and in others with eight, out of every ten deaths, registered as caused by this disease. In one parish, the largest and most populous in the union, the death-rate from small-pox averaged in 1838 20 per cent., and in 1848 25 per cent., of the total number of deaths from all causes. In the returns of children whose births were registered in the years 1876 and 1877 the North Wales unions figured remarkably well, only about 2 per cent. of the entire number of children born in those years being accounted for by the vaccination officers. As registrar and vaccination officer in the Wrexham Union, he had always found the Act cheerfully complied with and taken as a matter of course, so that the people felt no greater compulsion in having their children vaccinated than in having them registered. He had not had a single prosecution for

non-vaccination, a fact which was perhaps due in a great measure to fair reasoning with the parents, and an endeavour by the officers to make the Act popular."

In the discussion which followed the reading of this paper Captain Verney contended that the vaccine lymph should, as in Belgium, be supplied direct from the calf, and that greater care should be exercised in carrying out compulsory vaccination. Mr. J. Thomas (clerk to the Bangor Union) said that he never found any difficulty in carrying out the measure, nor to his knowledge had there been any prosecutions for offences against the Act. On the motion of Mr. B. T. Ellis, a resolution was carried in favour of the system of compulsory vaccination.

THE METROPOLITAN WATER-SUPPLY.

A meeting of delegates for the vestries and district boards of the metropolis met on the 20th inst. in the Vestry Hall, St. Martin's-in-the-Fields, where the following resolution was adopted: "That as the report of the [Parliamentary] Committee of Session II., 1880, on London Water-Supply, recommends that the Government should introduce a Bill to constitute a water authority of a representative character, in order that the supply of water in London should be under the control of some public body representing the interests of the consumers, a communication be addressed to the Home Secretary to learn if notice of such Bill will be given by him, and limited to such objects." A further resolution, to the following effect, was proposed but rejected as premature: "That the Home Office be invited to state whether it will undertake to present the requisite evidence, and whether it will arrange between this and the meeting of Parliament for a valuation of the works and plant of the companies, for a completion of the audit to the 31st December of the accounts of all companies, and for a report of the present condition of their works, and the outlay requisite for their transfer in perfect order."

THE METROPOLITAN MILK SUPPLY.

At a recent meeting of the St. Olave's District Board one of the members stated that the milkmen of London had an organised system of escaping the penalties that the law inflicted upon them. On the inspector warning a milkman that a repetition of offence in respect to adulteration would be dealt with by law, the business was transferred, no alteration being made in the quality of the milk.

At Scarborough a curious example of conflicting chemical evidence occurred in the police-court on the 15th inst. The Sanitary Authority took proceedings against certain inhabitants of the town in order to secure the closure of a well, the water of which was alleged to be impure and injurious to health. They supported their case by the evidence of the borough analyst, Professor Wanklin, and the medical officer of health, Dr. Taylor. For the defence Professors Redwood and Atfield were examined, both of whom admitted that the water was not of the purest, but expressed the opinion that the impurity would not render it unwholesome. In view of the differing opinions of the analysts, the magistrates dismissed the case.

An attempt would appear to have been made, at the instigation of the Local Government Board, and by the agency of its inspector, Major Tulloch, R.E., to induce the several sanitary authorities in the Barton Union (Lancashire) to combine for the purpose of erecting an infectious-disease hospital. It would seem, however, that several of the authorities have made arrangements with either the Monsall (Manchester) infectious-disease hospital or the Children's Hospital at Pendlebury for the reception of patients, and hold these arrangements to be sufficient. The Local Board of Barton, however, proposes to proceed with the erection of a hospital for their own district.

Dr. Wallace, in his report for Greenock for the month ending the 2nd October, notes eight cases of typhus. These cases occurred in five families, and were directly or indirectly associated with each other. Dr. Wallace thinks it quite possible that the first of the series may have caught the infection in Ireland where the patient had been visiting. It has been held desirable to dispose of the contents of the dry-earth closets of the infectious-disease hospital by burning, a case of small-pox occurring in the town having originated, it is believed, from communication with the person engaged in the duty of cleansing them.

Dr. Dixon, the medical officer of health for Bermondsey, appears to be regularly following the course of advising his Authority on the actual meaning of Dr. Frankland's phrase, as applied to Thames water supplied by the metropolitan water companies, "unfit for dietetic purposes." He ingeniously translates the chemical data on which it is founded into forms which may be apprehended by ordinary individuals, and shows that, however accurate the results of "chemical analysis" may be, they are imperfect until compared with the results of "medical analysis." He shows, in fact, that the phrase cannot be justified by chemical analysis alone.

The Bedford-park Estate, Acton, dear to the lovers of "Queen Anneism" in architectural art, has been the subject of an inquiry under directions from the Local Government Board. The proprietor of the estate wishes to dis sever it from Acton and attach it to Chiswick parish, for convenience of sewerage ostensibly, but, according to popular gossip, from a desire of the inhabitants (or some of them) to become associated with the more aristocratic neighbourhood. Mr. R. Morgan, C.E., held the inquiry; but Acton is loth to lose the Estate, while Chiswick does not appear to be anxious to annex it. The result of the inquiry has not yet been made known.

A curious discussion occurred at a vestry meeting at Westbury-on-Trym, near Bristol, on the 1st inst. It related to the use of a sum of money (£45), the unused balance of subscriptions made in aid of the sufferers from an outbreak of cholera in 1854. A proposition to devote this sum, with other surplus parochial funds, to the payment of the expenses of lighting the church, so as to make it available for evening service in the winter, was set aside, and it was decided to reserve it for use in cases of sickness among the poor.

At a recent meeting of the Middlesborough Rural Sanitary Authority a communication was read from the Enisborough Rural Sanitary Authority, asking the co-operation of the former in memorialising the Local Government Board respecting the more effective control of infectious diseases, by advocating a Bill in Parliament to make it compulsory upon medical men and heads of householders to notify to the Sanitary Authority all cases of infectious diseases coming under the observation of the former, and the control of the latter.

An abortive inquiry was recently opened at Gloucester, by Mr. Thornhill Harrison, C.E., under instructions from the Local Government Board, concerning an alleged pollution of the Severn by the Gloucester Corporation. The inquiry had been promoted by the chairman of the Severn Fishery Board, but when Mr. Harrison visited Gloucester for the purpose of the inquiry, the fishery board for some inscrutable reason refused to tender evidence in support of their case, and the inquiry in consequence had to be adjourned *sine die*.

The "disinfecter" of the St. Saviour's Board of Works is reported to be "always seen in the same suit of clothes." Hence a serious question for the Board. If, as is to be inferred, the suit in question is the one he uses when engaged in disinfecting articles of clothing, bedding and furniture, also infected houses, may it not imbibe infection, and the "disinfecter" himself become a means of disseminating disease? Such is a question at present perplexing the Board.

An outbreak of scarlet fever at Blackheath has led to the disclosure of a nuisance in a particular cow-shed which would indicate that systematic inspection of their district is not a feature that the Greenwich Board of Works can have credit for. "Several weeks' accumulation of manure in a putrid condition, and which gave off a most offensive stench" is spoken of as having had to be removed from the shed.

Dr. Ballard, under instructions from the Local Government Board, has been investigating an outbreak of enteric fever at Millbrook, in the St. Germans union. At an interview with the Rural Sanitary Authority he attributed the outbreak to defective ventilation of sewers, water pollution, and contaminated milk, the latter, in his opinion, being responsible for the disease in twelve out of forty-seven families affected.

Sewerage works have been recently opened at Birkdale, of which the construction was entered upon in 1875. The process of sewage treatment adopted is that of Mr. F. Hillé.

A disagreement between the workhouse infirmary medical officers of St. George's-in-the-East, and which appears to be locally designated as "the Civil War," has been referred to the Board of Guardians and the Local Government Board for inquiry.

The question of providing an infectious-disease hospital at Ashted is under consideration.

Dr. Ainley has been usefully lecturing in the Central Hall, Halifax, on "Practical Hygiene."

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

The rate of English urban mortality showed an increase last week, and exceeded the average rate for the season. In twenty of the largest English towns, estimated to contain in the middle of this year a population of seven and a half millions of persons, or nearly one-third of the entire population of England and Wales, 4895 births and 3249 deaths were registered last week. The births were 310 and the deaths 26 below the average weekly numbers during 1879. The deaths showed, however, an increase of 176 upon the comparatively low number returned in the previous week, and were equal to an annual rate of 22.6 per 1000 of the estimated population, against 21.7 and 21.4 in the two preceding weeks. The lowest death-rates in the twenty towns last week were 16.5 in Birmingham, 16.7 in Portsmouth, 19.3 in Bristol, 19.4 in Oldham, and 19.8 in Leeds. The rates in the other towns ranged upwards to 27.5 in Bradford, 30.2 in Liverpool, 32.1 in Hull, and 32.5 in Leicester. During the past three weeks of the current quarter the death-rate in these towns averaged 21.9 per 1000, against 20.3 in the corresponding periods of the four years 1876-9.

The deaths referred to the seven principal zymotic diseases, which had steadily declined from 1239 to 564 in the eight preceding weeks, further fell to 472 last week; of these, 159 resulted from diarrhoea, 147 from scarlet fever, and 59 from fever, principally enteric. The annual death-rate from these seven diseases averaged 3.3 per 1000 in the twenty towns, and ranged from 2.1 in Birmingham, Leeds, and Plymouth, to 6.7 and 7.6 in Salford and Leicester. The 147 deaths from scarlet fever exceeded the number returned in any previous week this year, and showed the largest proportional fatality in Sunderland, Liverpool, and Leicester; the disease was nearly three times as fatal in the provincial towns as in London. Measles was most fatal in Leicester. The highest death-rate from fever (principally enteric) occurred in Salford, Brighton, and Portsmouth. The general fatality of diarrhoea showed a further decline, but the death-rate from the disease, which did not exceed 0.9 per 1000 in London, averaged 1.4 in the nineteen provincial towns. Diphtheria caused 11 deaths in London, 2 in Bradford, and 3 in Liverpool. Seven more fatal cases of small-pox occurred in London, but not one in any of the nineteen other towns. The number of small-pox patients in the Metropolitan Asylum Hospitals, which had declined from 116 to 85 in the four preceding weeks, further fell to 77 on Saturday last; 12 new cases were admitted to these hospitals during the week, against 14 and 16 in the two previous weeks.

The deaths referred to diseases of the respiratory organs in London, which had steadily increased from 124 to 273 in the six previous weeks, further rose to 323 last week, and exceeded the corrected weekly average by 38; 213 were attributed to bronchitis, and 77 to pneumonia. The annual death-rate from lung diseases was equal to 4.5 per 1000 in London, and 5.7 in Liverpool.

HEALTH OF SCOTCH TOWNS.

In eight of the largest Scotch towns, having an estimated population of rather more than a million and a quarter persons, the annual death-rate last week averaged 19.6 per 1000, against 18.8, 19.6, and 22.4 in the three preceding weeks, and was 3.0 per 1000 below the average rate in the twenty large English towns. The rates in the eight Scotch towns ranged last week from 16.1 and 17.1 in Edinburgh and Aberdeen, to 25.3 and 25.8 in Perth and Leith. The deaths referred to the seven principal zymotic diseases in the eight towns, which had been 116 and 135 in the two previous weeks, declined last week to 107; they included 47 which resulted from scarlet fever, 17 from fever, 14 from

diarrhoea, 13 from whooping-cough, 13 from diphtheria, 3 from measles, and not one from small-pox. The annual death-rate from these seven diseases averaged 4.3 per 1000 in the eight towns, and was 1.0 above the average rate from the same diseases in the twenty English towns. The zymotic death-rate in the eight Scotch towns ranged from 0.5 and 2.3 in Aberdeen and Dundee, to 5.3 in Paisley and 7.1 in Leith; the high death-rate in the last-mentioned town was due to the excessive fatality of scarlet fever. The deaths referred to scarlet fever in the eight towns, which had been 30 and 52 in the two preceding weeks, declined last week, to 47, and included 25 in Glasgow, 15 in Edinburgh, and 5 in Leith. The 17 fatal cases of fever (including typhus and enteric or typhoid) were 6 less than those returned in the previous week; 9 occurred in Glasgow and one in Edinburgh, showing in each of those towns a considerable decline from the exceptionally high numbers in the preceding week. The deaths referred to diarrhoea, which had declined from 69 to 20 in the five previous weeks, further fell to 14, of which 8 were recorded in Glasgow. Of the 13 fatal cases of diphtheria last week 8 were returned in Glasgow. The deaths referred to acute diseases of the respiratory organs (bronchitis, pneumonia, and pleurisy) in the eight towns, which had been 66 and 98 in the two preceding weeks, further rose last week to 120; the annual death-rate from these diseases last week was equal to 4.8 per 1000 in the eight Scotch towns, against 4.1 in London.

HEALTH OF DUBLIN.

The excessive rate of mortality in Dublin showed a further slight decline last week. The annual death-rate in the city has slowly but continuously decreased during the past six weeks from 39.3 to 33.7 per 1000. During last quarter the death-rate averaged no less than 34.6, and in the past three weeks of the current quarter the average rate has been 33.0, against 20.5 in London, and 21.7 in Edinburgh. The 197 deaths in Dublin last week were 2 less than those returned in the previous week, and included 36, or 18 per cent., which were referred to the seven principal zymotic diseases, showing a further decline of 14 from recent weekly numbers; 16 resulted from scarlet fever, 7 from diarrhoea, 4 from measles, 4 from whooping-cough, 3 from fever, and 1 each from small-pox and diphtheria. The annual death-rate from these diseases was equal to 6.0 per 1000 in Dublin, whereas it did not exceed 2.7 in London, and was 4.8 in Edinburgh. The 15 fatal cases of scarlet fever showed a further increase upon the numbers in the two previous weeks, and exceeded the number in any week since the end of June. The fatality of diarrhoea showed a further considerable decline from recent weekly numbers, but exceeded the corrected average for the season. The deaths from fever and from whooping-cough showed a marked decline; and those from small-pox, which had been 1 and 4 in the two previous weeks, declined again to 1 last week. The number of deaths under one year of age corresponded with the number in the previous week, and was equivalent to a very excessive rate of infant mortality.

HEALTH MATTERS GENERALLY AT HOME AND ABROAD.

BEDROOM VENTILATION.

Mr. Lawson Tait has invented, and is now advocating, a very ingenious mode of ventilating and warming bedrooms. He uses what may be roughly described as a Tobin's tube, with an arrangement for filtering the incoming air and warming it by means of a lighted gas jet. The invention may be readily adapted to the purpose for which it is designed, and may even be given a much wider application to the warming and ventilating of rooms; but when he sees in his "little contrivance," as he judiciously terms his invention, an important step towards (if not the beginning) of a change which he is sanguine enough to hope will before long banish the deeply-cherished coal-fire from every house in the towns and villages of England, and banish also that (to him) barbarous element of room ventilation in England the fire-grate and chimney, we cannot follow his aspirations, notwithstanding even that they may be approved by "those who are accustomed to deal with questions of hygiene." Taking the cost of the "little contrivance" at the minimum suggested by Mr. Tait, 8s. to wit, add the cost of the gas and the gas-fittings where gas may chance to exist,

and calculate the number of houses where this addition to the cost of living would be an impossibility, the suggestion falls infinitely short of practicability. Persons accustomed to deal with questions of hygiene should have in view the requirements of the poorest people, and hitherto no means of securing the ventilation of bed-chambers have been devised or proved more effectual than the construction of a fireplace and chimney. Whatever tends to diminish the confidence of people in this matter, and to prejudice them against these means, merely helps to put money into the pockets of the cottage builder by encouraging him to build wherever he can avoid it without fireplace and flue.

DIPHTHERIA IN RUSSIA.

The Podolian branch of the Russian Red-cross Society reports that since the 15th (27th) August they have had nine sanitary detachments at work aiding the communities among which diphtheria prevails. These detachments include nine medical men, thirteen sisters of charity, and fifty-one assistants. Within the period they have been actively engaged there have been reported 4620 cases of diphtheria, of whom 1339 had died. In view of this formidable prevalence of the disease the Society had determined, from Sept. 12th, to strengthen their sanitary detachments, to invite the assistance of the most influential officials, and to request the Association of Ladies to collect linen and clothes in substitution for infected articles destroyed. It is proposed, however, to constitute a special commission to study the progress of the epidemic.

CHOLERA AT ALLAHABAD.

A correspondent of the *Pioneer* directs attention to the marked localisation of the cholera which prevailed among the troops stationed at Allahabad and in the Central Prison there early in the present year. The localisation was of a sort that has frequently been found in England to be dependent upon an infection of the water-supply or of some article, and he argues that if search had been made, after the English fashion, it is in the highest degree probable that causes of a like sort would have been found in operation in the Allahabad cantonments and prison. Of course it is assumed here that cholera has an element of infection in India such as it is held to have in England, whereas the infection attaching to cholera in India is a mere official contingency.

The Glasgow Dairymen's Association has taken exception to the conclusion of Drs. Russell and Christie on the cause of the late localised outbreak of enteric fever in Glasgow and the suburbs. It has endeavoured to traverse that conclusion by advancing data which appear to be inconsistent with it; but, as might have been anticipated, their data and arguments simply serve the purpose of giving greater confidence to the accuracy of the conclusion of the two reporters.

A correspondent calls our attention to the insanitary state of the Sunning-hill Schools, and the want of sufficient cubic air space for the children.

BRITISH MEDICAL TEMPERANCE ASSOCIATION AT BRISTOL.

A CONFERENCE of medical men was held at Bristol under the auspices of the British Medical Temperance Association on the 13th inst., to consider the following question:—"Has not the time arrived for the medical profession to give the public a scientific opinion with regard to the value of alcoholic drinks as beverages." The chair was taken by Dr. Brittain, and the debate opened by Dr. Ridge, the Secretary of the Association, in an affirmative answer to the above question. He stated that in Great Britain alone drink was the cause of 40,000 deaths annually; that it was responsible for nine-tenths of the crimes committed; was directly the cause of from 14 to 15 per cent. of the lunacy existing, and of three-fourths of the pauperism. The public would listen to a definite expression of opinion on the part of the profession; but the articles in the *Contemporary Review* only produced an effect of painful amusement at the diversity of opinion expressed by the writers. After considering the action of alcohol in health and disease, he

summed up the evidence against the use of alcohol as follows:—1. Alcohol was not necessary to health. 2. It was of no importance as a food. 3. It did not sustain the bodily heat. 4. It was prejudicial to hard work. 5. To children it was especially injurious. 6. It lessened the duration of life and increased the liability to disease. It was for the profession to give the public a definite opinion on this subject, and thus to throw upon them all responsibility for the use of alcoholic beverages. The debate which followed was shared in by a great many gentlemen. Dr. Long Fox said that undoubtedly alcohol did good—within the limit of physiological safety—in aiding digestion; but the physiological limit should never be crossed, and the abuse of alcohol should always be spoken of in grave terms. Dr. Shingleton Smith would negative the question propounded, as the result of bringing the matter before the public would be to divide medical men in the eyes of the public into two groups—abstainers and non-abstainers. Physiologically, alcohol in moderation must be regarded as a food. Dr. Steele said the profession should be unanimous on the question, and agreed with Sir H. Thompson that alcohol was a luxury and not a necessity. Mr. Dobson held that alcohol in moderation was not prejudicial, and he regarded it as a food. Dr. Markham Skerritt argued powerfully on the affirmative side. He claimed accuracy for the statistics of temperance institutions, which clearly showed the advantages of abstinence over moderation. He quoted the opinion of Mr. Gardiner, surgeon to the Bristol Prison, who in an experience of fourteen years had never detected any ill effects from sudden abstinence. Dr. Parkes had shown that alcohol was worse than useless in all conditions of special exposure. The question of alcohol being a food was not to be met on narrow physiological grounds; but was it of such value that it must be used in spite of all the misery and crime that it caused? Other foods were used in excess, but their ill effects were utterly insignificant in comparison. The object of the profession should be to train up the rising generation as abstainers. Alcohol in strict moderation could not be said to be absolutely injurious; but to those in average health it was unnecessary, and the sum total of any value it might have as food was utterly insignificant in comparison with the sum total of evil it produced. Dr. Stewart spoke in the same sense. There were several other speakers, but space does not permit of our giving their arguments—some being in favour, but the majority in opposition to the line taken by the opener of the debate. Dr. Brittain concurred in Dr. Skerritt's observation about training the rising generation to do without alcohol. It was a food, and was useful as an aid to digestion; but if it came to be a question of moral responsibility, the evidence against its use was so strong that he thought he should be almost compelled to support abstinence. Dr. Ridge, in reply, said that the value of statistics was that they stated facts independently of the bias of opinion. That a substance was destroyed in the body was not sufficient evidence that it was a food—e.g., chloroform and turpentine were thus destroyed, but they were not therefore held to be foods. Alcohol and the other narcotics should be avoided by healthy people; but all *liked* them, and hence their use. The proceedings closed with a vote of thanks to the opener and the chairman.

THE SERVICES.

DEATHS OF ARMY MEDICAL OFFICERS.

We have to report the death, on the 29th August, at Belize, Honduras, in the West Indies, of Surgeon-Major Alexander Thomson, M.D. Dr. Thomson's death was very sudden, he having been in his usual health, and doing his duty till a few days before the fatal occurrence. Dr. Thomson entered the army in June, 1859, and was promoted Surgeon-Major in February, 1875.

The death of Surgeon-Major William Lougheed, Army Medical Department, is announced as having taken place at Peshawur, East Indies, on the 24th September, from heat-apoplexy. Mr. Lougheed obtained his first commission in October, 1866, and was promoted to the rank of Surgeon-Major in October, 1878.

VOLUNTEER AMBULANCE DEPARTMENT.

The class of volunteers belonging to the Tower Hamlets Rifles, who have undergone a course of instruction in

"stretcher drill" by the regimental surgeon, Dr. W. H. Platt, was inspected by Surgeon-General A. Shelton, Army Medical Department, the President of the Society, at the headquarters in Shaftesbury-street, on Monday last. The class consisted of twenty-four men, who have all obtained certificates of proficiency in stretcher drill, and the application of first dressings to the wounded. Dr. Shelton expressed himself much pleased with the steadiness of the drill, and the intelligence and aptitude displayed by the volunteers in their ambulance work.

Surgeon-Major John Anderson, medical officer on the Staff of the Viceroy of India, has arrived in England, and will accompany H.E. the Marchioness of Ripon to India on the 3rd November. Surgeon-Major H. Skey Muir officiates on Lord Ripon's staff during Mr. Anderson's absence.

Sir William Muir, K.C.B., Director-General of the Army Medical Department, has joined the council of the Army Coffee Tavern Society. We trust medical officers of the army and navy will give a hearty support to this very excellent movement.

Deputy Surgeon-General J. L. Jameson, being supernumerary to the Establishment of Administrative Officers in India, has been ordered to England, and is on passage in H.M. troopship *Himalaya*.

ADMIRALTY.—The following appointments have made made:—Staff-Surgeon Robert Walter Biddulph to the *Excellent*, in lieu of a surgeon; William J. Gibson to be surgeon and agent at Clontarf.

Deputy Inspector-General Henry Fagan, M.D., C.B., of the Royal Marine Division, Portsmouth, has been appointed to Jamaica Hospital.

MILITIA MEDICAL DEPARTMENT. — Surgeon-Major William Scott, Scottish Borderers Militia, resigns his commission; also is permitted to retain his rank, and to continue to wear the uniform of the regiment on his retirement.

Correspondence.

"Audi alteram partem."

THE SITUATION AT GUY'S.

To the Editor of THE LANCET.

SIR,—The tone of your last week's article about Guy's is such that I, for one, should not take notice of it did I not feel that the manner in which you have represented the outcome of our struggle upon the nursing question is calculated to do harm by conveying the impression to those at other institutions that we have allowed the aggressive attempts upon medical authority to succeed.

What was our position at Guy's previous to the contest that has occurred? The answer is readily given by referring to the manner in which the treasurer and matron acted upon the installation of the latter in office just a year ago. The treasurer then, and formerly, possessed autocratic power; and it is a matter of history how he exercised it without the staff having any official power to control. As far as we were concerned, and our position was handed down to us by our predecessors, the treasurer was our supreme ruler, and according to the traditions of the institution the president and governors occupied an unapproachable position, except through the treasurer.

You, Sir, who have not been in the contest, are little aware of the difficulties we have had to encounter. Our first communications were held with the treasurer, and finding we could get no redress we appealed to the governors. The governors, we were told to begin with, must support the treasurer; but, continuing the contest, a Committee of Governors was appointed to investigate and report upon the whole question, and it was through this committee that the first substantial advance was made by the governors to meet us in adjusting the difficulty. The proposition now laid before us was that two representatives of our staff should be invited to attend once a month, or oftener if necessary, the Taking-in Committee of Governors with the view of deliberating on any matters relating to the medical and nursing arrangements. This proposition was carefully discussed

amongst us, and it was generally felt that if we accepted the invitation simply to attend the committee we should be placing ourselves and the profession in a wrong position. The committee might hear what our representatives had to say and afterwards adopt an antagonistic mode of action.

Our subsequent consent to co-operate with the governors was based upon their declaration (proceedings of a Special General Court held at Guy's Hospital, 7th October, 1880) that the matron is "willing to submit herself obediently to the orders of the several physicians and surgeons in all matters directly affecting the treatment of any patient," and upon the reception of our two representatives as an integral part of the Sub-committee appointed to deliberate on matters relating to the medical and nursing arrangements of the hospital.

Now, Sir, was it wrong to accept such terms as are here set forth, and do we deserve the hard words and insinuations which you have so indiscriminately hurled upon us? We began with no recognised status in relation to the nursing administration, and we leave off with an official position upon a committee of governors. Such is the very machinery which has been put forward by the press as the model to be copied. It remains, of course, to be seen how it will work within the walls of Guy's, but to show that the committee in question has no imaginary power, it may be mentioned that a recent proposal of the matron and treasurer affecting one of the sisters was overruled, and the sister remains in her ward.

You seem to have taken fright at the announcement by the governors, that they must "record their resolution to maintain in its integrity the power to govern the hospital entrusted to them by law." There are many who think that it would have been wise if, whilst making the concessions they have done, which give to the Staff an administrative position it did not enjoy before, the governors had not thought it necessary to trumpet forth these grandiloquent words, which in reality mean nothing more than a declaration of their position as the supreme governing body, which no one has ever disputed they hold.

I am, Sir, your obedient servant,

Grosvenor-street, Oct. 27th, 1880.

F. W. PAVY.

* * The words at which we "have taken fright" (!) are not those quoted, but the next following words of the same sentence, which affirm that the arrangement set forth "must be accepted by the medical staff." This virtually made the withdrawal of the demand for the resignation of the seniors conditional on the staff accepting "in its integrity" the rule of the governors—a rule involving a system which the staff had declared to be "in every respect mischievous."—ED. L.

HYPODERMIC INJECTION OF MORPHIA IN CHOLERA AND CHOLERAIC DIARRHŒA.

To the Editor of THE LANCET.

SIR,—Let me thank Mr. MacDowall for his letter on this subject in THE LANCET for October 16th; for, although his conclusions as regards the value of this method of treatment in Asiatic cholera are opposed to mine with respect to choleraic diarrhœa, his letter will stir up interest abroad, and thus, to a certain extent, further the object I have in view, which is the extensive routine use of the method in choleraic diarrhœa and cholera Asiatica, not as a *last* resort, but as a *first* resort.

I have carefully looked through both vols. of THE LANCET for 1872, also for 1871 and 1873, but can find no reference to Mr. MacDowall's cases, though I found a notice of Surgeon-General Murray's report. But my disappointment as regards my primary object met with some compensation, for I unexpectedly came upon a most important communication from a Dr. Augustus Werry, of Constantinople, in which he states that he has used the hypodermic injection of morphia in twenty-two cases of true cholera with the most astonishing and brilliant success. His experience appears to have been, judging from his language, the exact counterpart of mine (*vide* THE LANCET, 1871, vol. ii. page 737).

Though I have called my cases "choleraic diarrhœa," many of them presented every symptom of Asiatic cholera so called, but I have avoided using the term "cholera" as having a conventional meaning, and being always intended to designate the Oriental disease; but I must admit that I

never have been able to perceive the slightest real difference between Asiatic cholera and bad English choleraic diarrhoea, and I have seen several cases of cholera in the last epidemic when a student at University College Hospital in London. Intense "præcordial anguish" was present in all my cases, and is a constant symptom in bad choleraic diarrhoea. I shall never forget the overpowering intensity of this symptom in a severe attack of choleraic diarrhoea I went through myself a few weeks after writing my paper.

Mr. MacDowall takes exception to my statement that "it is the purging that kills," inasmuch as many cholera patients die during reaction of a typhoid condition. This, of course, I am well aware of, and when first I commenced using the treatment, when it was a last resort, I nearly lost patients from this febrile condition; but as I consider that the danger and severity of this reaction are directly proportional to the amount of the purging, and caused by the purging, and not a subtle manifestation of the unexhausted action of the cholera poison, I must still adhere to my original statement that "it is the purging that kills." I would even go a step farther, and assert the seeming paradox that I believe in cholera it is the purging that kills and not the cholera poison.

I am obliged to Mr. MacDowall for his fair and friendly criticism of my views and cases, but he would place me under a still greater obligation if he would again try the treatment as a *first* resort, and publish the result.

I am, Sir, yours, &c.,

London, Oct. 21st, 1880.

WM. HARDMAN.

FARR TESTIMONIAL FUND.

To the Editor of THE LANCET.

SIR,—I am desired by the Committee charged with the promotion of the Farr Testimonial Fund to request that you will add to their obligations by publishing in your next issue the following further list of subscriptions.

Faithfully yours,

Oct. 26th, 1880.

NOEL A. HUMPHREYS, *Hon. Sec.*

Amount of Subscriptions already published, £925 2s.

	£	s.	d.		£	s.	d.
Ogle, Wm., M.A., M.D.	2	2	0	Webb, F. E., M.R.C.S.	1	1	0
Lewis, Waller A., M.B.	2	2	0	Elliot, Robt., M.D.	1	1	0
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Sibley, Septimus W., M.D.	3	3	0	De Grave, J. F., M.R.C.P.	10	10	0
Hill, W. T., M.D.	1	1	0	Williams, F. J.	0	10	6
Rogers, Henry, M.R.C.S.	2	2	0	Tytheridge, H. B. H.	0	5	0
Hill, Berkeley, F.R.C.S.	3	3	0	Sayer, G. E. H.	0	2	6
Hallett, T. G. F., F.S.S.	5	5	0	Waters, A. C.	0	5	0
Hastings, G. W., M.P.	10	10	0	Wilkes, Jas., F.R.C.S.	5	0	0
Russell, Hon. F. A. R.	1	0	0	Davis, Theodore, M.R.C.S.	1	1	0
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Ace, Rev. D., D.D.	1	1	0	Hughes, H. S., M.R.C.S.	2	2	0
Watts, T. Spencer, F.R.C.S.	5	5	0	M'Kellar, E., M.D.	1	1	0
Tidy, C. M., M.B.	1	1	0	Hardman, Wm., M.B.	1	1	0
Quain, E., F.R.C.S., F.R.S.	5	0	0	Williams, R. Price, F.S.S.	2	2	0
Cleaton, J. D., M.R.C.S.	5	5	0	Tripe, J. W., M.D.	1	1	0
Radford, Thomas, M.D.	1	1	0	Sykes, John, M.D.	1	1	0
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Mann, Horace	2	2	0	Page, Herbert, M.R.C.S.	1	1	0
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Sutherland, John, M.D.	5	0	0	Davies, E., M.R.C.S.	1	1	0
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Lee, John, L.S.A.	1	1	0	Tilley, Samuel, F.R.C.S.	2	2	0
Ballard, Edward, M.D.	1	1	0	Shier, David, M.D.	1	1	0
Cadge, Wm., F.R.C.S.	2	2	0	Sutton, J. Maule, M.D.	2	2	0

As the Committee proposes shortly to close the subscription list, intending subscribers, who have not yet intimated their intention, are requested to communicate with the Hon. Sec., Mr. Noel A. Humphreys, General Register Office, Somerset House, London, W.C. All cheques or post-office orders should be crossed "Martin and Co."

A SUM amounting to £438 10s. 3d. has been handed over to the governors of the Lincoln County Hospital as the result of the Hospital Saturday movement.

Obituary.

DR. EDWARD ISAAC SPARKS.

THE death of this young physician, which took place on the 11th inst. at Crewkerne, in Dorsetshire, has robbed the profession of a man who, had he been endowed with physical qualities in any way commensurate with those of his mind, must have risen to the very foremost rank. He was the younger son of Mr. William Sparks, J.P., and was born at Crewkerne on September 25th, 1843. He received the rudiments of his education at the grammar-school of his native town, whence he was subsequently removed to Harrow, and ultimately entered Corpus Christi College, Oxford. At college his career was one of very great distinction. He graduated in 1866 with a first class in Natural Science, and second class honours in Classics. In 1868 he was appointed Radcliffe Travelling Fellow, and between this and 1871, in fulfilment of the conditions of the Fellowship, he travelled throughout Europe, visiting the chief medical schools in France, Germany, and Italy, and acquiring a sound knowledge of the three chief Continental languages. After graduating in Arts at Oxford he entered at University College, London, where he finished his medical education, graduating as M.B. in 1870, and taking the diploma of M.R.C.P. in 1872.

When Dr. Sparks settled in London in 1872 he had a right to be considered as one of the most highly educated members of the profession. Ancient and modern languages, the natural sciences, and the most advanced views on medicine, both of England and the Continent, he had made his own. But he was not a man to be led exclusively by the views and dogmas of others, and we accordingly find him eagerly seeking for opportunities of clinical study in the rich field afforded by our great metropolis. He became physician to the Mount-street Dispensary, the Children's Dispensary in Bell-street, and also to the Royal Hospital for Children and Women in the Waterloo-road. In 1874 he was made physician to the skin department at Charing-cross Hospital, and also subsequently had charge of a clinic for diseases of the throat.

This excessive devotion to the most unwholesome department of medical practice—viz., the out-patient practice of hospitals and dispensaries, soon told upon a constitution which was always feeble. In 1875 unmistakable signs of phthisis became manifest, and Dr. Sparks, who had only shortly before been married, found himself compelled to leave London for the south of France. His intention was to practise at Mentone, but at the outset his views were frustrated by the French regulation with regard to foreign practitioners. He was not a man to yield easily to obstacles, and accordingly in May, 1877, he qualified as an officier de santé at Marseilles, and began to practise systematically at Mentone. In the same year he published an English translation of Binz's Elements of Therapeutics, a work which was well received. From time to time Dr. Sparks published various papers on skin diseases, and notably a paper on "A Disease produced by the *Acarus folliculorum*," which appeared in the Medico-Chirurgical Transactions for 1874. After settling in Mentone, Dr. Sparks continued to suffer at intervals from lung trouble and also from profuse hæmaturia and albuminuria, but his bodily condition in no way dismayed him. He foresaw the result clearly enough, and contemplated his approaching end with a calmness which was little short of sublime. In the sixty-second volume of the Medico-Chirurgical Transactions he published, in connexion with his friend, Dr. Mitchell Bruce, a paper on the effect of diet, rest, and exercise in chronic nephritis, and the value of the paper and the respect for the author will alike be increased when it is known that he found the materials for the work in his own condition, and that, in fact, all the observations recorded in the paper in question were made upon himself.

Last year Dr. Sparks published a book upon the Riviera, which we reviewed most favourably in August last, and we have no doubt that it will prove a valuable work of reference.

It is needless to add that Dr. Sparks possessed a most unusual amount of energy combined with great scientific acumen. The catalogue of his writings and a record of their reception by the profession are a sufficient evidence of that.

In society Dr. Sparks was ever cheerful, and his highly cultivated mind and his great appreciation both of nature and of art made him one of the most agreeable of companions. Dr. Sparks was married in 1874, but has left no family.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—

At a quarterly meeting of the Council on the 21st inst., the following gentleman, having been elected a Fellow at a previous meeting, was admitted as such, his diploma of Membership bearing date Dec. 2nd, 1842:—

King, Jasper Rumball, L.S.A., M.I.Ksham, Wilts.

At the same meeting of the Council, the following gentleman (Assistant-Surgeon to University College Hospital) was elected an *ad eundem* Fellow:—

Barker, Arthur Edward James, F.R.C.S. Irel. (1876).

The following gentlemen passed the required examination, and received the diploma in dental surgery, at a meeting of the Board of Examiners, on the 27th inst.:—

Carnock, George Dennis, Cable-street, E.
Hindley, Henry Newton, Alfred-place, Bedford-square.
Palmer, Thomas Frederick Barton, Peterborough.
Robbins, Cornelius, Epsom.
Worfor, Thos. Walter Cromptley, London-st., Fitzroy-sq.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Oct. 21st:—

Day, Donald Douglas, Blackheath.
Garrard, Chas. Rowland Ordish, Tickenhall, Derby.
Pryn, William Wenmouth, Tredown, Saltash.
Whitcombe, Charles Henry, New Zealand.

The following gentlemen also on the same day passed their Primary Professional Examination:—

James Donald, Charing-cross Hospital Charles Henry Piesse, King's College Hospital.

COLLEGE OF PHYSICIANS IN IRELAND.—At examinations held during October the following obtained the licences in Medicine and Midwifery of the College:—

MEDICINE.—George Henry Butler, John Edw. James Deane, Harry Chalmers Hudson, John Hugh Jones, Francis Joseph Lambkin, John Murphy, Edw. Connell Adair Ramsay, Henry Geo. Swain.
MIDWIFERY.—Harry Chalmers Hudson, John Hugh Jones, John Murphy, Henry George Swain, Edmond Wall.

Also the undermentioned Licentiates have been admitted Members:—

Daniel Patterson Barry, John King Forrest, Francis M. Harricks, George William Hatchell, Alexander Richard Joyce, George Kell, Henry Anthony Wills Richardson, Francis Patrick Staples, Peter O'Reilly, Eliza Louisa Walker Dunbar.

QUEEN'S UNIVERSITY IN IRELAND.—The following degrees and diplomas were conferred on the 13th inst. by His Grace the Duke of Leinster, Chancellor of the University:—

DOCTOR IN MEDICINE.—First Honour Class: Jeremiah Cotter, David M'Keown, John C. Bodkin, Hugh Brosnan, R. J. Hackett, Robert Thomas M'Geagh, Robert Shore, George James Haslam.—Upper Pass Division: Joseph Anderson, John Shiel Collins, John A. Cunningham, Robert J. Hamill, James Paul M'Geagh, Matthew M'Vickar, Adam A. C. Mathers, William Roulston, Albert M'Carthy Scully, Hugh Thomas Shaw, Samuel Hamilton Shaw, John Wallace Watson.—Lower Pass Division: Robert Alexander, John Howard Batty, Wm. Hamilton Caldwell, Richard Campbell, Henry Castles, George J. Coates, William R. Cole, William N. Davies, John J. Dinnis, David S. Dunn, S. Eakin, William Gordon Hanna, Robert Lynn Heard, Arthur Hickman, Edward Horan, William Kelly, T. M'Iroy, John M'Loughlin, Daniel Lehan, Samson Matthews, William J. Matthews, Lowry D. Morrell, W. D. Moore, William T. Mullally, Patrick Mullane, James Mullin, John F. L. Mullin, P. J. Nealon, Thomas Nunan, James A. Oakshott, Menus W. O'Keefe, Samuel James Parkhill, Thomas Pritchard, Robert Reid Rentoul, Jas. John Riordan, Robt. John Roulston, Simpson Stuart, Samuel Townsend, Edmond Wall, Charles Wells, Charles Wenyon, James Blair White, James F. White, James Whitton.

MASTER IN SURGERY.—Myles H. C. Atkinson, John C. Bodkin, Hugh Brosnan, William Hamilton Caldwell, George J. Coates, William R. Cole, J. T. Collier, Jeremiah Cotter, John A. Cunningham, James Davidson, John J. Dinnis, Samuel Eakin, R. J. Dalbey Hackett, Charles Hall, John Hosford, Charles Frederick Knight, James Paul M'Geagh, Robert Thomas M'Geagh, David M'Keown, Matthew M'Vickar, John Martin, Adam A. C. Mathers, Wm. David Moore, William T. Mullally, P. Mullane, Patrick Joseph Nealon, Thomas Nunan, Menus W. O'Keefe, Myles William O'Reilly, Samuel J. Parkhill, Jas. John Riordan, Robt. John Roulston, Wm. Roulston, Albert M'Carthy Scully, Hugh Thomas Shaw, Samuel H. Shaw, William Smyth, William Stokes, Samuel Townsend, Edmond Wall, Charles Wenyon, John Wilson, Ralph Worrall.

DIPLOMA IN MIDWIFERY.—Robert Alexander, Joseph Anderson, John C. Bodkin, Hugh Brosnan, William H. Caldwell, George J. Coates, John Shiel Collins, Jeremiah Cotter, Jas. Davidson, David

Simpson Dunn, Samuel Eakin, James Paul M'Geagh, Robert Thos. M'Geagh, Matthew M'Vickar, Adam A. C. Mathers, Patrick Mullane, Menus W. O'Keefe, Robert John Roulston, William Roulston, Albert M'Carthy Scully, Hugh Thos. Shaw, Samuel Hamilton Shaw, William Stokes, James Whitton.

JOHN CHURCHILL, M.R.C.S., has been placed on the Commission of the Peace for Cumberland.

MR. OTTO JACKSON KAUFFMANN has obtained the Dauntsey Medical Entrance Scholarship of £100 at Owens College.

A **BAZAAR** has been held in Llanelly in aid of the funds of the hospital of the town. The proceeds are expected to realise some £300.

MR. G. BULLOCK, of East Coker, has presented to the Yeovil Hospital a field—two acres, one rood, thirty-eight perches in extent.

By order of the Queen parcels of cast-off linen from the Royal Household have been forwarded to the London and the University College Hospitals.

The salary of **W. W. Coltart, L.R.C.P. Lond., M.R.C.S. Eng.**, Medical Officer to the Workhouse of the Epsom Union, has been increased from £50 to £75 per annum.

The Committee of the Aberdeen Royal Infirmary have recommended that in future the appointments of house-physician and house-surgeon should be held only by regularly qualified men, instead of, as at present, by third-year's students.

DR. FAUSSETT, OF CLONTARF.—Last week a resolution recently passed granting this gentleman a retiring allowance of £50 per annum, after forty-three years' service as medical officer, was rescinded; and notice of another motion has been given that the superannuation be fixed at £106 per annum.

MEDICAL SOCIETY, COLLEGE OF PHYSICIANS IN IRELAND.—An election for council, honorary secretary, and treasurer takes place this week. Dr. Duffey having resigned as honorary secretary and Dr. MacSwiney as treasurer, the duties will most probably be undertaken by Dr. Alexander Montgomery, who has been nominated for office.

ST. MARK'S OPHTHALMIC HOSPITAL, DUBLIN.—Owing to the increased cost of living, together with the improved dietary of this hospital, and the loss sustained by the scale at present charged for the support of union patients, it has been determined for the future that the rate be increased from 1s. to 1s. 4d. per head per diem for all patients admitted after the 1st proximo.

PHARMACEUTICAL SOCIETY OF IRELAND.—On the 4th inst. the fifth annual meeting took place at the College of Physicians for election of office-bearers. The following constitute the new Council:—President: C. Tichborne. Vice-President: Aquila Smith. Members: William Allen, H. Bennett, J. Brunner, A. Doran, T. Collins, J. Goodwin, W. Goulding, G. Grindley, W. Harrington, W. Hayes, E. Hodgson, J. Holmes, S. Oldham, G. Owens, J. Payne, R. Pring, J. Ryan, R. Simpson, H. Whitaker. Treasurer: E. Hodgson. Registrar: Hugh Fennell.

Medical Appointments.

Intimations for this column must be sent DIRECT to the Office of THE LANCET before 9 o'clock on Thursday Morning, at the latest.

BATTERBURY, R. L., M.B., has been appointed Medical Examiner of Recruits for the Regular Army and Militia, at Berkhamsted.

BEACH, F., M.B., M.R.C.S.E., has been appointed Medical Superintendent for the Asylum for Children at Darenth.

BURTON, A. H., B.A., M.B., M.R.C.S.E., has been appointed a Clinical Assistant to the Central London Throat and Ear Hospital, Gray's-inn-road.

FARKSTEIN, H., L.R.C.P.L., M.R.C.S.E., has been appointed Medical Officer to the Newington District of the Sculcoates Union.

HEATH, H. T., L.R.C.P.Ed., L.R.C.S.I., has been appointed Medical Officer to the Second District of the Mansfield Union.

HUGHES, T. H., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer to the Pwllheli District and the Workhouse of the Pwllheli Union, vice H. H. Hughes, deceased.

HUNT, T., M.D., has been appointed a Clinical Assistant to the Central London Throat and Ear Hospital, Gray's-inn-road.

JACKSON, G., L.R.C.P.L., F.R.C.S.E., has been appointed an Honorary Surgeon to the Plymouth Public Dispensary.

JESSOP, W. H., M.R.C.S.E., has been appointed House-Physician to the Royal Hospital for Diseases of the Chest, City-road, vice Mr. F. M. Pope, whose appointment has expired.

KEELAN, P., L.K.Q.C.P.I., L.R.C.S.I., has been appointed Medical Officer and Public Vaccinator for the Monasterboice Dispensary District of the Drogheda Union.

KEIR, W. I., L.R.C.P.Ed., has been appointed Medical Officer of Health to the Melksham Rural Sanitary Authority.

MOORE, W., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for the Lower Milton District of the Kidderminster Union, vice Ormsby, resigned.

MUDGE, J., jun., L.R.C.P.Ed., has been appointed Medical Officer and Public Vaccinator to the No. 4 District of the Penzance Union, vice Trezise.

NELSON, T., M.B., C.M., has been appointed Resident Surgeon at the Birmingham Dispensary.

OATES, J. P., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer to the Bampton District of the Witney Union.

ORAM, A. M., M.B., has been appointed a Clinical Assistant to the Central London Throat and Ear Hospital, Gray's-inn-road.

PINCK, W., M.B., C.M., L.R.C.S., has been appointed Medical Officer to Rochdale Workhouse and the Wardleworth District of the Rochdale Union, vice Collingwood, resigned.

RIDDELL, R., M.D., C.M., has been appointed Medical Officer to the Dunsford District of the St. Thomas Union.

STEPHENS, W. B., M.R.C.S.E., L.S.A.L., has been appointed Consulting Surgeon to the Plymouth Public Dispensary.

STEWART, W. R. H., F.R.C.S.Ed. &c., has been appointed a Surgeon to the North-West London Hospital.

TURNER, G., L.R.C.P.L., M.R.C.S.E., has been appointed Medical Officer of Health to the Hertford, Ware, Buntingford, and Bishop's Stortford Rural Sanitary Authorities, and to the Bishop's Stortford Urban Sanitary Authority, vice Ogle, resigned.

TWEDDELL, G., M.R.C.S.E., L.S.A.L., has been elected Medical Officer of Health for the Northern Division of the Houghton-le-Spring Rural Sanitary District, vice Lyon.

WILLIS, J., L.R.C.P.Ed., M.R.C.S.E., has been appointed a Medical Officer to the Kilburn, Maida-vale, and St. John's-wood General Dispensary.

Births, Marriages, and Deaths.

BIRTHS.

BRADSHAW.—On the 24th inst., at Welbeck-street, the wife of Dr. Watson Bradshaw, formerly Staff-Surgeon, Her Majesty's Royal Navy, of a son.

HITCHCOCK.—On the 20th inst., at Market Lavington, the wife of C. K. Hitchcock, M.A., M.D. Cantab., Medical Superintendent, Kingsdown House Asylum, Box, Wilts, of a son.

LEEDS.—On the 22nd inst., at Ramsgate, the wife of E. Leeds, M.B., of a son.

MURPHY.—On the 12th ult., at Kamptee, C.P., the wife of Surgeon F. H. S. Murphy, M.D., A.M.D., of a daughter, stillborn.

PRESTON.—On the 11th ult., at Amberley, Canterbury, New Zealand, the wife of Alfred Chevallier Preston, M.R.C.S.E., of a daughter.

ROPE.—On the 23rd inst., at the Gateway House, Shrewsbury, the wife of H. J. Rope, F.R.C.S., of a son.

WOODS.—On the 19th inst., at Alverstoke, Hants, the wife of Staff-Surgeon Henry C. Woods, M.D., R.N., of a son.

MARRIAGES.

JOLLY—BALDWIN.—On the 21st inst., at the Parish Church, King's Norton, Robert Jolly, M.D., of Edgbaston, Birmingham, to Fanny, only daughter of Joseph B. Baldwin, Esq., of Broad Meadow, King's Norton, Worcestershire.

WARDLE—HUTCHINSON.—On the 21st inst., at St. Andrew's, Auckland, Mark A. Wardle, L.R.C.P.Ed., L.R.C.S.Ed., to Jane E. M., third daughter of V. Hutchinson, M.D., of The Elms, Bishop Auckland.

WHITE—JENNINGS.—On the 21st inst., at The Abbey, Malmesbury, by the Rev. G. W. Tucker, M.A., the Vicar, assisted by the Rev. C. D. Forbes, B.A., Edward Arthur White, M.D., of Malmesbury, third son of Richard White, of Heathfield House, Norwich, to Anne Maude, only daughter of Joseph C. S. Jennings, F.R.C.S., of The Abbey House, Malmesbury, Wilts. No cards.

DEATHS.

ASPLAND.—On the 24th inst., at his residence, St. Helen's Field, Alfred Aspland, F.R.C.S., of Dukinfield, in his 65th year.

CROSBIE.—On the 16th inst., at Haslar Hospital, Gosport, Alexander Crosbie, M.D., Staff-Surgeon, R.N.

HEARNE.—On the 22nd inst., at Southampton, of apoplexy, Edwin Hearne, M.B., F.R.C.S.E., aged 60.

HORNBSBY.—On the 21st inst., at High-street, Bromsgrove, Worcester-shire, George Harcourt Hornsby, M.R.C.S.E., in his 28th year.

INGHAM.—On the 24th inst., at Ash Mount, Haworth, Yorks, Mary, the beloved wife of Amos Ingham, M.D., aged 52.

LEWIS.—On the 10th inst., at Brechia, Carmarthen, D. H. Lewis, L.S.A.L., aged 29.

LYNCH.—On the 22nd inst., at her residence, Commercial-road East, Mary Ann, the beloved wife of John Lynch, L.S.A.L., aged 59. R.I.P.

NORTH.—On the 20th inst., at Egremont, Cumberland, through a fall from his horse, Henry North, M.R.C.S.E., aged 30.

N.B.—A fee of 6s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET OFFICE, October 28th, 1880.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radiation in Vacuo.	Max. Temp. Shade.	Min. Temp.	Rain fall.	Remarks at 8.30 A.M.
Oct. 22	29.74	E.	41	40	..	48	35	0.15	Raining
" 23	29.81	E.	44	42	..	48	38	0.14	Overcast
" 24	30.31	N.E.	41	39	57	48	34	..	Foggy
" 25	30.28	W.	41	39	..	50	33	..	Overcast
" 26	29.77	S.W.	43	42	..	46	37	..	Raining
" 27	29.86	E.	46	46	..	58	39	0.88	Foggy
" 28	28.88	S.W.	50	48	..	55	44	0.19	Raining

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Local papers containing reports or news-paragraphs should be marked.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET to be addressed "To the Publisher."

DIETETIC VALUE OF FLESH FOOD.

Halifax.—The question in the form it is put is a difficult one to answer, much depending on the feeding, age, or whether the animal is in the wild or tame state. The flesh of wild animals contains proportionately more of the albuminous constituents and extractive matters than that of an animal kept in confinement. On the other hand, the fibre would be tougher, and not so much nutriment would be extracted from it by the digestive process as would be the case with a stall-fed animal. Moreover, the delicate blending of fat with the meat, which is found in the highest perfection in well-fed ox or heifer beef, is most favourable towards the promotion of perfect nutrition. The flesh of rabbits is poor in the fatty elements, and is consequently dry and unpalatable unless cooked with some fatty substance, as milk or bacon.

Mr. B. Htjer.—The question has been frequently raised. Probably information of what has been done in the matter may be obtained of the Secretary of the Ladies' Sanitary Association, 22, Berners-street, W. The letter of *Dr. De Renzy* will appear in our next.

A RARE OCCURRENCE FOLLOWING AN INJURY TO THE OUTER SIDE OF THE ORBIT.

To the Editor of THE LANCET.

SIR,—The following case may be of some interest to the readers of THE LANCET as an accident of an uncommon nature, and I see no allusion is made to such a condition in a recent work of Lawson on Diseases and Injuries of the Eye:—

Whilst acting for the divisional surgeon to the H Division of the Metropolitan Police, I was sent for to see a child with a cut eye. The constable who found the child said the mother, who was drunk, allowed it, a girl three and a half years old, to fall through a window. I found an incised wound on the outer and upper part of the orbit, about a quarter of an inch in length, and from this a fatty-looking, pyriform lump projected, which I ascertained was due to a complete hernia of the lachrymal gland, and this was hanging by a slender pedicle composed of the duct and vessels. As the patient was at a police station, where I should only see the case once, I put on some lint, and sent the child to a hospital, after applying taxis and failing to reduce it, so small was the opening through which it had protruded. There were some swelling and ptosis of the upper lid; but the globe of the eye was uninjured. The treatment of such a condition in so young a subject, had it remained under my care, would have been—firstly, an attempt to replace it by enlarging the incision, and then endeavouring to keep it in place by means of sutures; secondly, failing this, there would have been no other alternative but to excise the gland, and this I should have been disposed to do after first applying a ligature. The prognosis in such a case, I apprehend, would be of an unfavourable nature as to the sight of the eye being retained unimpaired; yet I am aware that the gland has been removed for the radical cure of lachrymal disease, but I think with unsatisfactory results so far as the eye is concerned.

Yours truly,

Spital-square, E., October, 1880.

C. E. WALKER, M.B. Edin.

A RARE CAUSE OF CONVULSIONS.

DR. BEARD, of New York, to whose investigations we are indebted for the discovery that nervous weakness is a new disease, has recorded, in his work on "Neurasthenia," that during a conversation about the disease with a medical friend, the orbicularis palpebrarum of the latter began suddenly to twitch—a phenomenon before unknown in the subjective experience of the individual. We fear that the investigation of diseases of the nervous system is having a deleterious effect on Dr. Beard's own well-being. At least such is the only conclusion we can form from the title of a recent paper, as it is announced in the usually exact *Jahresbericht* of Virchow and Hirsch. The announcement runs as follows:—"Beard, G. M. Convulsions from the study of one hundred and twenty-five cases of writers' cramp, and allied affections"!

Enquirer.—23, Bloomsbury-square, W.C.

THE TREATMENT OF HÆMORRHOIDS: CRUSHING VERSUS CLAMP AND CAUTERY.

To the Editor of THE LANCET.

SIR,—After reading Mr. Pollock's account of the treatment of hæmorrhoids by crushing in THE LANCET of July 3rd, I must say that I feel much more convinced of the superiority of the method by clamp and cautery as performed by Mr. Henry Smith, of King's College Hospital, and I am led to this conclusion on taking the following points into consideration:—

1. *The length of time taken to perform the operation.*—This, of course, is not of much moment when the patient is unconscious; but when such is not the case, the more quickly the operation is performed the better. And here I believe it will be found that the clamp and cautery will answer our purpose better than crushing; for Mr. Pollock tells us that each pile should be retained in his crushing clamp from *half to one minute or even longer*, and also that it will be generally found necessary (or advisable) to ligature some bleeding points, all of which takes time.

2. *Pain of the operation.*—This again only concerns conscious patients. Patients operated upon with clamp and cautery always tell me that the only pain they suffer is when the pile is first secured in the clamp; the cutting and the application of the cautery they do not feel either at the time or when the clamp is removed. In this respect the crushing clamp cannot possibly be less painful; and if ligatures have to be applied, more pain must be caused.

3. *The nature of the wound.*—Here the cautery produces a carbonaceous eschar; and since charcoal is an acknowledged antiseptic, the only effect that can be produced in such a wound must be beneficial, though probably but to a slight extent. In this respect, then, the clamp and cautery must compare favourably with the crushing; nor can I understand how the slough can be more extensive in the former operation, as Mr. Pollock asserts, since the cautery is only applied to the cut surface, and that while the clamp is still retained *in situ*.

4. *Hæmorrhage during and after operation.*—In mild cases treated by clamp and cautery there is absolutely no hæmorrhage either during or after operation. In severe cases operated upon by me, there has been hæmorrhage during the operation, but to no appreciable extent; while after the operation this has only occurred once. In that case the piles were associated with a great degree of prolapsus, and a considerable amount of inflammation had to be subdued before operative measures could be taken. Here, however, only one gush of hæmorrhage occurred about four days after the operation; but as it ceased almost immediately, I am inclined to think that it was most probably the expulsion of the blood lost during the operation, and which had been retained in the bowel. Anyhow it cannot have been very severe, as the patient in question never thought of sending for medical aid. I believe, too, that in Mr. Henry Smith's hands hæmorrhage rarely results after operation, and, even when it does, it is but slight, and very easily controlled.

5. *Pain after operation.*—This I have nearly always found to be slight, pain being generally felt when the bowels are moved for the first few times. In fact, it is rather discomfort than actual pain that is experienced after the operation.

6. *Liability to erysipelas and pyæmia.*—Patients operated upon with clamp and cautery, I should consider, would probably be placed in a more favourable condition than those who have been subjected to the crushing treatment; for in the latter case, in addition to the clean wound, there would be ligatures serving to keep up a certain amount of irritation.

In conclusion, I may add that I have been led to make these remarks from what I have observed not only in the limited number of cases that have come into my own hands, but also in the large number of cases treated so successfully by Mr. Henry Smith during my period of study at King's College Hospital, London.

I am, Sir, yours faithfully,

THOS. F. CLARKE, M.R.C.S.E., &c.

Somerset East, S. Africa, Aug. 19th, 1880.

LAPSED OR LOST "EPILEPSY."

To the Editor of THE LANCET.

SIR,—It would be very instructive if your readers would place on record instances in which epileptic or epileptiform attacks have occurred once or oftener in life, and not been repeated so seriously as to interfere with health or the duties of life. I have known and heard of such cases, and the experience of general practitioners would be of great value.

I am, Sir, your obedient servant,

October, 1880.

J. G. G.

WHOLE-MEAL BREAD.

THE *House and Home*, in a judicious article on the use of whole-meal bread, its economy and healthfulness, remarks:—"It has come to our knowledge that several of our readers, adopting our advice, and eating only whole-meal bread, have lost all desire for the use of tobacco and alcohol."

Mr. Joseph Hamlyn.—The apparatus described does not appear to differ in any way from one we described recently.

Mr. C. A. Wheeler.—We cannot insert the report of a case save by a professional writer.

A Medical Officer of Health.—Consult Wilson's "Handbook of Hygiene" (J. and A. Churchill).

GUY'S HOSPITAL.

To the Editor of THE LANCET.

SIR,—In common with most of my acquaintances, professional or otherwise, I am extremely grieved that the staff of Guy's have deemed it necessary to rescind the letter they wrote to the governors of the hospital, dated August 13th last, in which they expressed their disapproval of the system of nursing, and other innovations introduced by the treasurer, and the governing board. Surely it was a just and temperate letter. Why on earth then need the physicians and surgeons have sought permission to be allowed to withdraw such a communication. This untoward transaction has placed the staff in a very humiliating position in the eyes of their professional brethren, and a ridiculous one in the eyes of the public.

After such an episode in matters medical one can no longer wonder how it is that the poor junior, and in many cases senior, general practitioners tamely submit, through dire necessity, to all the indignities heaped upon them by "Bumble" in the shape of parochial boards, and the stewards of sick clubs, when we find the staff of Guy's truckling (it is a nasty word to use) to the governing body of that institution in a matter which concerns their own dignity, and I may add the honour of their profession. We all know that in every large institution there must be rules and regulations which everyone connected with it must conform to, or all discipline would soon be at an end. Nevertheless, in all things strictly medical or surgical, the respective staffs should have entire control, as they alone are capable of judging for the best in such matters.

It is, I believe, a general opinion (and I think a right one) that the most dignified proceeding would have been for the whole staff to have resigned, there and then; and perhaps when the authorities discovered that none could be found who would fill the vacant posts, they might have been made to feel regret at having treated shabbily, if I may use the term, the body of scientific and honourable men who have done so much to maintain the ancient fame of Guy's Hospital.

What the public have to concern themselves about is, that a noble institution is being injured, and the public have a right to step in and say this shall not be. The governors and treasurer are but trustees of moneys left for a public purpose, and if they fail in their stewardship they will be arraigned at the bar of public opinion.

As I am writing this, it is a great matter of satisfaction and rejoicing to read that Dr. Habershon has resigned. Thank Providence for small mercies, and that there is one man with sufficient *esprit de corps* to stand up for the honour of his profession.

All I can say is, that if the gentlemen who have treated the staff of Guy's with such discourtesy were to serve their domestic servants after the same fashion, they would soon find themselves in the predicament of having to do for themselves what they had been in the habit of paying others to do for them.

Fulham-road, Oct. 23rd, 1880.

Yours obediently,

HENRY W. WILLIAMS, M.D.

To the Editor of THE LANCET.

SIR,—In the face of lay and medical editorial articles condemning the too ready acquiescence of the staff of Guy's Hospital to do as they are ordered by the governors, I and hosts of my medical brethren are anxious to know if the staff have reconsidered their untimely submission. Let them firmly and plainly intimate to the governors that they cannot accede to their demands. By doing so, and asserting their authority in matters purely medical, they will assuredly regain the confidence and be accorded the thanks not only of the profession, but also of the public in general.

Liverpool, Oct. 23rd, 1880.

I am, Sir, yours obediently,

A PROVINCIAL SURGEON.

To the Editor of THE LANCET.

SIR,—I agree with "A General Practitioner" that an opportunity occurred to the staff of Guy's Hospital of asserting their position in the interests of the patients such as seldom presents itself. They might have resigned their appointments *en masse*, and at the same time offered to fulfil their duties till others were found to take their places. Under these circumstances, no one, I venture to say, would have come forward, and the present Guy's staff would have had to remain at their posts, and the committee of the hospital to reconsider their position. The state of affairs is now unfortunately entirely the reverse.

Your obedient servant,

October, 1880.

A LOOKER-ON.

* * The above letters may be taken as specimens of the communications in which many of the profession express the view of this question that prevails. Unfortunately the resignation for which Dr. Williams records his thankfulness has not taken place.—ED. L.

CHEAP DOCTORING.

M.R.C.S., &c.—We regret that for the present we cannot insert more letters on the above subject, to which we have given already a large amount of space. We regret this the more as the letter of "M.R.C.S.," from his point of view, is very interesting and forcible, but not convincing.

Parateretes is thanked. The matter will be noticed next week.

M. O. H. desires to put the following questions and case:—

1. Can decomposing or putrid sewage getting into drinking-water give rise to enteric fever? or
2. Must the sewage actually contain the excreta of a patient suffering from typhoid in order to propagate the disease?
3. Is enteric fever likely to be contracted under the following conditions? A common sewer, serving a population of 2000, has for years discharged its sewage into a tidal river near its mouth. Except at spring tides, the mouth of the sewer and the adjacent mud-bank are open and exposed. The mud-bank is thoroughly impregnated with sewage. The situation being open and breezy, there is, as a rule, no great smell; but in hot, dry, and still weather a most foul and offensive odour arises from the place. Such conditions did prevail during the latter part of August and early part of September, and the stink was continuous and especially nasty. A public road runs close by. Query. Can a passer-by, who would probably be exposed to the influence of the stink for a quarter of an hour or so in going and again on returning, thus contract enteric fever, there being at the time no existing case in the district?

Disgusted.—It is a case for prosecution and exposure. Until the law is amended, it is no use expecting the Medical Council or the Registrar-General to prosecute. The profession of the locality should do so.

CERTIFICATION OF INSANE PAUPERS.

To the Editor of THE LANCET.

SIR,—In answer to the letter of "Subscriber" in your last issue, it seems to me that a contract between a board of guardians and a medical man for the certification of insane paupers for a fixed sum cannot be legal; for under the Lunacy Acts it rests entirely with the magistrate to decide as to the medical man he will call to his assistance; and secondly, it rests with him to decide alone what fee the board of guardians shall pay the medical man for the certificate. The duty and business of the guardians appear to be confined to paying. It will be seen on referring to the Lunacy Acts that boards of guardians appear to be specially ignored; but that medical officers, relieving officers, and overseers are liable to penalties for breaking the Lunacy Laws, boards of guardians having but to pay all the expenses.

I cannot help thinking that it would be very desirable to place this question in the hands of the Poor-law Medical Officers' Association, and to ask their able and energetic President, Dr. Rogers, to obtain from the Local Government Board their legal opinion on the subject. This would form an effectual check on parsimonious boards of guardians in the event of the contract being an illegal one.—Yours &c.,

Oct. 25th, 1880.

M.D.

To the Editor of THE LANCET.

SIR,—Pauper lunatics are admitted to asylums on the order of (a) a justice of the peace, and of (b) the officiating clergyman and the relieving officer.

In the first case, the justice who orders the medical examination of an alleged lunatic can make an order upon the guardians of the poor for the payment of a fee not exceeding one guinea to the medical man who makes the examination, whether the alleged lunatic is in consequence sent to an asylum or not. In the second case (b), there is no provision for the payment of any expenses attending the examination and removal to an asylum of the supposed insane person; but Fry says that "apparently the relieving officer would be justified in charging in his accounts the reasonable expenses necessarily incurred in the discharge of his duties cast upon him by the statute. Any charge so made will, of course, be subject to the auditor's revision, both as regards its legality and its reasonableness."

No contract such as that spoken of by "Subscriber" is provided for by the Lunacy Acts. I should advise him and his brother medical officers to retire from it, unless the Poor Laws, with which I am not familiar, permit it.

I am, Sir, yours &c.,

Oct. 25th, 1880.

MEDICAL SUPERINTENDENT.

M.B., C.M.—315, Oxford-street. The information required may be obtained of the Registrar.

Chirurgus has forgotten to enclose his card.

Mr. Thomas Bond.—Next week.

CURIOSITIES OF ADULTERATION.

To the Editor of THE LANCET.

SIR,—In your last issue (page 680) is a short paragraph on the above subject. What think you of the following:—

I am at the head of a town school, and a short time back gave Bread-making to a class of boys as the subject for an essay. One of the essays began in school-boy English:—"The first thing in bread-making is to boil the potatoes, and then you must peel them and mash them carefully. Then you must mix them with a little water, and set them in a warm place till they begin to ferment," &c. &c. Oddly enough, *flour* was not mentioned in the course of the essay. The boy's father is a baker.

Yours obediently,

October, 1880.

SCHOOLMASTER.

ANTISEPTIC MIDWIFERY.

Referring to Mr. Verdon's article in our pages on Sept. 25th, Mr. ARTHUR RICHARDSON, of The Firs, Rusholme, writes:—

"I have for the last two years freely used carbolic acid mixed with castor oil, in the proportion of 1 to 7, as a lubricant to all instruments for all manipulations in midwifery cases, and the result has been so uniformly successful in averting complications where experience would have led me to expect them, that I strongly advocate the careful notice by the profession of Mr. Verdon's treatment.

"I was first led to use carbolic acid in midwifery manipulations and as an after-application to the parts of the mother injured by laceration, bruising, or long-continued pressure, &c., from a discussion which took place in non-medical papers on the value of Calvert's carbolic oil for use by shepherds, and the overwhelming testimony given in its favour by them.

"Midwifery instruments are frequently apt to be washed by the nurse, after the hurry and bustle of a difficult labour, in a very imperfect manner; if in this state they are allowed to lie until next required, it is evident that unless they receive some antiseptic precautionary measures they may prove a fruitful source of septic mischief, and in like manner the argument may be extended."

Enquirer.—Scarcely.

Dr. Reginald E. Thompson's paper will appear in an early number.

A. D. O'C. F.—Yes.

A QUESTION IN SANITATION.

To the Editor of THE LANCET.

SIR,—I have as an architect thought myself justified in turning the overflow pipe of a soft-water tank, filled from the gutters of an isolated house in the country, into the only well of pure spring-water belonging to it. This was done on finding that the ditch into which it was intended to carry the overflow was at too high a level, and thinking that the occasional influx of rain-water to the well would not be injurious. Is it your opinion that the water in the well would be so contaminated in consequence of this as to render it unfit for drinking or culinary purposes? Or would it not rather be improved by the introduction of the soft water? Do you think my employer is justified in describing this arrangement as "murderous"? The rain-water tank contains 1800 gallons, and takes the fall from thirty-two squares of slated roofing, conducted into it by glazed drain-pipes jointed in cement.

If you would let me have your idea as to the above I should esteem it a favour.

I am, Sir, yours faithfully,

October, 1880.

BETA.

* * There is no objection to the rain-water *per se* going into the well. The difficulty arises from the chances of pollution to which rain-water is exposed in the collection and storage. Upon these chances, in the particular case, we can express no opinion. They must be judged of on the spot. If there were no necessity to supplement the supply of the well by the overflow of the rain-water tank, we should have held it best to have provided for the overflow in some other fashion. Why not (the circumstances of the locality being suitable) by a series of subsoil drains—by sub-irrigating a plot of ground, in fact, with the overflow!—ED. L.

BARMOUTH AS A HEALTH-RESORT.

To the Editor of THE LANCET.

SIR,—From the comments upon Barmouth in your number of the 9th inst., one might suppose it was the seat of all kinds of infectious disease; but my experience for the last eleven years as medical practitioner here is just the contrary. During that period the town has been remarkably free from any kind of zymotic disease; and whenever there has been any isolated case of measles, scarlet fever, or diphtheria, it has been imported by visitors, and has not extended as it would in some districts. Last year the rate of mortality from all diseases amounted only to 10 per 1000, and I might add that four of the deaths happened amongst visitors; one was due to drowning, and one occurred the first night after arrival. If we deduct these four cases, the rate of mortality amounted only to a little over 8 per 1000 per annum.... It is true that the drainage has not been opened yet, but no doubt will be before next summer, as it is being constructed, and when completed it is to be hoped that it will be as effectually done as at Torquay....

Yours faithfully,

Barmouth, October, 1880.

H. J. LLOYD, L.R.C.P., &c.

CHIAN TURPENTINE.

To the Editor of THE LANCET.

SIR,—In the *Pharmaceutical Journal* last week Professor Flücker suggests the probability of a supply of true Chian turpentine being found in Algeria. By letters received this week from competent authorities in that country, who have been making inquiries and searching for the trees, they report that the true *Pistacia terebinthus* tree is hardly known and very rare in Algeria. The *Terebinthus atlantica*, Desf., is the nearest variety that is found. A sample of the gum is sent for comparison. They are continuing the inquiries among the Arabs, and agree to distribute samples of true Chian that I am sending to the traders going into the interior. Mr. C. Hanbury informs me that his collector writes that, although he has found some more trees of *Pistacia terebinthus* in the islands, the Government will not allow them to be touched, with the view of tapping them, for fear of destroying the tree.

Yours truly,

London, Oct. 20th, 1880.

THOS. CHRISTY, F.L.S.

LITHOTOMY.

To the Editor of THE LANCET.

SIR,—On the 29th ultimo I operated on a boy, aged six years, for stone by the lateral operation for lithotomy, and, from its size, with some difficulty extracted a uric-acid calculus, weighing one ounce three drachms. I give this case as I think it very unusual for a stone of such magnitude to be taken from so young a child. The boy did well, and is now running about in perfect health. Yours faithfully,

Wivenhoe, Essex, Oct. 26th, 1880. C. A. S. LING, M.R.C.S., &c.

COMMUNICATIONS, LETTERS, &c., have been received from—Sir J. Paget, London; Dr. Whipple, London; Mr. T. Smith, London; Mr. Bond, London; Sir H. Lechmere, London; Dr. Reginald E. Thompson, London; Dr. M. Duncan, London; Mr. Rivington, London; Dr. Althaus, London; Dr. Woodward, Worcester; Dr. Pavy, London; Mr. Wood, Woodville; Dr. D. Duffield, London; Mr. Allen, New Wandsworth; Mr. G. P. Field, London; Dr. Littlejohn, Edinburgh; Mr. Hunstone, Manchester; Mr. Hamlin, Exeter; Dr. Mackenzie, Glossop; Dr. Macnaughton Jones, Cork; Mr. G. V. Stewart, London; Dr. Moinet, Edinburgh; Mr. Rendle, Forest Hill; Mr. Daniel, Leamington; Dr. H. W. Williams, London; Mr. Ling, Wivenhoe; Dr. Jacob, Leeds; Dr. Mears, Newcastle-on-Tyne; Dr. Wilson, Doncaster; Dr. O'Neill, Lincoln; Dr. Oliver, Newcastle-on-Tyne; Mr. H. J. Lloyd; Dr. Walker, Darlington; Messrs. Smith and Co, London; Mr. E. Rawson, Taranaki; Mr. Godlee, London; Mr. Kesteven, Wellington, N.Z.; Mr. Coughtrey, Dunedin; Dr. Somerville, Ardrihaig; Mr. H. Melladew, London; Mr. Emerson, London; Mr. Roger Williams, Wigan; Dr. R. H. Lloyd, London; Mr. Scones; Dr. Budd, Clifton; Mr. Churchill; Mr. Speedy, Dublin; Dr. M'G. MacLagan; Dr. Meredith; Dr. Rorke; Dr. Fergus; Dr. Stevenson, Shaldon; Dr. Farmer, London; Mr. Gilruth, Edinburgh; Mr. G. Jones, Birmingham; Mr. Stephens, Emsworth; Mr. W. Murray, Burley; Mr. W. Jones, Glandwr; Dr. W. H. Murray, Galashiels; Mr. Kershaw, London; Mr. Phillips, London; Mr. Mitchell; Mr. Woodland, Uxbridge-road; Messrs. Oliver and Boyd; Mr. Garrard, Derby; Mr. Lownds, Tunstall; Messrs. Lingard; Messrs. A. & C. Black, Edinburgh; Mr. M'Nabb, Edinburgh; Mr. Reeve, Northampton; Mr. Caton, Liverpool; Dr. Shepherd, London; Dr. Turnbull, Dunbar; Dr. Pickett, London; Mr. Reeve, Oldham; Mr. Potter, London; Nemo; Enquirer; Schoolmaster; A Looker-on; C. N.; House-Surgeon; Beta; Medico-Ethical; A Provincial Surgeon; F.R.C.S.; M. B. C. Selby; A. B.; Surgeon, Guisborough; A Constant Reader; Medicus; E. W. G. G.; L.R.C.P. Ed.; &c. &c.

LETTERS, each with enclosure, are also acknowledged from—Dr. Riordon, Londre; Dr. Gill, Canterbury; Dr. M'Adam, Edinburgh; Dr. Adam, Dumfries; Dr. Caisnette; Mr. Johnston, Sheffield; Messrs. Lingard, Barnsley; Dr. Ingham, Haworth; Mr. Van Praagh, London; Dr. Lloyd, Barmouth; Dr. Hitchcock, Box; Mr. Ryder, London; Mr. Brooks, Fareham; Mr. Phillips, Hales-Owen; Mr. Keyworth, Lincoln; Mr. Ixham, Bradford; Messrs. Parsons and Co., Salford; Mr. Butler, Westgate-on-Sea; Dr. M'Donald, Cupar, N.B.; Mr. Boaz, Kensington; Mr. Haggies, London; Dr. B. Squire, London; Mr. Bingham, Bristol; Mr. Haywood, Manchester; Mr. Jollye; Mr. M'Kinney, Castle Flinn; Messrs. Cadbury Brothers, Birmingham; Sir H. Thompson, London; Mr. Walford, Dudley; Omega; Medicus, St. Leonards; University; F.R.C.S., Malmesbury; J. P.; R. Y. L.; F.R.C.S., Edinburgh; Zeta, Edinburgh; Jacobus; Sigma, London; Stella; A. B., Bournemouth; M.D., Hackney; F.R.C.P. Edin.; D. C. L.; P. D. D.; Medical Student, Glasgow; E. H. C.; Rugeley; Medicus, Sheffield; Lady Superintendent; M. H. M., Hatherhage; R. B. S., Bedford; M. B., London; M.D., Macclesfield; Medicus, Goswell-road; J. W. B., Uxbridge-road; H. J., London; P., F.R.C.S.; A. B. C.; M.D., London; C. L., Kensington; R. B. T.; Surgeon, East India-road; M.R.C.S.; S. E. M.; &c.

Pharmaceutical Journal, Deutsche Medicin-Zeitung, San Francisco Newsletter, La Science Libre, Anglo-American, Concours Medical, Science, Bath Argus, House and Home, Metropolitan, Northern Evening Express, Le Gaulois, Cambrian News, Buxton Herald, &c. &c., have been received.

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Medical Diary for the ensuing Week.

Monday, Nov. 1.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS. — Operations, 10½ A.M. each day, and at the same hour.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

ST. MARK'S HOSPITAL.—Operations, 2 P.M.; on Tuesday, 9 A.M.

ROYAL INSTITUTION.—5 P.M. General Monthly Meeting.

MEDICAL SOCIETY OF LONDON.—8½ P.M. General Meeting.—Dr. F. de Havilland Hall, "On a Case of Pleuritic Effusion." Dr. E. Symes Thompson, "On a Case of Aortic Aneurism in which Secondary Disease was set up in the Right Lung."—Dr. J. C. Thorowgood, "On a Fatal Case of Atrophy of the Stomach."

Tuesday, Nov. 2.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 3 P.M.

PATHOLOGICAL SOCIETY OF LONDON.—8½ P.M. The following Specimens will be shown:—Myeloid Tumour of Femur; Multiple Exostoses; Specimens of Ainhum; Embolism of Cerebral Artery; Fibro-cellular Tumour from Knee-joint; Epithelioma of Lung; Papilloma of Umbilicus; Joint Disease in Tabes Dorsalis (living specimen); Histology of Molluscum Contagiosum; Telostitis in a Syphilitic Infant (living specimen); Dissection of Cleft Palate; Urticaria Pigmentosa; &c. &c.

Wednesday, Nov. 3.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.

ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.

ST. MARY'S HOSPITAL.—Operations, 1½ P.M.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at 1 P.M.

LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.

GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.

OBSTETRICAL SOCIETY OF LONDON.—8 P.M. Specimens will be exhibited by Dr. Roper, Dr. Herman, and others.—Papers: Dr. Wade (Birmingham), "On a Case of Chorea in Pregnancy successfully treated by Dilatation of the Cervix Uteri."—Dr. Braxton Hicks, "On Congenital Abnormality of the Uterus simulating Retention of Menses." Dr. Charles H. Carter, "Absence of the Vagina; Uterus Distended by Retained Menstrual Fluid; Operation; Recovery."

EPIDEMIOLOGICAL SOCIETY.—8 P.M. Inaugural Address by the President.—Mr. Netten Radcliffe, "On Certain Appearances of Cholera since 1873 in the Countries lying between India and Europe."

Thursday, Nov. 4.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations

CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M.

HARVEIAN SOCIETY.—8½ P.M. Mr. A. J. Pepper, "On a Case of Trephining for Double Compound Fracture."—Dr. Broadbent, "On a Case of Heart Disease."

Friday, Nov. 5.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, Nov. 6

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

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The postal arrangements relating to the distribution of THE LANCET will be considered from time to time in the interests of subscribers.

Tables of Contents, with the Index of Advertisements, for each Number can be had on application to the Publisher.

Agent for the Advertising Department in France—J. ASTIER, 66, Rue Caumartin, Paris.

An Address ON THE TREATMENT OF PUERPERAL FEVER.

*Delivered before the Midland Medical Society at Birmingham,
Oct. 20th, 1880,*

By J. MATTHEWS DUNCAN, M.D.

(Concluded from p. 685.)

SEPSIN, or chemical products of decomposition dissolved in water are absorbed by the extensive mucous surfaces of the vagina and uterus, with their lymphatics, and by the placental and other wounds in the genital tract. Or they pass freely into the uterine sinuses and thus into the general circulation. The result is quick pulse and respiration, high temperature, delirium, and often purging. If the poisoning is slight, symptoms are slight. If the poisoning is by a large dose the symptoms are urgent, and death may result, and this without any added septicæmia to produce the fatal event.

During the currency of the disease or poisoning there is the possibility of a cure, almost sudden, by removing the fetor or stopping the supply of the poison. Nothing is more striking or more gratifying in the whole practice of medicine than this sudden recovery; and, as it is often produced by art, it deserves the name of a cure. A patient in the most alarming condition, apparently within a few hours of death, is appropriately treated, and within a few hours alarm has entirely subsided. It is not in lying-in women alone that such cases are seen; but sapræmia is more frequently observed in them than in others, and the joy of recovery is greater because the foreseen danger is greater, for evident reasons.

An aggravated case of this kind was recently under my care in St. Bartholomew's Hospital, and I shall give you a sketch of it from the notes of Mr. Nall. The largeness of the retained placental mass made the cause of the disease evident and easily discovered; and in this respect it is not like the run of similar cases which are classed under the designation puerperal fever. The recovery in it was so great, so quick, and so nearly complete, as to be scarcely credible. The woman appeared to be at the point of death. It was apparently not worth while to disturb her by treatment. In a few hours after the treatment she was comfortable, and every alarming symptom had disappeared. Yet for some days there was slight recurrence of fetor and persistence of diminished symptoms, but not to such a degree as to cause any suffering or alarm for the ultimate safety of the patient. Were the case not a typical one I should not take up your time with it.

A. E— was delivered naturally of her second child on June 8th. Flooding occurred after the birth of the child, and slight blood loss continued for seven days. Then the lochia became fetid. On the eighth day she had rigors, which were repeated daily. She was brought into the hospital on the tenth day, and was delirious during the night. On the eleventh day of her lying-in, when I first saw her, she had no complaint of pain, was pale, sick, frequently vomiting, troubled with diarrhoea; the uterus tender; breath sweet; respiration hurried, 44; pulse 146; temperature 104°2'; copious flow of stinking lochia. A piece of placenta was removed from the vagina. Under the influence of chloroform the hand was introduced into the uterus, which was soft and easily admitted it, and adherent placental masses were removed, some small shreds being left after many had been separated by volsella. The whole genital tract was then washed out by copious injections of carbolic lotion (1 in 30). Ergot of rye was administered, and the uterus was washed out every four hours during the day. The report of the next day bears that she had a good night without delirium, that the bowels had been twice moved, the motions being thin, yellow, and offensive. The discharge was slight and slightly fetid; the breasts were tender and swollen; the pulse had fallen to 100, the re-

spirations to 36, and the highest temperature was 101°4'. The whole aspect of the case had changed from despair to hopefulness. Ergot was continued for some days, and the carbolic washings as long as any trace of fetor was found. Recovery was uninterrupted; indeed, it may be said there was no process of recovery, there was only convalescence. Such a progress is not seen in any other form of puerperal fever. The theory of sapræmia accounts for the rapid cure, while the theory of the other forms of puerperal fever explains their gradual advance from bad to worse, or to recovery.

Sapræmia is treated earnestly, even heroically if necessary, with a view to its own cure, and with a view to the prevention of the complications, inflammatory, septicæmic, or pyæmic, which it is very likely to bring in its train. Heroic treatment may be required to reach the remotest part of the genital tract in search for decomposing matter, or to ascertain that there is nothing but putrid lochia in the case. Mere vaginal washing may suffice, or intra-uterine washing, or the volsella may be passed into the uterus to grope for the decomposing structure, or with the same view a finger or fingers may be passed, or even the whole hand; and it may be necessary to dilate the cervix preliminarily. Most of this may be done without an anæsthetic, but where the hand is to be introduced into the vagina, the previous induction of anæsthesia is desirable.

The lotion which I always use is the carbolic, of the strength of 1 in 40, or occasionally 1 in 30. It is used tepid or warm. In conducting the operation it is necessary to be very gentle, to avoid the introduction of air into the passages, and to see that the fluid runs out freely. If the os uteri externum and internum are not widely open, a pipe with double current should be used. The whole proceeding should cause little or no pain, and, for an ordinary washing, a pint or a pint and a half may be passed. But if the discharges are copious and fetid, more may be required, and the rule is to continue the injection so long as it comes away foul or perceptibly fetid. Of course, a bowl is to be so used as to receive all the lotion as it is discharged, in order to save the bed-linen from being wetted. When the uterus is washed out the medical attendant conducts the operation, but vaginal washings may be left to the nurse. The washings are to be repeated from twice to four times a day if the fetor persists in the discharges. After the fetor is suppressed twice a day is sufficient. If the discharges become natural, and if the symptoms of sapræmia disappear, the washings are stopped. In any case they are required only for a few days.

These antiseptic washings constitute the great or essential treatment of sapræmia — a treatment, as already said, so direct in its action, and so successful, that it may be called a cure. Though these washings have been described by ancient authors, and though they were recommended by Harvey and by Bauloquoque, it is well known to you that no such practice was in use among us till the antiseptic theory of treatment was promulgated. Yet they are not covered by the antiseptic theory, for you know it was based on the presence of bacteria which passed into the blood, and the antiseptic treatment was planned to destroy them or prevent them reaching the wounded surface. Here we use antiseptics not with these views, but to remove and arrest putrefaction, with a view to stopping the supply of a chemical, not a living, poison, the product of putrefaction, which enters the blood and endangers the constitution.

Besides the washings out, a case may demand many attentions, and cares too varied and too uncertain of occurrence for me to enter on them here. But to one I must allude as probably directly useful. It is the administration of ergot. A drachm of the liquid extract, in divided doses, should be given daily for a few days. The object of its use is to induce permanent contraction of the uterus or uterine retraction. This diminishes the uterine cavity, in which the discharge accumulates; it thus also lessens the surface absorbing the putrid poison, and the contraction of the walls of the organ may to some extent prevent the passage of the fetid fluid along the vessels into the circulation. Of course, should it be desirable, the drug may be given hypodermically, ergotin being used instead of the liquid extract.

Perhaps I have made the pathology of sapræmia too simple; for, in addition to what I have said, it is necessary to add that fetid lochia do not always poison the constitution. They generally do so, but not invariably. They may flow in intense putridity, and yet be apparently not absorbed, as is generally the case. Why the putrid

ichor is in some cases not absorbed I shall not here attempt to explain.

I know no reason why septicæmia and pyæmia should be called *real* puerperal fever, yet this is a common mode of speaking. The simple inflammatory fever, and the sapræmic fever, are not less really fever, nor less really puerperal. Probably the notion arises from the fact that grave cases of fever after delivery are for the most part septicæmic, or pyæmic, and that the great majority of the deaths in childbed is produced by these diseases. There has always, indeed, been a tendency to regard puerperal fever as desperate, or almost certainly fatal. I can remember well the saying of an eminent physician, with whose retrospective diagnosis many agreed, that if a case recovered it was not one of real puerperal fever. Probably he did not mean his words to be held as strictly true, but to express his sense of the hopelessness of such cases. This disheartening opinion should not be entertained, for it is not based on ascertained truth, and it induces despondency and feebleness in treatment which are prejudicial to the thorough management of a case. The pyæmic cases with their embolism, inflammation, and abscess, are more dangerous than the septicæmic, but even in pyæmia there are numerous recoveries. Every one has heard of rare and marvellous convalescence in pyæmia, even after several joints have suppurated; but these are very far from being the only instances. Many less severe cases survive the disease.

I may consider simultaneously the treatment of these two diseases. They are often combined, and their treatment is identical, if we except such surgical interference as is sometimes required in cases of pyæmia, a department into which I do not propose to enter. I have said that pyæmia and septicæmia may be combined, and while this is probably a frequent occurrence, it should also be remembered that all the forms of puerperal fever may be simultaneously present in one case. The separate consideration of simple inflammatory fever and of sapræmia is demanded by their utterly different pathology, and by their distinct indications of treatment. For the inflammatory fever we have some modification of the venerable established antiphlogistic method. For the sapræmia we have the arrestment of the putrid poisoning. For the septicæmia and pyæmia we have no treatment in any sense antidotal or curative in the humblest meaning of that word.

Cases of pyæmia and septicæmia are to be managed rather than treated. The word treatment implies too high an estimate of the physician's powers; or if not too high, at least a too definite view of them. We cannot arrest or even moderate the storm, but we may guide the bark through it. When the organisms producing these diseases are in the blood we cannot kill them, nor do we know any means of certainly controlling their growth. But we may wisely consider the constitutional and local circumstances of the patient, and judiciously interfere to modify them with a view to the patient's survival.

One unsound tree in a forest may be covered with lichen and fungus, and the tree may slowly die, or be killed. But it may survive, and becoming healthy, throw off the morbid growth which endangered it. The organisms of pyæmia and septicæmia find a favourable nidus for development in the weak, the unhealthy, the hopeless, the ashamed, the sad—in those who have been exhausted by a long labour or injured in the course of a severe one. But the attacked do not certainly die. The organisms may grow and grow, and cause death, but they are not necessarily fatal; their growth may be arrested, and they may all disappear. Debilitating and depressing conditions favour their development. Health and strength favour their disappearance. These principles are the foundation of our management; and experience, daily increasing, confirms the conviction that the foundation is not laid on sand.

Good nursing, careful feeding, prudent stimulation—these are the great points. In all of them there is now progressive improvement. While it is impossible to appreciate with any exactness what we owe to these, no one will deny the comparatively great advantages we now gain by them. It would be out of place to enter upon the subject of nursing here. It is no peculiarity of cases of septicæmia and pyæmia to require good nursing, and the subject is specially referred to in connexion with these diseases because, in default of any direct treatment, we specially consider what remains for us to attend to.

On feeding and the use of stimulants I might content myself by making the same remarks as on nursing; but I

wish to insist on the great necessity for more attention being paid to the niceties of these important departments. The food and drink should not be left altogether to the nurse. In quality, quantity, and time they should be regulated; and this cannot be done by previously fixed rules, but by directions modified according to the observations daily or hourly made in each individual case. Milk and beef-tea are the staple of the patient's diet, and they may be varied almost infinitely, to suit minor emergencies as they arise. In regard to food, the general rule is to give as much as the patient can take without evident disorder arising from it. It is seldom that too much is taken, for a common difficulty lies in overcoming the aversion to food.

The use of stimulants requires a little more discussion. At present the favourites are brandy and champagne, and I adhere to the general voice in preferring them—on one condition, that they be really good. At the same time I make no objection to other wines and spirits. Brandy and champagne are common and simple, and, for me at least, it would be only an affectation of refinement to appraise the merits of different wines and different vintages. But I am sure that, in regard to all stimulants, our aim should be to use as little as possible. Often, at least for a time, none at all is required. Occasionally, but rarely, in a crisis of weakness, brandy is to be administered largely. Always the principle holds good that too much will do more harm than too little. I am sure that it is a common error to give too much. Excess of food may be passed along the *primæ viæ* without entailing any considerable injury; not so excess of alcohol. Food is rarely desired by the patient, while she often wishes alcohol; because, as it is given, it assuages thirst for a time and produces at once an agreeable excitement.

A sketch of the treatment of septicæmia and pyæmia would be bald and imperfect if it were confined to the paramount matters—nursing, food, and stimulants. Great attention has to be paid to the general condition and to the state of health as indicated by prominent symptoms. Iron and quinine are now frequently administered, and with great advantage; and what a change of view does this imply if we look back to the days of Gordon, or even of Ferguson? I can well remember the astonishment and unsettlement of mind produced by the recommendation of Hamilton Bell to use the old tincture of the muriate of iron in erysipelas, and I frequently witnessed the earliest employment of the same remedy in the cognate diseases now under discussion, chiefly by the advice of the elder Begbie. It was always the custom to combine bitters with the iron, but now the regal bitter, quinine, is used, not only as a stomachic vehicle, but with the direct purpose of reducing the temperature whose regular observation helps so greatly to guide us now—a chart unknown in the days of Bell and Begbie. Besides quinine and salicin, the influence of cold is now familiarly resorted to reduce temperature when it rises above 102° or 103°, and this is done with the result of giving comfort and securing probably real gain. Many physicians, Schroeder, Osterloh, and Spiegelberg, in Germany, and especially Playfair in this country, have used the cold bath to reduce temperature when it is very high; but I have no experience with it. Temperature does not long remain high in this disease, varying greatly and often rapidly; and for keeping it moderate, quinine or salicin, in large doses, with regulation of the heat of the room, of the bedclothes, and of tepid sponging, are generally sufficient.

Ice is often taken internally against thirst, and it is a delicious mouthful; but the craving thirst is not relieved. The dose is repeated and repeated in vain. For the relief of thirst, the old remedies, such as toast-water, have more real value. But the urgency of thirst is minimised by the proper management of the case. At least, I can have no doubt that in the days of what I call the excessive use of wine or brandy, or of opium, we heard a deal more of the suffering from thirst than we do now.

Ice is much used to arrest vomiting, which is so common a symptom of the peritonitis of puerperal patients, and it is sometimes effectual. For this distressing symptom remedies are numerous, and their largeness of number is evidence of their uncertain action. The best is of course that most used—the hydrocyanic acid and bismuth mixture, without or with morphia.

With or without sickness and vomiting there may be flatulence, and it is sometimes so great as to embarrass the heart and lungs. In extreme cases relief has been afforded by letting off the air by a small trocar and cannula, but of

this proceeding I have little experience. The remedies which I have found of most use are charcoal, in teaspoonful doses, given in water once or twice daily; or turpentine, in ten-drop doses, given in water or some simple vehicle, three or four times daily.

The hot linseed-meal poultice is almost always a grateful and useful application to the hypogastric region, relieving pain and promoting the lochial flow. Besides, when the skin is hot and dry it is a valuable diaphoretic.

Opium in some form is invariably administered, and almost always with advantage. Occasionally, indeed, it produces great mental disturbance and uneasiness, or vomiting, or dryness of tongue; and, in such cases, if a change of the preparation does not bring better results, the medicine may have to be given up, or used only to produce sleep. Indeed, apart from any injurious effects, it is often a good plan, when pain is not urgent, to give it only to secure a good night. But generally it is given repeatedly during the day, either to relieve pain or with a view to its soothing and supporting rather than narcotising action.

Opium and other remedies are also often used against diarrhoea, and in this way much good may be done. But it is necessary to pay much attention to this purging, generally of thin highly coloured dejecta, for undoubtedly it often should be encouraged rather than checked; and, perhaps fortunately, it is often not easy to check it. The physician should see all the motions, so as to justly estimate their quantity and character, and he should not regard it as his duty to try to check free and even copious evacuations, or to get the stools in a formed state. He will be guided in his judgment on this point by the strength of the patient and the amount of food consumed.

During the whole course of the disease the regular flow of the lochia is anxiously looked for; and should they be suppressed, an attempt is made to bring them back by hot fomentations to the vulva and hypogastrium; for it is naturally regarded as desirable that there should be lochial discharge, and that it should not be retained. But besides its mere flow, the character of the discharge, especially as to fetor, is scrutinised. If there is fetor there is probably sapræmia complicating the septicæmia or pyæmia, and this fetor is treated by antiseptic lotions, as already described. But fetor of discharges forms no part of septicæmia or pyæmia. The bacteria or micrococci of these diseases flourish when there is no fetor. At present, however, such is the enthusiasm for antiseptics, that it is considered desirable to have the womb well washed out once or twice daily by carbolic lotion, even when there is no fetor; and meantime I consider it good practice to do this twice daily while there is urgency, if the discharges are not quite healthy in all respects. The intra-uterine washing cannot work upon the infected blood circulating everywhere in the body, and carrying with it the baneful organisms, but it can keep the wounds clean; and, if the womb or vagina is a nursing-ground for farther supplies of these organisms, then by the antiseptic washing the nursery is destroyed. The farther supply of the contagium vivum is stopped, for the micrococci are killed by the carbolic wash.

Such, gentlemen, is an outline of the treatment of a group of terrible diseases. How imperfect it is no one can feel more strongly than I do. It is not a fixed treatment, but the treatment of to-day. Were I the wisest therapist and had I the best rhetoric, my description would still be imperfect; for no one can describe, with a near approach to perfection, what is imperfectly known and very dimly understood. But the variations of health and constitution, of complications, and of other conditions, are so numerous that a perfect theory or system of treatment would not carry with it directions for every individual case. Boundless scope, after all, would be left for intelligent interference of the practitioner warmed into zeal by a kindly sympathising heart.

Meeting with these puerperal diseases, the practitioner dare not fold his hands in apathy and inaction on account of the incompleteness of his knowledge. No one would listen to him were he to proclaim that all our experience and all our laboriously acquired information had yielded no fruit for the benefit of suffering women. He is face to face with great and terrible danger, yet his position is not one of imminent peril to himself as in the case of a soldier, who, like him, has to meet unexpected combinations and unforeseen difficulties, and who, whether he has little or much knowledge, must act and that at once, for in boldness there is safety, in delay there is only disaster; and experience has amply demonstrated that no case is to be utterly despaired of till the moribund

state supervenes, however severe and complicated it may be.

We have said that puerperal fever affects especially the weak, the unhealthy, the hopeless, the ashamed, those who have been exhausted by a long labour or injured in the course of a severe one; and there is no need to expatiate on the great field here opened up for the beneficent activity of the physician. To strengthen, to heal, to encourage, to console, to manage labour, to reduce injuries to a minimum, are all objects to be kept in mind; not indeed with a view only to the treatment of puerperal fever, but in order to its prevention. It is a trite saying that prevention is better than cure, and I think there can be no doubt that more suffering is avoided and more lives saved on this principle than by treatment; and I feel impelled to say a few words on this subject.

The prevention of simple inflammatory and of sapræmic fever demands no special consideration here; it is the prevention of septicæmia and pyæmia, or of contagious puerperal fever, that is generally in view when prophylaxis is spoken of, and few subjects are at present more discussed. The late trials of midwives for spreading puerperal fever, and the reiterated attacks on maternity hospitals, are familiar to all; and I believe all will admit that we want much more light and more wisdom in our dealings with these matters. They are not identical, for the propagation of puerperal fever in a hospital involves considerations which have no place in its propagation in a private or out-of-door dispensary practice. Hospitals are the seat of epidemics of fearful character. The house becomes tainted, and every lying-in woman in it is in great danger from the infection. Fortunately, the infection does not become so intense as to affect all, but such a degree of intensity is quite conceivable. In an ordinary dairy no vessel of milk escapes the action of the bacterium lactis; every dish becomes curdled. In home practice the infection reaches patients only sporadically; the disease, however, occasionally dogging the footsteps of an individual practitioner. There are no epidemics, no prevalence of the infection over countries. A lying-in woman can easily find a safe home. The analogy of the curdling of milk does not apply here, for it is difficult to find a place where there is no bacterium lactis where milk does not curdle.

Against the dangers of both hospital and home practice we find some degree of protection in antiseptic midwifery, a great practical subject which I have discussed in an address lately given to the Medical Society of London. Antiseptics have, as yet at least, but little to do with the treatment of the infectious forms of puerperal fever; they avail greatly in the prophylaxis. This has been well exemplified in the case of hospitals. In private practice the protective power is not so easily demonstrated; yet I believe the plan is there also invaluable, rendering the patient comparatively safe and practically excluding all danger of infection by the careful accoucheur.

Ventilation and cleanliness were, up to the present time, the great resorts of medicine against epidemics of puerperal fever, and they had little and only temporary effect. They are, however, even now justly valued very highly; but, with antiseptics, we come into closer quarters with the enemy we have to subdue, and have a weapon of greater potency, and consequently we have more success. In spite of all our prophylaxis, however, puerperal fever prevails. The enemy succeeds in the attack and the physician has to make every effort to rescue his patient by treatment.

Although we have at present no prospect of being able to stamp out the infectious forms of puerperal fever or of reducing them to comparative insignificance, there is yet, even as to the attainment of these great ends, some ground for hope arising from the success of scientific investigations. Vaccination seems destined only to a brief further protraction of its splendid and useful isolation and of the mystery of its operation. The results of Pasteur's researches on the cholera of the domestic fowl and of Toussaint's and Greenfield's on anthrax show how a contagium vivum may have its potency diminished, or nearly annihilated, by methods having a strong analogy with those employed to reduce the potency of the variolous contagion. If one contagion can be so modified, we are led to ask, Why may not also that of puerperal fever be likewise? There are other researches by Greenfield and Buchner which justify the philanthropic hope that with lapse of time the deadly characters of the organisms of septicæmia and pyæmia may be changed into others more innocent. Such anticipations are little more than mere indulgence of the scientific imagination; but

they are far from being useless or foolish, though to the merely practical man they may appear so.

The ideas suggested by the researches of Pasteur, of Toussaint, of Greenfield, and Buchner may prove to be mere *ignes fatui*, but they may, on the contrary, prove to be true guides. It is by following out such ideas, verifying or disproving them by new investigations, that progress is made in science. Progress in science is a fountain of purest pleasure to its promoters and of widespread beneficence to mankind.

The Society whose new session I have the honour to inaugurate is devoted to the advancement of science, and I dare in conclusion to suggest to every busy medical man here that he should make some department of it, perhaps a very small department, his peculiar study. By so doing he will keep a special perennial joy in his life of toil: he will be, if not a discoverer of new truth, at least a diffuser of it; he will be a useful and honoured member of this Society, he will contribute to the elevation of medicine into a more and more useful profession, and of his medical brethren into a higher and higher position.

The healthy and diseased human body is not the greatest matter in the universe of things. Our profession acknowledges that there are others to whom, in respect of the value and grandeur of its aims, it willingly bows. But medicine offers more than sufficient scope for the greatest efforts of the greatest minds. It is for us to contribute to its prosperity and progress. *Floreat res medica.*

Address AT THE

OPENING OF THE ANATOMICAL DEPARTMENT

IN THE
NEW BUILDINGS OF THE UNIVERSITY OF
EDINBURGH.

Delivered October 27th,

By WILLIAM TURNER, M.B., F.R.S.,
PROFESSOR OF ANATOMY.

WE meet together this morning on an occasion which will be for ever memorable in the history of this University and of the Chair of Anatomy. We inaugurate that portion of the new buildings of the University which is to be devoted to the study and teaching of anatomy, and in celebrating the accomplishment of the first stage of the great task of providing new buildings for the accommodation of the Faculty of Medicine, we may congratulate ourselves upon entering into the occupation of apartments which, in their spaciousness and the convenience of the arrangements they provide for the purposes for which they are designed, are unsurpassed in the British Empire.

It is now about ten years since the authorities of this University began seriously to consider the necessity of extending the buildings. Various causes had combined to make this a necessity; a considerable increase in the number of professors and in the subjects taught since the existing buildings were erected, requiring an addition to the number of class rooms; an annual growth in the number of students, causing the class rooms to be too small to give the proper accommodation; a complete change in the character of the teaching of many of the subjects, more especially those of medical study, owing to the development of practical methods of instruction, and the inefficiency, both as regards number and size, of the apartments used for that purpose; the natural growth of the museums of the University, which by the accumulations of years had outgrown the space allotted to them.

At the first it was thought that, if new buildings were provided for the large departments of anatomy and chemistry, a sufficient amount of space would be set free in the existing buildings for the accommodation of the other sub-

jects of study requiring an extension of room. On further inquiry, however, the Senatus became satisfied that the needs of the various departments could not in this way be properly provided for; and, after a full consideration of all the circumstances, it was decided that the proper course to take was to devote the existing University buildings to the services of the faculties of arts, divinity, and law, and to transfer the medical faculty to a new building, which would at once afford sufficient accommodation for lecture rooms, museums, laboratories, and other apartments for practical work.

The question of a site for these new buildings had then to be settled, and as it had been decided by the managers of the Royal Infirmary to remove that great institution to the site on which it now stands, the ground on which it then stood was looked upon as suitable for the purpose. Accordingly negotiations were entered into to acquire the old infirmary site for university purposes, but in the course of time the negotiation fell through, and it was fortunate that it did so. For if this scheme had been carried out, then the construction of the new buildings of the University could not have been commenced until the present year, after the managers had vacated the old infirmary; and if they had been constructed there, then the medical school of the University would have been at an inconvenient distance from the new infirmary. It was therefore resolved by the Senatus to acquire, if possible, the ground of Park-place and Teviot-row, and the means of effecting a considerable portion of that purchase was provided by a bequest of the late Sir David Baxter, who, in this as in so many other matters, proved a wise and liberal benefactor to the University.

A subscription was then set agoing to procure funds for the purchase of the rest of the site, and the erection of the buildings thereon; and through the exertions of a committee of public-spirited citizens, presided over by the Principal of the University, for whose services in the promotion of this great work we must for ever feel deeply grateful, and having as two of its most zealous members the late and the present Lord Provosts of the city, a sum of about £80,000, in addition to the Baxter bequest was raised. The Government was then appealed to for assistance, and a grant from the Treasury of £80,000 was obtained.

Whilst these important financial arrangements were being made, the architect, Mr. R. R. Anderson, was preparing the plans. The instructions that he received were to provide each subject of medical study with a distinct lecture theatre, and with rooms for practical study appropriate to the teaching of that subject; that the rooms should be spacious, well-lighted and ventilated, and conveniently arranged; that there should be a large anatomical museum, and that the departments of anatomy, surgery, pathology, and practice of physic should be grouped around the museum, so as to have convenient access to it for specimens. Two years ago the foundations of the building were begun, and now we welcome you in the department which has first been completed. How well the architect has accomplished his task, an inspection of the rooms devoted to anatomical teaching and study will show you, and you will not fail to see that he has set this and the other departments in a casket of stone of which the University may feel proud to be the possessor, which is an ornament to the city, and a witness to the truth of the saying that

"A thing of beauty is a joy for ever."

And now, gentlemen, let us take a rapid survey of the origin of the school of medicine of this University, which dates from the first quarter of the last century—a period which marks also the rise in a more or less complete form of medical schools in several of the other universities in these islands. Up to that time, as was not unnatural, when we consider that so many of the universities either owed their existence to papal bulls or were modelled under their influence, these academic institutions had been almost exclusively regarded as training-schools for ecclesiastics and for promoting the study of theology. But at the beginning of the last century a great national awakening to the need of instruction in other departments of knowledge took place, which led in this University to the institution of the faculties of both medicine and law.

It is true that lectureships and professorships of medicine had been founded in many of our universities at an earlier period. In Aberdeen, for example, a "Mediciner" was appointed so long ago as 1522. In Oxford and in Cambridge regius professorships of physic had been founded by Henry the Eighth about the middle of the same century. The pro-

fessorship of physic in Trinity College, Dublin, dates from 1618. Professors of medicine were also appointed in this University in 1685, but it does not appear that they ever attempted any systematic teaching.

It is impossible, indeed, for a school of medicine to have vitality until provision is made for teaching anatomy, and it was not until the beginning of the last century that distinct teachers were appointed in the universities for imparting instruction in that subject. A chair of anatomy was founded in Cambridge in 1707; one in Glasgow in 1718. In Dublin an anatomical theatre was built in the University in 1711, in which lectures on anatomy, chemistry, and botany were delivered, and in 1784 these lectureships were converted into professorships.

Efforts had been made during the last ten years of the seventeenth century by the Incorporation of Surgeons of this city to provide for their members and apprentices instruction in anatomy, and an anatomical theatre was built for that purpose; but it does not seem that the lectures and demonstrations were delivered regularly, and the conditions under which the instruction was imparted threw many difficulties in the way.

In 1705 the Town Council of Edinburgh, then the patrons of the University, allotted to Robert Elliot, surgeon, who held the office of public dissector of anatomy to the Incorporation of Surgeons, the sum of £15 of yearly salary, as an encouragement to pursue the teaching of anatomy. This is the first record of the introduction of the study of anatomy into the system of teaching in this University. In 1708 the Town Council appointed Adam Drummond "to be conjunct professor of anatomy with Robert Elliot, chirurgion apothecary and present professor thereof." It is doubtful, however, if either of these professors, or John McGill, who succeeded Elliot in 1716, did more than give occasional demonstrations on the anatomy of the human body. The commencement of the medical school as a definite organisation for affording systematic instruction in anatomy and in other departments of medical study, dates undoubtedly from the appointment by the Town Council in 1720 of Alexander Monro, *primus*, to the chair of anatomy in this University. In the beginning of the winter of that year he delivered a regular course of lectures on anatomy and surgery, and during the same session Monro induced Dr. Charles Alston to lecture on *materia medica* and botany. In 1726 Drs. Plummer and Innes were appointed to the chair of chemistry, and Drs. St. Clair and Rutherford to those of the practice of physic and the institutes of medicine; and immediately after their appointment all these gentlemen began to deliver regular courses of lectures. The medical school was now very completely organised according to the requirements of the time, so far as regarded provision for the delivery of lectures on the chief branches of a medical education. But an infirmary for the practical study of disease was still wanted to give completeness to the system of instruction. A scheme was therefore proposed by Monro's father and the members of the Royal Colleges of Physicians and Surgeons, for raising a subscription and building a hospital for the reception of the sick. Monro himself, in conjunction with the Lord Provost Drummond, actively promoted the work, and in a short time a hospital was provided. How thoroughly these founders of our medical school had grasped what was essential in a training for the practice of our profession is shown by the way in which they utilised the infirmary after it was erected; for Monro frequently gave lectures on the surgical cases, whilst Rutherford began in 1748 to deliver clinical lectures on the most remarkable medical cases in the wards.¹

Monro had been specially trained under the guidance of his father—one of the great objects of whose life was to develop a school of medicine in Edinburgh—to become a teacher of anatomy. His success was marked from the beginning, and gave proof of his ability as a teacher, as well as of the need that existed in Scotland for the establishment of a school of medicine. From his class-lists, now in the possession of the chair of anatomy, I find that he began with 57 students, and that the class gradually increased, until, in 1744, 150 students attended his præ-

lections. Owing to the political troubles of 1745 the class fell that year to 76, but in the following year it rose to 182, which was the maximum number it attained during his incumbency of the chair.

The seed which had been sown by the founders of the school fell upon good ground, and under the fostering care of Alexander Monro, *secundus*, and of his able colleagues, Robert Whytt, William Cullen, Joseph Black, John and James Gregory, and Andrew Duncan, it became a stately tree. A great increase took place in the number of students attending the medical classes in the latter half of the last century, who were attracted in large numbers from England, Ireland, and the Colonies, and in consequence of that increase the buildings of the University with which you are all familiar on the South Bridge, were projected, and in the course of time constructed. From the records of the anatomical class I find that the pupils of the second Monro, whose reputation as a teacher and investigator was even more renowned than that of his father, numbered for many years between 300 and 400, and that in 1783, 436 students attended his class.

In the earlier half of the present century the school as a whole continued to prosper, although, from the circumstances of the anatomical chair, the number of pupils in attendance on that class was much diminished. With the appointment in 1846 of John Goodsir, one of the most philosophical of modern anatomists, to the chair of anatomy, an important revival took place in the character of the teaching, the class once more assumed a foremost position in the school, the students greatly increased in numbers, and in 1852-53 mustered 368 pupils.

The appointment of a Royal Commission in 1858, under the presidency of one of the most sagacious of living Scotchmen, the present Chancellor of our University, effected a great change in the constitution of the University and in the regulations for graduation. By the ordinances of that commission a preliminary examination in arts for medical students was rendered compulsory, the board of examiners was organised on a wider and better basis, the degrees of M.B. and C.M. were instituted, and the degree of Doctor of Medicine was ordered not to be given until candidates had reached the age of twenty-four years.

The immediate effect of these ordinances was undoubtedly to diminish the total number of students of medicine frequenting the University, which fell in 1868-69 as low as 403. For it required a few years to bring the education imparted in the schools into harmony with the requirements of the preliminary examination. When this was, however, established students once more began to flock to Edinburgh, and from 1869 to the present date a yearly increase has been going on, not by slow degrees but by leaps and by bounds, until in the last academic year the total number of students of medicine reached 1253. In the general prosperity of the school the class of anatomy has participated, for 679 students were enrolled as members of it during the last winter session. Under the influence of these ordinances the prestige of our medical degrees has been very materially increased. By the institution of the preliminary examination, conducted by the same examiners as for the degree in arts, the entrance of illiterate persons has been prevented, and the tone of our students and graduates has been elevated. By the widening of the professional examining board and the admission of a number of non-professorial examiners equal to that of the professorial staff, the character of the examination has been raised. By the power given to the *Senatus* to administer the affairs of the University numerous improvements and additions have been made to the educational arrangements.

It may not be without interest to inquire how it was that, whilst during the last century important schools of medicine arose as parts of the educational machinery of the universities in Edinburgh, Glasgow, and Dublin, yet that no corresponding development occurred in the great English universities in Oxford and Cambridge.

In a presidential address delivered in August last at the annual meeting of the British Medical Association in Cambridge, Professor Humphry related the circumstances which in his judgment repressed the formation of medical schools in the two ancient English universities. He placed in the front rank of antagonistic causes the proximity of Oxford and Cambridge to London, which from its greater wealth and the more abundant opportunities that it afforded for study attracted the practitioners, teachers, and students of medicine; also the influence exercised by the powerful com-

¹ The authorities for this summary of the rise of the Edinburgh School of Medicine are the Memoir of Alexander Monro, *primus*, prefixed to his collected writings; the Histories of the University of Edinburgh, by Bower and Dalziel; Dr. Gairdner's Historical Sketch of the Royal College of Surgeons of Edinburgh, and his Sketch of the Early History of the Medical Profession in Edinburgh; and most fully in Professor Struthers's Historical Sketch of the Edinburgh Anatomical School.

peting Corporations of Physicians and Surgeons in the metropolis, which had power to grant licences to practise.

But in connexion with this argument I would point out that powerful medical and surgical corporations were not and are not confined to London, but that similar institutions, exercising large local influence, possessing many privileges, having the power of licensing, and up to a recent period even a monopoly of granting licences to practise in certain districts, were and had been for many years established in Dublin, Edinburgh, and Glasgow, and yet the medical schools connected with the universities in those cities grew and flourished.

One cannot doubt, if there had been a university in London when the national demand for an improved medical education arose in the beginning of the last century, that in England, as in Scotland and Ireland, competent professors would have been appointed in it as parts of its educational machinery, and a medical school of influence and renown would have been created. The scientific and practical training of the medical practitioners in England would not have been left to the private enterprise of the physicians and surgeons attached to the London hospitals, but would have centred in the university, whilst the hospitals would have been adjuncts to it as places of clinical study.

England suffered therefore, as regards medical education, a great loss from not having had a metropolitan university during the last century. And when one was founded during the present century, it was established on so peculiar and exceptional a basis—as a mere examining board—that it provided no educational training, and has exercised therefore little if any influence upon the education of the great body of practitioners. Hence there has arisen in the minds of many Englishmen a conception of the relations of the universities to medical education, and to the medical practitioner, which to us in Scotland seems quite erroneous. They look upon a university training as not intended for the profession generally, but as an especial privilege of the select few. We, on the other hand, hold that the more you bring the great body of the profession into relation with the thought and culture and scientific methods of our universities, the wider and more precise will be the basis on which to found rational methods of practice, and the more will our profession advance in the estimation of the public.

But other causes than proximity to a great metropolis and the influence of powerful medical corporations tended to repress during the last century the development of medical schools in the two ancient English universities. In them much longer than in Scotland did the idea prevail that their primary function was to train ecclesiastics. The system of each of these universities, which practically gave the control over the education, not to a body of professors, but into the hands of the fellows and tutors of the different colleges; the semi-monastic life imposed on the resident fellows, so many of whom were required to enter into holy orders; the valuable endowments attached to the different wealthy colleges conferred as prizes on those who entered the Church as a profession—all tended to keep the system of education in a particular groove, and to check its expansion. But, further, the imposition of a religious test, both on teacher and student; the necessity of having to reside in a college, with its attendant expenses; the absence, in England, of such a complete set of parochial schools as prevailed in Scotland, in which the child of the peasant could obtain the rudiments at least, and in many schools much more than the rudiments, of a training in classics and mathematics—excluded from the English universities a large body of the nation, and restricted their privileges to members of the Established Church and to the wealthier classes of the community. There can be no doubt that the expense and other difficulties which beset the path of so many young Englishmen in obtaining a university training and degree in medicine in the southern division of the island, sent them across the border to Scotland, and contributed in no small degree to the prosperity of the Edinburgh school of medicine.

It required the freer light and air, and the wider conception of the relations of a university to the life of a nation, engendered by the progress of knowledge during the present century, to break down the long existing exclusive system of the English universities, and to bring them into closer contact and sympathy with modern thought and work. During the last twenty-five years a considerable addition has been made to their staffs of professors, and educational duties have been required of them; tests have been abolished; a non-collegiate system of residence has been sanctioned;

endowments have been thrown open to a wider range of persons; museums, laboratories, and other means and appliances for affording instruction in the sciences have been constructed and obtained; the curriculum for the degree of Bachelor of Arts has been remodelled, and a much greater latitude as regards the subjects both of education and examination has been granted to candidates. Medicine and the sciences on which it is founded have shared in these improvements. Unquestionably the small population of the districts in which Oxford and Cambridge are situated, and their proximity to London, will always throw impediments in the way of a development of the practical and clinical parts of a medical education; but the undergraduates of these universities who intend to enter on the study of our profession, have now the opportunities of being trained in the fundamental sciences on which the practice of medicine is, or ought to be, based, and in Cambridge provision is also to some extent made for imparting a knowledge of the more advanced subjects of professional study.

(To be concluded.)

THE INFECTION OF PHTHISIS.

By REGINALD E. THOMPSON, M.D., F.R.C.P.

THERE are many questions in medicine which have long engaged the attention of the profession and caused such a division of opinion that authorities will be found ranged in two opposite camps in equal numbers, holding diametrically different views regarding them; and among such open questions the contagiousness of phthisis may be classed as one which has been affirmed by some and denied by others at all times of the world's history.

It is indeed a very old question, for it was advanced by Aristotle and answered in the affirmative by him and Morton, and many others; but authorities of equal weight and number can readily be found who have taken the other side, and given a direct negative to such a possibility.

Upon this subject opinion still remains strangely hesitating, more especially in temperate climates; and it is curious to note how far more positive are the views of those who have made their observation in warm climates—a difference of opinion which requires some explanation, and may perhaps lead to some further elucidation of the problem.

In Italy quarantine regulations used to be enforced regarding deaths from phthisis, and, acting upon such regulations, innkeepers and others have been wont to levy a heavy tax for cleansing and disinfecting rooms where the consumptive patient has been; while in India, if my information be correct, such patients are considered almost as dangerous as lepers used to be under the Mosaic sanitary laws, popular opinion compelling even the washing of cups and platters that have been handled by them.

The arguments brought forward to support the idea that phthisis is contagious have been derived mainly from facts showing that individuals in intimate relation with each other have been successively attacked with phthisis. But such evidence, which simply depends upon a numerical probability, cannot be considered a satisfactory way of solving the problem, for the few cases which can be brought forward by any observer are not sufficient to remove the chance of mere coincidence for so common a disease as phthisis, which it must be presumed will be found affecting individuals in close relation to each other (e.g., husbands and wives, brothers and sisters) in succession in a certain proportion of cases. This kind of argument is not likely to be convincing. The remarkable series of cases, however, which have been published by Dr. H. Weber advance the question a step further, for it can scarcely be considered within the pale of chance that several wives of a consumptive husband should successively fall victims to pulmonary disease. But, from the experience of some years, I believe that the subject may yet be approached from a different point of view, and I would appeal not to the numbers in which pairs of individuals may be successively attacked by disease, but to special features, clinical and pathological, which mark the infective disease, and which distinguish the transmitted disease from ordinary forms of phthisis.

The proposition which I shall venture to advance is this:

That infective phthisis (by which term may be designated that form of disease which results from the infection of phthisis) is a disease which has peculiar symptoms and signs of its own serving to distinguish it from phthisis, and approximating closely to those of a pyogenic or infective pneumonia.

If this proposition can be established, then I think it must be admitted that the question of the possible communication of phthisis will have received a more satisfactory answer than when arguments are drawn from the numerical point of view. Of late years experiments on animals have been largely appealed to with regard to the nature of phthisis and tubercle, but inasmuch as I believe that the artificial disease differs materially from phthisis as it appears in man, I have no intention of pressing the results of such experiments into the argument, nor of appealing to them, although I could do so with some effect, to help me in a difficult question.

The observations upon which the following conclusions are based extend over a period of ten years, and are derived from a total of twenty-five thousand patients: the series of cases to which special attention has been directed are those of wives infected by husbands, inasmuch as the possibility of error arising from blood relationship is hereby avoided, and the association of the nursing wife with the sick husband is so constant and intimate that if phthisis can be communicated it must be looked for in such instances.

Fifteen well-marked examples of this kind have come under notice out of something like fifteen thousand cases of phthisis, so that the proportion of infective cases may be reckoned as not less (probably a little more) than one per mille; hence it is easy to understand why observers, with a small number of patients, should disbelieve the possibility of contagion. I have, however, rejected from the series cases which might have been included, but in which the symptoms were not so acute and distinctive, and which may eventually prove to be chronic or subacute forms of that disease, which was manifested in an acute form in the fifteen selected cases.

Grouping all the cases together and analysing the symptoms and signs which characterise them, I would advance the following conditions as serving to identify the disease and to distinguish it from ordinary forms of phthisis.

1. A slight hacking cough appears to be the earliest symptom of infection, and I would suggest that this is an indication of the irritation of the air-passages, due to the introduction of the *matrices morbi* through their agency.
2. Symptoms of constitutional poisoning are at once shown by the rapid emaciation which is noticed by the patient in a very early stage of the disease.
3. As the disease progresses, rigors, accompanied by night sweats and pyrexia, occur at frequent intervals.
4. Later on the cough returns, considerably aggravated, and sputa are from time to time tinged with blood. Hæmoptysis to a small amount occurs, but is not frequently repeated.
5. The physical signs are usually bilateral, although not necessarily exactly uniform on both sides.
6. The pulmonary disease is disproportionate to the amount of constitutional disturbance, and is not sufficient to account for the extreme emaciation of the patient.
7. The physiognomy of the patient is not that of phthisis, and the colour of the skin is of a dull sallow hue, far different from the pallor which is so marked a feature in the consumptive patient.

With regard to the character of the physical signs, even after the patient has been ill for many months I have generally not been able to make out more than a few subcrepitant or crepitant râles, diffused, and of a somewhat peculiar character, in both infra-clavicular regions; but one lung may be attacked before the other, and, consequently, in some cases, and late in the disease, a cavity may form.

It is difficult by a mere description on paper to enforce differences which mark the features of a particular disease with the same impressive distinction with which clinical experience stamps them, but I will make the attempt in the following case, which may be taken as a fair sample of the disease under consideration:—

A widow, aged twenty-seven, presented herself for examination under the following circumstances: There was no history of consumption in her family, nor could I elicit any facts to show that she had been delicate or liable to cough before. Her husband had suffered from symptoms of rapid phthisis (cough, sweats, and diarrhoea) some months before marriage, and, finally, died of phthisis nine months after marriage.

During these nine months she was his constant companion and only nurse, and although warned of the danger, had slept with her husband up to the day of his death. There was no offspring from the marriage. Three months after marriage she began to suffer from a slight hacking cough (which she was quite unable to trace to cold), accompanied by rapid loss of flesh. The constitutional symptoms became aggravated; the emaciation speedily increased, and was accompanied by a succession of rigors with night sweats of a marked character. These were associated with dull aching pains all over the body. Six weeks after the death of the husband the cough returned with considerable exacerbation. Much expectoration, occasionally streaked with blood. Slight hæmoptysis was noticed. With these symptoms there was a return of night sweats, and subsequently diarrhoea set in.

When she presented herself for advice her illness had lasted sixteen months (her husband having been dead thirteen months). She was extremely emaciated and worn, her face thin and drawn; her complexion sallow, of a dull ochry hue, and her aspect was far more like a patient suffering from pyæmia than from pulmonary phthisis; the skin was hot and dry, and the pulse rapid (124). The following were the physical signs. Her chest was well formed, but thin; there was no local retraction or depression. Diminished resonance of percussion was found under both clavicles from the first to the third ribs in front, and the same sign was found over the supra-scapular fossæ. Auscultation showed the presence of some diffused, viscid, crepitant râles, confined to the end of inspiration from the first to the third ribs, in front, on the right side; fewer in front on the left, but harsh respiratory murmur and subcrepitant râles over the left supra-scapular fossa.

If it had not been for previous experience of similar cases, and for the limited pulmonary disease indicated by the above signs, I should have almost despaired of a favourable termination to the case, so great was her emaciation and want of vigour, more especially as she had for some time been unable to take cod-liver oil, and was at the time under most unfavourable conditions of climate. However, she improved with the use of iron and maltine; she gained flesh. The physical signs cleared away, and in four months she was restored to health; and when I last heard of her she continued well, and was about to return to America, the home of her husband's relations.

The other cases which I have in my note-book, although not so complete as this, have the same distinguishing features, and point to the same conclusion, that the disease is not a true phthisis, but in all points resembles a condition of pyogenic pneumonia or pyæmia.

But it will naturally be asked, What pathological evidence can be adduced in support of these surmises with regard to the nature of the disease? The following case, in which the symptoms and signs during life were made by an independent observer, and closely coincide with those of the case I have already detailed, is the only one to which I can appeal, but the pathological conditions are very decided, and quite distinct from those of phthisis. The patient was under the care of Dr. Williams, and I am indebted to his courtesy for permission to use the case.

A widow, aged thirty-nine, was admitted into hospital in August, 1878, with the following history and symptoms. No history of inherited predisposition to phthisis in any of her family could be obtained. Her husband had suffered from phthisis, and after a family of eight children (one of whom had died of phthisis, the others being all reported phthisical) had been born to them he died of that disease; the exact date was not given. Sixteen months before admission the woman began to suffer from a hacking cough (not traced to cold) and emaciation of a marked character. After eleven months' illness she had a slight attack of hæmoptysis, blood being mixed with the sputum; diarrhoea followed, and during the time she was in the hospital she suffered from rigors and night sweats.

The physical signs noted were diffused crepitation over both lungs, most marked at the lower half anteriorly.

In October she was attacked with pleurisy, and in November the right lung broke down, and a cavity formed. Three weeks before death she had phlebitis, with an erysipelatous blush over both forearms.

The post-mortem examination which I made at the end of December, 1878, showed a very peculiar condition of things. The left lung was adherent at the upper half, and the lobules were found stuffed with a caseiform material, the

bronchioles being pigmented at their bifurcation, producing a peculiar appearance, as if a big V was stamped or painted in the middle of each lobule. The lower portion of the lung was in an earlier stage of disease—a hard congestion of a patchy character being presented to view, resembling an infective pneumonia. The right lung was completely adherent except at a space at the lower anterior portion, where there was a small collection of recently formed pus. The condition of the lung was similar to that of the left, but the disease had progressed farther, and the caseiform material had broken down, leaving a cavity of the size of a Maltese orange. At first I could find no tubercle, but on careful search two racemose groups of recent tubercle were found below and in close proximity to the cavity. The spleen was pale, small, soft, and diffident, and resembled the pyæmic spleen. The lungs were carefully examined microscopically; and, naturally anxious to have my views corroborated, I submitted sections to Dr. Klein, who was good enough to examine them, and expressed the opinion that they indicated an infective pneumonia.

I must remark with regard to this case that I have never come across a case of ordinary phthisis which at all resembled it, and although I have been on the alert for indications regarding the nature of the clinical symptoms which appear to mark cases of acute infection, I have not had an opportunity of investigating any other case of the kind. If further observation should corroborate this evidence, it would, I think, lead to the conclusion that phthisis in its power of communicating disease must be looked upon not as a zymotic disease capable of sowing itself, and reproducing the same form of disease, with identical symptoms and signs, but rather as an ulcerative process capable of giving rise to pyæmia. This view of the infection of phthisis would induce less terror than the notion that it was a contagious disease in the generally accepted view of the term, and prevention might be expected from simple measures of hygiene, especially free ventilation of the patient's room. Such means might reduce the risk of infection to a minimum without preventing that assiduous care and attention which alleviates and soothes the last days of the dying invalid, and the devoted wife need not fall a victim to her duty and ministering care.

It may perhaps be necessary for me to state that cases come under observation with a history of possible infection of which the symptoms are less marked and intense, and in which the pulmonary disease is not distinctive enough to constitute a diagnosis. How far such cases may be classed with those acute and intense forms of disease which I have attempted to describe, and how nearly they may resemble ordinary phthisis, is a matter which will have to be decided by the features of each individual case. I wish especially to guard against the supposition that in all cases of infection the form and progress of the disease must assume the same strikingly marked features which appear to characterise the acute and intense form of the infective disease.

REMARKS ON STRICTURE OF THE URETHRA IN CONNEXION WITH INTERNAL URETHROTOMY.

By SURGEON-MAJOR T. J. MCGANN, I.M.D.,
CIVIL SURGEON, MYSORE.

THE gist of my communication lies in the fact that in several bad cases of stricture which have come under my care recently, I have at once, without any previous efforts to treat them by gradual dilatation, resorted to internal urethrotomy, and with very satisfactory results so far. The instrument I have used has been that of Mr. Teevan, which was described by him in March, 1878.

The natives of India are, as a rule, very reluctant to seek treatment for stricture, and will go on without such as long as they can pass urine, even in a very small stream, or squeeze it out drop by drop, and so relieve themselves for the time; and hence cases of extravasation, with sloughing of scrotum and perineum, are not uncommon, and less so still are bad strictures. It is, therefore, with the worst class of cases that one has, as a rule, to deal with, and even these rarely come to hospital until actual retention has occurred, with probably an over-distended bladder and rupture of the

urethra imminent, so that prompt measures are demanded. In Indian hospitals the supply of catheters and bougies is limited, and as they rapidly deteriorate from climatic causes, and become inefficient after very little use, and as it is the small sizes which are most frequently used, surgeons often find themselves with nothing but large ones in hand. I have, therefore, on occasions felt anything but pleasure at being called on to treat an urgent case, with perhaps a bladder distended to the umbilicus, a tight tortuous stricture, impassable to any instrument within my reach or obtainable in a reasonable time, aggravated, perhaps, by an indurated distorted condition of perineum. Under circumstances such as those enumerated, and with no very small instruments available, it will be readily conceived that puncture of the bladder has had frequently to be resorted to to relieve present urgent symptoms, and as a preliminary to other treatment; and although I have hitherto found puncture per rectum a perfectly safe operation, it will be admitted that it is undesirable to have recourse to it as a routine measure in every bad case of stricture that comes under treatment, albeit it gives time and admits of good results being achieved afterwards.

About a year ago I procured, through my friend Dr. Macgrath of Bayswater, Mr. Teevan's urethrotome, for a bad stricture complicated with numerous fistulae, which, after much trouble, I dilated up to No. 11, English, but which contracted again very rapidly, notwithstanding the occasional introduction of the full rigid instrument by the patient, and two of the openings never completely healed. After the free use of the urethrotome in this case the fistulous openings healed, and there was no tendency to further contraction.

The following are the cases previously alluded to in which urethrotomy was performed (from notes by Mr. Apothecary Costello):—

CASE 1.—Beeram Saib, Mahomedan, age thirty-five, admitted to hospital 2nd April, 1880, with tight organic stricture of long standing. Urine can only be passed in drops with much straining, bladder greatly distended, and rupture threatening. No instrument can be passed through the stricture, which is situated in the subpubic region; and after all efforts at catheterism failed, the bladder was punctured per rectum, and a cannula and tube tied in. For some days subsequently trials were made to pass No. 1 catheter or bougie, but without success. On the 10th the conducting bougie of Mr. Teevan's urethrotome having been passed through the stricture with a little trouble, the staff was screwed on, and it was made to follow the bougie by means of moderate pressure into the bladder. The pressure was only necessary to get the thickened part, or point of junction between the bougie and staff, through the stricture, and that being passed, the shaft of the staff passed readily enough. The sheathed knife was now adjusted, and a small incision having been made at the meatus to allow it to pass, it was passed down to the stricture, and the blade being protruded this was thoroughly divided. To ascertain that this was done, the blade was retracted after resistance had ceased, and the sheath pushed further on, but no further obstruction being encountered the instrument was withdrawn, and a full rigid catheter passed. The man was discharged with a urethra of the full calibre on the 25th April, the rectal wound having healed. Mr. Teevan conditions that urine should flow through the groove in the staff before operation, but in this case it was not, as the bladder was kept empty by means of the cannula in the rectum. There was, however, no difficulty in satisfying oneself that the instrument was in the bladder, both because of the direction and of the facility with which its point moved about in the viscus, &c. There was scarcely any bleeding from the operation.

CASE 2.—Buden Saib, Mahomedan, age fifty, admitted April 8th, 1880. Old-standing stricture; has fistulous openings in perineum. No. 1 catheter passed after much difficulty. Was treated by catheterism in Shimoga two years ago, when urethra was dilated fully, but it began to contract soon after. Urethrotomy performed on April 8th; very slight bleeding; No. 11 English catheter passed readily afterwards. Fistulae closed; No. 12 catheter passes readily. Discharged April 18th, with a large instrument to pass occasionally for himself.

CASE 3.—Bullaree, Hindu, age forty-five, admitted June 2nd, 1880, under Dr. P. H. Benson's care. Urine passing in drops; no catheter would pass; several fistulae in perineum. Urethrotomy performed same day; no bleeding. Discharged with urethra of full calibre on June 20th, No. 12 catheter passing easily, and fistulae closed.

CASE 4.—J. W.—, European, age thirty, admitted under Dr. Benson's care on July 10th, 1880. Had been treated by gradual dilatation some time ago, but stricture recurred, and urine passes now in a minute stream. Fistulous opening in perineum. No. 4 catheter à boulie passed with difficulty. Catheter withdrawn afterwards, and there was so much difficulty in reintroducing it, that Mr. Teevan's instrument was used, and the stricture cut on the 13th. The strictured portion not having been completely divided, I used the urethrotome again on Aug. 1st, and after that there was no further difficulty. No. 12 English catheter passed freely, and the man was discharged on the 22nd, with a full-sized instrument given him to pass occasionally, the fistula having closed some time previously—viz., soon after the urethrotomy.

In the last case there was a little fever after the operation, but not more than followed catheterism previously, and it was readily controlled by quinine and opium. I also noticed that in No. 4 a well-curved catheter with a stilet in it, so as to direct its point along the roof of the urethra, passed more readily than a soft straight catheter or bougie à boulie, the explanation of which I assumed was, that the latter became engaged in the old fistulous orifice or annular portion of the stricture, whereas the former glided over or through the gap made by the knife, and which was ultimately filled up with the "cicatrical splice," which remained less prominent than the indurated part in the unincised portion.

Four cases are of course too few to draw any conclusions from, but if, according to the highest authorities, organic stricture is not curable, strictly speaking—i. e., the indurated structures giving rise to it are never completely removed, and the urethral canal restored to its original healthy state, and there is a liability to its recurrence, and if it is an "operation perfectly safe and easy to perform," then it would seem to me that internal urethrotomy is the operation for severe and obstinate cases, if not even for milder ones where, as in India, the surgeon may lack the necessary instruments occasionally, or the patients be unreasonable and disinclined to submit to lengthened treatment, and want to leave before the "gradual dilatation" process has more than half done its work. At all events I now feel myself, whether rightly or wrongly, that I can attack most cases of stricture and treat them efficiently by internal urethrotomy, without having the prospect of having to puncture the bladder before my eyes as previously whenever I failed with catheterism; that is, of course, wherever the filiform bougie of Mr. Teevan's instrument will pass, and the percentage of cases where it ought to fail is, I think, very small.

THE CHLOROFORM DEATH-BILL FOR TWELVE MONTHS.¹

By ERNEST H. JACOB, M.D.,

PHYSICIAN TO THE LEEDS DISPENSARY AND THE LEEDS FEVER HOSPITAL.

IN a previous communication² I reviewed the great change that had occurred during the past few years in the substitution of ether for chloroform in surgical practice. In 1876 a return from the anæsthetists of the London and other large hospitals revealed the fact that, save for the aged and infants, ether had taken the place of chloroform in nearly all our great surgical centres, and not only this, but that the change was felt by the officers in charge of the administration to be one greatly to the advantage of the patients as regards their subsequent condition, as well as the mere avoidance of death while under the influence of the drug.

And yet, during the past twelve months, no less than twenty-five deaths have occurred from chloroform—I ought rather to say, have been recorded, for, no doubt, many occur which it is convenient and possible to say nothing about. Of these twenty-five, seventeen only occurred in Great Britain, fifteen being in hospital, and eight in private practice. The operations were mostly of the simplest kind. Dressing wounded fingers or toes, three; necrosis, four; extraction of teeth, two; amputation of the breast and lithotripsy, one

each; and one for applying a splint to a child's leg. The deaths appear to have occurred in the usual way from sudden syncope. As regards the post-mortem appearances, which are noted in fourteen cases, in five all organs were perfectly healthy. In eight only the heart was more or less "fatty" or "flabby," and in one there was emphysema of the lungs.

As regards locality, two deaths took place in the Edinburgh Infirmary, where, I believe, ether is not in use; two in the London Hospital, where ether is extensively used; and three in Liverpool.

During this period five deaths from other anæsthetics have been recorded. One each from ethylene dichloride and ethyl dibromide, and three from ether. Of the latter two occurred in America, one during extraction of teeth, no particulars being given, and one during an operation for hip disease, the patient suffering from valvular disease of the heart. The remaining case, the only one in England, was that recently reported by Mr. Hartley, which could not be said to be due to the anæsthetic, as the patient was almost in *articulo* from intestinal obstruction when the operation was commenced.

It can hardly be too strongly urged that the fatality of an anæsthetic cannot be deduced from the experience of one observer. The cases must amount to tens of thousands. During the past few years, however, there has been no lack of material for statistical inquiry, and the result is to be read in the facts I have stated.

A death from an anæsthetic administered for a trivial operation cannot be regarded as anything but a serious calamity. It is not for me to say that a grave irresponsibility rests on the surgeon who employs chloroform when a safer anæsthetic is available, but I think it cannot be long before the voice of the profession (if not of the public, as in America) demands some explanation for the use of an agent whose victims are numbered by hundreds.

Leeds.

ABSTRACT OF INTRODUCTORY ADDRESS,

Delivered at the Opening of the Winter Session of the School of Medicine, Surgeons' Hall, Edinburgh.

By DR. FRANCIS W. MOINET.

GENTLEMEN,—It has devolved upon me in the name of your teachers to address to you this morning a few words of welcome and encouragement on the occasion of the commencement of the medical session. We welcome you as fellow students in a noble profession, which has for its aim the prevention and relief of human suffering, in striving to accomplish which you will find ample reward for all the labours of mind and body you may expend upon it. I take it for granted, gentlemen, you have chosen your profession thoughtfully for the love of it, because unless you feel your hearts are in the work you will neither do justice to yourselves nor to your work. It is one which should thoroughly commend itself to you in its aim and endeavours apart from all extrinsic questions as mere pecuniary reward. Now is the time to think of your work only, and how best you are to prepare yourselves for its responsible duties. In thinking over what I would address you upon this morning, it appeared to me that our time would be most profitably occupied in directing your attention briefly to what I consider is the right spirit in which you should prosecute your studies. This I feel can best be done by trying to impress upon you the importance of entertaining a high opinion of your profession and a clear idea of its responsibilities; the first will make you careful to do nothing to tarnish its reputation, and the second should stimulate you in your work, so that you will do credit to yourselves and to the profession for which you are now going to prepare yourselves, and so maintain if not raise the estimation in which it is held by the public, and increase its power of usefulness. In treating your patients you should be satisfied that you have used all the possible means which science and experience have gathered for our use. This is the responsibility which you undertake when you go out into the world to practise your profession, and which, if properly realised by you now, will be the best stimulus to you to work hard as students, by

¹ Read before the Leeds and West Riding Medico-Chirurgical Society.

² On Ether as an Anæsthetic, THE LANCET, vol. ii. 1879, p. 539.

doing which you can alone hope to bear it with comfort to yourselves and benefit to the public.

Equal attention should be given to all subjects of study; they are so intimately connected with each other, and with the practical application of our knowledge in the treatment of diseases, that ignorance in any one of them will sure to be a cause of future difficulty. The trust which a patient places in us should make us careful to be honest to avoid any semblance of quackery. When a medical man allows the thought of the fee to come before other considerations he is not to be trusted as a worthy disciple of the healing art. In this way we will render ourselves more worthy of the confidence which the public place in us—a confidence which is of mutual benefit,—it encourages us in our efforts to do our best to repay them in receiving the results of these efforts, when they apply to us in their need. To do everything in our power to spread abroad a knowledge of the true means to prevent or arrest the spread of disease is, I hold, the duty of every medical man. If our professional advice was more frequently sought for as to the daily mode of life of our patients, there would be fewer diseases to treat, and our attention could then be more profitably directed to prevent rather than cure disease, which, if not easier, would be more beneficial to the community. I would also advise you in ordering alcoholic stimulants to be careful to order their discontinuance when satisfied that they are no longer required to meet the exigencies of the case, so that they could not advance as an excuse of the vicious indulgence the doctor's order. The same may be said of the use of narcotics, such as opium, chloral, or morphia; you must also remember that, as medical men, you must often necessarily be the confidant of your patient both in regard to personal and family matters. Not only the health, but often the happiness, of families may depend on your discretion. Cultivate, therefore, the habit of reticence about your patients; even in professional circles cases should only be mentioned anonymously. You must also do as much as lies in your power to advance the science of medicine. Bear in mind now that you are entering upon your life's work, and one which will demand all your energies, especially a sound mind in a sound body. Do not cram; work regularly, and you will thus economise both time and labour; your lectures will interest instead of wearying you, and the facts will be impressed on your memory, so that it will neither fail you at the examination table nor the patient's bedside. Do not during your student career devote your time to any especial subject; time enough for that when you have obtained your diploma. To be a good specialist you should be strong all round. Disease of special organs has such a close dependence upon constitutional conditions that it is impossible to separate the study of the part from the whole if you are to be successful in your treatment. These hints I offer to you as a help in going through your college career. And I give you this encouragement, that if you put your hearts in the work now it will surely become a pleasure, and when once that is the case you need not fear examinations, responsibilities, the attainment of professional reputation, and a fair amount of worldly success.

CASE OF POISONING BY PARAFFINE.

By HORACE ELLIOTT, M.R.C.S.,

LATE HOUSE-PHYSICIAN AND HOUSE-SURGEON, WESTMINSTER HOSPITAL.

A SHORT time back a child two years of age was brought to me by its mother, who stated that the child had been sent to a shop with an elder sister to purchase some paraffine. The paraffine was put into a tin can, and given to the younger child to carry. As they were going home they stopped to look at a street row; while doing so the younger child removed the cork, and drank some of the paraffine.

The child was seen about twenty minutes afterwards, and was found to be in a state of semi-collapse, being very pale; the surface of the body was cold and clammy; the pulse small and feeble; the pupils were widely dilated, but acted slightly to the light from a candle. The breath smelt strongly of paraffine. The little patient was dazed and very drowsy, and could only be kept awake with difficulty. Did not cry. Vomited slightly before I saw it, and again soon afterwards. Emetics were administered, which only acted slightly, the vomited matter smelling very

strongly of paraffine. The child was not allowed to go to sleep, and about two hours afterwards it began to rally; the surface of the body becoming warmer, and the pulse more frequent; the patient cried; there was no diarrhoea. Next morning the child was quite well, the pupils being normal, and the breath smelling slightly of paraffine. I was unable to ascertain the quantity swallowed, owing to its being in a tin can.

From the above notes, it will be seen that the symptoms somewhat resembled those of poisoning by belladonna.

Bristol.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla enim est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

KING'S COLLEGE HOSPITAL.

LEFT-SIDED EPILEPTIC HEMIPLEGIA AND APHASIA;
RECOVERY.

(Under the care of Dr. FERRIER.)

FOR the following notes we are indebted to Mr. P. H. Emerson, house-physician.

A. W—, aged twenty-seven, was admitted into the Todd ward on Monday, June 21st last, and transferred to Dr. Ferrier's care. All the following facts were obtained by questioning the patient, who comprehended and wrote the answers himself on a slate. His father, mother, and six brothers and sisters were all alive and healthy. He himself was married and had four children healthy, except the eldest daughter, aged six, who had had two fits, which from the description were apparently epileptic; otherwise she, too, was healthy. He had been a whitesmith for nine years, over and above serving an apprenticeship of five years. He was a right-handed man.

About 2.30 P.M. on Nov. 20th, 1869, he fell from a scaffold twenty-five feet high. In falling he struck a "padlock" with the left arm and thigh, and was so turned over that on reaching the ground he fell on his head. He was picked up insensible, and remained so until the next morning. From this fall he said he received a severe cut in the head, parallel with the middle line half an inch to the right, and extending from the level of the hair in front to the occipital protuberance behind. Six weeks after this he had his first fit (December, 1869). He had a second fall from a scaffold on Feb. 20th, 1870, followed in twenty minutes by his second fit. Altogether he had had eighteen fits. He remembered fits on July 15th and 23rd, 1875; one in December, 1879; three on March 23rd; one on June 5th, and one on June 9th, 1880. He could not remember the exact dates of others. The last two fits were the nearest together. On Nov. 30th, 1877, a piece of steel flew off from his chisel into his left eye, which led to its excision one week before Christmas, 1878. He had had lead colic three times in 1878 to 1879. Twice he had a sore-throat, but denied having had syphilis. Never had any other illness.

All the fits had been similar. Aura, he said, begins in the left hand with involuntary semi-closure and opening of hand, followed in about half an hour by pain in the left leg. About half an hour before the fit he feels a pain round abdomen, which creeps upwards as far as the larynx in front to a level with the third cervical vertebra behind, he then gets twitchings in the left side of his face, and about ten minutes before the fit these symptoms spread to the other side of the body. He is then seized with vertigo, and straightway falls unconscious. He falls on his face, foams at the mouth, bites his tongue, and struggles violently. The fit lasts from half to one hour. On recovering he feels too weak to stand, and usually rests for about one hour. After the fit he is unable to work again for a week. He stated that he has the aura before each fit, and has never had an aura without a fit following it, has never had more than one fit a day, and has gone a year without a fit. Since the first

fit two, he said, had come on after unusual exercise, as a long walk, lifting heavy weights, &c. Fits had occurred at home and at work; the first fit lasted forty-five minutes. They have been more severe lately. In no case had the fits been associated with the symptoms of plumbism. When he felt a fit coming on he called for wet bags for his head.

The last fit came on on June 9th, in the usual way. He was paralysed in the left arm and leg for two days after the fit. Was speechless after the fit, and had only spoken once since up to the time of admission, saying, "Fetch me the teapot." He was very violent during the fit, requiring two men to hold him, and was very excited afterwards. He was given a large dose of chloral and bromide of potassium, which quieted him. He had no difficulty in micturition or defecation. The arm got well before the leg.

On admission he had a slight scar on the forehead, to the right of the middle line, under the hair. None other to be detected. He complained of great pain in the right side of the head (parietal region, where he said the cut was received in the first fall), increased on slightest pressure or percussion. The left angle of the mouth was slightly lower than the right. There was very slight difference in action of the sides of the face. The facial sensibility was perfect. There was no paralysis whatever of the left arm, and sensibility was intact. Tendon-reflex was well marked in both knees. There was no appreciable difference between the two. When he held his legs in the horizontal position the left gave way first. Abduction and dorsal flexion were deficient in the left foot; sensibility was normal. The tongue movements were perfect; the lip movements were also perfect; he could whistle and swallow well. When asked whether he had headache he nodded assent, and when asked where he pointed to the right side of the forehead. On ophthalmic examination the retinal veins of the right eye were large, the disc pinkish, and the margin defined. With Gelée's tube he heard a watch twenty-two inches from the right ear and sixteen inches from the left. Understood perfectly questions put to him, but could not utter a single word; could not make any of the vowel sounds. He could write on a slate an intelligent reply to questions, and write names of objects shown him, as well as words spoken to him; but he was quite unable to pronounce the words. He complained chiefly of vertigo. Heart and lungs were normal. There was no blue line on the gums. Urine sp. gr. 1010, alkaline, no albumen; excess of phosphates.

On the 24th he had slept well, and taken food well. He still complained of slight vertigo. No pain; felt "strange." Was told to practise vocal sounds. Ordered ten grains of iodide of potassium, three times daily.

On the 25th, after dinner, he first uttered letters: O, R, and A, and several others. He could not articulate a single word, and soon gave up trying, as he said it caused him to perspire, and brought back the pain in his head. Still had slight vertigo.

On the 26th he said, "Better this morning," in a low voice. Spoke several sentences, but could not go on for reasons given above. In the evening read short extracts from a newspaper. Next day he spoke freely, but still in a low voice. Got up for a short time.

On the 28th he had slight pain in the head; but on the 29th he spoke in his natural voice. No vertigo, no headache.

On July 7th he was improving; and on the 9th, tested with dynamometer, the right hand was 110, left 100.

On 14th he was discharged, recovered.

Remarks by Dr. FERRIER.—Dr. Ferrier remarked that there could be little doubt that the symptoms in this case depended on a cortical lesion of the right hemisphere in the region of the fissure of Rolando. This was indicated (1) by the localised pain, intensified by percussion, especially over this area; (2) the occurrence of unilateral spasms, beginning always in the left hand, and followed by loss of consciousness when they became general; succeeded, after several attacks, by loss of power without loss of sensibility in the parts especially attacked by the spasms. The fact that the leg remained paralysed longer than the arm indicated a greater concentration of the distinctive effect of the lesion in the upper extremity of the ascending convolutions.

As to the etiology, the first, and considering the character of the affection, most likely hypothesis, was a syphilitic lesion of the cortex. Syphilis, however, was denied, but denial was by no means synonymous with disproof. In any case the treatment adapted for specific lesions was that most likely to be beneficial—viz., full doses of iodide of potassium, which was prescribed.

Another fact to be considered was that the patient had had one or two attacks of lead colic, and as encephalopathic affections, accompanied with intense headache and epileptiform convulsions, are not uncommon in connexion with lead poisoning, the question was whether there was any reason to suspect anything of this nature. The facts did not give much support to this hypothesis. The symptoms had never coincided with any other signs of lead poisoning, and the total absence of a blue line in the gums showed that there was no impregnation of the system with lead.

We had, however, a sufficient cause of the phenomena in the history of a severe blow on the head from a fall six weeks before the occurrence of the first epileptiform attack. The present condition of the scalp did not quite corroborate the patient's account of the severity of the injury; but even without this, the injury was no doubt sufficiently grave to have set up a superficial meningo-encephalitic irritation, for such a result may occur without marked external lesion.

An unusual feature in the case was the occurrence of absolute aphasia with left-sided hemiplegia in a right-handed man. The case was a typical instance of pure ataxic aphasia unaccompanied by amnesia or agraphia. Here only the power of utterance was abolished, and this in the most absolute manner, while words spoken and written were clearly comprehended, and the patient could think intelligently and consecutively, and express his ideas in graphic symbols.

It is not common in aphasia, with right hemiplegia, depending on affection of the left hemisphere, to have such a clear separation as in this case between word-execution, and word-memory, together with the expression of ideas in written symbols. Though there are innumerable shades in the degrees in which these faculties are respectively implicated, yet word-execution and word-memory are usually affected together, though the defects in word-memory may not be such as to appreciably impair the simpler forms of ideation. The defect, however, becomes apparent when more complex trains of thought are demanded. In this case there was a total absence of intellectual deficiency, and the patient could follow without difficulty, and give precise answers to questions involving considerable thought and discrimination. Here merely the power of word-execution was defective, and the very facts of this case, though apparently not conforming to the rule that the left hemisphere is the principal one concerned in speech, in reality confirm it. The affection of the right hemisphere caused speechlessness, probably merely by disturbance of the accustomed synergy of the hemispheres in this volitional act; whereas the complete retention of the memory of words and their associations, internal speech, and the power of expressing ideas in the graphic equivalents of articulate symbols, all indicated the greater preponderance in respect to these faculties of the sound left hemisphere.

NORTHERN HOSPITAL, LIVERPOOL.

CASE OF DISEASE OF RECTUM (SYPHILITIC?); STRICTURE; COLOTOMY; DEATH, AFTER SIX WEEKS, FROM EXHAUSTION.

(Under the care of Dr. W. MACFIE CAMPBELL.)

FOR the notes of this case we are indebted to Dr. James Allen, late house-surgeon.

Mary C—, aged forty-five, widow, was admitted Aug. 22nd, 1878. She had suffered for more than a year from some disease of the rectum; had thin watery discharge, lumpy motions, occasional constipation, varied with looseness, with slimy and bloody stools. Was treated by suppositories and dilatation. In July, 1878, had a shiver, followed by high temperature and diarrhoea. Had great abdominal and rectal pain, which subsided under poultices and opium. From that time till her admission she had several returns of this watery, foul-smelling diarrhoea.

On admission she was very much emaciated; was in constant pain, with frequent watery stools and tenesmus. The countenance was pinched and distressed. On examining the rectum by the finger a rough tubercular surface was found stretching from the sphincter to a contraction about three inches distant. The strictured portion would barely admit the point of the index-finger. A thin sanious foul discharge followed the withdrawal of the finger. She was ordered suppositories of mercurial ointment and morphia.

The pain remained constant, and the attacks of diarrhoea

and constipation were very distressing. She was evidently sinking, therefore, upon Sept. 5th, a consultation was held with a view to deciding whether colotomy should be performed. On the morning, however, the temperature was 103° 6'. She had passed a very bad night, and the operation was postponed. Next day the temperature was lower, but her general condition remained as before, the pain especially being very great, and on the day following, after consultation with Mr. Manifold and Mr. Puzey, colotomy was proceeded with under ether. Some difficulty was experienced in laying hold of the bowel owing to its emptiness and deep situation. The edges of the cut colon was secured to the skin by four silk sutures, and carbolie catgut was used to the intermediate portions. These catgut sutures were quite useless, and gave way in less than ten hours. The temperature rose the same evening to 102° 8'.

On the following day the temperature was 103° 2'. There was considerable alvine evacuation from the artificial anus, and only purulent discharge from the rectum, with great relief to the pain.

On Sept. 12th there was occasional fæcal discharge by the rectum. The artificial anus had greatly receded, some of the silk sutures having given way. Fresh silk sutures were applied.

On the 16th the wound was glazed, indolent looking, and there was absence of granulations. There was occasional fæcal discharge from the rectum, with decidedly less purulent discharge. The tongue was apthous; the tonsils ulcerated; and there were ulcers on the sides and angles of the mouth, which were relieved by touching with nitrate of silver.

On the 20th the apthous state of the mouth still continued. Glycerine and lime-water were given, with seeming benefit at first.

The further progress of the case was bad. On Oct. 2nd diarrhoea set in. On the 12th there was burrowing of pus from the wound towards the sacrum underneath the superficial muscles. Bedsores formed. There was an entire absence of any union about the wound. On Oct. 23rd she died exhausted.

Necropsy.—The most important points in the examination was some pneumonia at the apex of the right lung. The kidneys and liver were amyloid, the latter having a large white cicatrix (?) on its upper surface. The stomach and small intestines were empty, and the mucous membrane was covered by a catarrhal coat. The splenic flexure of the transverse colon was bent down abruptly in front of the descending colon, and at the level of the artificial anus it bent acutely upwards again. The descending colon was collapsed, lying along the spine. The artificial anus was in the angle of the descending loop of the transverse colon above described. Adhesions were extremely slight, and easily broken down. The mucosa of the rectum was hypertrophied. There were two strictures, both admitting the point of the forefinger—one near the anus, the other higher and out of reach from below. There was slight ulceration, but signs of cicatrisation going on. The disease seemed to be confined to the submucous tissue.

Remarks by Dr. CAMPBELL.—No history of syphilis was made out, and her character was good. The operation was undertaken for the purpose of giving rest to the inflamed rectum, and so giving time for cicatrisation to commence, when perhaps dilatation might have restored some available potency to the bowel. The complete absence of action about the wound disappointed our hopes in this direction, the patient dying from deficient vitality. The relief, however, of pain, absence of straining, and freedom from the constant discharge, gave great comfort to the patient, and made the operation so far a success. A remarkable feature in the case was the position of the transverse colon, its splenic flexure lying anterior to the descending colon at the point immediately opposite the outer edge of the quadratus lumborum, at the usual distance from the crest of the ilium.

STATISTICAL SOCIETY.—The title of the essay to which the Howard Medal will be awarded by this Society in November, 1881, is "On the Gaol Fever, from the earliest Black Assize to the last recorded Outbreak in recent times." The successful competitor will be granted the sum of £20 in addition to the medal.

ST. MARY'S HOSPITAL MEDICAL SCHOOL.—Mr. A. P. Luff has obtained the open scholarship of £150, and Mr. J. Holdsworth Fisher that of £125.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Multiple Exostoses.—*Sebaceous Tumour of Leg.*—*Cancer of Lung.*—*Blood in Diabetes.*—*Tumour of Knee-joint.*—*Recurrent Epithelioma in Lung.*—*Mucous Polypus of Umbilicus.*—*Ataxic Arthropathy.*—*Hemiatrophia Facialis.*—*Telostitis.*—*Morphea.*

The ordinary meeting of the Pathological Society was held on Tuesday, Nov. 2nd, the President, J. Hutchinson, Esq., in the chair. Several cases and specimens of interest were exhibited. The President announced that fresh and living specimens of interest, and that were urgent, would be welcomed at the meetings devoted to the discussion on rickets. Drs. Moore, Barlow, Lees, and Gee, and Messrs. Holmes, Howard, and Parker, had signified their intention of taking part in the debate, and he hoped that Sir W. Jenner and Dr. Dickinson would also speak.

The secretary read a report by Messrs. Howse and Taylor on Mr. Gay's specimen of Recurrent Tumour of the Mamma. The growth consisted of three parts, which differed slightly in appearance, but were all composed of spindle-shaped cells, either without any stroma at all, or with a small amount of structureless intercellular material. It was therefore a spindle-celled sarcoma.

The PRESIDENT showed photographs of a case of Multiple Exostoses sent to him by Mr. Windsor of Manchester. The tumours exist around both shoulders, elbows, knees, and ankles; they are quite symmetrical in position, but are larger on the right than the left side. There is a distinct history of heredity, the father having similar outgrowths in the same situations, and exostoses being found in four generations, at least, chiefly about the knee. In the museum of the Newcastle Infirmary the President had found a skeleton with a large number of exostoses. Mr. Price of Margate had also published a similar case in THE LANCET, and ten years ago he himself had had a lad in the London Hospital under his care with exostoses growing near the large joints; he removed the largest of these, which was near the knee, and he nearly lost the patient from inflammation. He had never seen these multiple exostoses in the female sex.—Dr. PAYNE had made the autopsy on a case shown to this Society by Mr. Arnott—a woman about eighteen years of age, from whom a large exostosis near the knee-joint was removed, death resulting from inflammatory complications. Exostoses were found on every bone in the body except the skull, pelvis, and ribs. He did not know the family history.—Dr. POORE had published in THE LANCET a case of a little girl under his care at the Charing-cross Hospital, who had several exostoses. No hereditary history known.—Mr. BARKER had seen a case at University College Hospital of a girl aged seventeen, with symmetrical exostoses on the bones of the fingers, wrists, elbows, and femora. No history known.—Dr. STURGE mentioned the case of a man forty years of age with remarkably symmetrical exostoses growing from the humeri, ulnæ, radii, metacarpal bones, scapulae, and clavicles.—Mr. PEARCE GOULD had seen a few years ago twin brothers, about five years of age, each presenting exostoses on the upper and lower ends of the humerus, which were symmetrical and alike in both except that one humerus had no exostosis on its upper end. There were also rickety "spines" on the tibiæ in each leg. The case was of interest as showing some hereditary influence.—Mr. EVE remarked that the specimens of such exostoses in St. Bartholomew's Museum showed all the outgrowths springing from the epiphysal line. He showed a lower jaw-bone on which was a large exostosis springing from the inner alveolar wall on each side at the level of the bicuspid and molar teeth, exactly symmetrical.—The PRESIDENT was glad to have elicited so many examples in females. In the family of the case he specially brought forward there had been a close intermarriage—two first cousins, three generations back—which may have had some influence in the production of the condition.

The PRESIDENT also showed a Tumour which he had

removed the day before from the leg of a woman forty-six years of age. The growth had existed twenty years, and for ten years had been ulcerated, fungated, and in its present condition. At first sight it resembled an epithelioma, but the tumour overhung the margins of the aperture in the skin. There was no warty growth, no infiltration, no disintegration, and the surface was florid, clean, with a sweet discharge. In the groin were several enlarged glands. The tumour was found to adhere to the deep fascia, part of which was removed with it. The enlarged glands were also removed. — Mr. PARKER had made a hurried examination of the growth, and had found it to consist of lobes of epithelial tissue, which he regarded as proliferated sebaceous glands, separated by strands of fibrous tissue. The growth in the glands was of a similar nature. The case differed from ordinary sebaceous tumours in its infecting the glands, and was of interest as showing that there is no hard and fast line of separation between benign and malignant tumours. — Dr. THIN had examined Mr. Parker's sections, and thought they resembled those of the growth on the cheek shown last year by Mr. McCarthy. In a case of an ulcer over the scapula, which had existed forty-three years, he had found a very similar tissue in the thick tumour-like margin—loose connective tissue, with epithelial masses in the meshes. He pointed out that at present there was no evidence of the development of these tumours from sebaceous glands; the epithelium differed from that in these glands, and there was no sebum to be found. At the suggestion of the President, the specimens were referred to the Morbid Growths Committee.

Dr. N. MOORE related a case of Primary Cancer of Lung and Embolism of the Middle Cerebral Artery. The lung was hard and shrunk, with dense masses of cancer, continuous with a large mass around the root of the lung. The cervical and mediastinal glands were also enlarged. There was no other growth elsewhere, so that it must be considered a primary tumour of the lung. In structure it was made up of a firm fibrous stroma, with tubes and spaces lined by epithelium; it was therefore a cancer of glandular origin, and he believed it originated from the crypts of the bronchial mucous membrane. Just before death the patient was seized with aphasia and right hemiplegia, and an embolism of fibrin was found in the left middle cerebral artery; this must be considered an accident in the case. — Mr. R. PARKER referred to his paper on Primary Cylindrical Cancer of the Lung read before the Medical and Chirurgical Society, in which he had fully described one case and referred to two others. He could find no reason why cancer should not develop primarily from the lung. In the fetus the infundibula are lined by columnar cells, and it is the pressure of the air which changes the shape of the cells, which are not in nature different from those in the bronchial tubes.

Dr. N. MOORE also exhibited some Blood recently obtained from a patient who died of Diabetes in St. Bartholomew's Hospital. The man, eighteen years of age, had suffered from the disease for two or three years, and had become very emaciated; a day or two ago he was greatly distressed by some news, became suddenly worse, unconscious, and in a few hours died. There were no convulsions or direct symptoms of acetonæmia. At the autopsy Dr. Moore noticed the blood to be of a pink colour, and that the serum which separated was milky in appearance. There was no change in the oxyhemoglobin as examined by the spectroscope, the red corpuscles were normal, the white cells rather abundant, but the serum contained a very large amount of fat granules, which rose to the top of some blood in a test tube. Dr. Gamgee had mentioned the pink colour of the blood in connexion with acetonæmia. Dr. Klein had recently lost fifty guinea-pigs quite suddenly, and he noticed both the pink colour and milky serum of the blood, but there was no reason to think the animals had diabetes. It was probable therefore that this peculiar change in the blood was met with apart from acetonæmia. — Dr. CAVAFY asked if the urine had been examined with perchloride of iron. — Dr. N. MOORE replied that it had not. — Dr. F. TAYLOR asked if any fat embolisms had been found, and whether there was any well defined condition to which the term acetonæmia could be fairly given. He had seen many deaths from diabetes, and most of them were from collapse and coma. He had seen two cases of so-called acetonæmia, but there was no convulsion. — Mr. M. BAKER asked what was the condition of the alimentary canal, and whether the condition of the blood could be explained by the sudden ingestion of a large quantity of fat. — Dr. MOORE replied that the patient had been

fed on the usual diabetic diet; that the stomach was empty and the intestines filled with dry yellow, fecal matter. He agreed with Dr. Taylor that it was difficult to define the condition of acetonæmia, but what he meant by it was a nervous condition with a strong odour of acetone before death. He should place his case in the category of those dying from collapse and coma. He had not made a special search for fat embolisms.

Mr. R. J. GODLEE showed a Tumour which he had removed from the knee-joint of a woman, aged thirty-eight. She had suffered from synovitis of the joint for four years. The tumour was felt on the outer and upper side of the patella, freely movable laterally but not vertically. He had excised it by cutting into the joint, hooking up the mass and cutting through the pedicle. The patient did well. In structure the growth was simple fibro-cellular tissue.

Mr. GODLEE also showed several microscopical specimens of Epithelioma, especially illustrating the recurrence of the squamous form in the lung, which is usually considered a rare condition. In the first case from which the specimens were taken the man had an epithelioma of the tongue and mouth, with many enlarged glands in the neck, and a large mass over the upper part of the sternum, which was inflamed and crackling. An incision into it let out turbid serum. At the autopsy several small epitheliomatous tumours were found scattered over the left side of the chest and abdomen, but not reaching across the middle line. The mass over the chest communicated with a large growth in the mediastinum by a large hole through the manubrium. In both lungs many small tumours were found, and similar ones in the liver, kidney, supra-renal capsules, and under the peritoneal surface of the diaphragm. Examination of these tumours showed them to be very much like one he had recorded in the Path. Soc. Trans., vol. xxvi., where there was also a recurrence in the lung and pleura. In the tongue and most of the smaller growths there was a very irregular collection of epithelial cells, with very little stroma and imperfect "nests"; in most cases there was an absence of the common serration of the cells. In the kidney the growth was very typical. He thought these specimens illustrated the principle that the further a tumour deviates from the normal tissues, the more malignant it was; the irregular arrangement of the connective tissue and the epithelial spaces marked out this growth as very heterologous, and it showed a more marked malignity than most epitheliomata in which recurrences in internal organs were rare. The other case was an epithelioma of the bladder, met with in a man seventy-eight years old, who suffered from dribbling of urine and difficulty in micturition; he was greatly emaciated and pale. At the post-mortem examination a large tumour was found growing from the posterior and upper part of the bladder, in the centre of which was a large ragged cavity leading through into the peritoneum; there was chronic cystitis and acute peritonitis. The only secondary deposit was a small patch in the back of the left lung, grey in colour, mottled with white specks. The primary tumour was an irregular epithelioma; in the lung the arrangement was more regular, and in places the growth was almost like true skin, with papillæ and horny epidermis. — The PRESIDENT referred to a case of cancer of the tongue, which had recurred locally several times, and had been removed on each occasion. There was a recurrent growth in the lungs just like that in Mr. Godlee's case.

Mr. PEARCE GOULD showed a microscopical section of a Mucous Polypus of the Umbilicus. The Polypus was met with in a boy five months old, in whom it was noticed when the cord fell off. It was soft, florid, pedunculated, about the size of a large pea, with a small central aperture. The pedicle was ligatured, and the growth removed, and prepared for examination by Dr. Gibbes. It was a true mucous polypus, composed of branching tubes lined by a single layer of cylindrical epithelium, with a finely fibrous and nucleated stroma. From its close resemblance in structure to the mucous polypi of the rectum, Mr. Gould suggested that it was developed from the remains of the umbilical vesicle.

Dr. PAYNE showed a living specimen—Joint Disease in Locomotor Ataxy. A man, aged thirty-four, had syphilis ten years ago. In June, 1879, he suddenly felt great weakness in his legs, in which he had had sudden sharp pains for two years previously. There was then well marked ataxia, which much improved under anti-syphilitic treatment. Five months ago he returned to the hospital complaining of his left knee, in which there was considerable synovitis, but

no evidence of any definite change in the bones; in the right knee there was a little thickening of the upper end of the tibia. Gastric disturbance had been quite absent until a week ago, when he was seized with vomiting of clear fluid. There was also a small ulcer in the sole of the foot. Dr. Payne considered this as probably a very early condition of the peculiar joint change met with in locomotor ataxia. Mr. Nettleship had examined the man's eyes, and found that there was no disease of the optic nerve, the pupils were motionless to light and nearly so to accommodation.—Dr. BUZZARD had questioned the man, and found that he owned to attacks of retching at times during the last three or four years. Out of nine other cases of ataxic arthropathy as many as six had distinct gastric crises.—Mr. BARROW asked whether this were not syphilitic disease of the knee.—Dr. PAYNE thought that time only could answer that question; but the joint had become affected while the man's general condition was being improved by anti-syphilitic treatment.

Dr. PAYNE also showed a man, forty-two years of age, who when eight years old had measles, and afterwards, under the left side of the lower jaw, there developed a swelling larger than an egg, which gradually subsided. From that time the left side of the head and face ceased to grow. In 1848 he was seen by Romberg, and was one of the cases on which he founded his views on trophic nerves. All the left side of the head and face, with the doubtful exception of the back of the head, is markedly smaller than the right; there is no impairment of sensation, nor paralysis of muscles. The affected part corresponds with the distribution of the fifth cervical nerve. Hearing is less acute on the left side, and he says his sight, smell, and taste are not so good as on the opposite side. There are bald patches above the left ear and in the left eyebrow. No affection of the limbs; tongue very much smaller on the left side, and protruded much to the left; but it is doubtful whether this is due to paralysis or to the altered shape of the parts. Facial nerve not affected. No difference in vascular supply or sweating on the two sides; and in this it differs from cases of injury to the sympathetic nerve. Dr. Payne considered the atrophy to be due to some affection of the fifth nerve.—The PRESIDENT remarked that this was the most extreme example of this hemiatrophy that he had ever met with. In his opinion such a condition followed on morphea, and he had himself published cases to illustrate this. In Eulenberg's essay on the vaso-motor nerves it is suggested that morphea is due to an irritation of these nerves keeping up a constant contraction of the vessels, and so leading to subsequent atrophy. His own explanation, however, of this case was that it was due to some disease of the vaso-motor nerves travelling in this case along the branches of the fifth nerve, as there is no loss of sensation, nor are the muscles supplied by the fifth nerve implicated. The President exhibited a middle-aged woman with very large and symmetrical patches of morphea on the lower extremities and abdomen; it had existed six years. The patches in the thighs were markedly symmetrical, and not corresponding with the distribution of any nerve; but on the abdomen there was a long oval patch sloping down just in the same way as herpes zoster does, with which this disease has great analogies. He had never before seen the disease symmetrical. It was limited to the lower extremities as much as paraplegia, and at other times attacks upper limbs only. Sensation was unaffected, pain was unusually severe.—Dr. POORE regarded Dr. Payne's case as arrested development, not atrophy, the left side of the face was that of a child. The skin of the left side was quite unaltered in texture, and had no resemblance to morphea now, and the vessels on that side were larger than on the right. He thought that the cause of the affection had quite passed away, and that it was a mistake to speak of any affection of the nerves as now existing. He suggested that the connexion between the fifth and vaso-motor nerves had been interfered with, and sensory impressions failed to be conveyed to the vaso-motor nerves governing the vessels. The large size of the vessels looked as if one of their incitements to contraction had been lost.—Dr. BUZZARD compared it to infantile paralysis of the lower limbs, and suggested that the cause was to be found in a myelitis of the medulla oblongata.—Dr. PAYNE adopted Dr. Buzzard's view, and suggested that the seat of the lesion was probably in the Gasserian ganglion. It was not simply an arrest of development, the wrinkles on the left side marked the cheek as twenty years older than the right.

Dr. LEES showed a child who had recovered from severe

inflammation of the distal ends of the diaphyses of the left humerus, left femur, left radius, and upper end of right humerus; there was suppuration at two of these seats of disease. The child was syphilitic, and was treated by mercury, and had made a very excellent recovery. It had been called epiphysitis; as the seat of the disease was the end of the diaphysis, telostitis was a better name. The multiplicity and severity of the affection, the early age of the patient—six weeks at the onset of the malady—and the good recovery, made the case one of unusual interest.

Card specimen by Mr. Shattock: Dissection of Cleft Palate in Adult.

MEDICAL SOCIETY OF LONDON.

Pleurisy with Effusion.—Aneurism of Ascending Aorta.—Atrophy of the Stomach.

AT the meeting of this Society on the 1st inst., Mr. F. J. Gant, President, in the chair—

Dr. DE HAVILLAND HALL read notes of a case of Pleuritic Effusion. The patient was a discharged soldier, aged thirty-two, admitted into Westminster Hospital on July 23rd, 1880. His illness dated from April 1st, when he had the usual symptoms of an attack of acute pleurisy. He was confined to bed for eight weeks, at the end of which time, though a good deal better, he still complained of considerable dyspnoea. On July 19th he caught a fresh cold and had a relapse. On admission, the patient, who was suffering from incomplete aphonia, presented all the symptoms and physical signs of extensive left pleural effusion, dullness extending all over the front of chest, except quite at apex, and passing across to the right side of sternum. Posteriorly there was a boxy note in the supra-spinous fossa, and absolute dullness from angle of scapula downwards. At first it was not possible to detect the position of the apex beat, but on July 27th it was found impinging half an inch to inner side and below the right nipple. After a fortnight's treatment with diuretics and iodine he was tapped, and forty-two ounces of straw-coloured fluid were drawn off and all treatment by drugs suspended. The aspiration was followed by improved breathing over the affected lung. On September 3rd, as the condition of the patient remained stationary, he was again aspirated, and 110 oz. of clear, straw-coloured fluid withdrawn. While the last pint of fluid was flowing he complained of intense pain in the left chest, especially posteriorly; the pulse became so feeble and the general aspect of the patient so alarming, that the aspirator had to be withdrawn, though the fluid was flowing freely. The pain lasted some hours, but was relieved by the subcutaneous injection of morphia. On Sept. 7th there was harsh breathing all over left front. On Sept. 30th aspiration was again resorted to, and fifty-five ounces of similar fluid drawn off; extreme pain again led to the withdrawal of the aspirator, whilst the fluid was still flowing. He was discharged much relieved on Oct. 12th, in order to go to the seaside, and to be readmitted if necessary on his return. After alluding to the large amount of fluid drawn off, Dr. Hall said that the point on which he wished to get the opinion of the Society was as to the quantity of fluid it is desirable to evacuate at a single sitting. He quoted the views of Walshe, Anstie, and Fraenkel on the subject, and did not agree with the latter in laying down a hard and fast rule that not more than a definite amount should be removed at once, but was disposed to coincide with Anstie that the withdrawal of fluid must be arrested when the patient begins to complain of constricting pains in the chest or epigastrium. After both aspirations the fluid remained quite clear. On the evening of the first tapping the temperature rose to 101°, and then rapidly fell; on the second occasion it only rose to 99° 8', and on the third occasion the rise to 99° 6' took place on the evening of the day following the aspiration. The incomplete aphonia which was present on admission was merely of catarrhal origin, and in no way connected with the effusion, as in a case recently recorded in THE LANCET by Dr. Poore.—Dr. THOROWGOOD was not quite satisfied with the use of the aspirator, seeing that the operation had to be repeated

so often. It was his habit to suspend the operation as soon as pain was complained of or the patient showed distress. He referred to a case under his care in which pus in the first instance was drawn off. A second aspiration a month later brought away blood mixed with serum. He thought this due to an exudation of blood corpuscles through the thin walls of new bloodvessels. The operation was persevered with and the patient recovered. He asked whether any Fellow had seen recovery follow a single operation with the aspirator.—Dr. SYMES THOMPSON mentioned a similar case to that of the author in which he had followed the suggestion of Mr. Parker, and introduced air into the chest in place of fluid. In many cases it was better to remove the fluid by a syphon rather than with an aspirator.—Dr. GILBART SMITH referred to a method introduced by his colleague, Dr. Hensley, at the City-road Chest Hospital, by which cases, especially of purulent effusion, were treated. Two trocars were used, and by an ingenious arrangement of stop-cocks the effusion could be withdrawn from an opening simultaneously with the introduction of carbolised water, plain water, or iodised water through the other; or the direction of the current could be reversed, in case of a blocking of the tubes.—Dr. SANSOM mentioned a case where a single aspiration had been sufficient.—Mr. PEARCE GOULD considered tapping was often too long delayed; it should be resorted to before the lung had become bound down by tough adhesions. He did not see the benefit of the introduction of carbolised water or air, and thought that the more slowly the fluid was abstracted the better.—Dr. WARNER referred to a case under his care six weeks ago at the London Hospital. On admission a large quantity of serous fluid was withdrawn by the aspirator. A month later thirty-eight ounces of pus were removed; rapid accumulation followed, which necessitated a third operation in ten days more. This not giving relief, Mr. Couper's advice was sought, and he inserted a second tube at the angle of the scapula, when a large quantity of pus gushed out, and continued to flow with expiratory movement for some time. This has resulted in the improved physical signs and condition of the patient. He also gave instances of a too rapid withdrawal of pleuritic effusion.—The PRESIDENT pointed out the decided advantage of counter openings for the prevention of the accumulation of fluid.—Dr. HALL, in reply, stated that in one case in which he had withdrawn seventy-seven ounces, no return of the fluid had occurred. It was not advisable to tap during the feverish stage unless dyspnoea were urgent. His plan was to insert a drainage-tube should the second tapping be followed by return of the effusion.

Dr. SYMES THOMPSON brought forward a specimen of Aneurism, involving the whole ascending aorta—from the pericardium to the aortic arch. The vessel was studded with patches of atheroma, and several calcareous spiculae projected from its inner surface. The dilatation above the sinuses of Valsalva was as large as a Tangerine orange, and a sacculus pressed upon the apex of the left lung. The right lung was covered by tough and thickened pleura; in the upper lobe were two small cavities, with semi-fluid caseous contents, and a larger cavity full of foul grumous fluid occurred in the lower lobe, where also were numerous dilated bronchi. The left lung, although congested at the apex, was otherwise free from disease. The symptoms during life were not characteristic of aneurism. When admitted into the Brompton Hospital in June the patient complained of cough, expectoration, and dyspnoea on exertion, and there was some oedema of legs and abdomen. There was dulness and bronchial breathing under the left clavicle, and dulness with crepitation and rhonchus at the right base. The area of cardiac dulness was increased leftwards and the apex beat was half an inch outside the left nipple. There was no murmur. The cough increased, the dropsy extended to the upper extremities, and the patient died on September 12th. He had suffered from pleurisy twelve years before, but never from rheumatism or syphilis. He was forty-four years old, but had been in failing health for ten years. Dr. Symes Thompson remarked that when an aneurism compresses a bronchus and leads to secondary changes in the lung the primary disease is apt to be masked, and the tumour being deep-seated, the diagnosis between chronic pleuro-pneumonia and aneurism becomes difficult. The urgency of the dyspnoea, the pain and palpitation, awakened grave suspicion in this case, which was strengthened by the persistent and anomalous disturbance within the chest.—The base of the lung had the appearance on section of multiple abscesses dispersed through it. These

"abscesses" are really distended bronchial tubes full of retained secretion, the peribronchial tissue being thickened by inflammation. It seems probable that pressure upon the nerves at the root of the lung, by lowering the vitality of the organ, rendered it liable to inflammatory changes, just as complete destruction of these nerves leads to pulmonary gangrene. The pressure on the nerves may also have caused—as suggested by Dr. Risdon Bennett—paralysis of the bronchial muscles, leading to retention and accumulation of secretion. It was not clear in the present case that the bronchus was much compressed by the aneurism, but the nerve-plexus must have been seriously involved.—Dr. EWART described the post-mortem appearances found in this case; alluded to the difficulties of diagnosing the presence of aneurism, and referred to the fact that the superior cava generally suffers pressure.—Dr. GILBART SMITH referred to the important series of cases showing the effects of pressure upon the bronchi brought before the Pathological Society by the late Dr. Pearson Irvine. The present case was unusual in the right and not the left bronchus being the seat of pressure. While admitting that nerve-pressure might have some share in enfeebling the lung, as shown long ago by Sir W. Gull and Dr. Habershon, he considered that both lungs should be affected by such pressure on the pulmonary plexus. Probably the pulmonary condition was due to narrowing of the bronchus, leading to an enlarged and emphysematous condition from interference with expiratory rather than inspiratory efforts. In proportion as the calibre of the vessel became restricted, inflammatory and disintegrating changes would be set up by the retention of secretion. The fetid character of the secretion in Dr. Thompson's case showed that ingress of air was not wholly prevented.—Dr. SYMES THOMPSON, in reply, said that the pupils and pulse were equal, and there was no alteration of voice or laryngeal cough.

Dr. THOROWGOOD read notes of a case of Atrophy of the Stomach. The patient was a woman, aged twenty-three years, admitted into the West London Hospital on Sept. 6th on account of constant vomiting of all food. There was no sign of any thoracic or cerebral disease. The region of the stomach was very tender on pressure, but no tumour could be felt in any part of the abdomen. There was no diarrhoea and no vomiting of blood. A variety of medicines, reputed valuable for the arrest of vomiting, were vainly tried; but it was only after a hypodermic injection of morphia that any tolerance of the mildest nourishment could be obtained. Life was maintained chiefly by nutrient enemata of beef-tea. The patient died on Oct. 5th, having on the day previously vomited blood for the first time. There was no very marked emaciation. All the organs were sound with the exception of the stomach, which was remarkably thin and wasted. When cut open some grumous fluid escaped, and the lining membrane was smooth, free from rugæ, and of a yellowish hue. At the cardiac end some arborescent congested vessels were seen. A portion was given to Dr. Fenwick for examination, and he found well-marked intertubular gastritis with granular and fatty degeneration of the tubules. Dr. Fenwick was disposed to look upon a subacute gastritis as the essential cause of the wasting of the stomach.—Dr. SANSOM called attention to the administration of enemata of defibrinated ox-blood in quantities of four to six ounces twice or thrice a day, as recommended by the Therapeutical Society of New York. He had carried this out successfully in a case of idiopathic progressive anæmia when the stomach rejected everything. After a time the stomach became tolerant, and arsenic was administered. Dr. Sansom thought the method offered a good prospect of successful treatment in numerous cases in which the stomach was wholly or in a considerable degree intolerant of food.—Dr. TIMMS thought that in this case no treatment would have been successful; but less advanced cases had derived much benefit from the use of hydrochloric and other mineral acids.—Dr. DOUGLAS POWELL referred to a case under his care at the Middlesex Hospital, where the diagnosis was extremely difficult; obstinate vomiting and extreme emaciation were present, without any evidence of cancerous disease, gastric ulcer, or uterine disorder. Great improvement had followed treatment by nutritive enemata and peptonised food. He thought Dr. Sansom's suggestion of much value.—Dr. DOWSE pointed out that Dr. Thorowgood's case was of inflammatory origin, and not due to a lesion of the semi-lunar ganglia, in which case atrophy would occur apart from inflammation.—Dr. THOROWGOOD replied, and the meeting adjourned.

Reviews and Notices of Books.

The Royal London Ophthalmic Hospital Reports. Edited by JOHN TWEEDY, F.R.C.S. Part I., Vol. X. August, 1880. London: Churchill.

THE new volume of the Ophthalmic Hospital Reports opens well, and Mr. Tweedy is to be congratulated on having collected a valuable series of original articles. Mr. Lawson discusses the treatment of sympathetic ophthalmia. He considers that whilst sympathetic irritation may be arrested by removal of the injured eye, this proceeding will not stay the progress of sympathetic ophthalmia, and he therefore holds that if the injured eye retain any sight it should not be removed when sympathetic ophthalmia is established, a point in which we are disposed to agree with him, having seen several cases where the injured eye, after sympathetic ophthalmia had destroyed the opposite eye, retained sufficient vision to be very useful. We coincide with him also in deprecating any operative interference, such as iridectomy or sclerotomy, in the eye secondarily affected during the earlier stages of the inflammation, though it may be improved at a later period either by an iridectomy or by the removal of the lens. Great caution, however, should be exercised in meddling with such an eye, as if inflammation be set up sight is irrevocably lost. Mr. Lawson finds sclerotomy useful where pain is experienced. He places several cases on record.

The second paper, which is a very valuable one, is by Dr. Brailey on a Theory of Glaucoma. After alluding to the theories of Donders and Weber, both of which Dr. Brailey believes have an element of truth in them, he thinks there is both an increased inflow of blood into the eye, and obstruction to the exit of the lymph and fluids secreted. The enlargement of the vessels is probably the consequence of an affection of the vaso-motor nerves, and the connexion between neuralgia and mental anxiety, which is no doubt of very common occurrence, may thus be accounted for. The obstructed escape of the aqueous humour is due to the application and adhesion of the periphery of the iris to the cornea. He gives a classification of cases of glaucoma. Upon the whole Dr. Brailey's views seem to us to be the nearest to the truth, and the best substantiated that have hitherto been advanced.

A very different theory has been suggested to account for glaucoma by Dr. Priestley Smith, in the next following article to that of Dr. Brailey. Starting with the observation that the intra-ocular fluid escapes from the interior of the eye at the angle of the anterior chamber, and that this angle is closed in glaucomatous eyes, he endeavours to show that the closure is due to two factors, an increase in the size of the lens, and a swelling of the ciliary processes. This proposition he endeavours to maintain by a considerable number of photographic drawings.

The next paper is by Mr. George Berry on Central Amblyopia. This affection seems in the great majority of cases to be a toxic affection most commonly caused by the abuse of tobacco; the vision is noticed to become rather rapidly impaired, so that the patient finds he is unable to read, and his general health is sometimes impaired. In the defectively sensitive part there is more or less red-green blindness. The prognosis is good, since recovery usually takes place if the patient has strength of mind sufficient to enable him to give up smoking.

Mr. Couper gives a drawing and description of a new ophthalmoscope, which seems to be convenient and useful.

Dr. Litton Forbes furnishes a paper on Keratotomy, in which he shows that the refraction of the eye may be determined by simple examination of the lights and shadows thrown by a concave or plane mirror on the cornea. The

plan seems to have answered well in his hands, but would probably require much practice and very close observation.

Mr. Morton gives a note in which he describes some remarkable phenomena of pulsation in the vessels in cases of embolism of the carotid artery of the retina. Mr. Lawson suggests the use of variously-sized seeds as a means of determining the vision of children too young to be tested by means of types. Mr. Gunn gives some notes of the mode of treatment adopted at Moorfields for ordinary cases of gonorrhoeal ophthalmia, iritis, cataract, &c. Finally, Dr. Brailey and Mr. Edmunds give a long and carefully drawn-up report of the condition of the optic nerve and other parts of the eye in cases of increased tension. Altogether the number is a very good one.

The Dissector's Guide. By D. J. CUNNINGHAM, M.D., C.M., F.R.S.E., Senior Demonstrator of Anatomy, University of Edinburgh. Part II. The Abdomen. Edinburgh: MacLachlan and Stewart. 1880.

AMONG the numerous manuals of dissections which are used by students in our anatomical schools, we think that Dr. Cunningham's new work must take a conspicuous place. Primarily designed for the students of the Edinburgh University, and so following the methods in vogue there, it has such intrinsic merits that when known in other schools it is sure to become a favourite. The second part is much fuller than that previously issued, and in many ways a great improvement on it, and we regret that the author should have deemed it necessary to publish the work in this fragmentary fashion. We hope that the other parts will be speedily issued, and the whole work republished in a single volume, for a "guide" subdivided into parts is rarely acceptable to the student, and never meets with the appreciation which would be accorded to it if published in a more convenient form. The fulness with which the methods of dissection are described, and the omission of all details of minute anatomy, which, as the author observes, are altogether out of place in a text-book upon Practical Anatomy to be used in the dissecting room, constitute the special features of the work. The various procedures necessary for examining the structures in the male and female abdomen are most carefully pointed out, and no one can follow Dr. Cunningham's instructions without gaining a thorough knowledge of their anatomy as far as this can be seen with the unaided eye. The descriptions of the peritoneum and pelvic fascia are remarkably lucid and comprehensive. Besides the ordinary illustrations in standard anatomical works, many new diagrams and plates are introduced, and these are very clear and of great service in explaining the text. We must congratulate the publishers on having done everything in their power towards making the book acceptable to the student and the teacher.

The Ocean as a Health-Resort. By W. S. WILSON, L.R.C.P., M.R.C.S. Small 8vo, pp. 260. London: J. and A. Churchill. 1880.

WE have read every page of this book, and have derived from it both instruction and amusement. In the present day, when voyages are so often recommended on the score of health, it is very useful to have a practical adviser—at once a sailor, a man of science, and a medical practitioner—to tell both doctor and patient what to do and what not to do, what a voyage at sea is really like, what are its shortcomings, and what are the benefits likely to arise from it. All this will be found in Mr. Wilson's book, and we should advise all who are going a voyage for the first time to furnish themselves with a copy of it.

THE Court of Quarter Sessions have voted £35,000 for enlarging the Stafford Lunatic Asylum.

THE LANCET.

LONDON: SATURDAY, NOVEMBER 6, 1880.

WHAT has happened at Guy's Hospital is happening, or may happen, at any moment in similar institutions elsewhere. The inter-relations of governors, medical officers, and nurses are almost everywhere strained and "gritty." Why is this? We think it is because the general arrangement of affairs—the organisation as it may be called—is faulty, and in all ways calculated to go wrong and give rise to a great deal of unnecessary friction, and to become destructively heated, whenever the smallest mishap occurs, or interlocking "departments" are the least bit shifted. Let us see how such things can be, and so try to find a remedy.

The governors of a hospital *are*, and must ever be, its responsible managers. This much should be distinctly laid down at the outset of every discussion of "hospital management," whether what follows is intended to affirm principles broadly, or to state and criticise a special set of circumstances which may encompass a particular institution. When we contend for the introduction of a medical element into the system of hospital management, and assert that such an element is *necessary*, we do not mean to imply that a hospital ought to be handed over to its physicians and surgeons, but that there should always be a sufficient number of medical men on the Board of Governors, and that the policy pursued should clearly recognise that the aims and ends of the charity are exclusively medical. The governors are the managers, but they are not, therefore, autocratic, and bound by no law of procedure. There is such a thing as constitutional government, and constitutional government is the only sort of rule which can be finally safe or successful in connexion with hospitals. The administrative staff of a fairly large hospital may number from thirty to forty physicians and surgeons, who practically serve the institution gratuitously, and whose work and status bring it fame. This fact should, in itself, be sufficient to convince any sensible body of men acting as governors that they cannot treat the hospital under their control empirically, or expect its staff to submit to ordinances promulgated without due consideration. Nor is this all; the staff must be made party to every detail in the system of government if the business of the institution is to be carried on harmoniously. We are now speaking of *general* business. In regard to *professional* business—that is to say, the surroundings, accommodation, feeding, and disciplined nursing, of the sick—none but the most wrong-headed and fatuous of Boards of Governors would presume to interfere. If the medical staff of a hospital were to invade the treasurer's office and direct that the accounts should be kept on some particular system, and were to claim the right of displacing the clerks, or if they were to intrude into the kitchen and insist on engaging the cook and her assistants, or into the laundry and claim to superintend the washerwomen, they would have far better and more cogent reasons to offer in explanation of their audacity than those which the lay governors of a hospital can adduce in ex-

tenuation of the insufferable folly of seeking to control the "nursing."

There is something so preposterous in the encroachments recently made by the governing bodies of hospitals on the province of medical duty, that it must be confessed the profession has been a little remiss in not making a proper stand against the movement. It may hereafter become an interesting topic of inquiry to what we owe this outburst and exercise of energy. For the moment, however, we are too much concerned with the practical question to indulge in speculations as to the metaphysical. The duty of the instant is to assert that the medical profession cannot tolerate the assumption of distinctly medical authority in the treatment of the sick, and that rather than sanction a course like that recently pursued, the better portion of the profession would withdraw from hospital charity, leaving it to the misguided trustees of public funds and property bequeathed for the benefit of the sick poor, to work out their folly. It is within the province of the governors of a hospital to administer its funds, and to select the *personnel* of its establishment, subject to the traditions and needs of the institution, the proper judges of what these traditions and needs require being skilled counsellors: for example, in all that concerns the medical interests, care and treatment of the sick, inclusive of accommodation, diet, and nursing, the medical and surgical staff are obviously the legitimate advisers. It is within the province of the governors to see that the charity is not misdirected, squandered, or abused; and it is their duty to exercise the sort of control which a constitutional government exercises over the general affairs of a state or community; always remembering that civilians do not attempt to manœuvre armies in the field, to navigate fleets, or interpret laws and administer justice. On the same principle the lay governors of a hospital must refrain from interference in matters so obviously professional as are the care and treatment of the sick. It is not difficult to trace the limits of the authority entrusted to the governors of hospitals, or to define the functions they are expected to perform. It should not be difficult, with the combined good sense of the gentlemen who devote time and trouble to hospital management, and the sagacity and judicious and dignified firmness of a staff of educated physicians and surgeons, to secure that these limits shall be duly recognised and observed.

The medical officers of a hospital are practitioners at whose disposal public philanthropy or private benevolence has placed a house of shelter and an organisation for the cure of the sick. It is the professional business of physicians and surgeons to administer remedies, to direct the general management, and to superintend the nursing of their patients. With their own hands, or by those of the pupils their personal fame or that of the institution has brought around them, they should perform all operations, dress all wounds, and generally discharge the duties which compose the detailed treatment of disease. We are speaking plainly all round, and the truth needs to be spoken to the medical staffs of hospitals not less than to their governing bodies. It is, very much, to the neglect of practical instruction in "dressing," which has notably increased of late years, that some of the worst evils now rife in the hospitals are due. In the pursuit of *higher* branches of scientific education,

pupils have been allowed to neglect the humbler, but not less useful, functions of the "dresser." Dressing, properly defined, includes much that is now left to nurses. In the old days pupils applied *all* dressings, whether of simple lint, ointment, or plaster. They, of course, and only they, applied splints; they, and only they, exercised any "discretion" as to the treatment of the sick. There were, happily, no "sisters" in those days, and no matron ever presumed to vary an order, or herself assume the function of treating the sick. The women of the establishment acted as servants; their chief as housekeeper and disciplinarian of the female attendants under her, and she was content in this purely *domestic* department, if only her fidelity and that of the women serving under her were approved. We repeat that it is in large measure because "dressing" has come to be more restricted in its offices for the comfort of the sick "nursing" has grown out of due proportion, and become mischievous to the system of which it forms only a small and wholly subordinate part. How, we ask, can pupils be properly trained and instructed for the daily business of practitioners among the sick, if they are not permitted to learn the minor and practical details of their calling in the wards of a hospital? Does the study of medicine or surgery consist, can it be achieved, in walking round the wards of a hospital, making *scientific* investigations at the bedsides of *selected* cases, and picking up a smattering of morbid anatomy elsewhere? The older physicians and surgeons could direct the application of blisters and poultices, and even order the creature comforts of the sick chamber, because they had obtained a practical knowledge of details in the wards of the hospitals. It is much to be feared that the present generation of practitioners are not so expert; and looking to the way in which clinical study is prosecuted, the cause of the altered state of things is not far to seek. If the medical officers of hospitals do not wish to be crowded out of their proper sphere, to find their functions curtailed and their authority crippled, they must reoccupy the province from which they have practically retired, and by their own hands and the aid of their pupils—to the lasting advantage of these young men—perform their full functions, and put in exercise the authority they claim. It can only be wrested from them by their own consent. In so far as the consent to encroachment has been tacitly given, it must be wisely, courteously, but firmly and unhesitatingly, withdrawn.

The "nurses" in hospitals are, and should be content to be, servants of the medical staff, and nothing more. In so far as their position and duties differ from those of servants in private houses attending on the sound of body and mind, they are the agents by which Medicine strives to work a cure, and all such agencies must, in the nature of things, be gathered up into the hands of the physician or surgeon who treats the case. Great social misconception and a multitude of personal mistakes have arisen from the exceptional enterprise of Miss NIGHTINGALE in the Crimea. She found an army without nurses, and in a beneficent mission which will go down to history as a marvel of self-sacrifice and skill, she filled the gap and supplied the pressing need. This circumstance did not, however, warrant a host of imitators, crazy to find a means of extending the area of woman's work, in organising a movement to usurp the position of independent "ministers to the sick" in the

hospitals at home. Trained nurses, like trained cooks or trained seamstresses, are useful and necessary in their place, but it is an essential part of their duty, and ought to be part of their discipline, to act under the physicians and surgeons to whose wards they are attached. "Systems of nursing" are absolutely bad and relatively mischievous. Individuality in treatment is a logical consequence of the individuality of morbid manifestations. Moreover, every physician or surgeon who takes a practical interest in his work has his own notions of nursing, and it is essential to the success of his practice that these should be carried into effect. The only difficulty that arises in acting up to this principle grows out of the introduction of "systems" and "methods" of nursing excogitated by incompetent persons, as the most expert and experienced of women—being without medical knowledge—must ever be. It is of course desirable in a large hospital to adopt one general system, but it is obvious to every unprejudiced person that the system so adopted must be one devised or approved by the medical and surgical staff. This is so plainly the fact that it seems waste of time and space to enforce it. The authority of a matron ought to be strictly limited to the control of nurses and the domestic business of the household; she has no place or function in the wards of a hospital except to see that they are duly cleansed, and the general arrangements kept in good working order. She cleans and oils the machinery, but she can have no part or interest in the way it is employed, the purposes to which it is put, or the end it is designed to answer. Obedience to orders, and the expert discharge of the personal offices required for the comfort of the sick, comprise "the whole duty" of the hospital nurse. The moment she wanders beyond the limits of this sphere of action, she is out of her depth, and her activity is to be condemned. It is not necessary to argue with nurses as to their duty, and it is needless to define it. One word covers the case completely—they must "Obey." When they are not simply obeying, they are, or ought to be, performing the function of kindly and expert attendants on the sick; but their duty as attendants is to be merged in, or subordinated to, their duty as servants of the physicians and surgeons on whose patients they are required to attend. If these general principles were clearly understood, there would be little chance of trouble arising in our hospitals, and no danger of a dead-lock.

WHATEVER may be the fate of metallo-therapy—and in the opinion of most authorities it is scarcely doubtful—there can be no question that the clinical investigations to which it has given rise have added to our knowledge of the physiology and pathology of sensation. It has indeed furnished us with more facts than we can yet interpret, but we cannot on that account doubt the truth of observations which rest on the concurrent testimony of many well-qualified observers. The facts are of a range very much wider than at first appeared at all likely to spring from the observations of M. BURQ. Almost every day fresh investigations come to hand, showing the strange and unexpected manner in which sensation may be modified in functional disorders of the nervous system. Of not least interest in this particular are some observations which have been published by M. GRASSET

of Montpellier, regarding the action of blisters in modifying perversions of sensibility.

The observations relate to a man who was suffering from left-sided hemianæsthesia alleged to be of six years' duration, and in whom right-sided anaesthesia had been previously and unexpectedly removed by a blister applied for pleurisy. The loss of sensation is supposed by M. GRASSET to have been due to an organic lesion of the brain, but its course and the circumstance of the previous attack of right-sided anaesthesia, render it difficult to accept this view of the nature of the case. The application of a blister over the deltoid was followed by the return of sensibility in the greater part of the limb. The restoration did not, however, return first in the neighbourhood of the blister, but in the hand, and it extended as far as a little above the elbow, the neighbourhood of the blister remaining insensitive. Another blister was then applied to the thigh, and was followed by a recovery of sensibility in the whole leg. The loss of sensation was thus reduced to the left half of the trunk, neck, and face.

M. A. ROBIN found some time ago that saturnine hemianæsthesia could be removed by the action of jaborandi, the diaphoresis appearing to be attended with a return of sensibility. The use of the drug was also suggested by a statement made by M. GRASSET's patient—viz., that when he was anaesthetic on the right side he only perspired on the left. Accordingly six grammes of infusion of jaborandi were given. Perspiration was equal on the two sides. Immediately afterwards no change in sensibility could be discovered; but twenty-four hours later, after severe perspiration during the night, sensibility returned in the anaesthetic parts.

The mode of action of diaphoresis in removing anaesthesia is a subject on which there is considerable room for divergence of opinion. M. ROBIN suggested that it is by modifying the vascularity of the anaesthetic parts. M. GRASSET, however, rejects that opinion, on grounds supplied by the further history of his patient, who presented the oscillation so often noticed in cases of functional disease. Six days after the recovery of sensibility just mentioned, there was a partial loss of sensibility on the left side of the face, passing away on the following day. A little later he had another return of partial anaesthesia in the left thigh, between the hip and the knee, which passed off after free purgation. A few days later he had another attack of partial insensibility in the same region, disappearing after three days' duration, with spontaneous sweating. This anaesthesia was just in that part of the thigh to which the blister had been applied. Still later anaesthesia occurred in the left arm and hand, sharply but irregularly limited, not according to nerve-distribution. A mustard-leaf was applied to the back of the forearm, and left in position for more than an hour, causing abundant redness, but no immediate influence on the sensibility. A few hours later, however, sensation gradually returned, the recovery commencing at the upper part of the limb. Another attack of anaesthesia was quickly removed by the application of the magneto-electric apparatus.

M. GRASSET sums up, in a series of conclusions, the main lessons of this instructive case. He points out that it establishes clearly that a blister possesses an "æsthesiogenic"

action at least as great as a magnet, a metal, or an induction current. It thus affords an additional proof of the modification of perception of sensation by peripheral influences. It affords also another reason for accepting the now scarcely doubtful principle, that metals and magnets in such cases have no specific action. At the same time the facts give no support to the view that any of the æsthesiogenic agents produce their effects by a simply peripheral action, whether circulatory or nervous. On the contrary, they demonstrate that the effect of a local application may cause return of sensibility to an anaesthetic limb in all parts except the region to which the blister was applied. Moreover, its action brings into view some of the central relations of sensation, and, taken with other facts, seems to show that there are certain regions the representation of which in the sensory centres or region of the brain (posterior fibres of the internal capsule, M. GRASSET thinks) is more or less distinct; these are the upper limb, the lower limb, the anterior aspect of the trunk, the posterior aspect of the trunk, and the face. Some of these may be subdivided, but the central subdivisions represent articular segments rather than the distribution of any special nerves. Each of these regions has a certain solidarity, and suffers or recovers as a whole.

The Times, in a recent leader, expressed the opinion that the occurrence of a death in an English convent without a proper certificate and registration would furnish an occasion for legislative interference. Mr. SHIRLEY F. MURPHY, the medical officer of health for St. Pancras, was allowed on the following morning to point out that during last year no less than 24,723 deaths in England and Wales were registered, and the bodies buried, without the production of any medical certificate, and without any inquiry before a coroner. It is true that registrars are instructed to report all cases attended with any suspicious circumstances to the coroner previously to registration. It cannot, however, be anything but unsatisfactory, from every point of view, that the responsibility of defining what constitutes suspicious circumstances should rest with the registrar; and it is certain that very few coroners consider the neglect of parents to provide medical attendance for their sick child to justify the holding of an inquest. Under a new *régime* it should be distinctly provided that one of the main objects of holding an inquest is to ascertain the cause of death, when no other satisfactory evidence is forthcoming. How far this is the case at present we learn from an official return just issued by the Home Office. It appears that 27,056 inquests were held in England and Wales during last year, at an average cost of £3 each. From the verdicts, it would seem that in no less than 9776, or more than a third of the total number, the cause of death was not determined; indeed, in so many as 3046 cases the unsatisfactory verdict of "Found dead" was returned. The Births and Deaths Registration Act enacts that the "cause of death" is one of the several particulars concerning a death which is the subject of an inquest to be certified by the coroner, for entry in the Death Register. This enactment is ignored, however, by a large number of coroners, hence the perpetuation of the old-fashioned and comparatively meaningless verdicts, "Visitation of God," "Found dead," "Accidentally

killed," &c. In a large proportion of cases of sudden death from natural causes, the medical attendants of the deceased would be prepared to give satisfactory evidence of the true cause of death, but their evidence is not called for. At the present time, when the laws affecting coroners are under consideration for the purpose of revision, it is well not to lose sight of the necessity for instituting some system of certification in cases where no medical certificate is forthcoming, and where no inquest is held. A memorial has recently been presented to the Home Secretary, under the advice of the medical officers of health in Wandsworth Union, praying for legislation, with a view to check the present dangerous facility for the registration of uncertified causes of death. It is proposed in this memorial that the duty of inquiry and certification of causes of death, not otherwise certified, should be imposed upon medical officers of health. The subject is too important to be lost sight of, but it is so intimately connected with the present defects of the law relating to coroners, and the suggested remedy is so bound up with the present unsatisfactory *status* of medical officers of health, that we can scarcely hope for a prompt alteration of the present condition of things with regard to registration of deaths.

Annotations.

"No quid nimis."

THE OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.

THE above newly-formed society held a very successful opening meeting on the 28th ult., under the presidency of Mr. Bowman. The laws of the society were read and approved, and the number of members of council was increased to admit some well-known provincial ophthalmologists into that body. After these preliminaries the society at once entered upon its special work. Dr. Gowers exhibited and described two very interesting cases of optic neuritis; Mr. Nettleship exhibited a case of tumour of the iris. A feature in the proceedings, which might with advantage be followed in some other societies, was the discussion of cases exhibited before the reading of papers was commenced. The paper of the evening was by Mr. J. Hutchinson, detailing a case of retinal hemorrhages in a young man, and discussing their association with the gouty diathesis, with constipation and increased arterial tension. Several members took part in the discussion, of which we hope next week to give a brief report. Already a very considerable list of original members has been obtained, including many physicians and surgeons, in addition to pure ophthalmologists, and the proceedings of the first meeting showed that the society did not intend to limit its operations to ophthalmic surgery only, but that the wider bearings of disorders of the eye in connexion with disease are included in its work. At the commencement of the proceedings a resolution was passed authorising the council to put themselves in communication with the Board of Trade in reference to the question of colour-blindness in persons engaged in signalling, a subject which, the President pointed out, had already engaged the attention of foreign Governments, and the importance of which can hardly be overrated.

LIBEL CASE IN INDIA.

WE have received from India a full report of the proceedings in the case of Surgeon G. C. Hall, Indian Medical Service, *versus* Surgeon-Major K. McLeod, editor, and Mr.

F. F. Wyman, publisher of the *Indian Medical Gazette*, for defamation in imputing to him unprofessional conduct. It appears that Dr. Hall, while holding the appointment of superintendent of the central prison at Allahabad, established an Eye Hospital in that city, and carried it on at his own expense. This institution met with so much success that after some time a larger house and more complete equipment became necessary for its efficient working. In view of the increased expense Dr. Hall made an application to the Government, through the head of his department, to take it over and to maintain it. He was informed that before doing so the Government would require evidence to show that the hospital was likely to prove self-supporting, and he was requested with this object to forward to them his subscription list. As he had hitherto supported the hospital chiefly at his own expense, no such document existed. In order to obtain the information required, he inserted in the *Indian Herald* an advertisement stating that subscriptions were urgently needed for the hospital, the number of cases which had been treated in it, with the number of operations and their results, the average cost of the institution, and the means at its disposal. Upon this advertisement the *Indian Medical Gazette*, in an editorial article, commented as follows: "Our attention has been drawn to the fact that a medical officer serving in a large town in the north-western provinces is in the habit of soliciting by advertisement subscriptions to an Eye Hospital which he has established. The medical transactions of the institution are set forth in the advertisement: 'There have been 180 major operations, including 95 cataract operations and 31 iridectomies; with one exception these have all been successful.' The advertiser is certainly entitled to be congratulated on this marvellous success, but it is hardly consistent with the feelings and usages of the medical profession. We are not surprised to find that the line he has elected to adopt has not met with the approval of his brother officers serving in the same province, and we have no hesitation in pronouncing his proceedings in this matter unprofessional." For this article Dr. Hall brought his action for defamation against the editor and the publisher. The magistrate, in his judgment, says very justly that "the sting of the article complained of, the essence of the libel charged, is of course contained in the ironically conveyed insinuation that the successes advertised were not really obtained, and in the stigma of unprofessional conduct fixed upon the advertiser. There can be no doubt in the mind of any reader of ordinary intelligence that the words 'the advertiser is certainly to be congratulated on this marvellous success' do convey, and were meant to convey, the ironical insinuation I have referred to." In addition to his own evidence, Dr. Hall called only one witness; but as the Court desired to have the evidence of a medical officer of standing on the professional points involved, the senior medical officer in Allahabad attended at the request of the magistrate for that purpose. Six witnesses were examined, by commission, for the defence, which was based on the grounds that the advertisement was rightly styled unprofessional, and was of a nature which has always been condemned by the leading professional journals in England and by the profession at large; that the statistics were rightly styled "marvellous," as being quite unprecedented; that the advertisement led readers to presume that Dr. Hall was the performer of these operations; and that the accused in publishing the article acted in good faith. In a long and carefully drawn up judgment the magistrate, Mr. Markham, reviewed the whole of the evidence, and came to the conclusion that there was nothing unprofessional in the advertisement, and that no one but Dr. Hall could have signed it. "If," he says, "an unpretending, unegotistical advertisement like that in question, soliciting subscriptions for a charity and showing that that charity is deserving, is unprofessional, and

is so chiefly because it is signed by the medical man most intimately connected with the charity, then the sooner the canons of what is called medical etiquette are reformed in this respect the better." And again he observes:—"It does not do or state any of the things which its detractors say are unprofessional. Its object is one which all the witnesses say it is strictly proper for a medical man to do—viz., the collection of subscriptions for a charity, and giving the details of operations performed in a hospital is stated by all to be usual. It is true, as a matter of fact, that the operations were his own, but Dr. Hall hides these facts from the general public to whom his advertisement was addressed." Mr. Markham held that the statement that the results were "marvellous" was not true, and that the insinuation that they were falsely stated was unfounded; "the criticism conveys not an opinion properly so-called, but a slur on the private character of Dr. Hall, in that it insinuates he has been capable of publishing false statistics of his skill in order to 'herald forth' his success." On the question of good faith he also decided against the defendants, because good faith is defined by the Indian penal code to be "the doing or believing a thing *with due care and attention*," and he was of opinion that the evidence failed to show that due care and attention had been exercised by the defendants in ascertaining the facts of the case before publishing the libel. The Court thereupon found against the defendants on all the pleas, and sentenced Surgeon-Major McLeod to a fine of 300 rupees, or, in default, simple imprisonment for one month, and Mr. Wyman to a fine of 150 rupees or fourteen days' imprisonment, the expenses of the prosecutor to be paid out of the fines.

We have gone very carefully through the whole of the evidence submitted to the Court, and the judgment of the magistrate, with the result that we concur with him generally in the conclusions at which he arrived. We regret much that an officer of Dr. McLeod's standing should, with the best possible intentions, but from want of due consideration, have placed himself in so unpleasant a position, but, on the other hand, it is a satisfaction to find Dr. Hall completely and honourably acquitted of any unprofessional conduct. But although Dr. Hall has cleared himself from the serious imputation cast upon him, we are sorry that we cannot congratulate him on the course he thought it advisable to adopt for that purpose. Before commencing legal proceedings against a member of his own profession and an officer of his own service, it would, in our opinion, have been only courteous and proper to have given Dr. McLeod an opportunity of withdrawing the imputation, which we are disposed to think he would have done had those explanations been given which were elicited in the course of the trial. It was not in good taste to commence proceedings for libel without first endeavouring to settle the matter in a friendly manner. We also think it would have been much better, and equally effectual for the purpose intended, had Dr. Hall contented himself with stating the number of operations without giving the results, more especially as it appears from his evidence that they were all specially selected cases—a circumstance which must have materially affected the question of success.

UNQUALIFIED ASSISTANTS AND MEDICAL CERTIFICATES.

WE are repeatedly asked whether it is lawful for a medical practitioner to sign a certificate of the cause of death of a patient who has been solely attended by his unqualified assistant. The unsatisfactory state of registration law which permits, and indeed enjoins, the registration of every death whether or no any satisfactory evidence of its cause is forthcoming, is just now beginning to attract the attention which it has long demanded. Our correspondents' inquiry

has a somewhat important bearing upon this subject of un-certified causes of death, a considerable proportion of which is due to the practice of unqualified assistants. The form of medical certificate provided by the Registrar-General, if fully filled in, affirms that the registered practitioner signing the certificate had "attended" the deceased person, and also the date when the patient was last seen. Section 40 of the Births and Deaths Registration Act of 1874 enacts that any person who wilfully makes any false certificate or declaration under or for the purpose of this Act, and gives or sends such false certificate as true to any person, shall for each offence be liable on summary conviction to a penalty not exceeding £10, and on conviction on indictment to fine or to imprisonment with or without hard labour for a term not exceeding seven years. There can be no question that any practitioner who signs and issues a certificate declaring that he has "attended" a deceased person whom he had not seen during his or her illness makes such a false certificate as was contemplated by the above-mentioned section of the Registration Act. Under the present state of the law no one can give a legal medical certificate of the cause of a death unless the deceased person have been attended during his or her last illness by a registered medical practitioner. It is difficult to say whether the profession or the public suffers most from the abuse of the system of employing unqualified assistants.

THE RATIONALE OF COLD-CATCHING.

THE maintenance of a healthy body may be stated as an equation of force, and, by the doctrine of the correlation of forces, an equation of heat. We are compelled in dealing with the indefinable property of life—i. e., vitality—to seize upon the idea and grapple with its formula, as our want of, knowledge of the truth will best enable us. It is not the whole truth to say that the equation of internal and external heat is the problem of health preservation, because heat is only one form of motion, and, as regards the phenomena of life, electricity, magnetism, and psychic and nerve-forces, whatever these may be, are factors in the production of the result; but heat is at once the readiest expression, and, so far as we know, plays the most prominent part in the maintenance, of the health. Therefore it is not only permissible, but scientifically accurate, to lay great stress on this factor—namely, temperature—in dealing with the problem of avoiding cold and preserving a normal state of vitality. There are, accordingly, three propositions which it seems well to press on public attention at a season when great and sudden changes of external temperature beset us, and the perils consequent on such changes are especially rife. The chief, and in one sense the only, source of animal heat, is within us. We wear clothes to prevent the radiation of heat generated within our bodies to the objects around. In a state of nature, even in the tropics, it suffices to dispense with clothing in order to be normally temperate; but the use of sunshades and puggeries may serve as an illustration of the use of clothing or apparatus to prevent the access of heat from without. Practically the human organism must be maintained at a temperature equal to 96°5' of Fahrenheit in all climates. The differences of the normal temperature are very small. What is then required is as follows:—The body must generate enough heat, by the conversion of food into heat, or work into heat, to raise the body to the normal standard, *plus* whatever may be lost to surrounding objects. The use of non-conducting clothes may minimise the loss, perhaps prevent it altogether, but this will not secure a healthy temperature unless the organism generates heat sufficient for the supply which the conditions of life demand. If therefore the demand is exceptionally great at any time, the strain on the internal sources of heat will be increased in a corresponding degree, and upon the satisfaction of the demand so created will depend the pre-

servation of health. As we have said, this is not the whole truth, but it will suffice for the purpose of a practical suggestion to limit what we have to say to this aspect of the question. By habituating the organism to work at a low pressure, so to say, it is unfitted to cope with special circumstances creating an extraordinary demand. If a man has the rooms and passages of his house heated to what is called a "comfortable temperature," he practically habituates himself to produce little heat; and it may happen that even the stimulus of exercise will not evolve so much extra heat, or the recourse to additional clothing will not so minimise the loss of heat, as to render the low supply generated within his organism adequate to the need of emergencies. If this failure happens he is "delicate" or "susceptible to cold," and his health is always in jeopardy. Sometimes, by the use of a diffusible stimulant, such as alcohol in some form, or tea or coffee, he may so excite the heat-producing faculties of the organism, before going out into the cold, as to ward off a "chill"; but the effect of these artifices is very transitory, and they generally bring depression in their train. It is better policy to establish such a habit of heat-production as shall render the supply equal to all probable demands. This can be most readily accomplished by the use of the cold or tepid bath—as a stimulant to reaction, not a heat-abstractor and depressant,—and by the avoidance of such wraps as, while they minimise the loss of heat, obviate the necessity for a large habitual production. A volume might be written on this subject of temperature regulation, and a volume *must* be written if the whole truth about the nervous and other forms of force concerned in the maintenance of vitality is to be told; but what has been said will suffice for the hint we are, at the moment, concerned in offering.

THE REQUIREMENT OF GREEK IN THE PREVIOUS EXAMINATION AT CAMBRIDGE.

A DISCUSSION took place in the Arts Schools at Cambridge on Tuesday, Oct. 26th, on the report of an influential Syndicate, which had been appointed to consider a memorial sent by schoolmasters and teachers, including the headmasters of Eton, Winchester, Westminster, St. Paul's, Harrow, and Rugby, Matthew Arnold, C. Darwin, Sir J. Hooker, Professor Huxley, Professor Tyndall, Dr. Vaughan, and the Bishops of Exeter and Winchester. The memorial stated that "the present regulations, according to which a knowledge of Greek is required from all candidates for the Previous Examination at Cambridge, have the effect of excluding a large and increasing number of able and deserving students from the benefits of university education," and it respectfully prayed that the University would be pleased to take into consideration some means whereby candidates for an honour degree may be relieved from the obligation of passing an examination in Greek.

After much deliberation and inquiry, the Syndicate reported—(1) in favour of the relaxation of the requirement of Greek in some cases; (2) that the relaxation should be restricted to candidates for honours; (3) that a knowledge of French and German should be accepted as a substitute for Greek.

THE ABSORPTION OF SNAKE-POISON.

A COMMUNICATION to the Académie des Sciences by MM. Couty and Lacerda illustrates a source of fallacy in the estimation of the virulence of certain snake poisons. Bothrops jararaca is a small snake reputed to be but slightly venomous. They have found, however, that its poison introduced into the blood is very active, while they have ascertained that when introduced into the cellular tissue, it produced but slight toxic symptoms, apparently in consequence of the slowness and difficulty with which it is absorbed. Local symptoms of irritation are much more

marked than general symptoms. Inflammation and local abscesses were caused, but no symptoms similar to those which followed its introduction into the blood, although the subcutaneous dose was five or six times as great as that which had determined toxic symptoms when introduced into a vein. The local inflammation produced was always of a low order—phlegmonous abscesses beneath the skin, or in the muscles; hæmorrhagic pneumonia or pleurisy, when the injection was into the lung; meningo-encephalitis when into the brain, and some of these lesions by their violence caused death, but never the specific effect which was found to follow injections into the subcutaneous tissue. Another interesting fact which was ascertained is the tolerance exhibited by the stomach. The only visible lesions produced there were a few spots of extravasation in the small intestine, scarcely ever in the stomach, and this even although the dose introduced into the stomach is six or ten times greater than that which, introduced into the blood, would be immediately fatal, and introduced under the skin would cause an enormous abscess. But in some of these cases in which the alimentary canal suffered so little, certain distant lesions were found—endocarditis, scattered pneumonia, and some fatty degeneration of the liver.

CROSSED PARALYSIS OF THE SYMPATHETIC.

A REMARKABLE effect of removal of the superior cervical ganglion has been observed by MM. Dastre and Morat. Their experiments, made upon dogs, related not only to the effects of removal of the ganglion, but also to those following the division of its chief branches, especially of the intercervical filament. The animals experimented on were examined at different periods after the operation—four days, eight days, and three weeks. Recovery quickly followed the removal of the superior cervical ganglion: the same evening the animal took food in the ordinary manner, and seemed well. Eight days later, the animal having been slightly curarised, the vagus and sympathetic nerves were divided on the side on which the ganglion had been extirpated. If then the central end of the nerve was stimulated, of course no dilatation of the buccal vessels on the same side followed, but there ensued the unexpected effect of dilatation of the buccal vessels on the opposite side; and this effect was arrested by section of the right vago-sympathetic trunk. This demonstrates the path by which this interesting crossed action was produced.

A VETERAN PROFESSOR.

M. CHEVREUL has finished, for the fiftieth time, his lectures at the Museum of Natural History on the Application of Chemistry to Organised Bodies. Each course has consisted of forty lectures, making a total of two thousand in all. M. Chevreul is in his ninety-fifth year, and he is still an indefatigable worker in the laboratory. His father reached the extreme age of a hundred and ten. The American Association for the Advancement of Science, assembled for its twenty-ninth session at Boston, has sent the eminent *savant* a congratulatory telegram expressing the hope that he will be spared to continue his labours until the end of the century.

THE MEDICAL OFFICERSHIP OF ST. MARYLEBONE.

ON Thursday afternoon the vestry by ballot (Mr. Churchwarden Howard in the chair) appointed A. Wynter Blyth, M.R.C.S., F.C.S., to this position; the numbers for the successful candidate being 69 out of a total of 109 present, 4 of whom lost their votes through being a minute or two late.

THE classes in the Medical Faculty of the Aberdeen University were opened in Marischal College on the 27th ult.,

when introductory lectures were delivered by Professor Pirrie (Surgery), Professor Struthers (Anatomy), Professor Stirling (Physiology), Professor Ewart (Natural History), Professor Shand (Practice of Medicine), Professor Davidson (Materia Medica), and Professor Stephenson (Midwifery). The address of Professor Struthers dealt more particularly with the system of medical education and graduation in Scotland compared with those of England. Professor Stirling spoke on Animal Magnetism; while the remarks of Professor Stephenson were directed to the Relations existing between Hospital and University.

DR. ROBERT GREENHALGH, one of the consulting physicians of the Samaritan Free Hospital, has just presented to that institution a portion of his medical library, consisting of 600 volumes, together with his obstetric instruments. The books are given with the view of forming the nucleus of a permanent library for the use of the staff. We think that Dr. Greenhalgh has done a good work by thus bestowing his books in order that his colleagues may have the opportunity of using such a valuable collection. We need scarcely add that the committee of the Samaritan Hospital have most cheerfully accepted Dr. Greenhalgh's gift, and are making suitable arrangements for the proper care of the books and instruments.

THE death is announced on the 25th ult. of Anthony Beale, Esq., late Surgeon-Major Bengal Medical Establishment. Mr. Beale was educated in Edinburgh, and entered the East India Company's service soon after obtaining the diploma of the College of Surgeons. He served through the Punjab campaign in charge of a battery of Bengal Artillery, and was for many years surgeon on the personal staff of the Governor-General, Lord Canning, whom he accompanied to England after the Mutiny. Mr. Beale retired from the service in 1859, and for many years has resided in Royal-crescent, Cheltenham, where his death took place very suddenly and unexpectedly last week. Mr. Beale was unmarried.

A NEW district hospital, designed for twelve beds, has been opened at Shepton Mallet. The new building stands upon a plot of ground about an acre in extent, and about 100 yards from the old hospital. The design is Gothic, and the material used is stone from a quarry in the neighbourhood, with Bath stone dressings. The construction and arrangements of the edifice are spoken of favourably.

THE death of one of the sisters of charity from diphtheria, contracted during attendance upon the sick of the disease, is announced from Poltava. She was a member of the third detachment of sisters sent by the Red Cross Society to the relief of that district during the still persisting epidemic.

THE entries of students at Owens College, Manchester, this session are as follows:—First year's students, 54; second year's, 57; third and fourth, 75; for partial courses, 25; total, 211.

A CLASS is to be formed at the Military Female Hospital, Chatham, under the superintendence of the Principal Medical Officer of the district, for the purpose of instructing the soldiers' wives in midwifery and general nursing.

THE following gentlemen are candidates for the vacant office of Assistant Physician to the Middlesex Hospital: Dr. Biss, Dr. Burnet, Dr. G. C. Henderson, Dr. C. Hood, and Dr. Wm. Murrell.

A COURSE of stenography has been organised at the Academy of Medicine, St. Petersburg, and one hundred students have intimated their intention of following it.

DR. B. W. RICHARDSON, F.R.S., has been elected to fill the vacancy on the London School Board, caused by the death of Mr. Watson, one of the representatives or Marylebone.

DR. BELL FLETCHER has been appointed President of Queen's College, Birmingham.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD.

THREE reports have been issued from the Medical Department of the Local Government Board, all from the pen of Dr. H. F. Parsons, and referring respectively to the Llanelly Urban Sanitary District, the Pontardawe Rural Sanitary District, and to the Stourbridge Registration District. Each of these reports will require brief consideration.

Llanelly.—This report is of peculiar interest, as illustrating the progress of sanitary improvements among a large industrial population. Llanelly has been the subject of four official sanitary inquiries. It was inspected on behalf of the General Board of Health in 1850, by Mr. G. T. Clark; again in 1866, under instructions from the Privy Council Office, by Dr. Hunter; still again, and also from the Privy Council Office, by Mr. Netten Radcliffe in 1870; and now, for the fourth time, by direction of the Local Government Board, by Dr. H. F. Parsons. These several reports enable us to follow the sanitary history of the place somewhat closely from the period of the unreformed state of the district to the present time. Dr. Parsons' inquiry appears to have been called for by an undue prevalence of scarlet fever and "fever" in the town; but although this close attention of the Government would seem to imply that Llanelly was particularly in need of exterior incentives to induce it to carry out properly its sanitary functions, on the whole it would seem that, having regard to the circumstances of the place, the local authority has been far from neglectful, and, under considerable difficulties, has effected great changes. Systematic and costly works of sewerage and water-supply have been carried out, leaving few parts of the district now to be provided for. At the time of Mr. Radcliffe's inspection in 1870, 8400 yards of sewers had been constructed; now 32,000 yards exist. Again, in 1870, the water-supply consisted of 8,000,000 gallons held in reserve, and a temporary supply derived from the river Llidi, the waters of which were intercepted and distributed by gravitation to the town. Now the valley of the Llidi has been dammed, and a reservoir formed holding 160,000,000 gallons, admitting of a much larger and more detailed distribution of water in the town. Further, at the time of Mr. Radcliffe's visit it was estimated that five-sixths of the population used common privies, or adopted other and less formal means for the deposit of their excrement. Now, 1530 houses are provided with waterclosets, 836 with pail-closets, 616 with the common privy, and only 169 are without any appliances of this sort. Corresponding advances appear to have been made in the general cleansing and cleanliness of the town. Dr. Parsons shows that these great changes have probably been followed by equally great changes in the prevalence of "fever" in the town, for unfortunately, from peculiarities in the district, the data do not exist which would enable an accurate opinion to be formed on this score, and on the mortality of the place generally. But Llanelly has always had an ill reputation for fever; and Dr. Parsons' inquiry proves that this still in a measure continues, and would seem to throw doubt upon the efficacy of the sanitary measures which have been adopted by the local authority. This, however, is far from being the case. A careful inquiry into the conditions under which the more recent cases of fever have occurred leaves little doubt that the fever of the district is enteric fever, and that it is dependent upon favourable conditions in particular houses. In other words, these conditions, although they have been largely ameliorated

throughout the town generally, have been far from eradicated. The first steps which had to be taken were to make provision for the effectual sewerage, water-supply, and filth-removal of the town. Until this was done the detailed abatement and prevention of the recurrence of nuisances in individual houses could not be carried out. Now that the fundamental sanitary requirements of the town have been virtually completed, it has become possible to deal effectually with individual houses in detail, and this is the kind of work which is now more particularly required from the local authority, and which is needed to give full effect to the measures previously carried out. It is no reflection upon the local authority to say that this detailed work is in arrears, not only as it concerns the local conditions provocative of enteric fever, but as regards the prevalence of infectious diseases generally. Reports, such as this report of Dr. Parsons on Llanelly, are invaluable to local authorities, enabling them clearly to see the position in which they stand with regard to their various efforts at sanitary improvement, and showing, from the health aspect, in what respects these efforts need to be amended or supplemented.

TYPHOID FEVER AT BURLEY-IN-WHARFEDALE.

We have been favoured with the following particulars of the recent outbreak of typhoid fever at Burley-in-Wharfedale, a village where the Rt. Hon. W. H. Forster, the Chief Secretary for Ireland, resides. The first case came under observation on the 19th September and was followed by eighteen other cases from that date to the 13th October. Of these eighteen cases three ended fatally. All the cases occurred among the wage-earning classes. The cause to which the outbreak is assigned was the foul condition of the ashpits and privies in connexion with the cottages. In Burley there is, it seems, no systematic cleansing out of these places, although the attention of the Local Board has been repeatedly called to the subject. The duty of attending to the emptying of the ashpits and privies has been thrown upon the occupier, quite irrespective of his ability to secure such emptying so as to avoid or prevent nuisance. As a consequence there has been terrible neglect, in the face of which both the occupier and the Sanitary Authority appear to have been helpless. In a recent inspection it was found that some of the ashpits and privies had not been cleansed for eighteen months, and the usual practice would appear to be to cleanse them once every year in October, when it suits the convenience of neighbouring farmers to cart away the accumulated filth. The occupiers, in fact, have to depend upon the farmers for the cleansing of the ashpits and privies, and the farmers are not prepared to carry out the cleansing except when they want the accumulated filth for deposit on their fields as manure. The cleansing, in other words, has to be carried out, as a rule, not with reference to the health of the community, but with reference to the fertilisation of the adjacent lands. The ash- and privy-pits are improperly constructed, and admit of the collection in them of much foul liquid. It is complained that, although covered in, they are not ventilated, but it is obvious that either rain finds its way into them, or that "slops" are deliberately thrown in, and that in either case the essential requisite of a common privy, if it is to be used with the least degree of nuisance—namely, dryness of the contents—is set aside. Until this requisite is secured, ventilation of the ash- and privy-pit becomes of secondary importance. The cottages to which these barbarously-constructed out-offices are attached are described as "very handsome," and when it is added that the offices were designed by the architects who also designed the cottages, their hopelessness from a sanitary point of view follows almost as a matter of course. The pits have drains, and their offensiveness must necessarily be extreme. The water-supply of Burley, derived from moorland springs, is exonerated from all suspicion of having any part in the determination of the fever.

THE ARREST OF INFECTION.

A case of no little importance with reference to the arrest of infection was heard before the stipendiary magistrate at Liverpool, Mr. Raffles, on the 20th inst. A woman, the keeper of a provision shop, was summoned by the Health Authority for exposing herself to the public in clothing which had been in a position liable to become infected. The summons was laid under the 126th section of the Public Health Act, 1875. It was stated in evidence that on the 15th inst. the defendant was serving customers in her shop, having at

the same time four children suffering from scarlet fever, and whom she was nursing personally. She was warned not to attend the shop, and it was intimated to her that it should be shut up. Further evidence was produced with a view of showing that the clothing which the woman wore would, under the circumstances, be infectious. Mr. Raffles observed that he did not see that the case came under the section of the Public Health Act referred to, and the solicitor who conducted the prosecution remarked that that was his own view, and that there was no law to meet these cases. The authorities were very anxious to stop the disease in the way observed in this case, and he hoped they would be in a position next time Parliament met to obtain a provision which would prevent one of the most dangerous practices that could prevail in a town like Liverpool. We wish that these remarks had been continued, so as to give some indication how the difficulty was to be met of compensating or of preventing actual pauperism of petty shopkeepers, who would have to cease attending upon their business under circumstances similar to those occurring in this case. Does the Liverpool authority propose to make the alternative of removal of the cases to a hospital indiscriminate in its application?

The public health committee of the Aberdeen Local Authority recently determined to recommend that a clause should be inserted in the Bill which is to be applied for by the Town Council in the ensuing session of Parliament to the following effect:—"In order to secure more prompt action in dealing with infectious diseases, every medical practitioner practising within the burgh shall, within twenty-four hours of the same coming to his knowledge, report to the local authority every case of cholera, small-pox, measles, scarlet fever, scarlatina, diphtheria, typhus fever, enteric fever, and whooping-cough occurring in his practice, and stating the house or place where the patient is being treated, under a penalty not exceeding forty shillings; and if it be found on inquiry by the local authority that the diagnosis of such practitioner was correct, such practitioner shall be paid by the local authority a sum not exceeding two shillings and sixpence for every such case so reported and verified; and in order to facilitate the making of such reports, every such practitioner shall, from time to time, be furnished, on application to the local authority, with printed forms stamped for postal transmission; provided always that the local authority may, from time to time, alter and vary the list of diseases of which such reports shall be made." The council agreed to this recommendation, and granted authority to carry out the object in view.

Mr. N. C. Collier, the medical officer of health for Fulham, in his report for the third quarter of the year, speaks favourably of the health of his district. Writing of the individual who was sent to prison, at the instance of the Sanitary Authority, for refusing to quit a house unfit to live in, in accordance with a magistrate's order and after thirty-six applications to the police-court, and who unfortunately died in prison, Mr. Collier observes: "Surely the comfortable ward of a prison infirmary was preferable to a house containing nothing but an atmosphere reeking with stench. It was not known as a fact that he was ill. Had he complained to the warrant officer he would have been at once taken to a hospital or workhouse." With reference to reported typhoid fever at the Wormwood Scrubs Prison, Mr. Collier states that he has been unable to discover any sanitary defect on the premises, but confirms the report of the prison being exposed to nuisance from piggeries.

At a public meeting recently held in the Mission Hall, Great Arthur-street, St. Luke's, resolutions were passed asking the Home Secretary to introduce a Bill amending the Artisans and Labourers' Dwellings Improvement and Streets Improvements Acts, so as to enable the Metropolitan Board of Works and the Commissioners of Sewers to build proper dwellings to accommodate the labouring classes displaced by the carrying out of the Acts; regretting the action of the Metropolitan Board in refusing to seek Parliamentary powers to effect this object; and calling upon the Board to request the Peabody Trustees to fulfil at once their engagements relating to the Whitecross-street improvement scheme. A further resolution was passed approving of the action of the Local Rights Association in endeavouring to obtain proper dwellings for the people; and expressing a hope that a deputation would wait upon the Home Secretary urging upon him to take further action in this matter.

Colonel Bolton, the water examiner, in his report on the state of the water-supply of the metropolis for August, says that the water of the Thames at the intakes of the several companies who take their supplies from that source was good from the 1st to the 13th Sept., when it became bad, and continued so until the 25th. After that date it was good for the rest of the month. The filtration to which the water was subjected before delivery for use failed to free it "from the effects of the organic matters, principally arising from vegetation brought down by the flood waters."

Dr. Stevenson, the medical officer of health for Paddington, has written to *The Times*, and, in view of the recent outbreak of scarlet fever in his district, determined by infected milk, and of the prevalence of the disease in rural districts from which the metropolitan milk-supply is in part derived, he advises that, during the coming winter, all milk used in the metropolis should be boiled. With regard to any objection which may be urged on this score, he states that it is the usual practice to boil milk before drinking it in France, Germany, Switzerland, and India.

The magistrate of the Southwark Police-court has granted a summons against an official of the vestry of that district for having removed and destroyed a feather bed, the property of a poor woman, on which a case of scarlet fever had been treated, no compensation having been made. The bed was removed ostensibly for disinfection, but destruction was substituted for disinfection. It was complained also that the bed, although the feathers had been put into a clean tick after the recovery of the case, had been carried away in a slop-cart.

The Thames Conservators recently took proceedings against the Wokingham Rural Sanitary Authority for permitting sewage to flow into the Kennet from a sewer into which opened the drains of six or eight houses. The case was heard at quarter sessions, when it was contended that the sewer was a private one, not under the control of the Sanitary Authority. The contention was accepted by the Bench, but a case was granted for a higher tribunal, the decision of the magistrates involving questions of very considerable importance with reference to sewers in rural sanitary districts.

Blandford, it would appear, has neither a proper water-supply nor proper sewerage, and its Local Authority turns a deaf ear to the remonstrances not only of its own ratepayers but even of the Local Government Board. It is reported that the Central Authority, finding written communications ineffectual, has declined further correspondence with the Local Authority, and intimated that the responsibility for any mischief arising from the insanitary condition of the place would rest with them. This is not the usual course adopted by the Local Government Board when default of sewerage is in question.

The surprisingly low death-rates in some of the suburbs of London is deserving of comment. Surbiton has recently reported a death-rate of 8.4 per 1000 of its estimated population, and last year its death-rate averaged only 11.4. Putney, moreover, has lately reported a death-rate of 10.9. Surbiton, however, we learn, is determined to have the health in the future even better than in the present, for it has adopted by-laws relating to new buildings on the model of those suggested by the Local Government Board.

One of the Harbour Trustees of Barmouth, Mr. Wm. Jones, has withdrawn his name from the Trust, in consequence of the Local Board persisting, with the assent of his colleagues, in their intention to carry the drainage of the town into the harbour, and its having been represented to the Local Government Board that he was an assenting party. Mr. Jones has protested against this intention, believing that it will be an injury to the place by proving mischievous to the health of the East-end, and deterring outsiders from visiting it.

The Town Council of Beccles have adopted a report of the Sewage Committee recommending that the plans of Mr. T. Miller, C.E., be carried out for the utilisation of the town sewage, and that forty-five acres of land belonging to the Corporation, situated near Puttock-hill, be devoted to that purpose.

A suggestion has been made to the Mayor of Plymouth by Dr. Pearce and others, to plant the West Hoe and convert it into a garden, in the interest of the health of the inhabitants of the town.

Mr. G. Weston, the superintendent of the works department of the Paddington Vestry, after an inspection of the method of burning of town refuse followed in Leeds, has recommended his Vestry to adopt the same method for dealing with the Paddington refuse.

An immunity from zymotic diseases in Padstow during the past twelve months is attributed to an efficient ventilation of the sewers carried out not long ago.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

The rate of English urban mortality showed no further increase last week, notwithstanding the unseasonably low temperature that prevailed. In twenty of the largest English towns, estimated to contain in the middle of this year a population of seven and a half millions of persons, or nearly one-third of the entire population of England and Wales, 4830 births and 3244 deaths were registered last week. The births were 355 and the deaths 31 below the average weekly numbers during 1879. The deaths were within five of the number in the previous week, and were equal to an annual rate of 22.6 per 1000 of the estimated population, against 21.7 and 22.6 in the two preceding weeks. The lowest death-rates in the twenty towns last week were 19.3 in Bradford, 20.1 in Leeds, 21.3 in Newcastle-upon-Tyne, and 21.4 in Sheffield and in Portsmouth. The rates in the other towns ranged upwards to 25.3 in Salford, 25.5 in Norwich, 26.3 in Brighton, 26.9 in Liverpool, and 27.5 in Hull. During the past four weeks of the current quarter the death-rate in these towns averaged 22.1 per 1000, against 20.7 in the corresponding periods of the four years 1876-9.

The deaths referred to the seven principal zymotic diseases, which had steadily declined from 1239 to 472 in the nine preceding weeks, were last week 473; of these, 167 resulted from scarlet fever, 119 from diarrhoea, 63 from whooping-cough, and 47 from fever, principally enteric. The annual rate from these seven diseases averaged 3.3 per 1000 in the twenty towns, and ranged from 1.8 in Norwich to 6.3 and 6.4 in Sunderland and Leicester. The 167 deaths from scarlet fever showed a further increase upon the numbers in recent weeks, and exceeded the number registered in any previous week of the year; this disease showed the largest proportional fatality in Sunderland, Leicester, and Oldham. Measles was most fatal in Salford and Leicester. The highest death-rates from enteric fever occurred in Leicester, Salford, and Leeds. Of the 18 deaths from diphtheria, 10 were recorded in London, 2 in Birmingham, and 2 in Sheffield. The fatality of diarrhoea showed a further decline, but still exceeded the average for the season. Two more fatal cases of small-pox occurred in London, but not one in any of the nineteen other towns. The number of small-pox patients in the Metropolitan Asylum Hospitals, which had steadily declined from 116 to 77 in the five preceding weeks, rose again to 105 on Saturday last; no less than 38 new cases of small-pox were admitted to these hospitals during the week, against but 16 and 12 in the two previous weeks.

The deaths referred to diseases of the respiratory organs in London, which had steadily increased from 124 to 323 in the seven preceding weeks, further rose to 333 last week, which, however, exceeded the corrected weekly average by but 7; 232 were attributed to bronchitis, and 66 to pneumonia. The annual death-rate from lung diseases was equal to 4.7 per 1000 in London, and 6.5 in Liverpool.

HEALTH OF SCOTCH TOWNS.

In eight of the largest Scotch towns, having an estimated population of rather more than a million and a quarter persons, the annual death-rate last week averaged 24.2 per 1000, against 22.4 and 19.6 in the two preceding weeks, and were 1.6 per 1000 above the average rate in the twenty large English towns. The rates in the eight Scotch towns ranged last week from 14.2 and 20.6 in Leith and Aberdeen, to 29.5 and 44.8 in Greenock and Paisley. The deaths referred to the seven principal zymotic diseases in the eight towns, which had been 135 and 107 in the two previous weeks, rose to 149 last week; they included 51 from scarlet fever, 34 from diarrhoea, 28 from diphtheria, 16 from whooping-cough, 13 from fever, 7 from measles, and not one from small-pox. The annual death-rate from these

seven diseases averaged 6·0 per 1000 in the eight towns, and was no less 2·7 above the average rate from the same diseases in the twenty English towns. The zymotic death-rate in the eight Scotch towns ranged from 1·9 and 4·0 in Perth and Aberdeen to 7·1 and 10·5 in Leith and Greenock; scarlet fever was exceptionally fatal in Leith, and the high zymotic rate in Greenock was principally due to whooping-cough and diphtheria. The fatal cases of scarlet fever in the eight towns, which had been 52 and 47 in the two preceding weeks, rose again to 51 last week, of which 26 occurred in Glasgow, 14 in Edinburgh, and 8 in Leith. The 13 deaths from fever, of which 8 were recorded in Glasgow, showed a further decline from those returned in the previous week. The deaths referred to diarrhoea, which in the six previous weeks had steadily declined from 69 to 14, rose again last week to 34, and showed a marked excess upon the average number in the corresponding weeks in recent years; the largest proportional fatality occurred in Dundee. The 28 fatal cases of diphtheria included 9 in Glasgow, 7 in Edinburgh, and 4 both in Greenock and Paisley. The deaths referred to acute diseases of the respiratory organs (bronchitis, pneumonia, and pleurisy) in the eight towns, which had been 66, 98, and 120 in the three preceding weeks, were 121 last week; the annual death-rate from these diseases last week was equal to 4·8 per 1000 in the eight Scotch towns, against 4·2 in London.

HEALTH OF DUBLIN.

After a slow but steady decline in the rate of mortality in Dublin extending over several weeks an increase was recorded last week. The annual death-rate in the city, which had continuously decreased in the six preceding weeks from 39·3 to 33·7 per 1000, rose again last week to 34·8. During the past four weeks of the current quarter the death-rate in the city has averaged no less than 33·5 per 1000, against 20·8 in London, and 21·7 in Edinburgh. The 210 deaths in Dublin last week showed an increase of 13 upon those returned in the previous week, and included 36, or 17 per cent., which were referred to the seven principal zymotic diseases, corresponding with the number returned in the previous week; 13 resulted from scarlet fever, 10 from diarrhoea, 6 from fever, 6 from whooping-cough, 1 from measles, and not one either from small-pox or diphtheria. The annual death-rate from these diseases was equal to 6·0 per 1000 in Dublin, while it did not exceed 3·0 in London, and was 6·3 in Edinburgh. The 13 deaths from scarlet fever were within 3 of the number in the previous week; the fatal cases of diarrhoea, however, which had steadily declined from 44 to 7 in the five preceding weeks, rose again to 10 last week, and exceeded the average number in the corresponding week of recent years. The deaths referred both to whooping-cough and fever showed an increase upon the numbers in the previous weeks. The annual death-rate from fever (principally enteric), which had averaged rather less than 1 per 1000 during last quarter, has been equal to 1·1 per 1000 during the past four weeks. The deaths of infants showed a further decline last week from recent weekly numbers, whereas there was a marked increase in the number of deaths of elderly persons, owing probably to the large number recorded in public institutions.

REPORT OF THE LOCAL GOVERNMENT BOARD.

II.

THE observations of the Report on the Sale of Food and Drugs Act of 1875 are of unusual interest. It would appear that a considerable number of additional authorities have availed themselves of the advantages to be derived from a compliance with the provisions of this Act in regard to the appointment of an analyst. The number of authorities who had appointed analysts to the time of the report was 237, including the county authorities generally and a large majority of the boroughs. The number of analyses made during the year was 17,049, exceeding by 850 the number made during the previous year. The number would, no doubt, have been greater had it not happened that in a large number of districts the Act had been practically sus-

pended by a doubt being entertained whether articles purchased for the purpose of analysis came within the meaning of the words "to the prejudice of the purchaser," contained within the 6th Section of the Act. In the end, however, a decision of the High Court of Justice, to the effect that the words in question did not, as had been contended, defeat the object of the Act, set the doubt at rest; and since this the decision has been embodied in an Amendment Act.

The articles most commonly found to be adulterated, taken in the order of adulteration from the highest to the lowest, so far as number of adulterated samples are concerned, were gin, spirits other than gin, drugs, milk, mustard, coffee, and butter.

With respect to spirits, the adulteration was of an innocuous character, water only being usually added.

As regards *drugs*, the remarks of the report are so important that we give them in detail:—"We regret to find that drugs continue to be largely adulterated, no less than 171 samples being reported against out of 613 submitted to analysis (25·4 per cent.). One result of adulteration of drugs is, that a person habituated to the use of a certain medicine in an adulterated state may be seriously affected by suddenly taking the genuine article. Thus 'paregoric' is a popular domestic medicine, practically identical with the official preparation formerly called compound tincture of opium, of which opium is the leading ingredient. Certain samples, however, of so-called paregoric, which were analysed in Derbyshire, contained no opium whatever, and large doses might be habitually taken without producing the sedative effect desired, whereas, if the patient were suddenly supplied with genuine paregoric, and were to take it in the quantities to which he had been accustomed, the change might be attended with unexpected and probably disastrous results. Similarly, in the case of sweet spirits of nitre, some samples were found entirely destitute of the nitrous ether, which is the most important constituent of the real compound; and others were diluted with amounts of water varying up to 40 per cent. of the whole. Cream of tartar has been found largely mixed with sulphate of lime; and tartaric acid with lead in quantity sufficient to injure health. Fluid magnesia has been reported to have only 3·3 grains of magnesia per fluid ounce, instead of 5 grains, which is its proper proportion; and tincture of rhubarb bought at one shop has been found of scarcely more than half the strength of that bought at another. We must repeat the opinion which we have expressed in former years, that this state of things demands serious attention, and that strong efforts should be made to secure the sale of genuine drugs of proper strength."

With respect to *milk*, although the number of samples found to be adulterated was large, it was less than in the previous year. Thus the percentage of adulteration had sunk in the provinces from 21·6 in 1878 to 19·4 in 1879; and in the metropolis from 25·4 to 23·3. The proportion of adulterated samples of milk varies much in different districts. This is very marked in the metropolis, and it is not clear how far these differences represent the relative advantages and disadvantages of the respective districts as regards milk-supply, or to what extent they depend on the system adopted of procuring samples, or on other conditions. Generally the adulteration consists of simple dilution with water; but sometimes chemistry is called in to aid in the adulteration, as in the case of a sample where just such an amount of sugar has been added as would bring the sample up to the specific gravity of genuine milk; or where an alkali has been introduced to conceal the badness of milk that has become sour.

The entire money loss sustained by the consumers of milk, to say nothing of the loss of nutriment, by the addition of water, must in the aggregate be enormous. The following attempt at an estimate of this loss for London is given:—"If we assume that in London each person consumes only two pints of milk weekly, or rather over a quarter of a pint daily (and this considering that over one-eighth of the entire population consists of children under five years of age, is probably a moderate estimate), the yearly consumption of the metropolis alone will be found to amount to nearly twenty-three million gallons a year, representing, at 5d. a quart, an expenditure not far short of two millions sterling. If nearly a quarter of this milk be adulterated with about 16 per cent. of added water (and this seems, from the analysts' reports, to be the average proportion), it follows (on the hypothesis that the samples analysed are fairly representative of the entire supply) that Londoners are paying between £70,000 and £80,000 a year for water sold under

the name of milk. This unremunerative outlay might certainly be diminished with advantage by the more extended use of the Sale of Food and Drugs Act."

It is further observed that persons who adulterate are not likely to be very particular as to the quality of water which they use for the purpose; and this is the more important, considering the part which water has frequently been shown to play in the dissemination of infectious disease.

The preparations ordinarily sold as mustard consist for the most part of mixtures of mustard flour, wheat flour, and a little turmeric, and so long as they are not palmed upon the purchaser as genuine mustard there is little to object to in them. The percentage of adulterated samples of coffee continues high, mainly from the practice of selling mixtures of chicory and coffee without adequate notice to the purchaser. In respect to butter, the substitution of "butterine" (a preparation made from beef-fat, mixed with milk and colouring agents, and churned), for the genuine article is seemingly on the increase. Opinions differ as to the wholesomeness of the preparation. The report quotes the following opinion of a public analyst of "high reputation" in this country, namely, that "genuine butterine, which can be purchased retail at less than one shilling a pound, is often more palatable and more digestible than the inferior Canadian and other butters which are washed up, and prepared for the English market, and sold at a little higher price." But, alas! the procuring even of genuine butterine appears to be not unattended with difficulty.

THE SERVICES.

Surgeon Macnamara is mentioned by the late General Brooke, in his despatches reporting the disaster at Maiwand, as having done very good service in attending the wounded during the retreat to Kandahar on that ill-fated day.

Deputy Surgeon-General A. Smith, C.B., late Principal Medical Officer of the Cabul Field Force, has arrived in England invalided for disease of the liver contracted during the campaign.

The appointment of Head of the Statistical Branch, War Office, Whitehall Yard, is vacant by the decease of Deputy Surgeon-General B. Tydd on the 24th ultimo.

MILITIA MEDICAL DEPARTMENT.—The undermentioned officers resign their commissions; also are permitted to retain their rank, and to continue to wear their uniform on retirement:—Surgeon-Major Edward Tweddell Atkinson, North York Militia, dated 3rd November, 1880; Surgeon-Major Joseph Marshall Lynn, Armagh Militia, dated 3rd November, 1880.

ADMIRALTY.—Staff-Surgeon Charles J. Fennell to the *Téméraire*; Staff-Surgeon John Malvany to Portsmouth Dockyard, in lieu of a surgeon; and Staff-Surgeon James Boadley to the *St. Vincent*, in lieu of a surgeon. Mr. Francis G. Wright has been appointed Surgeon (additional) to the *Duncan*. George H. L. Bankier and John A. MacMunn, M.B., surgeons, to the *Duke of Wellington* (additional), for temporary service at Haslar Hospital; and Joseph Crossley, M.D., surgeon, to the *Royal Adelaide* (additional), for temporary service at Plymouth Hospital.

Surgeon James C. Howard has been appointed Surgeon and Agent at Dungarvan and Ballynacourt.

Correspondence.

"Audi alteram partem."

FISH-EATING AND LEPROSY.

To the Editor of THE LANCET.

SIR,—In your journal of Oct. 30th Mr. James Startin records a case of leprosy with some comments on the hypothesis that fish-eating is the cause of that disease. He says that his case "could not possibly be ascribed to the eating of bad fish, for he [the patient] had none." Now, it so happens that I had made a note respecting the same case as supporting the fish hypothesis. I saw the man at the meeting of the Pathological Society, where Mr. Startin produced

him and put to him the questions: "Are you fond of fish?" "Yes, very." "Did you eat fish in India?" "Whenever I could get it." He had been a soldier and had lived in various parts of India where leprosy is endemic. Those who believe that leprosy is due to some poison taken into the system in connexion with fish by no means think that it is necessary under all circumstances to eat fish largely. It is thought probable that in some cases small quantities of fish of a bad kind (and we especially suspect fish in hot climates and all fish that has been potted) may produce an effect which requires large quantities of less unwholesome kinds. I am well aware that such a suggestion is very difficult of credence to anyone who has not studied the facts of leprosy widely. I never yet met with a leprosy patient who did not deny at once that he had ever eaten bad fish, or who was even inclined to admit that he had eaten fish of any kind or in any quantity likely to make him ill. Usually, I believe, I have failed, even after full explanation, to make the patient think that the fish hypothesis was at all probable. The more such patients are questioned the more strongly they repudiate the accusation of having eaten decomposing fish, and the more they endeavour to minimise their admissions as to fish-eating at all. We must collect our facts very carefully if we would avoid being misled. A remarkable example of the risk of error occurred to me last summer. A sharp lad of thirteen was brought to my house by his mother. He was the subject of leprosy, and had lived in India. I put to his mother, in the boy's presence, my usual questions as to fish-eating habits. She told me that her husband was a connoisseur in fish, and always had it on his table when it was obtainable; and she added spontaneously, "This boy follows his father in the taste, and is much more fond of fish than his brothers and sisters." For clinical purposes I admitted the lad into the London Hospital, and gave a lecture on his case, part of which the lad heard. The result was that he told his dresser that he never had eaten any fish, that he had heard a doctor say it was not good for him and never took it. With this revised statement I was confronted at my next visit to the hospital. Which was to be trusted, the boy's statement or his mother's? I sent for his mother again; she positively assured me that he had never abstained from fish until I ordered him to do so, and that in India, for a boy, he had been a large fish eater. Of this, however, I am very sure, that whoever sees that boy in the future will be told by him that in India he never ate any fish.

In the earlier part of his narrative Mr. Startin records of his patient, "He states he had plenty of food, and very little fish; a few sardines and other tinned fish, but this he had only occasionally, and it was fresh." After such an admission, I cannot see how it can be fairly asserted that the disease, "could not possibly be ascribed to the eating of bad fish, for he had none." The man was a common soldier; he had lived thirteen years in India in various parts, and no doubt with very varying opportunities as regards the abundance of fish. I have recorded the man's replies to my questions, and I think that Mr. Startin goes very far beyond the facts when he asks us to accept as proved that none of the fish partaken of in those thirteen years was "bad," in the sense of being unwholesome. I have criticised Mr. Startin's statements at some length because they concern an exceedingly important question, and further because his narrative is a very good specimen of the kind of facts which are adduced to disprove the hypothesis which I with others think probably true. In the freest manner it is asserted of this or that patient who is a leper, "He had never eaten fish," or of some district where leprosy prevails that "fish is never used," but when the facts are sifted they always in my experience turn out to be of the same kind and value as those now before us. Some very remarkable instances of this I felt it my duty to comment on in my College of Surgeons lectures last summer. I have investigated the facts in detail, as much as I have been able; and my present experience is this—that I have not seen a single instance of leprosy in which the fish hypothesis was impossible; nor do I know of a single district where the facts, when sifted, are strongly opposed to it. I know well that there are many isolated cases, and many localities respecting which it seems at first sight improbable, but there are none in which it is impossible. Against the few seeming exceptions we must place the huge mass of evidence in support of this theory which the observations of leprosy in all parts of the world afford. Let any sceptic read Dr. Liveing's excellent lectures, keeping in mind during the perusal what I have ventured to suggest as

the possible potency of small quantities of fish, and the great proneness to exaggeration of statement on the part of many writers. Dr. Liveing himself combats the hypothesis, but I shall be much astonished if anyone can read his book without being strongly impressed with the absence of evidence in support of any other, and the great strength of that in reference to fish.

Before concluding may I ask Mr. Startin to give, either privately or through your pages, the references as regards his assertions as to Rawal Pindi, the Naga Hills, and the Nuggs of Arakan. If he will kindly do so, I will do my best to examine the facts, and will record my conclusions at a future time.

I am, Sir, yours, &c.,

JONATHAN HUTCHINSON.

Cavendish-square, W., Nov. 1st, 1880.

CHOLERA IN INDIA.

To the Editor of THE LANCET.

SIR,—In his report on the cholera history of 1875 and 1876, published a year ago by the Government of India, Dr. Bryden has done me the honour of criticising some statements made in my Punjab Sanitary Reports; and as I find that his observations have been taken as unanswerable in an official report on the cholera of 1878, because they were left unanswered, I shall feel obliged if you will allow me, even at this late date, to make a few remarks on the subject in the columns of THE LANCET. The discussion relates to a matter which deeply concerns the public welfare. The object of Dr. Bryden's remarks is to show that "in dealing with cholera, sanitation must be directed against the inevitable," the statements of mine which he criticises being intended to show that of all preventable epidemic diseases, none can be so readily and effectually prevented as cholera, provided the attack on it be conducted with the requisite skill.

I shall now quote Dr. Bryden's remarks on the statements he has selected for criticism. At page 310 of his report, he writes as follows:—"In 1867 the Meean Meer cantonment suffered heavily; in the great epidemic of 1869 it escaped altogether. The inference was made that the water-supply had been so secured from contamination that the outbreak of cholera in the future was not to be dreaded. The very next epidemic of 1872 swept down on the cantonments, and 185 cases occurred in a strength of 1300, of which 123 were fatal." These remarks refer to the following statement, made at page 17 of my Punjab Sanitary Report for 1868:—"The facts stated leave no room for doubt that there were abundant facilities at Meean Meer for the propagation of cholera through the drinking water, that by the closure of the cesspools those facilities were greatly lessened, and that by the disuse of the wells and their attached open reservoirs those facilities have been almost altogether removed. There are still some grave defects in the water-supply of the station, which, it is to be hoped, will be shortly removed; but even as matters now are, a repetition of the terrible epidemics of past days is impossible." Now, I must admit that in making this statement I fell into two errors—first, I altogether underrated the danger inherent in the grave defects referred to. I considered the disuse of wells situated within leakage distance of deep cesspit latrines a great improvement, but I under-estimated the risks of contamination to which the new source of supply, a small open canal cut, flowing through a thickly-inhabited country, was exposed, as is proved by the fact that the dead body of a native was removed from the cut, where it must have lain some time, only a few days before the arrival of Dr. Cunningham, when he visited Meean Meer to investigate the circumstances of the epidemic in question. Of course, this dead body could have had nothing to do with the causation of that epidemic; but the discovery of it, which was quite accidental, shows how greatly I under-estimated the "grave defects" referred to in the extract from my report above quoted. The second error I made was in under-estimating the force of the obstruction which the scheme then in contemplation for removing the "grave defects" would experience. In my simplicity I believed that the grave defects would be shortly removed, but to my sorrow nothing whatever had been done to remove them when I left the Punjab, seven years after

the prediction, to the failure of which Dr. Bryden refers, was made. But terrible as was the epidemic of 1872, its horrors fell far short of those of 1856 to 1861, which were the ones I had in view when the passage was written. The epidemic of 1861 killed 24 per cent. of the troops; the epidemic of 1872 only 8 per cent. Considering all the circumstances of the case, I do not think that the partial failure of my prediction will be regarded as giving support to Dr. Bryden's thesis, that, as regards cholera, "sanitation must be directed against the inevitable." I adhere to my old opinion, that with a proper water-supply an epidemic of cholera would be impossible at Meean Meer; but at the same time I am by no means sanguine that the projects which have been so long under consideration will realise that happy deliverance.

Dr. Bryden's next observation, to which I desire to reply, is as follows:—"In the epidemic of 1869 the Lahore Lunatic Asylum lost 33 out of a strength of 200 inmates. No other community at Lahore suffered in any such ratio. The conclusion arrived at was that the sand through which the drinking water of the lunatics passed had been impregnated with cholera evacuations. Among the first to suffer in 1872 were these same lunatics. In the epidemic of 1875, out of a strength of 275 lunatics in the asylum, there were 27 cases and 19 deaths. It is not likely that the contingency of sand-poisoning should have occurred in three successive epidemics, and the Sanitary Commissioner for the Punjab does not urge this theory in writing of the outbreak of 1875." Does Dr. Bryden really suppose that there is only one means by which water may become contaminated? Under the system of supply now existing in India, the modes of contamination are infinite in variety. In my report for 1869, referring to the cholera virus, I said that in places "where the water-supply is entirely exposed to excremental pollution, no amount of personal precautions can bar its entrance into the stomach. So multitudinous are the avenues by which it effects a lodgment that it is impossible to guard them all—through the bath, in milk, in butter, on uncooked vegetables, or fruit; and finally, in drinking water it has innumerable facilities for reaching its breeding ground in the stomach and bowels." In 1872, as in 1875, there were many channels by which cholera-matter might have gained access to the stomachs and bowels of the lunatics. My report for 1869 only indicated the channel by which I considered that on that occasion the enemy had effected a lodgment in greatest force.

I shall now only add this: wherever the water-supply of a locality has been placed on a moderately satisfactory footing (unfortunately there are not many such places in India), the liability of the population to cholera has instantly been either greatly reduced or almost entirely extinguished. Everyone knows the truth of this statement as regards Calcutta and Bombay, where the European residents have for the last ten years been nearly as free from cholera as the inhabitants of London. But there are other instances which, if less known, are not less conclusive. Since the municipal water was laid on to Fort William eight years ago, the troops stationed in that once unhealthy place have been almost entirely free from cholera, although the men are still exposed to infection, when, as they will do, they go out into the purlieus of the town and suburbs, and also through milk, which it is next to impossible to get free from adulteration in Calcutta. They have, in fact, been almost as healthy as if they had been quartered in one of the healthiest camps in England. The death-rate for the six years ending in 1878 was only 10 per thousand of strength. The city of Nagpore is another illustration in point. This place was formerly a great sufferer from cholera. In 1871 water was laid on to the town, in iron pipes. There has not been a single epidemic in the town since, although stray cases have occurred from time to time, and the adjacent district has suffered severely on three different occasions. In 1878 there were 3356 cholera deaths in the Nagpore district, and only 69 in the town. In the district the ratio of cholera deaths was 54 in the town, 6 per 10,000 of population. There can be little doubt that many of the cases that occurred in the city contracted the infection in the neighbourhood external to the city. Kohat is another memorable illustration. This place, in Dr. Bryden's system, has a very mysterious importance attached to it as a great cholera focus. He speaks of the terrible outbreak of 1869 among the troops as "the result of a single affluat of the cholera miasm." Certain it is that if, in former days, cholera got into the vicinity of the cantonment, it never failed to commit sad havoc among the troops. And

what is the case now? In 1872 the duct which supplies drinking water for the cantonment, and which is described in the Punjab Sanitary Report "as a lounge for dogs and a receptacle for the surface drainage of the station," was made tolerably safe against contamination. Two epidemics have since visited the locality. The one of 1876 passed over the station quite harmlessly. In 1878 the adjacent town and district suffered severely; but in the cantonment there were only eight deaths registered, and this though the place was crowded with 7000 troops and followers, brought there by the field operations in the Kurru Valley, and was in a very insanitary state in consequence. The last case I shall refer to is that of the emigrant coolies on the Brahmaputra steamers. For nearly twenty years cholera had made terrible havoc among these poor people, in spite of all the efforts of the Bengal Government to prevent it. Four times on each voyage of about eighteen days the arrangements on board the steamers for the coolies were inspected by medical officers of the highest ability, and almost invariably pronounced very good—perfect cleanliness, good food, good clothing, plenty of room, excellent water. But in spite of all these advantages, the dreadful mortality continued from year to year, and it was a common thing for from thirty to sixty dead coolies to be thrown overboard in the course of a few days. All other explanation of these fearful catastrophes failing, it was concluded that the coolies, who mostly belonged to one of the primitive Indian races, had such a strong predisposition to cholera that human efforts were powerless to control it. And the Government had settled down in the belief that it was a struggle with the inevitable. But in the end it turned out that although four times in each voyage the water-supply was pronounced excellent, it was in reality extremely bad. The Bengal Government at length adopted structural precautions, which made it impossible for any but pure water to be used for any purpose whatever; and, behold, the predisposition of the coolies to cholera vanished, and the mortality among them became so small that the Superintendent of Emigration at Dhubri reports that he now finds it inconvenient to record it any longer in centesimal ratios. The results obtained in these cases, harmonising as they do with European experience, teach no doubtful lesson. They show that the struggle with cholera is not the hopeless contest that Dr. Bryden supposes.

In conclusion, let me say that, although I have for years felt it my duty to combat the views put forth on this subject by Dr. Bryden, I feel sure that that officer deserves the nation's gratitude for the herculean labour, under the guidance of brilliant genius, with which he has brought order into the once dreary chaos of Indian medical statistics.

I am, Sir, yours truly,

A. C. C. DE RENZY,
Deputy Surgeon-General, Punjab Frontier Force,
late Sanitary Commissioner, Punjab.

ON THE COMPULSORY INTIMATION OF INFECTIOUS DISEASES IN EDINBURGH.

To the Editor of THE LANCET.

SIR,—At the last meeting of the Social Science Congress I gave the statistics relating to the carrying out of the compulsory intimation of infectious diseases. The Local Act in question came into operation on November 7th, 1879, and up to September 6th of the present year—a period of ten months—no fewer than 4502 intimations had been received by the authorities. These comprised: typhus, 22 cases; typhoid, 226 cases; diphtheria, 127 cases; scarlatina, 917 cases; measles, 3210 cases. In 412 cases the circumstances were such as to justify the removal of the patients to a hospital with the concurrence of the medical attendant.

As your readers are aware the intimations are made by the medical profession, who are furnished with suitable slips and stamped envelopes, and who receive 2s. 6d. for each intimation. Last July a sum of £519 was sent out to the profession, and so convinced is the Corporation of the value of the information thus received, that they have set aside £1000 to cover the expenses of the current year.

Our experiment has been a great success. No complaints have reached us from the medical profession, who have loyally assisted the authorities in carrying out what was feared would be an unworkable and objectionable clause. The

information as to the existence of infectious disease has been prompt and effectual, which, I am convinced, would not have been the case had we trusted in great part to a poor, ignorant population to supply it. No doubt here we enjoy exceptional advantages from the large number of students attending our hospitals and dispensaries, and it is comparatively rare to find a person dying without medical advice. This is mainly due to the custom introduced by myself some twenty years ago, of causing an official inquiry to be made by the police into all cases of death occurring without a medical man seeing the patient during life. This inquiry entails on the relatives considerable annoyance, and has gradually led them to recognise the importance of seeking medical assistance. One of the subsidiary advantages of this procedure is, that the number of uncertified deaths in Edinburgh is very small.

To the health department the intimations have proved of great service—first, in showing how inadequate was the existing accommodation for infectious diseases in our various hospitals; and second, in enabling us to arrive at the true cause of outbreaks of these diseases, and thus prevent their spread.

Yours, &c.,

HENRY D. LITTLEJOHN, M.D.,
Medical Officer of Health.

Edinburgh.

"DENTAL SURGEONS," "SURGEON-DENTISTS."

To the Editor of THE LANCET.

SIR,—As a Fellow of the Association of Surgeons practising Dental Surgery, permit me to offer you my best thanks for the very able remarks contained in your issue of last week relative to the continued abuse of the above-mentioned titles by totally unqualified persons, as well as by such as have merely a licence to practise dentistry from the College of Surgeons. The "Dentists Act," as you justly say, has become a delusion and a snare, but it is some satisfaction to know that but for the opposition this statute met with at the hands of those of us who, being surgeons by diploma, practise dentistry merely as a specialty of surgery, matters would have been far worse than they are now.

Let it not be forgotten that it was due to no want of zeal or activity on the part of the gentleman who framed this measure, that the medical profession was not crippled and harassed by a clause which he strove hard to include in the Dental Bill, making it illegal for qualified medical practitioners to style themselves or pursue their calling as dental surgeons until they had first registered their names on the list of his unqualified friends—friends from whom he has lately received a testimonial. This clause was after some trouble withdrawn, but it leaves no doubt as to the democratic nature of his views.

Again thanking you for the support which on every occasion you have given to those of us who have at heart the best interests of the profession, as well as that of the specialty we practise,

I am, faithfully yours,

W. DONALD NAPIER.

George-street, Hanover-square, Nov. 4th, 1880.

IRELAND.

(From our own Correspondent.)

UP to the present time candidates for the Fellowship of the Royal College of Surgeons in Ireland were permitted to send in applications for examination at irregular periods; but by a recent regulation of the Council it has been determined that for the future all candidates for the fellowship shall undergo examination at the ordinary sessional examinations. Doubts are entertained whether the new method will work as satisfactorily as the older system.

Introductory lectures have been given at several of the medical schools and hospitals in Dublin. Last week Mr. Swanzy, Professor of Ophthalmic Surgery in the Royal College of Surgeons, gave the inaugural address in the Medical School, and Dr. Quinlan at St. Vincent's Hospital; and last Monday addresses were delivered at the Meath Hospital, and Ledwich School of Medicine, by Messrs.

Hepburn and Benson respectively. The session commenced in October, but the strange regulation still prevails of having the introductory delivered in November instead of the early part of the previous month.

The election for Members of Council of the Surgical Society of Ireland took place on the 1st inst., when all the outgoing councillors were re-elected. Thirty-four members of the society recorded their votes.

Compulsory attendance on medical lectures has of late received a good deal of attention, and the Colleges of Surgeons and Physicians in Ireland have recently adopted regulations relative to this subject; while the University of Dublin has a stringent rule to the effect that no certificate shall be granted to any student who does not at all events attend three-fourths of the course delivered. It is, however, one thing to compel a student to attend a certain number of lectures, and quite another to guarantee that he derives instruction from such attendance. Here the various examining boards are at fault, except the Queen's Colleges, which carry out the following arrangement, that guards against an absence from lectures or a merely nominal attendance. For example, a daily roll-call is in force in every class, and class examinations are frequently held, while no credit is given for attendance when deficient preparation for lecture or deficient study of the subject is exhibited by the student. The class-certificate therefore of the Queen's College system not alone shows the payment of a fee and the entry of a name on the class-roll, but is besides a guarantee of continuous study of the subject lectured on on the part of the student during the whole session. The President of the Queen's College, Galway, in his recent report for the past session, draws particular attention to this method, as avoiding the well-known abuses of the lecture system.

A deputation from the Irish Medical Association waited, last Monday, on the Chief Secretary for Ireland with reference to the limitation of salaries of medical officers of health which exists, and also as to the exclusion of public health salaries and lunacy fees in computing retiring allowances for Poor-law medical officers. The scale proposed by the Local Government Board when the Public Health Act of 1874 became law was a maximum of one-fourth of the salary of the dispensary medical officer; but the maximum had been given in very few instances, and the Association were of opinion that even this amount would not admit of adequate remuneration for services zealously performed in most districts. In 1878 the Act now in force was introduced, it being understood that there should be no maximum scale, but that each salary should be decided on its merits; and it was contended that the average salary for medical officers of health was now only about half of the average maximum prescribed by the repealed Act of 1874. The question which the Association wished the Chief Secretary to consider was whether the Treasury had any right or power to enforce the repealed scale; for if it was intended that due effect should be given to the provisions of the Public Health Act, it was desirable that a liberal minimum scale of salary should be fixed, in order that proper and independent supervision should be provided, and that efficient officers should be equitably remunerated. The second subject brought forward was in connexion with superannuation, and it was pointed out that of late the Local Government Board had refused their sanction to a portion of the pension granted to two Poor-law medical officers, stating as their reason for so doing that they had been advised that salaries payable under the Public Health Act and fees for examination of lunatics should not be included in the computation of pensions, inasmuch as they were emoluments which accrued under Acts passed after the latest Superannuation Act. The Chief Secretary, in reply, referred to the important position which dispensary medical officers held throughout Ireland, and the faithful and devoted manner in which they discharged their duties; and observed that it was hard to expect sanitary improvements to be carried out unless the sanitary medical officers were satisfied with their position, and felt they were fairly treated in the matter of remuneration. He felt that a strong case had been made out, and although it was a matter for the Treasury he would promise that the views of the deputation would be considered.

The Visiting Committee of the Guardians of the South Dublin Union have recommended, in reference to Dr. MacCabe's recent report on the management of the Kilmainham Small-pox Hospital, that the clothes of every patient should, on admission, be destroyed, and that a nurse be appointed to each of the hospitals for night duty. The

arrangement of having paid and responsible nurses for irresponsible pauper nurses is a great improvement, and the change will be carried out without delay.

The Committee of the Home for Incurables, Cork, have made an appeal for funds to complete the institution, one of the first of its kind in the United Kingdom. One thousand pounds are at the present time required to pay off existing charges on the building account, and a similar amount to complete the hospital. I have little doubt but that the necessary funds will shortly be subscribed for so deserving a charity.

At a meeting of the Cork Board of Guardians held last week, Dr. Wall reported that a woman named Keegan had been admitted to the Union Fever Hospital on the 25th ult., having been landed that day at Queenstown from one of the American emigrant steamers, and declared to be suffering from small-pox. It eventually proved, however, to be a case of varicella, and the patient was transferred to the shed originally constructed in the workhouse for the reception of small-pox patients, perfect isolation being secured. At the same meeting a deputation from the ratepayers waited on the Cork Board of Guardians and presented a memorial on the subject of the increased amount of stimulants used in the workhouse, but Dr. Callaghan, one of the medical officers, showed that the consumption in the Cork workhouse compared very favourably with the amount consumed in the North and South Dublin Unions. While the cost of stimulants in the former place averaged £10 per week, in the Dublin Unions the expenditure amounted to £25 weekly. After some discussion it was decided to refer the memorial to the medical officers to report on the subject on that day fortnight.

Dublin Hospital Sunday will be held on the 14th inst.

Dublin, Nov. 2nd, 1880.

PARIS.

(From our own Correspondent.)

THE chief event of last week was M. Pasteur's long promised communication to the Academy of Medicine, on the attenuation of the virus of fowl's cholera (*choléra des poules*). The assertions of M. Pasteur are so important that it will be well to give a translation from the official bulletin. It is as follows:—

Of the different results which I have had the honour to communicate to the Academy concerning the affection commonly known as *choléra des poules*, I take the liberty of reminding you of the following.

(1) Cholera of fowls is a disease virulent in the highest degree. (2) The virus consists of a microscopic parasite that can be easily multiplied by culture, outside the body of the animal that the disease affects. Hence the possibility of observing the virus in a state of perfect purity, and the demonstration that it is the sole agent of disease and death. (3) The virus offers various degrees of virulence. Sometimes the disease is followed by death; sometimes, after having given rise to morbid symptoms of variable intensity, it ends in cure. (4) The differences observed in the power of the virus are not only the result of observations of the natural course of things, but can be produced by the experimenter at will. (5) As a rule, in all virulent diseases fowl's cholera does not recur, or rather recurrence happens in a degree which is inversely proportional to the severity of the first infection; and it is always possible to push the preservation so far that subsequent inoculation with the most virulent virus will produce no effect. (6) Without wishing to affirm anything at present as to the relation between variolous virus and human vaccine, it is evident from what precedes that in fowl's cholera there exist states of the virus which, relatively to the most virulent virus, perform the same office as human vaccine does in relation to variolous virus.

Vaccine virus produces a benign disease—vaccinia—which gives immunity from a graver disease, variola. In the same way fowl's cholera has states of attenuated virulence which cause the disease but not death, and in such conditions that the animal can, after recovery, submit to inoculation with a very virulent virus. The difference is great, however, in some respects between the two classes of facts, and it may be well to remark that as regards our knowledge, and our deductions, the advantage is with the study of fowl's cholera: for where

the relations between variola and vaccine are still a matter of controversy, we know that the attenuated virus of fowl's cholera is derived from the virulent virus, special to the disease, that we pass directly from the first to the second; in a word, that their fundamental nature is the same.

The time has now come to explain the chief assertion, which forms the basis of most of the preceding propositions—namely, that variable degrees of virulence exist in the cholera of fowls. Surely a strange result when it is considered that the virus of this affection is a microscopic organism, which can be handled in a state of perfect isolation, as one can experiment with the yeast of beer, or the mycoderma of vinegar. And yet if this mysterious datum of variable virulence is considered calmly, it will be recognised that it is probably common to the different species of this group of virulent diseases.

Where, then, is unicuity in any of the scourges which compose this group? To quote an example, do we not see epidemics of severe variola, and others which are almost benign, without being able to explain the difference by external conditions of climate, or by the constitution of affected individuals? Do we not also see great contagions die out, to reappear later, and again become extinct?

The theory of the existence of variable intensities of the same virus is not then calculated to surprise either the physician or the well-informed, notwithstanding that it is of immense interest that it be scientifically established. In the particular case under consideration, the mystery lies in the circumstance that the virus being a microscopic parasite, the variations in its virulence depend upon the will of the observer. This is what I must establish with certainty.

Let us take as our starting-point the virus of the cholera in a very virulent condition, the most virulent possible, if we may use the expression. I have already made known a curious way of so obtaining it. It consists in collecting the virus from a fowl which has just died, not of the acute, but of the chronic disease. I have observed that the cholera is sometimes seen in this form. Such cases are rare, although it is not very difficult to meet with examples. Under these circumstances the fowl, after a severe illness, wastes away, but keeps alive for weeks or months. When it succumbs, which happens when the parasite, which had hitherto been localised in certain organs, passes into the blood and there develops, it will be observed that whatever may have been the original virulence of the virus when inoculated, that which is extracted from the blood of an animal which has taken long to die, is of considerable virulence, generally killing ten times out of ten, and twenty out of twenty.

This being stated, let us now make successive cultures of this virus, in a state of purity, in a decoction of fowl's muscle, taking each time the germ of the new culture in that which preceded it, and let us try the virulence of these different cultures. Observation shows that the virulence does not change in an appreciable degree. In other words, if we allow that two virulences are identical when, by operating on the same conditions upon the same number of animals of the same kind, the proportional mortality is the same, we also recognise that for our successive cultures the virulence is the same.

Hitherto I have neglected the interval between two successive cultures, that is to say, between one sowing-time and the following. Let us now consider this point, however small it may be apparently. For an interval of from one to eight days the successive virulences remain unchanged. For an interval of a fortnight the same result. For an interval of a month, six weeks, or two months even, no change will be observed in this respect. As, however, the interval increases, a few signs of little apparent value appear to indicate a weakening of the inoculated virus.

The rapidity of death, for example, if not the proportion of the mortality, becomes lessened. In the different series inoculated will be seen fowls which cling to life, very ill, and very lame, for the parasite, in its propagation through the muscles, has reached those of the thigh. The pericardites run a longer course; abscesses appear around the eye; the virus has lost, in fact, its *foudroyant* character. Let us now increase the periods between the successive cultures. Let us extend them to three, four, five, or eight months, and more, before studying the virulence of the development of the new microscopic being. Now the scene will change entirely. The differences in the successive virulences, which were hitherto *nil*, or at the most doubtful, are about to exhibit themselves with considerable effect.

With such intervals between the germ-sowings, we find

upon culture that instead of identical virulences—that is to say, of a mortality of ten fowls in ten inoculations—the mortality falls progressively to nine, eight, seven, six, five, four, three, two, or one, in ten, and sometimes even there is no mortality at all; the disease manifests itself in all the individuals experimented on, and all recover. In other words, by simply changing the mode of culture, by simply separating the periods of germ-sowing, we have a means of obtaining progressively decreasing virulences, and, finally, a true vaccine virus, which does not kill, but communicates a benign disease, preservative from its mortal form.

It must not, however, be thought that in all these attenuations everything happens with a constant and mathematical regularity. One culture which has been kept for six months may still show considerable virulence, whilst another may have become greatly attenuated after three or four months. We shall see the explanation of these anomalies, which are, however, anomalous only in appearance. Sometimes, indeed, there is a sudden jump from a great degree of virulence to the death of the microscopic parasite in a very short interval, and on passing from one culture to another one is surprised by the impossibility of development. The parasite is dead. The death of the parasite is, in fact, a common circumstance, occurring constantly when there is a sufficient interval between the cultures.

And now the Academy is aware of the real motive of the silence which I have hitherto observed, and why I claimed a period of delay before making known my method of attenuation. Time was an element of the question.

In the course of these changes what becomes of the microscopic organism? In changing its degree of virulence in so marked a manner, is there any change of form or appearance? I will not say that there is no morphological relation between the parasite and the different degrees of virulence which it presents, but I must confess that I have hitherto been unable to detect any, and if it exists in reality the extreme smallness of the parasite prevents its recognition by the microscope. The cultures appear the same in all virulences. If slight differences are sometimes seen they would seem to be accidental only, for they disappear, or are produced in an inverse manner, in the next culture.

It is equally worthy of remark that, if one takes each variety of virulence as the starting-point of new successive cultures made at short intervals, each variety of virulence keeps its own special intensity. If, for instance, an attenuated virus only kills once in ten, it keeps this virulence when the successive cultures are not made with too great an interval between the germ-sowings.

Another point is worthy of remark, although it is in strict accordance with what has been observed—viz., that a germ-sowing interval which suffices to destroy an attenuated virus does not kill a more virulent virus, which may perhaps be again attenuated, but which does not then necessarily become extinct.

The important question must now be raised as to the cause of the diminution of the virulence. The cultures of the parasite are necessarily made in contact with the air, for our virus is an aerobe being, whose development is not possible without it. We naturally inquire whether the weakening influence on the quality of the virulence does not reside in the contact with the oxygen of the air. May not the little organism which constitutes the virus, abandoned in presence of pure air, to multiply in a field of culture, undergo a modification, which will remain permanent, even when the organism is withdrawn from the modifying influence?

We can inquire, moreover, whether any other principle of atmospheric air, a chemical or fluid principle, can account for a phenomenon which by its incomparable strangeness warrants every hypothesis.

It is easy to understand that the solution of this problem, should it be explained by our first hypothesis, that of the influence of the atmospheric oxygen, can be easily enough determined by experiment; for if the oxygen of the air is indeed the modifying agent of the virulence, we can easily have the proof by the effect of its suppression.

To this end let us conduct our cultures as follows:—A suitable quantity of decoction of fowl is sown with the seeds of our most virulent virus, and glass tubes are filled to three-quarters of their volume and then hermetically sealed. Owing to the air that still remains the development of the virus will begin, which is seen by an increasing cloudiness of the liquid; the progress of the culture then exhausts all the oxygen contained in the tube. Then the cloud falls, the virus is deposited on the sides of the tube, and the cultivat-

ing liquid clears up. Two or three days are required to produce this effect. The little organism is henceforth uninfluenced by oxygen, and will remain in the same condition as long as the tube is sealed. What will now become of its virulence? To be more sure, let us prepare a large number of such tubes, and, at the same time, an equal number of tubes of the same culture, but freely exposed to the action of pure air. We have said what becomes of these cultures exposed to the contact of the air. We know that they experience a progressive diminution of their virulence: we shall not return to them. Let us speak only of the cultures in closed tubes. If they be opened, one after a month's interval, after having made a culture by the germsowing of a portion of its contents, let its virulence be tried. Let another be opened after two months, and again another after three months, and so on with a fourth, fifth, sixth, seventh, eighth, ninth, and tenth tube at intervals of from two to ten months. There I will pause for a moment. It is remarkable—and experiment proves it—that the virulences are always identical with the original virulence, with that of the virus which was used in the preparation of the closed tubes. As to the cultures which have been exposed to the air, they are always either extinct or else possessed of very feeble virulence.

The question which we have studied is then solved: it is the oxygen of the air which weakens or extinguishes the virulence. This is probably more than an isolated fact, we may here be in possession of a principle. It may be hoped the inherent action of atmospheric oxygen, a natural force which is everywhere present, will be found efficacious in other virus. In any case, the probable grand generalisation of this method of the attenuation of virulence by a cosmic influence is a circumstance which is well worthy of attention. May we not presume henceforth that it is to this influence we may attribute the limitation of great epidemics?

The facts which I have had the honour to communicate to the Academy suggest numerous immediate or indirect inductions. As to these I am bound to the greatest reserve. I shall not feel authorised in publishing them until I am able to announce them as demonstrable truths."

Obituary.

DEP. INSP.-GEN. EDWARD GOODEVE, M.B., Q.H.P.,
LATE BENGAL ARMY.

THE members of the Indian Medical Services, as well as many others in India and at home, will learn with profound regret that Deputy Inspect.-Gen. Edward Goodeve, M.B., late Professor of Medicine, Senior Physician to the Medical College Hospital in Calcutta, and Honorary Physician to the Queen, died on the 27th of October last, at his residence in Stoke Bishop, near Bristol, at the age of sixty-four years. The following brief outline of his career (communicated) conveys but a faint impression of him whose services it so briefly records.

"Dr. Edward Goodeve was born at Bury Hall, Alverstoke, Hants, on Jan. 27th, 1816. He was educated at private schools in England and France, and studied his profession under his brother William, who was a leading surgeon and a teacher of anatomy in Bristol, where he also was a very attentive student at the Royal Infirmary. He then went to London, where he became a dresser, under the late Sir W. Lawrence, for two years at St. Bartholomew's Hospital. Sir William was so much pleased with his pupil that when his work at the hospital was over and he had taken his degree, unsolicited he obtained for him an assistant-surgeon's appointment to Bengal.

"Dr. Edward Goodeve arrived in Calcutta early in 1841, and was shortly afterwards selected as travelling physician to the Bishop of Calcutta, Dr. Wilson, with whom he made several long expeditions. In 1843 he went to Cawnpore as civil surgeon, and remained in that capacity for several years; meantime, however, serving with the British forces in both Sutej campaigns, for which he received a medal and two clasps (Chillianwallah and Guzerat). In 1850 he was appointed Assistant Apothecary-General and Professor of Materia Medica in the Calcutta Medical College. Shortly afterwards he relinquished these offices, and became Professor of Medicine and Physician to the College Hospital—

offices which he held till he retired from India in 1864. In this position he rapidly acquired a large and important private practice. In 1864 he returned to England, and in 1866 he was sent by the Home Government to Constantinople to represent England in the International Cholera Commission.

"On his return to London he established himself as a consulting physician, but his health giving way, he gave up entirely the practice of his profession and retired into the country, finally living during the last few years at Drinagh, Stoke Bishop, a beautifully-situated villa on the banks of the Avon, about two miles from Clifton. He contributed two most valuable articles (on Diarrhoea and Cholera) to 'Reynolds' System of Medicine.' He married twice—firstly, Miss Renoux, of Jersey, in 1842; secondly, Miss Allen, in 1866, but he left no children alive. Some years ago he suffered from a slight attack of paralysis, from the effects of which he never entirely recovered. He had been for a long time in bad health, and though the symptoms were rather obscure, he doubtless sank at last from cerebral affection, seriously injuring his digestive and respiratory functions, and death appeared to be caused by a sudden and violent accession of the disease."

The death of this distinguished medical officer has removed one of the brightest ornaments of the old Indian Medical Service, a most able teacher and accomplished gentleman, one in whom centred all that did honour to the office of physician, and gave grace and charm to the character of friend. His whole career from the day he landed in India was one of marked utility. His military services during the Sutej campaigns were important, and distinguished by as much ready promptitude and skill in surgical operations in the field as by devoted attention to the sick and wounded in hospital.

But it was in Calcutta, during his long connexion with the Medical College and Hospital, as Professor of Medicine and Senior Physician, that his great work was done and his merits became conspicuous. It was there, as a teacher and among the European and native population (for he was equally well known to all), that he acquired the fame that will, in India as well as at home, attach to his name as a physician, and that gave him the high position that he held among his brethren.

Of retiring and undemonstrative nature, his judgment, skill, and knowledge of disease were yet of the highest order, while his powers of diagnosis were only excelled by his skill in treatment. Deeply versed in the knowledge of pathology, and excellent alike as physician or surgeon, he rapidly attained pre-eminence. His most valuable researches on dysentery, diarrhoea, enteric fever, cholera, and the so-called red-fever of Bengal, form the most important of his written contributions to the annals of medicine.

His name still is, and long will be, familiar as a household word in Bengal. His pupils, scattered over India and Ceylon, no less than his colleagues and friends everywhere, will deplore his death, whilst they hold him in grateful remembrance; for no medical officer ever made a deeper mark, none will be longer remembered as a teacher and benefactor of the natives of India, than Edward Goodeve.

In addition to the duties he performed in connexion with the Medical College and Hospital, he was a member and sometime President of the Faculty of Medicine in the Calcutta University, of which he was also a Fellow and an Examiner in Medicine; he was moreover an honorary Physician to the Queen. But besides and above all this, he was the physician in whom all reposed confidence, and was much beloved by all who enjoyed the privilege of his friendship.

His whole life and conduct form a beautiful model, on which a young medical officer might well endeavour to frame his own career.

EDWIN HEARNE, J.P., M.B. LOND., F.R.C.S.

WE have to record the death of Dr. Edwin Hearne, who died at Southampton on the 22nd ult. of apoplexy. Dr. Hearne was born near Taunton in the year 1820. His father was a large farmer, descended from an old Somersetshire family. Dr. Hearne was originally intended for a business career, but his tastes being of a more ambitious nature, he entered as a medical student at University College in 1840. He there distinguished himself by carrying off many class prizes, and in 1844 graduated M.B. at the University of London, taking honours in physiology and comparative

anatomy, as well as in medicine and surgery. He was afterwards house-surgeon at University College Hospital, and was a favourite pupil of Liston. So anxious was he to qualify for the highest position in his profession, of which he was an ardent lover, that he spent some time in studying at the Paris hospitals. On his return he happened to land at Southampton, and was so struck by the improving look of the place that he settled there in 1845 and soon acquired a large practice. He was a most accomplished surgeon and an expert operator. In politics he was a very advanced Liberal, and he worked with heart and soul in the cause. His mind was original and thoughtful, and his temperament vigorous and bold. This continually involved him in scientific and political controversies.

In 1864 the wear and tear of his large practice, combined with his other work, brought on a painful affection of the nervous system, which resulted in torticollis. This obliged him to give up active practice, and he retired to Germany for a time, but by the use of subcutaneous injections of morphia he subdued to a great extent the distortion of the neck, and resumed practice as a consulting physician. His health, however, was never sufficiently re-established for him to do much work, yet he took great interest in social and municipal matters, and became also an ardent sportsman. He was well known amongst hunting men as a straight and fearless rider to hounds; and in *Bailey's Magazine* the "White Doctor," as he is called, is described as a hard man to beat.

Dr. Hearne was a frequent writer, both on medical questions and in the local press. He was for some time a member of the Borough Council, and had been a magistrate for Southampton during the past fifteen or sixteen years. Few men have lived more active lives or sustained more arduous labour; and though possessed of singular vehemence of temperament, there was a softer side to his nature, which often found expression in acts of kindness and consideration unknown to the outside world.

THOMAS HOPGOOD, M.R.C.S.

MR. HOPGOOD (whose death was announced in our issue of Oct. 23rd) was the last of the old practitioners of Chipping Norton, Oxfordshire. He had been in practice in that town since his qualification in 1846. For some time past the deceased gentleman had been in failing health, never having recovered a severe illness he had two and a half years ago, when he was suddenly seized with severe rigors and became unconscious after exposure for several hours in the cold upon business connected with the office of mayor. During the past winter he was confined to his bed for some time from an attack of bronchitis. From this, however, he so far recovered as to be able to resume his professional duties. A few weeks since he became seriously indisposed, and died on the 8th ult. He was not one of the old school who cared little about the progress of medicine and surgery, but his greatest interest was in hygiene, and he lived, as he said, to see the greatest improvement that had ever taken place in the town—the supply of good water, and with it the almost total disappearance of fever. Mr. Hopgood had for a lengthened period taken an active part in the municipal affairs of the town. He was elected a member of the Council in the year 1862, and on the death of Mr. Alderman Rawlinson was promoted to an aldermanic chair, which he occupied up to the time of his death. Mr. Hopgood had also three times filled the office of chief magistrate of the borough—viz., in 1863, 1873, and 1877. He leaves three sons, all of whom are in the profession. Mr. Hopgood during his last severe illness was attended by Dr. Hutchinison, of Chipping Norton.

A MEETING, over which Sir Joseph Fayrer presided, was held on Monday in the Langham Hotel, at which it was determined to form a Sanitary Assurance Association "for the purpose of securing to its members, at a minimum cost, those advantages which the progress of sanitary science has made available." It was agreed that Professor de Chaumont, F.R.S., Professor Hayter Lewis, F.R.I.B.A., Mr. H. Rutherford, Professor Corfield, M.D., Mr. George Aitche-son, and Mr. Mark H. Judge be appointed a provisional committee, with Professor Corfield as chief sanitary officer, and Mr. Judge as surveyor *pro tem.*, and that they be requested to organise the association on the basis of a prospectus which was circulated, and report to a future meeting.

Medical News.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—The following gentlemen were admitted Members of the College on Oct. 28th:—

Davy, Henry, M.B. Lond., Lancaster House, Savoy-street.
Heron, George Allen, M.D. Glas., Margaret-street.
Mann, John Dixon, M.D. St. And., Manchester.
Smith, Robert, M.D. Aberd., Charing-cross Hospital.

On the same day the following gentlemen were admitted Licentiates of the College:—

Bulteel, Marcus Henry, Stonehouse, Plymouth.
Corbould, Henry Francis, Thornton-heath.
Cotterell, Edward, University Hospital.
Henry, Joseph, Camden-square.
Hubbard, Henry William, Ford-park, Plymouth.
Jennings, Edward, George-street, Manchester-square.
Sisley, Richard, Park-row.
Smith, George Munro, Clifton.
Swale, Harold, Leicester-place.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Oct. 28th:—

Marlow, Frank William, Wantage, Berks.
Powell, Simpson, Upper Woburn-place.
Whiting, John, Kingsfields, Beccles.

The following gentlemen also on the same day passed their Primary Professional Examination:—

Charles Frederick Burton, Queen's College, Birmingham; Robert Cheyne, King's College; Samuel Wyborn, Charing-cross Hospital.

FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW AND ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH. At the October sittings of the Examiners at Glasgow the following gentleman passed the First Examination:—

Conway, Thomas A., Glasgow.

The following gentlemen passed the Second Examination, and were admitted Licentiates of the two bodies:—

Darwin, Geo. A., Manchester.	MacDonald, Charles, Tilsonburg, Canada.
Dickson, Peter S., Edinburgh.	M'Kechnie, Neil, M.B. Ontario.
Ferguson, John, M.B. Toronto.	Rawes, Geo. B., Liverpool.
Hamilton, Oliphant, Glasgow.	Ross, James, Glasgow.
Hannah, Fredk. R., Bombay.	Roberts, Robert, Glasgow.
Jones, A. T. L., Glasgow.	

FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.—At the October quarterly examination the following gentlemen passed the First Examination:—

Clark, M., Glasgow.	Jardine, Peter F., Glasgow.
Crowther, G. D., Luddenden.	McKee, Thomas, Glasgow.
Dickson, F. H., Glasgow.	Owen, John W., Glasgow.
Hitchen, Thos. C., Birmingham.	Parke, John L., Manchester.

The following gentlemen passed the Second Examination, and were admitted Licentiates:—

Bhabha, S. D., Glasgow.	Jean-Louis, N., Mauritius.
Deene, Ed., Wincanton.	Lo Page, John F., Durham.
Forsyth, David, Glasgow.	Mackintosh, A., Scarborough.
Gilroy, James, Paisley.	Wigmore, James, M.D., Tiverton.
Govan, Joseph, Limerick.	

It is proposed to purchase additional land in view of the extension of the South Yorkshire Pauper Lunatic Asylum.

JOHN WILLIAM BUSTEED, L.R.C.S.I., and John Ireland Donovan, M.D., have been placed on the Commission of the Peace, the former for the county of Kerry; the latter for the county of Cork.

IN connexion with the St. John Ambulance Association, an advanced course for certificated females is being conducted at the Royal Hospital for Children and Women, Waterloo-road, where, after each lecture, the students are taken round a ward and given practical hints on nursing and the treatment of the sick.

THE 21st annual Hospital Sunday collection in aid of the local medical charities was made in the various churches and chapels of Birmingham on the 31st ult., the proceeds being devoted this year to the General Hospital. The receipts in most cases showed a slight falling off as compared with those of the two previous years.

We have received from Messrs. Eade & Caulfield, of Princes-street, Cavendish-square, a copy of a photographic group of the members of the medical and surgical staff of St. Bartholomew's Hospital. The picture contains forty-four portraits, from life, artistically arranged, enclosed in a neat frame of black and gold. The cost is one guinea.

UNIVERSITY OF DURHAM.—Examinations for (1) the practitioner's degree of M.D., (2) the degree of M.D., (3) the degree of M.B., (4) the degree of M.S., will commence on Monday, Dec. 6th, 1880. The examinations are held at Newcastle-upon-Tyne. The names of candidates should be forwarded to the Registrar, Dr. Luke Armstrong, 26, Clayton-street West, Newcastle-upon-Tyne, on or before the 8th inst.

BEQUESTS AND DONATIONS TO MEDICAL CHARITIES. By the will of Mr. W. H. Poynder, late of Harttham Park, the Royal United Hospital, Bath, and the Salisbury Infirmary become entitled to £1000 each, and St. Bartholomew's Hospital to £500. Mr. T. S. Wall, late of Maida Vale, bequeathed £100 each to St. Mary's Hospital, the Western Dispensary, and the Royal Hospital for Incurables. Mr. E. Howard, late of Crowhurst, bequeathed £100 each to the Sussex County Hospital, the Cancer Hospital, Brompton, and the London Hospital. The executors of Miss Caroline Brown, late of Cheltenham, have paid over to the treasurers of the General Infirmary, Leeds, and of the British Medical Benevolent Fund, the sum of £2987 16s. 11d. each, being their respective shares of the testator's residuary personal estate.

ASSOCIATION OF REGISTRARS OF THE METROPOLITAN HOSPITALS.—At a meeting held at King's College Hospital on Nov. 3rd (Dr. Mahomed in the chair), the following officers were elected:—Dr. Mahomed (Guy's), President and Chairman of Medical Section; Mr. Harrison Cripps (St. Bartholomew's), Vice-President and Chairman of Surgical Section; Dr. Dunbar (St. George's), General Secretary, and Secretary of Medical Section; Mr. Boyd (University), Secretary of Surgical Section. The following resolutions were carried *nem. con.*:—1. That the Association will draw up a form of index of medical and surgical cases available for the use of each hospital. 2. That it will, if possible, compile on the same model a combined index of cases admitted into the metropolitan hospitals during the year. 3. That one of the objects of the Association be to co-operate for the investigation of questions of obscurity. 4. That the secretaries of the medical and surgical sub-committees shall summon a meeting for Wednesday, Nov. 17th, at 8 P.M. at King's College Hospital, for the purpose of drawing up a form of index of medical and surgical diseases.

Medical Appointments.

Intimations for this column must be sent DIRECT to the Office of THE LANCET before 9 o'clock on Thursday Morning, at the latest.

AINLEY, D., L.R.C.P.Ed., M.R.C.S.E., has been reappointed Medical Officer of Health for the Borough of Halifax. £100 per annum.
BARRY, E. J., M.D., M.R.C.S.E., has been appointed Medical Officer for the Fourth District of the Hollinbourn Union.
BODKIN, P. J. T., L.K.Q.C.P.I., L.R.C.S.I., has been appointed Medical Attendant to the Royal Irish Constabulary, Tuam.
BURKE, J. M., L.R.C.S.I., has been appointed Medical Officer and Public Vaccinator for the Carney-street No. 2 Dispensary District of the Sligo Union, vice O'Neill, resigned.
CHARLTON, A., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for the Fifth District of the East Ashford Union.
DALSTON, G. W., M.R.C.S.E., has been appointed Medical Officer for the Brough District of the East Ward Union.
DALY, J. C., L.R.C.P.Ed., L.R.C.S.E., has been appointed Medical Officer to the Borrisokane Dispensary of the Borrisokane Union.
EWBANK, F., L.R.C.P., M.R.C.S.E., has been appointed Resident Surgeon to the Cheltenham General Hospital and Dispensary, vice Taylor, resigned.
FIRTH, E., M.B., C.M., has been appointed Medical Officer to the Debenham District of the Bosmere and Claydon Union, vice W. W. Cuthbert, resigned.
FRAZER, W., B.A., M.D., has been appointed a Medical Officer to the Boscombe Infirmary, Bournemouth.
GARDEN, R. J., M.D., C.M., has been appointed Surgeon to the Aberdeen Royal Infirmary.
HANRAHAN, J. A., L.K.Q.C.P.I., L.R.C.S.I., has been appointed Medical Officer to the Hollymount Dispensary District of the Ballinrobe Union, vice Hawkins, resigned.
HEDLEY, E. A., M.R.C.S.E., has been appointed Medical Officer to the Felton District of the Alnwick Union.
HEMMING, W. D., F.R.C.S.Ed., has been appointed a Medical Officer to the Boscombe Infirmary, Bournemouth.
KEER, G. E., L.R.C.P., has been appointed Medical Officer to the Seventh District of the Woodbridge Union, vice Hughes, deceased.

LOUGH, J. J., M.B., has been appointed Medical Officer to the N. Postal District (Islington Division), vice Harston, resigned.
NEVE, A., L.R.C.S.Ed., L.R.C.P.Ed., has been appointed Resident Surgeon to the Livingstone Memorial Medical Mission Dispensary, Edinburgh.
PIRRIE, W., M.D., F.R.S.Ed., has been appointed Consulting Surgeon to the Aberdeen Royal Infirmary.
SYMONS, G. F., M.R.C.S.E., has been appointed Resident Medical Officer to the Brixton Dispensary, Water-lane.
TAYLOR, R. S., M.B., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for the Breadalsh District of the Sharrowd Union.
TURNER, J. E., L.R.C.P.Ed., L.R.C.S.I., has been appointed Medical Attendant to the Royal Irish Constabulary, Tuam, vice T. B. Turner, deceased.
WANOSTROCHT, V., M.B., C.M., has been appointed Medical Officer for the Seventh District of the York Union.
WHITE, J., F.R.C.S.E., has been appointed Consulting Surgeon to the Nottingham General Hospital, on retiring, after twenty-one years, from the office of Surgeon.
WILKINSON, Mr. O., has been reappointed Public Analyst for the Borough of Stockport for one year.
WILSON, W. J., L.R.C.P.Ed., M.R.C.S.E., L.F.P.S.G., has been appointed Medical Referee to the Midland Counties Permanent Relief Fund.

Births, Marriages, and Deaths.

BIRTHS.

BOWEN.—On the 23rd ult., at Kirkley, South Lowestoft, the wife of Edward Bowen, M.R.C.S.E., of a daughter.
BOYS.—On the 25th ult., at Pill, Bristol, the wife of A. H. Boys, M.B., of a son.
CREED.—On the 30th ult., at Rathkeale House, Girdler's-road, West Kensington-park, the wife of C. P. Creed, M.R.C.S.E., of a son (still-born).
KESTEVEN.—On the 31st ult., at Holloway-road, N., the wife of W. Henry Kesteven, M.R.C.S.E., of a daughter.
MORGAN.—On the 4th ult., at Mussooree, India, the wife of Surgeon-Major Jerome Morgan (prematurely), of a daughter, who survived her birth but a short time.
SCOVIL.—On the 27th ult., at Hove, Brighton, the wife of Francis S. Scovil, M.R.C.S.E., of a daughter.
SHEPHERD.—On the 4th Sept., the wife of Charles Carter Shepherd, B.M., of the General Hospital, W.I., of a son.

MARRIAGES.

BROWNE-SIMPSON.—On the 16th ult., at St. George's Church, Stonehouse, Samuel Browne, M.D., son of Dr. Browne, J.P., Belfast, to Ada Eliza, daughter of the late George Simpson, Surgeon, of Gower-street, London.
DE POURTALES-MARCEY.—On the 28th ult., at Genthod Parish Church, Geneva, Count Hermann de Pourtales, of the Royal Prussian Cuirassier Guards, to Marguerite (Daisy), only daughter of W. Marcey, M.D., F.R.S., of Grosvenor-street, and Yvoire, Lake of Geneva.
HOGG-JENKYN.—On the 30th ult., at St. Mary's, Ealing, Arthur John Hogg, M.R.C.S.E., of Netley Villas, Ealing, to Ellen Eugenie, eldest daughter of Osborn Jenkyn, Esq., of Woodside, Ealing-common.
LEWIS-WILSON.—On the 26th ult., at the Parish Church, Kingston-on-Thames, John Lewis, Surgeon, Queen's Own Corps of Guides, Murdan, Punjab, to Annie Chambers, second daughter of the late H. T. Wilson, Esq., of Liverpool.
LOWNDES-LEWIS.—On the 26th ult., at St. Nicholas Parish Church, Liverpool, Frederick Walter Lowndes, M.R.C.S.E., of Liverpool, to Elizabeth Ellen, youngest daughter of the late John Lewis, of Helsby, Cheshire.
MUMBY-ROSS.—On the 2nd inst., at Milton, Portsmouth, by the Rev. P. H. Good, M.A. (uncle of the bridegroom), Bonner Harris Mumby, M.B., to Nellie, only daughter of Alexander Ross, of Southsea.

DEATHS.

BEALE.—On the 25th ult., at Royal-crescent, Cheltenham, Anthony Beale, Esq., late Surgeon-Major, Bengal Army.
COOPER.—On the 31st ult., at his residence, Croydon, George Cooper, M.R.C.S.E., in his 70th year.
GOODEVE.—On the 27th ult., at Drinagh, Stoke Bishop, near Bristol, Edward Goodeve, M.B., Deputy Inspector-General of Hospitals (Bengal), and Honorary Physician to the Queen, aged 64.
MOORE.—On the 30th ult., at Hastings, George Moore, M.D., M.R.C.P., aged 77.
PAINTER.—On the 31st ult., at Beaufort-gardens, S.W., Richard Budd Painter, M.D., F.R.C.S., aged 54.
STRATON.—On the 17th ult., Alexander Straton, M.D., of Steeple Langford, aged 64.
WHITEFOORD.—On the 28th ult., at Albany-street, Caleb C. Whiteford, M.R.C.S.E., aged 35.
WILKINSON.—On the 25th ult., T. J. Wilkinson, M.R.C.S.E., late of Manchester.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

BOOKS ETC. RECEIVED.

BAILLIÈRE, TINDALL, & COX, London.

An Elementary Treatise on the Function of Vision and its Anomalies. By Dr. Giraud-Teulon. Translated from the Second French Edition by Lloyd Owen, F.R.C.S.I. pp. 158.

BATSFORD, B. T.

The Plumber and Sanitary Houses. By S. Stevens Hellyer. Second Edition. pp. 321. With Engravings.

BLACK, A. & C.

An Introduction to the Study of Fishes. By A. C. L. G. Günther, M.A., M.D., &c. pp. 720. With Illustrations.

CHURCHILL, J. & A., London.

St. George's Hospital Reports. Vol. X. 1879. pp. 662.
Croonian Lectures on some Points in the Pathology and Treatment of Typhoid Fever. By W. Cayley, M.D., F.R.C.P. pp. 126.

HEYWOOD, J., Manchester.

Health Lectures delivered in Manchester, 1878-79-80.

HODDER & STOUGHTON, London.

Health Studies. A Third Course of Lectures delivered in the Lecture Hall of the Young Men's Christian Association. By H. S. Paterson, M.D. pp. 209.

LEWIS, H. K., London.

Practical Histology and Pathology. By Heneage Gibbes, M.B. pp. 107.

Dwelling Houses, their Sanitary Construction and Arrangements. By Dr. W. H. Corfield. pp. 112. With Illustrations.

LINDSAY & BLAKISTON, Philadelphia; TRÜBNER & Co., London.

A Practical Treatise on Mechanical Dentistry. By Joseph Richardson, D.D.S., M.D. Third Edition, Revised and Enlarged. pp. 438. With 185 Illustrations.

MACLACHLAN & STEWART, Edinburgh.

Notebook on Materia Medica, Pharmacology, and Therapeutics. By R. E. Scoresby-Jackson, M.D. &c. Fourth Edition, Revised and brought down to the present date, by Dr. F. W. Moinet, F.R.S.E. pp. 470.

MACMILLAN & Co., London.

Ideal Chemistry. A Lecture. By Sir B. C. Brodie, Bart., D.C.L., F.R.S. pp. 64.

SMITH, ELDER, & Co., London.

Atlas of Histology. By E. Klein, M.D., F.R.S., and E. Noble Smith, L.R.C.P., M.R.C.S. Part XII.
The Descriptive Atlas of Anatomy. A Representation of the Anatomy of the Human Body in 92 royal 4to Plates, containing 550 figures.

Note sur quelques particularités de l'Action Aësthiogène des Vésicatoires. Par le Dr. J. Grasset.—La Médecine du Passé et la Médecine de l'Avenir. Par Dr. A. Juhel.—Indications for Treatment in Fractures at the Elbow. By Dr. L. S. Pilcher.—Clinica Oftalmologica. Del Dr. P. F. Roberts.—The Form, Cause, and Treatment of Tinnitus Aurium. By W. D. Henning, F.R.C.S.Ed.—Nieuwe wyze van Behandeling der Aneurysmata. Door J. E. Van der Meulen.—Westminster Review, October.—Vox Populi: a Sequel to the Philosophy of Voice. By C. Lunn. (Reeves, Fleet-street.)—Proceedings of the Medical Society of the County of Kings.—Protection of the Insane. By Dr. E. C. Seguin.—Kopf on Diet and Hygiene.—Sull' Intestinale Cronico. Studio Clinico del Prof. G. Corradi.—Della Litolapassia o Litotrizia a Processo Rapido. Del Dr. G. Cinti.—Victorian Review, September.—L'Amministrazione Sanitaria in Egitto.—Du Myxoedème. Par W. B. Hadden.—Hints on the Application of the Poro-plastic Jacket. By Paul Swain, F.R.C.S. (Brendon, Plymouth.)—Compendium der Psychiatrie. Von Dr. J. Weiss. (Bermann and Altmann, Wien.)—Note on Bedroom Ventilation. By Lawson Tait, F.R.C.S.—Anales del Circulo Medico Argentino.—Monthly Review of Dental Surgery, October.—The Carisbrooke Magazine, October. (Simpkin, Marshall, and Co.)—Revue des Sciences Médicales, Octobre. (Masson, Paris.)—Statistical Tables of the Patients under Treatment in St. Bartholomew's Hospital during 1879.—Rocky Mountain Medical Review. (Tribbe and Jefferay, Colorado.)—De l'Influence des Eaux Malsaines sur le Développement du Typhus Exanthématique. Par le Dr. Robinski. (Asselin, Paris.)—Bulletin de l'Académie de Médecine, Nos. XXXIX. and XL.—Journal of Psychological Medicine, Vol. VI., Part II. (Baillière, Tindall, and Cox.)—Indican in Health and Disease. By H. N. Heineman, M.D. (Putnam's Sons, New York.)—State Medicine and the Compulsory Registration of Disease. By Dr. J. M.G. MacLagan. (Knight and Co.)—The Medical Practitioner and his Social Position. By Dr. J. Meredith.—Virchow's Archiv.—The Magazine of Art, Part I., New Series. (Cassell and Co.)—Smith's Visiting List, 1881.—Mittheilungen aus der Ophthalmiatriischen Klinik in Tübingen. Herausgegeben von Dr. Albrecht Nagel.—Zweites Heft. Die Typhus Epidemie im Füsilier-Bataillon zu Tübingen im Winter 1876-77. Von Dr. Hermann Schmidt. (Verlag der H. Laupp'schen Buchhandlung.)—Carisbrooke Magazine, November. (Simpkin, Marshall, and Co.)—Sunday Magazine, November; Good Words, November; Good Cheer; Little Snow-flakes: Christmas Stories for the Young. (Isbister and Co.)—The Veterinary Journal, November.—Italian Dairy Produce. A Sketch by C. Pavia.—On Renaissance Drama, or History made Visible. By Wm. Thomson, F.R.C.S., F.L.S. (Sands and McDougall, Melbourne.)—Archives of Ophthalmology; Archives of Otolology. Edited by Drs. Knapp and Moos. (Putnam's Sons, New York.)—Enumeration, Classification, and Causation of Idiocy. By Dr. I. N. Kerlin.—Contemporary Review, November. (Strahan and Co.)—London Smoke and Fog. By F. Edwards, jun. (Longmans.)—Some Practical Suggestions in the Treatment of Diphtheria. By Dr. R. J. Nunn. (Evans, Baltimore.)—Fraser's Magazine, November.

INTERNATIONAL MEDICAL CONGRESS.

A MEETING of the Executive Committee took place at the College of Physicians on Tuesday, the 19th of October, Dr. J. Risdon Bennett in the chair. The Secretary-General, Mr. MacCormac, presented a statement of the work which had been done since the last meeting of the Committee on August 3rd. A circular announcing the meeting of the Congress in London next year, together with a list of the proposed officers of the various sections, and a provisional list of subscriptions, have been sent to every medical man whose name stands on the Register. In addition to these circulars in English, circulars in French have been widely distributed in France, Holland, Belgium, Norway, Sweden, Denmark, Switzerland, Portugal, and Russia. Circulars in German have been sent to the principal medical men throughout Germany and Austro-Hungary. Circulars in Italian have been sent out in Italy; and circulars in Spanish in Spain. A special circular in English has been sent to the leading medical men in the Northern and Southern States of America; and, in addition to all these, a number of circulars have been sent to medical men residing in various other parts of the world. Lastly, a copy of one of the circulars and of the proposed list of officers has been sent to a number of the home and foreign medical journals, and in several of these cordial and appreciative notices have already appeared concerning the intended Congress. Among others, the following medical men have already announced their intention to attend:—Professor Langenbeck, Berlin; Professor Billroth, Wien; Professor Volkman, Halle; Professor König, Göttingen; Professor Frendelenburg, Rostock; Professor Busch, Bonn; Professor Reyher, St. Petersburg; Professor Charcot, Paris; Baron Larrey, Paris; Professor Morache, Bordeaux; Dr. L. Labbé, Paris; Professor Theod. Schwann; Professor v. Recklinghausen, Strassburg; Professor Spiegelburg, Breslau; Dr. Benedikt, Wien; Professor Brandes, Aachen; Dr. Bämler, Freiburg; Dr. Munnich, Berlin; Dr. Fokker, Groningen; Dr. Bidder, Mannheim; Dr. Mikulicz, Wien; Dr. J. Peczeley, Buda-Pesth; Dr. Waldeyer, Strassburg; Dr. Königsfeld, Aachen; Dr. Götz, Strassburg; Dr. Sandre, Oran; Dr. L. Martineau, Paris; Dr. A. Herbert, Paris; Dr. L. Jullien, Paris; Dr. Brachet, Aix-le-Bains; Dr. Lahuppe, Dr. Chervin, Dr. Demons, Bordeaux; Dr. Barr, Geneva; Dr. Joel, Lausanne; Dr. C. Romano, Naples; Dr. S. Giordano, Cannerio; Professor Albanese, Palermo; Professor Argentio, Palermo; Dr. Keyes, New York; Dr. W. Y. Yandell, Louisville, Kentucky; &c.

Meetings of the officers of the various sections have been held, and in several of them a provisional list of subjects for papers and discussion has been drawn up, printed in the three official languages, and widely distributed at home and abroad. The following are the provisional lists prepared in Sections of Surgery, Diseases of Children, Diseases of the Ear. We have already published the list of subjects in State Medicine (see p. 679):—

SECTION V.—SURGERY.

1. Recent Advances in Abdominal Surgery. 2. On the Surgical Treatment of certain Diseased Conditions of the Kidney. 3. On recent Advances in the Method of Extracting Stone from the Bladder. 4. On the Treatment of Operation Wounds. 5. On the Treatment of Aneurism by the Elastic Bandage. 6. On the Comparative Advantages of Early and Late Resection in Diseases of Joints.

JOHN ERIC ERICHSEN, Esq., P.R.C.S., F.R.S., President.

PROF. E. H. BENNETT, M.D.,
PROF. HUMPHRY, M.D., F.R.S., } Vice-Presidents.
W. S. SAVORY, Esq., F.R.S.,
H. G. HOWSE, Esq., M.S., } Secretaries.
THOMAS SMITH, Esq.,

All communications regarding Section V. should be addressed to H. G. Howse, Esq., M.S., 10, St. Thomas's-street, London, S.E.

SECTION VII.—DISEASES OF CHILDREN.

MEDICAL.—1. The real Position of the so-called Rubella, Rötheln or German Measles, and its relation to Scarlatina and Measles. 2. Syphilis as a Cause of Rickets. 3. On the different kinds of Spinal Paralysis and Myelitis in Children. 4. The Conditions governing the occurrence of Albuminuria and of Paralysis as attendant on Diphtheria, or as Sequelæ. 5. The relationship of Chorea to Rheumatism, with especial reference to the nature of the Heart Murmur which so frequently attends Chorea. 6. The forms of Acute Tuberculosis other than ordinary Tubercular Meningitis.

SURGICAL.—1. The Surgical Treatment of Croup and Diphtheria. 2. The Surgical Aspect of Tapping for Empyema. 3. The Pathology and Treatment of Genu Valgum. 4. The Treatment of Diseases of the Joints, especially with a view to the Prevention of Deformity. 5. Treatment of Spinal Curvature, with special reference to Sayre's method. 6. The Nature of the so-called Surgical Scarlet Fever.

CHARLES WEST, President.

SAMUEL GEE,
TIMOTHY HOLMES, } Vice-Presidents.
HORATIO DONKIN,
ROBERT W. PARKER, } Secretaries.

All communications regarding Section VII. should be addressed to Dr. H. Donkin, 60, Upper Berkeley-street, London, W.

SECTION X.—OTOLOGY.

1. On the Value of Operations in which the Tympanic Membrane is Incised. 2. On Morbid Growths within the Ear and their Treatment. 3. On Loss of Hearing where the External and Middle Ears are Healthy.

WILLIAM B. DALBY, Esq., President.
DR. CASSELLS,
DR. FITZGERALD, } Vice-Presidents.

All communications regarding Section X. should be addressed to W. Laidlaw Purves, 9, Stratford-place, Oxford-street, London, W.; or Urban Pritchard, 3, George-street, Hanover-square, London, W., Secretaries.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET OFFICE, November 4th, 1880.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radiation in Vacuum	Max. Temp. in Shade	Min. Temp.	Rain fall.	Remarks at 8.30 A.M.
Oct. 29	29.50	N.	39	37	..	46	35	0.23	Raining
" 30	30.12	W.	35	33	66	47	30	..	Hazy
" 31	30.10	N.W.	46	42	71	52	32	..	Bright
Nov. 1	30.20	N.W.	45	41	..	45	41	..	Foggy
" 2	30.19	S.E.	34	33	57	45	29	..	Foggy
" 3	30.17	E.N.E.	39	37	63	48	30	..	Hazy
" 4	30.45	E.	37	35	61	41	32	..	Hazy

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Local papers containing reports or news-paragraphs should be marked.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

Lectures, original articles, and reports should be written on one side only of the paper.

We cannot prescribe, or recommend practitioners.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET to be addressed "To the Publisher."

A PARADISE OF RHUBARB.

M. PRJCVASKY, the Russian explorer, in a recent letter giving an account of his movements on the Chinese frontier, in Eastern Turkistan, describes a veritable paradise of rhubarb. Here he chanced upon a locality where the plant was found in prodigious quantity, and in the older plants with roots of colossal proportions. Taking at hazard one of these roots, he found that it measured 16 inches in length, 12 inches in breadth, 7 inches in thickness, and weighed 26 pounds.

Mr. W. Roger Williams.—The paper is marked for insertion.

WATERING-PLACES AND THEIR SANITARY CONDITION.

To the Editor of THE LANCET.

SIR,—The public owe you many thanks for your article on the Sanitary State of Margate. My own experience of that town enables me to corroborate your statements. The condition, however, of other watering-places, where men do congregate in large numbers, is equally bad, and equally deserves the lash of your vigorous whip. I give you in a few words my experience of Great Yarmouth, where it is stated that more than 20,000 visitors were enjoying the breezes of the eastern coast during the month of August.

As at Margate, so at Yarmouth, there is no system of drainage. Cess-pools exist throughout the town in the back yards of the dwelling-houses. I went to Yarmouth with a delicate and ailing wife and two children in the month of August, when the weather was at its hottest, being ordered thither by my doctor for my wife's restoration to health. A few nights after our arrival I woke suddenly, and found my bedroom filled with the most abominable stench with which my olfactory nerves were ever afflicted. To jump up, close the open window—through which the horrid stench was pouring,—and to burn some brown paper was the work of a minute. In answer to my inquiries the next morning, I found that a cesspool, immediately under my bedroom window, had been emptied during the night, and that the landlady had cautioned her servants to close their own windows, but, dreading the hasty exodus of her lodgers, had expressly ordered them not to communicate the impending night-work to us. One of my boys was seized in a few days with shivering fits and feverish symptoms, which only vigorous measures prevented, I believe, from taking the form of serious illness. The other lad had an abscess in the ear, and was otherwise unwell. I had sickness and all-overish feelings, which necessitated, as in the case of the others, application to a neighbouring medical man. This was going to the seaside for health! The glorious breezes of Great Yarmouth are undeniable, and thankfully do I acknowledge their potency; but it seems the height of infatuation for man to stop the flow of healing influence by an obstinate disregard of the decencies and purities of modern civilisation.

I am, Sir, yours obediently,

H. W. G.

London, Oct. 20th, 1880.

TABES DORSALIS CURED BY NERVE-STRETCHING.

DR. LANGENBECK reports in the *Berlin. Wochenschrift* a case of tabes dorsalis, in which nerve-stretching, conducted under antiseptic precautions, resulted in a complete cure. The left sciatic was first operated upon; the motor and sensory paralysis following disappeared in a few days. Twelve days subsequently the right sciatic and both crural nerves were stretched, and with the same results. The feebleness which marked the first efforts at locomotion soon passed off, and the ataxic symptoms disappeared.

L.S.A.—It would scarcely be worth while to raise the point.

Dr. Mahomed.—Too late for this week.

PAYMENT OF MEDICAL OFFICERS OF HOSPITALS.

To the Editor of THE LANCET.

SIR,—So many of the letters and articles contained in your late numbers point in the same direction that it appears right to call attention to their common end. Some of your correspondents condemn, and others defend, cheap dispensaries; while Mr. Ayres, of Deptford, casually mentions that in his ordinary practice he charges poor people as low as 6d. and 1s. a bottle for medicine; and at Guy's Hospital the authorities are disputing the authority and position of doctors who give time and hard work to the public free of all charge.

Surely now is the time to consider and discuss how it is that medical men so seldom make a retiring competence for themselves and a provision for their families. How is it that they as a profession always occupy an ambiguous position in "good society," only patronised or sneeringly tolerated when other professional men take an undisputed position? "Fine words butter no parsnips," and yet we are content to accept a few words of compliment about the unselfishness of our noble profession (often spoken with a half-veiled contempt), in place of the practical and pecuniary results of work that should stand on its own merits. People are judged much by the value they put on themselves and on their work. The public will only give us even the honour of its esteem when it is sure that no practical benefit will follow to us. The best man among us has never yet been made a peer, while more than half the peerage is made up of descendants of lawyers, who knew better than to work half their time for nothing. It is high time to recognise this fact, that every man of eminence in the profession who systematically gives gratuitous service in hospital work lowers the status and diminishes the fees of his professional brethren all over the kingdom to the remotest village. No other man or class of men gives systematic labour in hospitals. Why should doctors? Now is the time to speak. Let the profession insist on all its members engaged in hospital work being salaried. The men will be ten times more respected and esteemed at the hospitals; they will raise the position of the whole profession in the public estimation, and the public will delightedly pay us a hundred thousand a year more for services they will value more highly.—Yours truly,

Oct. 22nd, 1880.

MEDICO-ETHICAL.

Club Doctor.—In the absence of a written agreement, it is doubtful whether the claim could be enforced. The matter should be referred to a solicitor.

Dr. W. H. Taylor.—It would, under the circumstances, be contrary to our rule to publish the description.

F.R.C.S. (Calcutta) is thanked for his communication.

THE EAST WIND IN RESPECT TO HEALTH.

To the Editor of THE LANCET.

SIR,—While heat and cold and damp have been constantly referred to as causes of disease, I do not think the effects of a dry wind, such as that from the east in our own country, have been worked out in a precise—i.e., scientific manner. To me its effects are very similar to that of the air of a room heated by a stove, no water being used to moisten the air by evaporation. I have felt the same sensations in a hot climate when doing hard physical work in a hot sun and a hot place, which could be checked only by frequent, though small, drinks of water. At the time I was in excellent condition, and could do any hard work all the day long. After all, one can take such effects of the external air very much as a slow heat-stroke, merely causing irritation, or, carried still further, as in a burn, where still more shock is caused, and the danger consists in the extent of surface injury, not its mere depth. Here the vaso-motor nerves, of course, are the sufferers; then the unpleasant action of this wind, if not well admixed with a southerly one, is the same as that of a burn or heat-stroke, only milder in degree. To show how strong the effects of an east wind are, I may cite its action on that most delicate of scents—viz., that of the hare. On two occasions, when hunting with beagles, the scent was gone in the afternoon, after being good all the morning, we not noticing any change; but in the night, strong easterly winds with frost set in, and the scent felt the influence long before we did. Again, with a pack of the same hounds, an easterly wind blowing, no scent on grass or plough-land; but on a broad beach of shingle an excellent one, simply because the sea-salt kept moisture enough in it to hold the scent. I do not pretend to compare these as identical, but merely to show what effect a dry wind has on animals, and also on the subtle scent given off by some. For the same reasons I believe that erysipelas, incipient sunstroke, relapse of ague, and dysentery are due to the dryness of this wind.

Your obedient servant,

October, 1880.

WILMOT H. T. POWER, M.R.C.S.

THE FORCING SYSTEM IN EDUCATION.

At the thirteenth annual meeting of the Canada Medical Association, a committee was appointed to consider and report upon the subject of excessive brain-work and cramming in schools. This step on the part of the Association was induced by certain facts brought forward by Dr. Grant in a paper read by him "On Gymnastics of the Brain," in which he dealt with the evils resulting to young people of too early education in ill-ventilated and overcrowded school-rooms.

House-Surgeon.—1. No.—2. Yes.—3. For the evidence a fee may be demanded, but not for the post-mortem examination.
Mr. H. W. Hall's letter will appear next week.

DIFFUSION OF ANTISEPTICS AND OTHER REMEDIES IN THE ATMOSPHERE OF APARTMENTS.

To the Editor of THE LANCET.

SIR,—It happens frequently that it is desirable to diffuse antiseptics in sick chambers. Many forms of apparatus to effect this object that have been devised fail for various reasons.

During last spring I had several cases in the treatment of which it was most desirable to have an antiseptic as well as a moist atmosphere. I had in use one of Mr. Swan Nash's bronchitis kettles. This afforded as much steam as could be required; but the small triangular trough with which it is furnished was quite unsuitable for holding any antiseptic. I accordingly removed the first joint of the delivery tube, and fixed in its place a common tin funnel. This was loosely filled with tow; the steam was delivered in greatly increased volume by this alteration of the arrangement. Upon the tow a drachm of pure carbolic acid was sprinkled, and in a very few minutes the odour of the acid pervaded every corner of the apartment. The great advantage of this form of fumigation is—first, its great simplicity; and secondly, the ease with which a supply of antiseptic can be set up. At regular intervals a fresh supply of carbolic acid is sprinkled on the tow, without the smallest difficulty or disarrangement of the apparatus.

It is very remarkable to note how grateful the purification of the atmosphere of a sick room is both to patients and to attendants. Cases of severe pneumonia have been strikingly benefited by the use of carbolic-acid fumigation, and in cases of diphtheria some such arrangement should be continuously in use both for the benefit of the patients and also for the protection of attendants and fellow-occupants of the ward. In a case of great gravity I had an elastic tube fixed to the kettle, and the funnel with the carbolised steam flowing from it was brought close to the bed of the patient, giving wonderful relief to his sufferings. Every sick ward—that is, wards constantly used for sickness—ought to be furnished with the means of antiseptic fumigation, and there are few cases that would not bear the antiseptic steam diffused by this apparatus.

Yours faithfully,

Marlborough College, Oct. 23rd, 1880. WALTER FERGUS, M.D.

Mr. T. P. Stephenson.—The practitioner himself is the best judge. The case is a good one, and the medical attendant should be well paid. Ignoring medicines, 100 guineas, with special charges for London journeys and consultations, would not be too much.

M. M.—The question is a legal one.

INTENTION IN THE DETERMINATION OF SEX.

To the Editor of THE LANCET.

SIR,—With your permission, I should like to ask Dr. Granville how he accounts for difference of sex in the case of twins?—Yours &c.,
October, 1880. A. G. P.

A. M. is referred to an article on the subject in another part of our present impression.

Mr. A. B. Lowndes does not explain the kind of machine for which his device is intended.

"HOMŒOPATHIC PRACTITIONERS."

To the Editor of THE LANCET.

SIR,—In your last issue you accuse the homœopaths of sailing under false colours, as there is no indication of their mode of practice in the Directory. In my own case, and in others that I know of, the fault of this omission is entirely due to the editors of the Directory, who utterly ignored and omitted to insert the announcement of my connexion with the British Homœopathic Society and appointment at the Birmingham Homœopathic Hospital, both of which I returned with their annual circular on two occasions.

I trust to your fairness to make this explanation as public as your accusation; and I must say that it is a little hard upon us that after for several years the head and front of our offending being made the fact of our assuming a distinctive name, we should now be condemned because the distinction is not made in the Directory.

I am, SIR, yours &c.,

ED. M. MADDEN, M.B.,

Surgeon to the Birmingham Homœopathic Hospital.

Birmingham, Nov. 3rd, 1880.

**Mr. Madden, M.B.*, is seeking one object; we are striving for another. He would have the editors of the Medical Directory recognise homœopathic hospitals by inserting appointments to these institutions. This recognition we should deprecate. What we desire is that some distinguishing mark should be placed against the names of homœopaths to avoid mistake.—ED. L.

BRITISH MEDICAL TEMPERANCE ASSOCIATION AT BRISTOL.

UNDER this head *Temperance* writes:—

"I would, with your permission, point out a matter which I think is deserving the attention of teetotalers—that is, the utter untrustworthiness of the statistics set forth to show the advantages of total abstinence over even temperance. I took some rough notes of some of the figures read out by Dr. Ridge in his paper. These figures read thus: There is an Assurance Society which divides its members into non-abstainers and abstainers for comparison as to longevity, with the result that one non-abstainer dies in forty, and one total abstainer in one hundred and forty-one per annum. Again, a Total Abstinence Club, carried on at Colne, has a death-rate per annum of 9.9 per 1000! Well, this means, seeing that people do not often insure their lives until they are twenty years of age—that, in the first case, a person who enjoys some of the good things provided may live to the beggarly age of sixty years on the average; while if he will drink water only, he may live until he is a hundred and sixty years of age! Again, in the second instance, a man after insurance, who is a teetotaler, may live for another hundred years! Such statistics might be brought forward by the genuine teetotal stump orator, and might go down with the unthinking public. But, I would ask, are they worthy of a man having such an eminent position as Dr. Ridge, or a fit pabulum for perhaps his equals?"

Mr. Nourse.—The announcement in our number of October 9th will be found to be correct.

Dr. Jas. Johnstone.—We think it would not be advisable to publish the letter.

SEA-BATHING IN WINTER.

To the Editor of THE LANCET.

SIR,—Having occasionally read remarks in your journal upon cold bathing, I venture to send you some details of my own experience, having bathed in the open sea regularly all the year round for two years and a half, including two severe winters. I am in my forty-third year, of active and temperate habits, accustomed to much exercise in the open air, but not altogether strong, having indeed come to the seaside for rest and change after a partial breakdown of the nervous system, which necessitated an easy life for two or three years. I am careful (1) to stay in the water a very short time: ten seconds in winter and a minute or two in summer is enough for me. I think this is the secret of useful bathing. There is hardly time to lose much heat, and the reaction comes on directly after getting out. (2) Not to bathe if feeling unwell at the time, nor when tired, and to keep the body warm by exercise before and after the bath. I have often missed a single day, twice only three days together, because of a slight cold or biliousness.

As for the benefits, sea-water may be different from fresh; but I agree with your remark that they are questionable, and each must judge for himself. To me personally I think there are general, though perhaps indirect benefits—viz.: (1) *The moral resolution* which has enabled me to go and bathe almost before sunrise (if tide required), with ice and snow to the water's edge, helps one to keep up a good standard of health. (2) *The direct physiological effects* I cannot speak of scientifically; but the act of bathing and the warm and pleasant reaction seem to be almost like an athletic exercise, and certainly in mid-winter I have sometimes felt the exhilarating glow in the most decided manner.

In conclusion, it seems to me that cold bathing requires much care if it is to do good, and I cannot help thinking that many people who go for the seaside in summer and bathe lose most of the benefit by staying in the water much too long.

October, 1880.

I am, Sir, yours truly,

NEMO.

THE USE OF IMPURE MATERIALS IN ERECTING BUILDINGS.

To the Editor of THE LANCET.

SIR,—I have felt interested in the discussion going on in THE LANCET on the above subject, and have been astonished that none of your correspondents have taken notice of the extensive use of putrid matter that is mixed with the plaster in the shape of hair. My attention was drawn to this subject by an outbreak of typhoid fever which raged here some five years ago, and which was almost entirely confined to a district containing a number of newly-built houses—a district, it is true, that was badly supplied with water, but still not to such an extent as altogether to account for the scourge, seeing that the houses which had been inhabited for a length of time were not found to contain the disease to such an extent as those of recent formation. These houses, I may mention, had been occupied before the plaster was thoroughly dry, and it occurred to me that the poison might to a large extent be generated in their walls, and have as its origin the decomposing animal matter with which the lime was mixed. My observations have also led me to notice isolated cases of typhoid occurring in country places, where the houses were in a defective condition as regards their water-tightness, permitting of rain soaking the walls, and no doubt setting up some chemical action between the lime and hair. That the hair which our plasterers use is a source of danger to the occupants of newly-built houses, as also to those whose habitations are damp from defective roofing or drainage, is a fact of which I am thoroughly convinced, and so long as people will be stupid enough to occupy such houses, so long will the evil last; but that a substitute for this putrid animal matter should not have been invented is a disgrace to this enlightened age, and one that will have the serious consideration of our sanitary authorities, is the earnest wish of,

Yours faithfully,

Galashiels, Oct. 26th, 1880.

W. H. MURRAY, M.D.

Mr. Thos. Browne and Inquirer will find on reference to the Directory that Mr. Wm. Arthur Stradling is surgeon in the West Indian Mail Service. H.M.S. was a misprint for R.M.S.

CERTIFICATION OF INSANE PAUPERS.

To the Editor of THE LANCET.

SIR,—Allow me to mention what occurred to me personally on this subject in support of the opinions of your correspondents. Some months ago I was appointed surgeon to a large union workhouse hospital at a fixed salary of £250; no extras. The Local Government Board refused to confirm such an appointment on the ground that lunacy fees cannot be legally contracted for. After a deal of correspondence I agreed to accept £220, with extras, this difference being an average of my predecessor's extras for three years. In a pecuniary point of view I am so far a good deal in pocket.

Yours &c.,

Nov. 1st, 1880.

J. P. C.

COMMUNICATIONS, LETTERS, &c., have been received from—Sir J. Fayer; Mr. J. Hutchinson, London; Mr. MacCormac, London; Dr. Mahomed, London; Mr. R. C. Lucas, London; Dr. Sharkey, London; Dr. Hill, Birmingham; Dr. Reed; Mr. H. Laupp'sche, Tübingen; Dr. Hughes, Llanberis; Dr. A. M'L. Hamilton, Queenstown; Dr. Tayler, Anerley; Surgeon J. Ronayne, A.M.D.; Mr. Smeeton, Jamaica; Mr. Potter; Dr. Drysdale; Dr. Byrom Bramwell, Edinburgh; Mr. Dudgeon, London; Dr. Monckton, Rugeley; Mr. T. Browne; Dr. R. J. Morin; Mr. H. J. Lloyd, Barmouth; Dr. C. Taylor, Parramatta; Dr. Fowler, London; Mr. Paulson, Loughborough; Messrs. Agnew and Sons; Mr. H. Field; Dr. C. MacDowall; Dr. J. Gamgee, Washington; Mr. T. Woods, Gillingham; Mr. H. E. Armstrong; Dr. Johnstone, Edinburgh; Mr. Scudamore, London; Mr. Rendle; Mr. Wilson, London; Mr. Judge, London; Mr. Benham, London; Mr. Tallack; Dr. Jacob, Leeds; Dr. Drummond, Newcastle-on-Tyne; Mr. Palmer, London; Mr. Abbott, London; Mr. Jackson; Mr. Elliott; Mr. W. E. C. Nourse, Exeter; Mr. H. W. Hill, Manchester; Mr. Madden, Birmingham; Mr. J. H. Nicholson, Manchester; Mr. S. Boyd; Mr. Mercier; Messrs. Rushworth and Abbott, London; Messrs. Herbert, Miller, and Co., London; Mrs. Gurner; Messrs. Stenth and Co., Guildford; Mrs. Coker, Horncastle; Mr. Warner; Dr. Edward Laurie, Lahore; Temperance; Club Doctor; A. M.; J. P. C.; A. G. P.; M. M.; General Practitioner; Medicus; R. W.; L.R.C.P.; C. M. C.; &c. &c.

LETTERS, each with enclosure, are also acknowledged from—Mr. Hopson, Newcastle-on-Tyne; Mr. Weatherhead; Mr. Llanwrne, Hereford; Mr. Casson, Ulverston; Messrs. Porteous and Co., Glasgow; Dr. Munro, Manchester; Miss Rossier, Southall; Mr. R. D. Ford, London; Mr. Totten, London; Mr. Scattergood, Leeds; Mr. Kempthorne, Calington; Messrs. Keith and Co., Edinburgh; Mr. Crabb, Holloway; Messrs. Shiers and Haddon; Dr. Lister, Newton-le-Willows; Messrs. Holbrook and Son, Portsmouth; Mr. Lees, Oldham; Dr. Weaver, Langton; Mr. Garrard, Derby; Mr. Sergeant, London; Mr. Jordan, Birmingham; Mr. Brainsby, Peterborough; Mr. Whiteley, Leeds; Mr. Cole, Holywell; Mr. Pratt, Cardiff; Mr. Lowe, London; Messrs. Lee and Nightingale, Liverpool; Mr. Walker, Wakefield; Mr. Williams, Pwlheli; M. De Casinette; Mr. Sanders, Manchester; Mr. Richardson, Leamington; Dr. Allbutt, Leeds; Messrs. Gurdon, Berdoe, and Co.; Mr. Cooper, Croydon; Miss Sullivan, Leicester; Veritas, Chesham; B. D. F.; Dispenser; H. O. S., Gomersall; A. Z., Patricroft; Medicus, Sheffield; M. N., Holloway; W. F.; W. H. M., London; Edinensis; Medicus, Preston; Fides, Balham; Alpha, Newcastle-on-Tyne; Veritas; Medicus, Rathmullen; Medicus, Wilton; H. M. P., Port Elizabeth; R. C. S., Birmingham; Beta; Statim, London; Medicus, Cardiff; Ch. M.; E. J.; J. B.; M. D., Leicester; Medicus, Leeds; M., London; Q., East Retford; M. D., Clapton; &c.

Journal de Médecine, Indian Daily News, La Escuela de Medicina, Englishman, Chemist's Journal, Irish Times, Anglo-American, Dumfriesshire Herald, Democrat, El Medico y Cirujano Centro-Americano, St. Louis Globe, Science, Halifax Times, Willesden Chronicle, Specialist, Education, Revue Mensuelle, Gaillard's Medical Journal, Scarborough Mercury, Medical Herald, La Science Libre, &c., have been received.

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Advertisements (to ensure insertion the same week) should be delivered at the Office not later than Wednesday, accompanied by a remittance.

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The postal arrangements relating to the distribution of THE LANCET will be considered from time to time in the interests of subscribers.

Tables of Contents, with the Index of Advertisements, for each Number can be had on application to the Publisher.

Agent for the Advertising Department in France—J. ASTIER, 66, Rue Caumartin, Paris.

Medical Diary for the ensuing Week.

Monday, Nov. 8.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS. — Operations, 10½ A.M. each day, and at the same hour.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

ST. MARK'S HOSPITAL.—Operations, 2 P.M.; on Tuesday, 9 A.M.

MEDICAL SOCIETY OF LONDON.—8½ P.M. Dr. Dowse will exhibit a Patient with Tumour of the Cerebellum.—Dr. Sansom: "A Case and Specimen illustrating the Causation of the Pre-systolic Murmur"; "The Cause and Significance of Reduplication of the Sounds of the Heart."

Tuesday, Nov. 9.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 3 P.M.

ANTHROPOLOGICAL INSTITUTE OF GREAT BRITAIN AND IRELAND.—8 P.M.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—8½ P.M. Dr. Cavafy, "On Amoeboid Movements of the Colourless Blood-corpuscles in Leukæmia."—Mr. Brodhurst, "On the Nature and Treatment of Genu Valgum."

Wednesday, Nov. 10.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.

ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.

ST. MARY'S HOSPITAL.—Operations, 1½ P.M.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at 1 P.M.

LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.

GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.

HUNTERIAN SOCIETY.—7½ P.M. Meeting of Council.—8 P.M. Mr. Couper, "On a Case of Nephrectomy."—Mr. Waren Tay: "Notes of a Case of Colotomy performed six years ago for (1) Annular Stricture, Patient still living."

ROYAL MICROSCOPICAL SOCIETY.—8 P.M. Mr. Chas. Stewart: "Notes on some Acanthometridæ."—Dr. Carpenter: "New Working Microscopes."

Thursday, Nov. 11.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.

CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M.

Friday, Nov. 12.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

QUEKETT MICROSCOPICAL CLUB.—7 P.M. Conversation and Exhibition of Objects.

CLINICAL SOCIETY OF LONDON.—8½ P.M. Mr. James Adams, "On a Case of Ligature of the Common Carotid and Subclavian Arteries for an Aneurism, supposed to be of the Innominate Artery."—Dr. Duckworth, "On two Cases of Myxœdema."—Dr. Sturge and Mr. Godlee, "On Stretching of the Facial Nerve for Relief of Spasm of the Facial Muscles."—Dr. T. Colcott Fox, "On a Case of Persisting Gyrate Erythema."

Saturday, Nov. 13.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

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Address
AT THE

OPENING OF THE ANATOMICAL DEPARTMENT

IN THE

NEW BUILDINGS OF THE UNIVERSITY OF
EDINBURGH.

Delivered October 27th,

By WILLIAM TURNER, M.B., F.R.S.,

PROFESSOR OF ANATOMY.

(Concluded from p. 726.)

AND now, gentlemen, we may perhaps devote a few minutes to the consideration of the question of why it is that the study of anatomy has for centuries, by common consent, been made the foundation of medical education. Anatomy forms the basis of the biological sciences; just as a knowledge of the laws of motion is essential and must be constantly recurrd to at every step, before any true progress can be made in the investigation of the physical sciences, so must the structure of the human and animal frame be appealed to in all attempts at classification, in all inquiries into the adaptation of parts to their uses, in all discussions respecting the functions they perform in a state of health, and the alterations or disturbance in those functions which take place in the course of disease.

As a branch of medical training anatomy may be looked at from two points of view, either in its direct relations to the science and practice of medicine and surgery; or as a valuable educational exercise for disciplining the mind to habits of observation, accuracy and patience, and for strengthening the memory and reasoning powers.

In its direct relations to the science of medicine it is of importance as the science which treats of the structure, position, form, and relations of the constituent parts of the body, and of the construction of the body as a whole; so that in applying yourselves to this subject you are, in short, studying the mode in which the complex mechanism of the human framework is put together. If you are to understand by the term morphology the study of form, internal and external, superficial and deep, then the term anatomy embraces not only morphology but something more. For superadded to the conception of form, position, and relations you have that also of structure and construction. Hence by its study you are enabled to realise the nature of that mechanism which, though you examine it in its dead or passive condition, has yet at one time teemed with life and activity. The study of anatomy is therefore a necessary preliminary to that of physiology, which treats of the functions performed by the organs and tissues of the body when in a state of health; and to that of pathology, which treats not only of disturbed function, but of altered structure. Hence, by the common consent of the schools, anatomy is regarded as a fundamental subject, and forms a part of the early training of every student of medicine.

But anatomy has also a direct relation to the practice of medicine and surgery; it is by its study that you become acquainted with the position and relations of all those tissues, organs, and parts, the diseases or modifications in the structure or functions of which, you as prospective practitioners of medicine, have to make yourselves acquainted with. By the careful dissection and manipulation of parts your hand becomes trained to recognise differences in form and structure, and fitted to execute such operative procedures as may be required in the exigences of practice. It is only after you have acquired an accurate conception of normal anatomy and physiology that you can hope to apply your knowledge to the diagnosis of disease, so as to feel certain of the ground on which you stand. Now, as the relations of anatomy and physiology to the practice of medicine and surgery can only be properly realised by the student after he has seen something of that practice, after he has, in short, attended for some time the wards of an infirmary and come face to face with disease, the

No. 2985.

study of these two fundamental sciences should not cease in the early years of a medical curriculum, but ought to overlap, for a time at least, with the hospital work. Hence I am unable to agree with those educationists who would draw a sharp line of demarcation between the study of anatomy and physiology and the final subjects of medical study. The attention of the student ought not, in my judgment, to be withdrawn from the one until he has been introduced to the other by attendance in the wards of a hospital.

I have now told you, gentlemen, what I conceive to be the relations of anatomy to medical science and practice. There are some, however, who fail to recognise this comprehensive aspect of the subject, and who seem to limit it to the study merely of the form, position, and relations of parts, without any reference whatever to their structure and mechanical arrangements; as if the topographical relations of parts and organs embraced the whole science of the subject. But such a limited conception of what is meant by the term anatomy, and what ought to be included in its teaching, is most unphilosophical. It has not been the creed of this University or of the other Universities in Scotland. Here, where the tradition of the character of the teaching of the second Monro still lingers in the schools; here, where John Goodsir, within the recollection of so many of us, propounded the science in its manifold relations,—it would be an act of treason to the memory of these great men, and to the whole history and development of our school, for one moment to entertain it.

Such an erroneous conception, indeed, of the science could never have arisen in a university system of teaching. For by the introduction of the medical sciences into a university curriculum their teaching acquires a breadth and comprehensiveness such as is scarcely attainable in a purely technical school. Their teachers have to regard them not merely with reference to the requirements of a particular profession, but also in their more general bearings. The educational horizon is not, and ought not to be, bounded by the standard of examination exacted either by the University herself, or by other examining boards, but should ever be pushed onwards with the advancing wave of knowledge.

On the other hand, in the purely medical schools, the education has undoubtedly a tendency to become confined within particular limits. There have been, and without doubt will always continue to be, men attached to these institutions actuated by a noble desire to advance the science of medicine, and to inspire similar feelings into the minds of their pupils; and to those who first guided my steps along the thorny paths of professional study I cannot too strongly express my indebtedness. But many of the teachers have as their object not so much to contribute by their own efforts to the progress of medical science, but simply to prepare their pupils for the examination ordeal to which they will have to be subjected. There is thus engendered in the mind both of teacher and pupil the feeling that the examination is the main end or object of education; that the education should be subservient to the examination, and not the means of strengthening the student's mental powers and filling him with knowledge.

Let me give you an illustration of this. A much-valued friend of mine, now occupying one of the most honourable positions open to a member of our profession, told me, not many weeks ago, that when during his studentship he was applying himself one day most industriously to the dissection of the muscles of the back, the demonstrator in charge of the dissecting-room came to him and said, "Why are you wasting your time in dissecting those muscles? They do not examine on them at the Hall." Notwithstanding this remonstrance my friend persevered with his work. He had a higher conception of his educational needs than had his teacher, or he never would have attained his present dignified position.

Such a mode of looking at structure would, I will venture to say, never have presented itself to a teacher in a university. Take these muscles of the back, for example. No one who ever attended the lectures of my distinguished predecessor in this chair can forget the care with which he explained their attachments and arrangement, and showed how they acted in producing the beautiful yet complicated movements of the spinal column. There is, indeed, no part of the human mechanism which presents more features of interest in connexion with the movements of the body than the joints and muscles of the spine. And note what has been the practical result of their careful study. An eminent American surgeon, Dr. Sayre, has founded on it a method

of treatment of curvatures of the spine based on rational and not on empirical principles.

One sometimes reads in introductory and other addresses that anatomy, descriptive and topographical, is a perfect and complete science, and limited in its scope; that all that is or can ever be known about it is recorded in books; that its study, whilst admirable as an exercise for the memory, and as a training for habits of accuracy, exactness, and patient careful observation, is yet of little or no value in forming the mind to reason out the complex facts of biological science, or to strengthen the critical faculty. Such statements are full of fallacy; they show an entire want of appreciation of the real scope of anatomical science, and of its many-sided aspects, and a want of knowledge of the progress which it has made and is still making. I could give you many illustrations of the erroneous nature of such remarks to prove to you that anatomy is an advancing science, and that it exercises, and will for all time continue to exercise, an important influence on the progress of physiology and pathology, and on the practice of both medicine and surgery; but I shall refer to a few only of the advances which have been made since I became a teacher of anatomy twenty-six years ago. And in selecting these, observe that I do not include one of the innumerable additions to our knowledge of structure, both macroscopic and microscopic, but confine myself to the form, position, and relations of parts and organs.

During my studentship the topography of the cerebral convolutions and lobes was very imperfectly known, and the description of their arrangement was meagre and wanting in precision. The publication, however, in 1854 of the important memoir of Gratiolet at once threw a flood of light on the arrangement. Anatomists in this and other countries followed up the subject with much zeal, with the result of placing our knowledge of the surface anatomy of the brain on a definite basis as regards the relations of the convolutions to each other and to the surface of the head.

And note how this series of anatomical researches has borne fruit in advancing our knowledge of the physiology and pathology of the brain. If these preliminary but essential anatomical inquiries had not been conducted we should never have heard of the remarkable experimental investigations of Fritsch, Hitzig, and Ferrier into the functions of the cerebrum. Neither would it have been possible to have localised with precision the seats of morbid processes in the hemispheres, such as enabled Broca to associate right hemiplegia and aphasia with disease of the inferior frontal convolution in the left hemisphere.

The dissections of Dr. Stilling the younger, conducted during the last few months, have proved that the roots of origin of the optic nerves have much more extensive relations than has hitherto been supposed. By tracing a band of these fibres through the pons and medulla to the decussation of the pyramids, he has forced on the attention of physiologists the necessity of reconsidering the functions both of the medulla and the lateral columns of the spinal cord. With every discovery in anatomy, fresh problems are presented to the consideration of the physiologist.

Again, if you compare the descriptions of the cranium written not many years ago with those which have recently been given, you will now find an enormous advance in precision and fulness of statement.

The invention by Cleland, Broca, and other craniologists of new instruments for measuring and delineating the skull and head have enabled anatomists to conduct a series of researches from which we have obtained a much clearer insight into the construction of the skull in individuals, and into the modifications in its shape and in the proportion of its different parts in the different races of men. Questions of the widest interest in their anthropological bearings have in this manner been elucidated.

The careful study of the arrangement and direction of the cranial sutures by Virchow and others has given us a key to the interpretation of the modifications which may be produced in the form of the skull by their premature closure, on the one hand, and by retarded ossification, on the other. So that it would be utterly inexcusable nowadays for an anatomist to commit such an error as was made by a professor of the standing and reputation of Huschke of Jena, just twenty-six years ago, when he figured a cranium deformed through premature closure of the sagittal suture as a normal and typical specimen of the Celtic skull.

In the anatomy of the movable joints, also, great advances have been made, more especially in the acquisition of a more

precise acquaintance with the forms of the articular surfaces. It is a mistake to suppose that the character and direction of the movements of a limb are determined solely by the relative positions of the bones, muscles, and tendons. Undoubtedly these structures play an important part, but they are not the only factors to be considered. The direction and character of the movements of a wheel are influenced by the form of its rim and by the configuration of the surface on which it moves, as well as by the propulsive power applied. And so it is with the joints. The importance of studying the forms of the articular surfaces was indeed insisted on by the brothers Weber in their classical treatise on the Mechanism of the Organs of Locomotion, published in 1836. But great advances have been made during the past twenty-five years in the elucidation of this difficult subject, more especially by the labours of Meyer, Langer, and Goodsir. Should anyone of you wish to investigate a complex biological problem, and to bring into play your analytical and critical powers, you will find full exercise for them in the study of the forms of the articular surfaces of the knee-joint, and in the influence which those forms exert on the character of its movements.

The introduction by the Russian surgeon, Pirogoff, of the method of freezing the human body and then making sections through its different parts—a method which Braune of Leipzig has pursued with so much zeal—has enabled anatomists to obtain much more correct views of the relations of the organs to each other, and to the walls of the regions in which they are situated, than could be done by the ordinary methods of dissection. We have, in consequence, a much more precise knowledge of the real position of the spleen, stomach, heart, uterus, bladder, and other viscera now than was the case ten years ago. Physicians will profit by these additions to anatomical knowledge, and greater definition will be given to their diagnoses. There is indeed no department of practical medicine which has been more a gainer by the introduction of the freezing method than that of obstetrics.

Are we, then, to say that with this year of grace 1880 all further progress in topographical anatomy will cease, that we have reached the limits of our subject, and that henceforth the anatomist must content himself with repeating the observations made by his predecessors, with no hope of himself adding to the progress of knowledge? Such a position would be intolerable if it were true. No man with any intellectual vigour or capacity for thinking and reasoning could be brought to pursue a subject so barren. Anatomy would cease to be a science, and become a mere handicraft. Anatomical teaching would fall into the hands either of the veriest dullards, whose sole object in life would be to earn their daily bread by grinding their pupils up to the level of an examination; or would be pursued for a time by young men desirous of using it as a stepping-stone to practice. The further development of general biological and medical science, so far as they rest on an anatomical basis, would be staved.

But, gentlemen, this picture of the finality of anatomy which has been painted by some writers is a mere fanciful hypothesis evolved out of the minds of those who are so absorbed in the contemplation of their own side of the shield of science, that they do not seem to recognise that it has more sides than one.

In literature and in art no generation treads precisely in the footsteps of its predecessors. The ever-changing social conditions amidst which men live, the development of fresh habits and of ways of looking at objects and actions, the lessons taught by augmented experience, are constantly modifying the character of the environment, and producing variations in our modes of thinking and working.

It is the same, if not even to a greater degree, in science, for each new discovery affords a wider platform from which the world of nature may be surveyed, gives a keener and fuller insight into her complex phenomena, and enables us to obtain a clearer conception of their meaning. In this general advance anatomy participates along with the other medical sciences. Every year adds something to our knowledge of form and structure and of the relations which they bear to function, and a further light is thrown on the mechanism of the human frame.

But there is another fallacy as regards the relations of anatomy to medical education which sometimes finds expression. It has been said that anatomical details, which require from the student so much toil and labour and time to acquire, are but of little use to the busy practitioner, and,

indeed, are for the most part rapidly forgotten as soon as the examination ordeal has been passed. And it is implied that what is so soon forgotten can be of but little use, and the time and toil expended in acquiring things of which the memory retains no grip have been misapplied and wasted. Such a statement, plausible though it may at first sight appear, is really of no moment as an argument against the minute study of the details of anatomy. Let us test its value by a reference to other subjects of study, both general and professional.

Of the shoals of wranglers that Cambridge has sent out during the last quarter of a century, how many, except those who may be following mathematics as a business, have preserved any accurate recollection of the scores of mathematical details which they had at their finger's end at the time of the examination? And yet are we to say that they derived no mental profit from their study? How many of the classmen that Oxford has trained during the same period, always excepting those who are scholars by profession, could now write Latin verses, explain the distinctive characters of the dialects of the Greek language, or even read a Greek play without the aid of a lexicon? and yet have not these men improved in taste, in the power of using their own language, and in literary expression, by the cultivation of the ancient classics?

But does topographical anatomy stand alone amongst the subjects of professional study in that the details are soon forgotten? How long do students retain in their memories the dimensions of epithelium and other cells, the breadth of nerve-fibres, and other finer details of histological study? Who amongst busy practitioners remembers the volume of the different gases, or the atomic weights of any but the most common of the elements? What use in practice is a minute knowledge of the chemical constitution of muscle, or of the experiments relating to the electric phenomena displayed by that important tissue? What is the need to the great bulk of practitioners of being able to discriminate between the characters of the different kinds of chinchona bark or of aloes?

And yet is it to be said that because all these minute details have no direct practical application, and are so soon forgotten, that it is useless ever to learn them, and that the time and labour they have occupied have been wasted? Is not a knowledge of these things, temporary though it may be, evidence of a power of continuous application and of mastering facts. Is it possible, indeed, to obtain a sound general conception of any science, or other subject of study, unless the details are gone into and understood? I could tell you of more than one instance in which men have gone utterly wrong in their enunciation of what they thought were general principles, simply because they had not taken the trouble to master the details. Depend upon it that, whether you learn or do not learn, in the minute details of the more important subjects of study lies the difference between slipshod information and that kind of knowledge the possession of which makes a man feel that he is treading on firm ground and not on the shifting sand.

He who will take time and trouble to follow out the ramifications of a nerve from its origin to its distribution in muscle, or skin, or internal viscus; or he who studies minutely the relations of an artery to the surrounding structures, or of an organ to the walls of the cavities in which it lies, and to the other organs contained in the same, or in an adjacent cavity, will, you may be sure, when he goes to the bedside, bestow an equal care in the examination of the patient whose disease he has to study and to treat. The qualities of mind which have led him to strive for precision of knowledge during his anatomical studies will have been strengthened by his earnest application, and the knowledge of form, position, relations, and structure, which he has thereby attained will find a practical application in his clinical work.

I am well aware that in surgery, for example, owing to the important discoveries of Professor Lister, the methods of practice are not so exclusively anatomical as was at one time the case. But though by his researches additional factors have been brought into use, a knowledge of anatomy is not the less necessary to the surgeon. Because we have new idols to worship, are we therefore to discard the old gods? Nay, is it not the more necessary to be perfect in our mastery of anatomical details? for by the development of the antiseptic system of practice, operations are now possible in regions where at one time no one would have thought of performing them.

If you sufficiently apply yourselves to the observation of the facts of normal relations and structure, the mind will become as it were saturated with these facts, you will be able to form a mental picture of the part or organ, and when the occasion arises to study that part or organ in a state of disease, you will be able vividly to realise the changes which have been produced in it.

Pursue your studies, gentlemen, with an earnest desire to cultivate accuracy and to acquire precision of knowledge. Let your motto be "Thorough." May the words of the preacher be for ever written on the tablets of your memory, "Whatsoever thy hand findeth to do, do it with thy might." And may God prosper the work.

THE TREATMENT OF ASTHMA BY THE INDUCED CURRENT.

By I. BURNEY YEO, M.D., F.R.C.P.,

PHYSICIAN TO KING'S COLLEGE HOSPITAL, AND SENIOR ASSISTANT-PHYSICIAN TO THE BROMPTON HOSPITAL FOR DISEASES OF THE CHEST.

THE recent discussion on Asthma at the meeting of the British Medical Association at Cambridge gives especial interest to the following notes of a case which has lately been brought under my own observation. Two or three days after taking part in this discussion I found myself at the baths of Neuenahr, the guest of that able physician, Dr. Richard Schmitz; and I had an opportunity of seeing and examining with him an aggravated case of asthma, which had been treated by the application of the induced current, and apparently completely cured thereby.

This patient, a gentleman about forty years of age, had suffered from paroxysms of asthma for more than six years, originally induced, he believed, by a severe attack of catarrh. He had tried numerous remedies and visited various climates, but without any considerable relief. This year he was spending a second season at Neuenahr, but without any relief to his asthmatic attacks. Quite recently he was seized with an attack of unusual severity and duration, which had lasted, with but slight intermission, for three whole days and nights, when, as all other resources had failed, it occurred to Dr. Richard Schmitz to try the effect of the induced current applied in the manner suggested by Dr. Max Schaeffer of Bremen.¹ The relief afforded was immediate, and after twelve applications—i.e., an application twice a day for six days—the patient appeared quite well. I examined his chest carefully, and there was no trace of wheezing or of dry or moist râles of any kind. I examined his throat, and found evidence of chronic pharyngitis, the mucous membrane being very granular from the presence of many enlarged swollen follicles; but it was quite clean, and free from mucous secretion. The tonsils were scarcely at all enlarged, although they had been much so formerly. I mention these facts with respect to the condition of the throat, as they bear on the theory of the action of the remedy to which I shall immediately allude. The influence of the remedy had been so complete that the patient's gait and carriage were totally changed, and instead of assuming the bent, stooping figure of the asthmatic, he walked as upright as his fellows.

The galvanic current had been applied to the throat in the situation of the great nerve trunks, the vagus and sympathetic, each pole being applied just below the angle of the jaw and in front of the sterno-cleido mastoideus. The current, mild at first, was gradually increased in intensity until it could be distinctly appreciated by the patient as passing through the soft palate from one side of the throat to the other. It was continued for fifteen minutes at each sitting. It was noticed that the pupils, widely dilated at first, became strongly contracted as soon as the application of the current gave relief. Dr. Max Schaeffer, who has recently advocated this treatment, agrees in the main with Biermer as to the pathology of idiopathic asthma, meaning by *idiopathic* asthma those attacks in the intervals between which no evidence of morbid changes in the lungs can be found. He regards these attacks as a tonic spasm of the middle and

¹ Deutsche Medicinische Wochenschrift, 1879, No. 32.

finer bronchial tubes; but he looks upon the spasm as secondary, and agrees with Weber in believing the primary change to be a swelling or tumefaction of the bronchial mucous membrane, dependent on a fluxionary hyperæmia, itself due to a vaso-motor nervous influence, the principal rôle being played by the pulmonary fibres of the vagus. According to this view asthma is an irritative and reflex pulmonary neurosis. It agrees, in many respects, with the theory of asthma adopted by Dr. Andrew Clark in the discussion to which I have alluded, and which I hold myself as the most consistent with the clinical history and phenomena of the asthmatic paroxysms.

The morbid state, upon which the asthma depends, may— affect (1) the nerve itself, or (2) the coverings of the nerve, or (3) the tissues adjacent to the nerve.

Max Schaeffer lays great emphasis on the third of these conditions—viz., that morbid states of the structures adjacent to the nerve may influence and disturb the nervous currents. Tumours such as nasal polypi, hypertrophied tonsils, swollen cervical or bronchial glands (temporary hyperæmia of these glands), can, according to their position, cause irritative pressure on nerve filaments connected with the respiratory centres. He found that many of his asthmatic patients were the subjects of nasal catarrh, or pharyngeal catarrh, or laryngo-tracheal catarrh. He noticed that swellings of the mucous membranes of these parts were attended with asthmatic paroxysms, and patients would constantly refer the seat of their discomfort lower or higher in the throat, according to the seat of the swelling, and he concludes that all the symptoms of asthma are symptoms of irritation brought on by pressure on nerves which are in connexion with the pulmonary portion of the vagus, and especially in the upper part of the respiratory tract—the pharynx, larynx, and trachea.

He examines carefully the nose and throat, and applies the electrodes according to the seat of the disease. Usually the two electrodes are placed on each side of the neck about two centimetres below the angle of the jaw, and sometimes a little lower down in front of the sterno-cleido-mastoideus. The current must be of good strength, so that the patient can feel the stream go across the larynx and soft palate. In bad cases it should be applied twice a day from fifteen to thirty minutes each sitting. He states that in the most severe cases it has acted "like witchcraft." He has never found the constant current do any good, but he has never failed with the induced current.

Certainly the result of the application of the induced current in the case that came under my own observation was very remarkable.

Hertford-street, Mayfair.

THE ASPIRATOR AS AN AID TO DIAGNOSIS IN CASES OF OBSTRUCTION OF THE BOWEL;

WITH DESCRIPTION OF AN ENTEROTOMY TUBE.¹

By RODERICK MACLAREN, M.D.,
SURGEON TO THE CUMBERLAND INFIRMARY.

I PURPOSE illustrating the use of the aspirator in cases of obstruction of the bowel by giving an account of the instance which drew my attention to its value; and as there are some other points in the case which are worthy of note, I will record its essential features.

Mrs. R—, aged forty-three, wife of a market gardener, was first seen by me on Tuesday, April 20th, 1880. She stated that she had not had her bowels moved since the previous Thursday, though she had taken aperient medicine, and that she had vomited frequently for two days. She was seven months gone in pregnancy. On the following day (April 21st) she miscarried, the child living only a short time. The treatment prescribed consisted in purgatives and frequently repeated enemata, some given with the long O'Beirne's tube. As this failed to give relief, she was next brought under the influence of opium, and subsequently belladonna was given. Each and all seemed to make her worse, and her condition was

best when she was least interfered with. When she had been four days under treatment—this being eight days after the last motion—her state had become urgent; her pulse was very feeble, the vomiting frequent, and the abdomen distended and tense, so that the propriety of operative interference had to be considered. The probabilities were in favour of the obstruction being in the great bowel, for the following reasons: the symptoms were not very acute; the patient always passed plenty of urine; and she stated that for the previous six months she had difficulty with her bowels. This was not due to costive motion, for when she did succeed in getting time to act the consistence was natural. She had occasionally passed blood and mucus. Physical examination, however, gave no help; and it was a matter of extreme doubt in which part of the great bowel the obstruction occurred.

The abdomen on April 23rd was uniformly and intensely distended; it was everywhere resonant, a trifle less so in each loin, and I thought rather less tympanitic in the right than the left, but the difference between either of these regions and the rest of the abdomen was very slight. No hardness or tumour could be felt. No fæcal vomiting occurred. About a pint was the largest enema which could be given, and this usually returned unstained, but occasionally there was slight fæcal colouration. Nothing abnormal could be felt per anum. There was no appearance of cachexia; the patient was a stout florid woman.

It was at this stage that I found the aspirator of essential service. So uncertain were the indications of the seat of stricture that it was a question whether it would not be better to open the small bowel close to the cæcum rather than risk a colotomy, with the possibility of finding the bowel obstructed above the opening. It occurred to me, however, that by inserting an aspirator needle into the loin in the position of the colon I could ascertain whether this contained liquid fæces or not. The patient being placed under chloroform, with the kind assistance of my friend Dr. Murphy I aspirated the colon on the right side, preferring this to the left, because it was slightly less resonant on percussion. The aspirator withdrew air and liquid fæces, giving evidence that the closure of the bowel was below this point. I therefore performed right colotomy. The incision was a deep one, owing to the great amount of abdominal fat; and there was, from the same cause, some difficulty in finding the bowel,—the reverse of what is usually encountered. When the bowel was found, sutured to the skin, and opened, a large amount of flatus and fæces escaped. From the date of the operation the patient did thoroughly well. Five days after the colotomy some liquid fæces passed per anum. On the following day the same occurred, the motion containing much mucus. On the seventh day blood, mucus, and fæces were passed. From this period there was almost always a daily motion per anum, gradually increasing in consistence until she regularly passed a well-formed stool. At the same time liquid fæces escaped freely from the wound. On one occasion, a month after the operation, the bowel prolapsed through the wound. A recurrence of this prolapse was prevented by making her wear an enterotomy tube.

Six weeks after the operation the patient was out of bed. A week later the motions were so natural that I determined to see the effect of plugging the wound before deciding whether or not to let it heal. This was done by closing the tube. I arranged to see her again in a week, during which time she was to wear the plug if she felt no inconvenience from its use. On the morning of the day on which I had promised to see her she was found dead in bed by her daughter, who slept with her.

A post-mortem examination was made in the evening. The heart was found with a considerable covering of fat; the muscular fibre pale, and under the microscope mostly devoid of striation (her pulse had always been feeble and the heart sounds indistinct). Brain, lungs, liver, and kidneys were healthy. The large intestine was distended with air and contained a considerable quantity of solid fæces. The meso-colon was unusually free and large. A couple of inches above the sigmoid flexure was a cancerous mass, measuring an inch in thickness, two inches from above downwards, and occupying most of the circumference of the bowel. A great part of it was undergoing colloid degeneration, and there was some pus in the interior. The opening through the stricture into the lower bowel was a fairly free one. The post-mortem examination was a very instructive one. It was evident why medicinal treatment had failed: purgatives merely forced the contents of the bowel against a closed stricture; sedatives paralysed the bowel and allowed flatus, &c., to accumulate.

¹ Read before the Border Counties Branch of the British Medical Association.

From ulceration or the absence of pressure, or some such cause, the stricture, after the operation, became permeable, and during the last few weeks of her life allowed fæces to pass readily. The free attachment of the great bowel explained how it was that the dulness on percussion, which is usually present above a stricture, could not be detected, the intestine not being in close contact with the abdominal wall.

Obstructions of the bowel are so often obscure that any aid to the diagnosis of their position, or any expedient which will help us in treating them, deserves careful trial. In the aspirator we have an instrument which will determine whether any given portion of the ascending or descending colon contains liquid or not. If it does, it is of necessity above the seat of stricture. The puncture involves no risk. I once saw a post-mortem examination on a case in which the aspirator needle had been pushed into various portions of the bowel within six hours of death, and yet all traces of its use had disappeared. When the presence of liquid fæces in a portion of the colon is ascertained, we know that opening the bowel there will relieve the urgent condition. In the above case the needle was of great service as a guide to the bowel (there is not usually any difficulty in exposing it; but this patient was so fat that the wound was a very deep one, and the intestine was covered by a layer of fat). The class of case in which aspiration is most likely to be useful is: when no stricture or fecal accumulation can be felt per anum; when there is no decided evidence by percussion dulness of a large accumulation in either ascending or descending colon and yet the symptoms point to stoppage of the great bowel, not the small one. I should certainly trust to it to guide me whether to perform colotomy or, on the other hand, to do abdominal section, with the object of removing the obstruction, or opening the lower end of the small bowel.

I have mentioned that I used an enterotomy tube for preventing a prolapse of the bowel. This is a contrivance which I had formerly found of much use in cases of colotomy; it prevents prolapse of the bowel, keeps the opening from closing, and can be made so as to a great extent to prevent contact of fæces with the wound and skin. It consists of a piece of large-sized drainage tubing fastened at right angles to a plate of perforated zinc. The tube is passed into the bowel, the zinc lies on the skin, and is kept there by a band of tape going round the body. The tape is fastened to the zinc plate by india-rubber rings, so as to keep it tense. If it is desired to protect the skin, the tube is passed into the wound through a sheet of gutta-percha tissue. It has a considerable general resemblance to a tracheotomy tube.

Carlisle.

CASCA BARK *VERSUS* DIGITALIS.

By DAVID DRUMMOND, M.A., M.D.,
PHYSICIAN TO THE INFIRMARY, NEWCASTLE-ON-TYNE.

IN the Gulstonian Lectures of 1877 Dr. Lauder Brunton pointed out the close resemblance which existed between the cortex erythrophloei and digitalis in their physiological action. To use Dr. Brunton's words, the action of casca is to strengthen and slow the heart, to contract the arterioles, and increase the urine. For the past two years I have used the tinctura erythrophloei (as it is proposed to style the drug) in a good many cases, a few of which I shall shortly cite with the view of comparing the therapeutical value of the two drugs, especially as regards the certainty and rapidity of their action. The tincture of casca I procured from Messrs. Brady and Martin, of Newcastle, who recommend the dose of five to ten minims, founded on Dr. Lauder Brunton's observations. I believe the strength of the tincture is 1 in 10.

Ellen H— was one of the earliest of my cases in which the drug was tried. Into the details of her malady, or that of the cases to follow, it is unnecessary to enter. Aged eighteen, she had suffered from rheumatism, which left her with a constricted mitral orifice, as evidenced by presystolic murmur, thrill, &c. On the 26th of April, 1879, whilst the heart was beating at the rate of 90 per minute, five-minim doses of the tincture were ordered three times daily. The first evidence of its action occurred in the shape of an attack of epistaxis—i.e., increased arterial tension. On April 30th

the pulse was 88. There being no return of the epistaxis, the dose was increased to eight minims. On May 1st the pulse was 80. On May 2nd ten minims of casca was given, which dose was continued up to the 21st, during which time the pulse remained at about 70. Then it was observed that the patient passed a great deal of urine. The effects of the drug were allowed to pass off, and on June 9th fifteen minims of tincture of digitalis were given thrice daily, the effect of which was to lower the pulse ten beats per minute in about a day. The patient was soon after discharged, the pulse remaining at from ten to fifteen beats below the average until she left.

Alice G—, aged twenty, suffering from mitral insufficiency. Her average pulse was about 100. On April 20th five-drop doses of the tincture were administered, which were gradually increased to fifteen minims three times daily; but owing to an attack of hæmoptysis on April 23rd the casca was stopped, at which time the pulse was at 90. On the 30th, the pulse still remaining about 90 to 95, eight-drop doses of the tincture were given, and continued until May 19th, during which time the pulse scarcely varied at all, but remained about 90, the only noticeable effect of the drug being a diminution in the quantity of urine passed. Dr. Brunton has shown that one of the toxic effects of the drug is to diminish the renal secretion; however, in spite of the small quantity of water passed, the dose was increased to fifteen minims thrice daily; but on the 21st, the flow becoming less, the exhibition of the casca was stopped. The pulse during this time had increased rather than diminished in frequency. It was found that it was only necessary to omit the casca for two days to allow the flow of urine to become normal again. On May 24th fifteen drops were again given three times in the day, and continued till the 31st; but the drug appeared to have lost its effect, for on that day the pulse was at 120 per minute. The tincture of digitalis was substituted, in ten-drop doses. On June 4th the pulse was down to 100, when the digitalis was increased to fifteen drops. On the 9th the pulse was at 50; in consequence the digitalis was stopped, and in a few days the pulse again became rapid—i.e., 100; but now the digitalis had lost its influence, for fifteen- and twenty-drop doses thrice daily failed to bring down the number of beats.

In the next case the drug was pushed much more energetically.

Wm. W—, aged fifty-four, presented unmistakable symptoms of mitral stenosis. Although there was no murmur, yet the rapid, irregular heart, the cyanosed face, the congested lungs, with hæmoptysis and dyspnoea, told a tale of obstruction on the left side of the heart. On the 14th of July, 1879, the heart—counted with the stethoscope, as many of the beats did not reach the wrist—was at 160 per minute, irregular and intermittent. Ten-drop doses of the tincture of casca were given three times a day. On the 17th, the pulse was much steadier, and reduced to 100. All the beats seemingly reached the radial. The quantity of water passed was much increased. The administration of the drug was continued, and larger doses employed, the increase being gradual. On Aug. 1st, thirty drops three times a day were given, and in a few days the dose was increased to thirty-five drops. On the 11th, a week after the maximum dose named had been employed, the pulse was at 110, and very irregular. The drug was then discontinued, the urine being diminished in quantity. On Aug. 16th—no medicine was given in the interval—the heart was beating at the rate of 152 in the minute, 120 of which only reached the radial. Digitalis was then exhibited—twenty drops of the tincture three times a day—the immediate effect of which was to steady the cardiac pulsations, and to render them both slower and more regular; for, on the 18th of the same month, the heart beats were 120, all of which reached the wrist. The digitalis was continued until Sept. 16th, 1879, on which day the patient left the hospital, his pulse much more regular, and at 80 in the minute.

This patient came again under treatment in the hospital on May 25th of the present year, at which time his pulse was at 150, and very irregular. He was ordered ten-drop doses of the casca administered as before, which was increased on June 4th to twenty drops, the pulse remaining unaltered. On the 12th the pulse was steadier, and reduced to 120 in the minute. Then camphor-water was substituted and continued for eight days, during which period the pulse rose again to about 150, and became more irregular, being with difficulty counted. On June 20th the camphor-water was discontinued, and in place twenty-drop doses of the

tincture of digitalis were employed—a larger quantity invariably caused vomiting. On the 28th the pulse was again reduced to 120, but a continuance of the remedy failed to bring about a further reduction.

I have used the drug in several other cases besides those briefly recorded above, but as the trials simply served to strengthen my previously formed impression as regards the therapeutical value of the tincture of casca, no object can be gained by citing them. To sum up my limited experience of the remedy:—It is undoubtedly a very useful addition to our somewhat restricted list of therapeutic agents in the treatment of cardiac cases, serving, like digitalis, to lower the pulse-rate, and, whilst increasing the force of the systole, to render the heart more regular. In comparing the two drugs, whilst recognising the value of casca, I think digitalis is the more reliable remedy of the two; it seems to act more rapidly and with more certainty. It may, however, yet be found that the cases in which each drug is to be employed must be selected; some cases requiring perhaps stimulation of the cardio-inhibitory centre in the medulla—casca,—whilst others may be best suited by a remedy which acts on the peripheral inhibitory apparatus in the heart—digitalis.

In my cases it did not appear that the remedy was cumulative, for in the case of Alice G—the quantity of urine, which had been very much diminished by the drug, became normal a day or two after its discontinuance. The drug appeared to me to act in the desired manner upon the heart only so long as the quantity of urine was increased.

Sphygmographic tracings in the cases given showed well the high arterial tension as the result of the drug; this was especially noticeable in the first and third of the cases. In Alice G—'s case the tracing, taken whilst the drug was being administered, but without effect, the pulse being increased in rate, showed a low-tension pulse. In a case of thoracic aneurism in which the drug was tried, the effect was an increase in the pain, the result of increased arterial tension.

Newcastle-upon-Tyne.

FIVE YEARS' SURGICAL WORK IN THE CARDIFF INFIRMARY.

By ALFRED SHEEN, M.D.,
SURGEON TO THE INFIRMARY.

(Continued from p. 691.)

OPERATIONS for the removal of cancerous growths do not leave a very favourable impression on one's mind. Whatever their immediate results may be, and in some cases I believe these results to be highly beneficial in a variety of ways, the disease, as a rule, either returns at the seat of operation or in some other part, and the patient eventually succumbs to it. One or two cases may be deemed worthy of a more extended record.

S. P—, aged forty-four (Nos. 36 and 37) was admitted in December, 1877, with an enormous sarcomatous tumour in the posterior aspect of the right thigh, extending from the top of the femur nearly to the popliteal space. It was removed under antiseptic precautions. The temperature varied from 99° to 101° for eleven days, after which it became and remained normal. She was again admitted in February, 1879, when another tumour, the size of a small orange, was removed antiseptically, from the upper part of the thigh, and the pulse and temperature were normal throughout. Again, during this year, I have dissected out three nodules, each the size of a small hen's egg.

In the case of T. B— (No. 41) I had previously twice operated for epithelioma of the lip, after which there was no return of the disease at its original seat, but glandular enlargement supervened at the angle of the jaw, and, unfortunately, he did not seek advice (although cautioned to do so) until it had attained such a size as to render his chances of benefit from further operative interference exceedingly problematical. He was, however, very anxious to have something done, and I removed it partly by the knife and partly by tearing with my fingers. There was considerable venous hæmorrhage. After its removal a large gap was left showing the digastric muscle, the hypoglossal nerve and

other structures as they would appear after an elaborate and careful dissection.¹ The man after his discharge had a severe attack of erysipelas of the face, from which he recovered, but he died twelve months after the operation of an extension of the disease.²

Of the cases of epithelioma of the penis one was removed by the galvanic cautery, but I was so unfavourably impressed with it that I did not use it again. A clean cut with a knife is far preferable to the eschar produced by the cautery and its subsequent tedious separation.

Of the eye cases, two cases of senile cataract were dealt with successfully by the flap operation, whilst a third, treated by iridectomy and the modified linear incision, was a failure from escape of vitreous and intraocular hæmorrhage. Abcission of the cornea, for a very prominent staphyloma, left a not unsightly stump, upon which a glass eye may at some future time be fixed.

During the removal of a scirrhus of the breast in a woman aged sixty-four, the patient twice became pulseless, but recovered on tilting her up, head downwards.

In the case of popliteal aneurism the femoral was tied in the usual situation with carbolised catgut, and the wound closed with styptic. No chloroform was given.³

BONE.

	Under ten.	Under twenty.	Under forty.	Under sixty.	Totals.
Lower jaw	0	0	2	0	2
Face	1	0	0	0	1
Hand	0	1	1	0	2
Elbow	0	1	0	0	1
Humerus.....	0	1	0	0	1
Femur.....	0	5	1	0	6
Tibia.....	1	0	1	1	3
Tibia and fibula	0	1	0	0	1
Periostitis: Tibia.....	1	1	2	0	4
Foot.....	0	3	1	0	4
	3	13	8	1	25

In this division there were eighteen males and seven females; no deaths. In these cases, where operations have been performed, Esmarch's bandage has always been used, and with great advantage, making the operation as plain as though it had been performed on the dead body. The chisel and hammer have also been resorted to in place of the usual bone instruments, in cutting through new bone and in dividing large pieces of necrosed bone, and in some cases I greatly prefer this method of proceeding. Lint steeped in carbolised oil (1 to 10), stuffed into the wound, has been the usual mode of dressing for some days, and in some cases I have used terebene in place of the carbolised oil with advantage. It has answered as well, or better, and certainly has a more agreeable odour. I think we may be, at times, too hasty in interfering with diseased bone, especially in the hand and foot, for I have cases under my observation which go to prove that, by patience, the use of the stiff bandage and long-continued expectant treatment we may sometimes fairly assume that such cases will recover without operative interference. I had one such case in 1878 of disease of the bones of the foot, and that patient, under the treatment I have here indicated, is now nearly well.

JOINT.

	Under ten.	Under twenty.	Under forty.	Under sixty.	Totals.
Hip	4	7	3	0	14
Knee	8	8	6	2	24
Ankle	0	2	1	1	4
Hip and knee.....	0	0	1	0	1
Synovitis: Knee.....	0	2	1	0	3
„ Ankle.....	0	1	0	0	1
Wrist	0	1	0	0	1
Metacarpo-phalangeal	0	0	1	0	1
Sacro-iliac	0	0	0	1	1
Hysterical knee.....	0	1	0	0	1
	12	22	13	4	51

The cases of joint diseases were equally divided between males and females. As one would expect, the majority of the cases were of the hip and knee, diseases of other joints

¹ An almost exactly similar case, under the care of Mr. Durham, at Guy's, is recorded in the Guy's Hospital Gazette, vol. vii., p. 189.

² Reported in THE LANCET, vol. i., 1876, p. 601.

³ This case is reported in THE LANCET, vol. ii., 1876, p. 222.

being, as a rule, treated as out-patients. There were four deaths. Ellen G—, aged thirty-nine; knee; died from phthisis. Llewellyn P—, aged fifteen; hip; from exhaustion. Richard T—, aged thirty-three; hip; suddenly, in convulsions, chiefly of the right side. Thomas O—, aged twenty-five; hip; exhaustion.

Nine operations were undertaken in this class, these cases being tabulated under the headings "Operations" and "Amputations for Disease." Remarks on the dressings and modes of operation will be found under those headings.

W. D—, aged fifty-seven; removal of a diseased astragalus. Patient recovered with a useful limb.

W. S—, aged forty-eight; disease of knee; Carden's amputation. Discharged with a capital stump in forty-eight days.

Leonard J—, aged five years and a half; diseased knee, with suppuration and external wound, and great exhaustion. Amputation by modified circular method above knee, and discharged well in forty days.

Albert W—, aged twenty-three; disease of knee; excision. Drainage-tube and carbolic-oil dressings. P. H. Watson's splint and gum-and-chalk bandage. Styptic colloid and charpie over line of incision, on removal of which some days after this line, except at its extremities, was found completely healed. This case failed from there being some slight movement at the knee, and he was to be admitted again for further treatment, but disappeared from observation.

The case of fibrous ankylosis at the hip and knee affords several points of interest. The patient was a woman, aged twenty-eight, whose confinement twelve months previously had been followed by severe pelvic cellulitis, with discharge of pus through the right groin. She had a miserable home, and had been badly attended to. On admission, the left knee extended to its utmost limit was ten inches from the bed level, and the right hip and knee were flexed to nearly right angles, and rotated outwards. After her general health had improved, she was placed under chloroform, the hamstring tendons on the right side divided, and the adhesions at the hip broken down by manipulation until the limb was in a fairly straight position. The adhesions at the hip gave way with a loudish crack, and without much force being used. Before the patient's removal back to bed a Liston's long splint was applied. On the evening of the day of operation, and all next day, the patient appeared in a most critical position, with a pulse of 164, scarcely perceptible, and complaining of great pain in the left knee, which was relieved by the removal of a splint previously applied. These alarming symptoms gradually passed away. No pain was complained of in the right limb until some days after the operation, and then not much, but she became unruly, and insisted upon having the splint removed, and would scarcely allow the limb to be touched from that time forward. The limb went back to its old position, the skin behind the right knee sloughed, an abscess formed here, the joint became disorganised, and she was rapidly losing ground. Amputation was advised, but she and her husband persistently refused their consent. Finally she rapidly regained strength, got fat even, and went out of the infirmary in the same state as she was admitted, so far as her deformity was concerned, much to my chagrin. It was a mistake to put the limb up in splints immediately, but I cannot think that this was the whole and sole cause of failure.

Hip cases are a severe strain upon the resources of a small institution like our infirmary, where we only make up from fifty to sixty beds, the town population alone being upwards of 80,000. Yet, surely, they are proper cases for in-door treatment. In order that they may be cured they require a certain line of treatment persistently carried out "under orders"; and this, considering the class of patients one has to deal with, cannot be done unless they are continually under intelligent observation, which cannot be the case at their own homes.

Hip cases, as a rule, were treated in the first instance by rest in bed and the application of Liston's long splint, or a weight and pulley, and subsequently by the application of a stiff bandage. One case, in a boy aged seventeen, was successfully dealt with by Sayre's splint. One knee case, in a female aged thirty-nine, died of lung mischief, the joint symptoms apparently improving. In an ankle-joint case in a man aged fifty-seven, the joint was cut into and the astragalus alone found diseased; this was removed, and he finally recovered with a useful foot. Carbolic oil was used, but not the spray or gauze.

In early knee cases the plaster-of-Paris or gum-and-chalk bandage has been chiefly resorted to. I prefer them to Hyde's poroplastic splints, which, after being worn for a short time, give way to some extent.

BURSÆ AND TENDONS.

	Under twenty.	Under forty.	Under sixty.	Totals.
	M. F.	M. F.	M. F.	M. F.
Contracted tendons:				
fingers	0 0	1 0	0 0	1 0
False ankylosis: ankle	0 0	0 0	1 0	1 0
Contracted hamstrings...	2 0	0 0	0 0	2 0
Housemaid's knee.....	0 3	0 2	0 0	0 5
Effusion in sheath of tendons:				
hand.....	0 0	1 0	0 0	1 0
Ditto: inner ankle.....	0 1	0 0	0 0	0 1
	2 4	2 2	1	5 6

In the first case the finger which was most in the way was amputated at the earnest request of the patient, and he was well satisfied with the result so far as improved use of his hand was concerned. The cases of housemaid's knee were cured or much relieved by rest.

	Under ten.	Under twenty.	Totals.
	F.	F.	F.
Varus	0	2	2
Equino-varus	1	1	2
	1	3	4

In the two cases of equino-varus the tendo Achillis was divided subcutaneously, and this treatment, with the subsequent application of stiff bandages, was successful in effecting a cure in one case, but in the other, aged eleven, owing to a difficulty with the parents, the child did not remain sufficiently long under observation to obtain a satisfactory result. The varus cases were mild; one, aged fourteen, was put on tonic treatment and frequent exercise under observation, and was discharged cured, without any operation. The other case was evidently hysterical, and was much improved by ten weeks' stay in the infirmary and general treatment.

ULCERS.

	Under ten.	Under twenty.	Under forty.	Under sixty.	Over sixty.	Totals.
Face	1	0	0	0	0	1
Hand	0	0	0	1	0	1
Groin	0	0	1	0	0	1
Thigh.....	0	1	2	1	0	4
Leg.....	0	4	21	13	3	41
Ankle.....	0	0	2	0	0	2
Heel and foot.	0	1	0	1	1	3
Scrotum.....	0	0	2	0	0	2
	1	6	28	16	4	55

Ulcers I have classified according to their seat. Twenty-one were in women and 34 in men. The three thigh cases were all in women. Ulcers of the leg, occurring in the middle period of life, made up the great bulk of these cases, and they were of the usual varieties—eczematous, varicose, simple, indolent, specific. The usual treatment of ulcerated legs has been rest in bed on an inclined board, cleanliness, bandaging, in some cases strapping, and various local applications according to circumstances—carbolic oil, lotio rubra, boracic ointment, zinc ointment, &c. One is well repaid by directing a little attention to these local applications; indeed in this, and in other directions of treatment, we are far too apt, from the cases being so common and so numerous, to lapse into a system of careless routine which is anything but beneficial to the patient. Carbolic oil is a useful early application in some cases, but it must be borne in mind that it delays cicatrisation, and when it has served its purpose, some other application, as *lotio rubra*, which is most useful in aiding granulation and cicatrisation, should be resorted to. Boracic ointment is a valuable application in some cases, and acts admirably as a deodoriser of foul discharges, or rather as a preventer of their becoming foul. I have not yet treated ulcers on Lister's antiseptic method, but intend doing so; *Martin's elastic bandage* has been chiefly of value in the varicose variety; in such cases it answers admirably. Where there has been any constitutional dyscrasia, obvious or suspected, *internal treatment* has been adopted

to aid the cure. If eczema is present, *arsenic* has been given with advantage; and so also *opium*, where pain is a dominant symptom. When the ulcer is specific *iodide of potassium* acts often like magic, and where there is any suspicion of such connexion it is wise to give it to aid the diagnosis. In some cases it clears up matters wonderfully. I have known cases which, after being under various kinds of treatment for a lengthened period, have healed up in a week or two under iodide of potassium and simple dressing. On the healing of varicose and some other ulcers, if you have an intelligent patient to deal with, I strongly approve of an *elastic stocking* being worn, but it should be adapted before the patient leaves the hospital, to ensure its fitting properly, and he should be cautioned about its proper use. In almost all cases, under rest, good and regular diet, and the avoidance of all irritating applications to the ulcer (which, as a rule, have been pretty freely applied before the patient's admission), rapid improvement is observed. In some cases of indolent ulcer, *blistering* has been followed by beneficial results. The application of a *splint* has sometimes been of value by keeping the parts at rest, and one obstinate case, where the ulcer was situated at the lower part of the back of the leg, was cured by relaxing the tendo Achillis by means of a slipper, and a strap extending from it to above the knee. The practice of *skin-grafting* has been adopted in suitable cases, and the results in some of them have been everything that one could desire. The heel case was chronic and extensive, the result of injury a long time previously. The patient had been unable to work for five or six years, and craved to have the foot removed. Amputation in the lower third of the leg, taking a long anterior flap, was performed antiseptically, catgut ligatures and sutures being used; the stump was dressed four times; the temperature was normal throughout, and in eighteen days the patient was up, being discharged with an admirable stump ten days later. One case of scrofulous ulceration of the face was attacked by erysipelas, and this case showed the value of aconite in small and frequently-repeated doses in this disease, for, under its use, in two days the temperature was normal. Nitrate of silver, four grains to the drachm, was applied, to see if it would stop the erysipelas from spreading. It did not have this effect, neither did I expect that it would. Aconite in small and frequently repeated doses, as advised by Ringer, will, as a rule in such cases, meet all the indications, without any other treatment, general or local.

(To be concluded.)

NOTES ON PATHOLOGY OF THE URINE.

By CHARLES A. CAMERON, M.D., F.R.C.S.I.,
PROFESSOR OF CHEMISTRY AND HYGIENE, R.C.S.I., MEDICAL OFFICER
OF HEALTH, DUBLIN.

SULPHURETTED HYDROGEN AND AMMONIA IN URINE.

I HAVE not met with any account of the persistent occurrence of free sulphuretted hydrogen in the urine, but a case of the kind has come under my own observation. A gentleman in the middle period of life, of active business habits, and discharging the duties of a most onerous public appointment, has been for many years past frequently under medical treatment. His complaints are always of a somewhat indefinable nature. He suffers from malaise, a painful feeling of fatigue, and sometimes from want of appetite, but he is rarely confined to his bed or even his room. He works away steadily. He has been treated medically by Dr. Samuel Gordon, ex-president of the College of Physicians, who has enabled me to make examinations of his patient's urine. Now, there was nothing peculiar in the urine with respect to its specific gravity, amount of urea, or other points, with but one remarkable exception: it contained free sulphuretted hydrogen the moment it was passed. On one occasion I had the opportunity of examining this urine within a minute after it had been passed, and found, both by chemical tests and by smell, the presence of free sulphuretted hydrogen in it.

The amount of sulphuretted hydrogen was determined on two occasions: on the first it was found to exist in the ratio of 1.4 cubic centimetres per litre, and on the second occasion 1.9 cubic centimetres per litre of urine. These pro-

portions are about one-third of the quantities found in very weak sulphuretted waters (Spas).

The period which elapsed after the discovery of the sulphuretted hydrogen in this urine until its disappearance was somewhat more than two years. During nearly the whole of this time the urine was never free from sulphuretted hydrogen; at least, every time it was examined or analysed such was found to be the case.

So soon as the sulphuretted hydrogen disappeared, its place was taken by ammonia; the instant the urine was passed it was found to have an ammoniacal odour. This state of things continued for about two years; but lately the urine has no longer an ammoniacal odour.

About the time that this sulphuretted hydrogen urine was being passed, Surgeon Hazleton of Westland-row, Dublin, introduced to me a young lady, from whose skin sulphuretted hydrogen was exhaled. I placed upon her skin pieces of bibulous paper, containing acetate of lead, and in the course of a few hours they were blackened. When she was warm after exertion the odour of sulphuretted hydrogen from her was unmistakable. Silver coins, thimbles, &c., kept in her pockets soon became black. She was in good health. Her urine contained no sulphuretted hydrogen; whilst, on the other hand, no odour of sulphuretted hydrogen could be observed from the skin of the gentleman whose urine contained sulphuretted hydrogen. In the case of the lady the exhalation of sulphuretted hydrogen lasted for about three years, and then completely ceased.

INTERMITTENT OCCURRENCE OF SUGAR IN THE URINE.

I make, now and then, examinations of the urine of a gentleman nearly sixty years old. Sometimes its specific gravity is from 1025 to 1037, and sugar in large quantity is present. At other times the specific gravity is from 1020 to 1023, but not a trace of sugar can be detected in it by any method. Sugar is more frequently present than absent. The quantity of urine passed per diem is generally, but not invariably, above forty ounces. Dr. Garrod has examined this gentleman.

LOW SPECIFIC GRAVITY OF DIABETIC URINE.

Many years ago I examined several times a week during some months the urine of a young man (a patient of Sir George B. Owens), who ultimately died from diabetes mellitus. As a rule, the specific gravity of his urine rarely rose higher than 1030. He had an incessant and unallayable thirst. On one occasion I found his urine to have a specific gravity of 1005, sugar being present in small but decided quantity. The low gravity of the urine surprised the medical attendant, who indeed at first was incredulous that diabetic urine could have so low a gravity. The specific gravity of the urine was carefully determined by the specific-gravity bottle and by the hydrometer, and, unless the patient put water into the specimen (which was highly improbable), there was no other source of error. On questioning the patient, he stated that on the day upon which the specimen of urine was passed his thirst was so great that he drank water incessantly. He believed that he must have swallowed a gallon and a half during the day.

FIFTEEN CASES OF DIPHTHERIA.

By FREDERICK H. DALY, M.D.

I CAN offer no explanation as to why such a number of cases of diphtheria should occur in my practice within a short period, while several medical men around in large practice, to whom I have spoken, have had no cases. It is also remarkable that my cases have very little relationship, as far as locality is concerned, and they all were in the families of well-to-do people. All the houses in which they occurred had two insanitary conditions—viz., first, there was only one common cistern for drinking and closet purposes; and, second, the sink in the kitchen or scullery communicated *directly* with the drains. I cannot help connecting this outburst of the disease with the prolonged drought which we have had, and the consequent want of flushing of the drains or sewers. I would call attention to Case 4, as proving that the incubation period of diphtheria may be only three days.

CASES 1 and 2.—On April 27th I was called to see two children in Bouverie-road, Stoke Newington, the house being the last but one in the road, having the open country beyond. The younger of the two, aged eight years, had been ill for four days, and had slept with her sister, aged ten years. Both cases were mild. There was a good deal of false membrane on the tonsils, fauces, and velum palati in the younger child, and on two occasions traces of albumen in the urine. In both cases the temperature varied from 101° to 103° , and the pulse from 120 to 130. The pulse of the younger child was very feeble during the second week, and there was considerable glandular enlargement in the neck. The treatment used in these two cases was large doses of tincture of perchloride of iron and chlorate of potash internally, and glycerine of carbolic acid applied to the throat. Ice to suck, and plenty of port wine, beef-tea, and milk. In this house I found that previous to the attack the closet had been out of order for a week. There was no water, from something having gone wrong with the closet-wire.

CASE 3.—On the 8th of May I saw for the first time Mrs. W—, aged sixty-eight years. She was visiting at Albion-road, Dalston. She complained of slight sore-throat and cough; she was a little feverish. On examination the throat was a little inflamed; there were other symptoms of catarrh. Ordered a saline mixture. On the 9th she felt much better, and the throat was comfortable. I did not therefore examine the throat. With the stethoscope I heard some coarse mucous râles. On the 10th there were more distinct bronchial symptoms, and *no complaint was made about the throat*. Ordered bark and ammonia. I saw her again on the evening of the 10th. She was then very restless and coughing; temperature $101^{\circ}8'$. On the morning of the 11th, at 11 A.M., I again saw her. She was much worse, and complained of her throat, and of great difficulty of swallowing. I found now that both the tonsils and the back of the fauces, as far down as I could see, were covered with a thick diphtheritic exudation. The pulse was good and the temperature slightly subnormal. To take as much stimulants as possible. At 4 P.M. Dr. Wilson Fox saw the lady with me. She had grown worse rapidly since the morning; the disease had extended to the larynx, the face and left hand were getting livid, and very little air entered the left lung. The question of tracheotomy was discussed by Dr. Wilson Fox and myself, and decided against. The patient died during the evening.

CASE 4.—Miss W—, daughter of the last patient, came to be with her mother on the 10th of May, and certainly kissed her mother on that day. I saw this lady on the evening of May 13th, exactly three days from the time she came to attend her mother, and she had undoubted diphtheria. There were distinct patches of false membrane on the throat. Temperature 103° . She was removed the same evening into a private ward in a hospital, and recovered.

CASES 5, 6, and 7.—These occurred at the same house in Mountford-road, Hackney. Mrs. B—, who had been confined on the 6th of May, complained of sore-throat on May 15th, so also, on the same day, did her eldest son, aged eight years. Both cases were slight, and there was not much exudation on the throat. On May 19th, four days after the mother was taken ill, the nurse called my attention to the infant's navel. The funis had separated, and round the navel was a red circle as large as the top of a tumbler, and this was covered with a shreddy diphtheritic exudation perfectly characteristic. It was not easy to examine the throat, but, as far as I could see, there was membrane there also. The infant died on the fourth day. The mother and son recovered. The treatment was the same as in cases 1 and 2.

CASES 8, 9, 10.—I was called on the 14th of May to see Mrs. G—, living in a large roomy house, having the open country behind it, in Lordship-park, South Hornsey. I found her suffering from a severe attack of diphtheria. She was very ill, temperature $103^{\circ}2'$, with a good deal of exudation on the throat. The glands of the neck were intensely painful and much swollen. She recovered very slowly, and is much shattered in health by the attack. No albumen and no paralysis. She was of course isolated, but on the 22nd her second daughter, aged thirteen years, was attacked very seriously. The entire throat was covered with false membrane, which extended over the roof of the mouth. Temperature $102^{\circ}2'$; pulse 112; the latter became so feeble after a few days that it could scarcely be felt. Urine feebly albuminous twice. Could only swallow with the greatest difficulty. Glands painful, and considerable aphonia. The treatment was, as in the other cases, plenty of wine, steel

and chlorate of potash, ice, beef-tea, milk, and glycerine of carbolic acid applied to the throat; she also had the throat frequently sprayed with warm Condy's fluid and water. She is recovering slowly, the pulse being still almost imperceptible. On May 28th, her sister, aged fourteen years, had several characteristic patches on the throat, but was not at all ill. Temperature 99° ; pulse 80. The state of the throat continued for several days, and then cleared off, the patient all the time feeling fairly well.

CASES 11 and 12.—Agnes B—, aged eight years, was attacked with a sickness and sore-throat on the 25th of May. She had had scarlet fever two years back, but her mother thought she must be getting it again. Her temperature was 103° ; pulse 120. There were several large diphtheritic patches on the throat, the tongue was swollen, and she could scarcely swallow. The urine was highly albuminous. The treatment was the same as in the other cases. On the fourth day her nose bled profusely. She said she felt much better. The throat cleared; the temperature was 98° ; pulse 76. The albumen disappeared from the urine, and, beyond weakness, the patient was well on May 31st. Her sister Lilly sickened two days later, and made a speedy recovery.

CASES 13, 14, and 15.—These were all mild, requiring no particular remarks. One was in Albert-road, Dalston, and the house was nearly opposite to that in which cases 11 and 12 were. The other two cases were in Stoke Newington.

It will be seen by the above necessarily brief notes (for I have omitted all details) that in less than a month fifteen cases of diphtheria occurred in my practice, two proving fatal. In all the cases isolation was insisted on, and disinfection with carbolic acid carried out fully. I also advised the various members of each household to gargle their throats very frequently with Condy's fluid and water, and to these precautions I attribute the escape of the other members of the different households. In the houses in Albert-road, there were eleven persons living in one house, and only one had the disease, and in the other house eight persons lived, and but two had diphtheria. None of the patients have as yet developed diphtheritic paralysis.

Queen's-road, Dalston.

TARSAL TUMOURS TREATED BY ELECTROLYSIS.

By JULIUS ALTHAUS, M.D.

ON February 6th, 1880, Mr. White Cooper sent a lady, aged thirty, to me, who suffered from tarsal tumours occupying nearly the whole of both upper eyelids, and which had become gradually developed during the last six months. They looked inflamed, were very disfiguring, and caused considerable annoyance by interfering with the proper action of the eyelids, which felt very heavy. Under these circumstances Mr. White Cooper recommended the removal of the growths by electrolysis. As the conjunctiva was involved by the tumour and was excessively sensitive, reflex action in the lid being very much increased, I thought it best to perform the operation under anæsthesia, and therefore procured the assistance of Mr. Clover, who put the lady very quickly under the influence of his anæsthetic mixture. I then applied both poles of the voltaic battery by means of my four-pointed electrolytic needle-conductors alternately to both tumours, so that each of them received the influence of the cathode and anode successively. Twenty cells of Becker-Muirhead's battery were used for ten minutes, after which the whole of the tumours, both inside and outside, appeared completely shrivelled up.

Not a drop of blood was lost at any stage of the operation, which was particularly remarkable when the subconjunctival portion of the tumour was acted upon, as this was highly vascular. The surface of the lids was covered by goldbeater's skin and flexile collodion. The patient recovered quickly from the influence of the anæsthetic, and went the same afternoon to her home in the country. She called upon me again on March 4th, about a month after the operation, when I was gratified to find that the success had been complete. The tumours had entirely vanished; no scar was visible anywhere, and no eversion of the lids had occurred. Both eyelids had, indeed, a perfectly normal appearance.

Tarsal tumour is a troublesome affection and does not yield to external applications, such as the red precipitate or iodide

of potassium ointment; so that, if removal becomes necessary, free incisions have to be made which are generally accompanied by considerable bleeding. The adhesive inflammation which supervenes upon the operation has sometimes to be increased by touching the interior of the cysts with nitrate of silver; and if the tumour be situated near the margin of the eyelid and the punctum, there may be cicatricial shrinking after the operation, and eversion of the edge of the lid, with displacement of the punctum. All this makes the ordinary operation for tarsal tumour a somewhat formidable one; and electrolysis would therefore appear far preferable. The complete absence of bleeding in the latter procedure is a great advantage, as the operator sees much better what he is doing, and can regulate the action of the galvanic force with the greatest nicety. A single application appears to be sufficient for a cure, and there is no danger of cicatricial shrinking afterwards, provided the operation be properly performed. In a case where only the skin of the eyelid would be affected, I should not resort to anæsthesia, as then the pain would not be severe; but the great sensitiveness of the mucous membrane in the above case rendered anæsthesia desirable.

Bryanston-street, Marble Arch, W.

A Mirror

OF

HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. GEORGE'S HOSPITAL.

THE following are among some of the cases, under the care of Mr. CARTER, in the Ophthalmic Wards.

SOFT CATARACT IN ONE EYE, AND A HIGH DEGREE OF MYOPIA IN THE OTHER, BOTH RECENT.

The patient, a man aged twenty-four, eighteen months ago was tested for the army, and the sight of each eye was found to be perfect. Five months ago he noticed that the sight of the left eye was failing, and a month later that he had a difficulty in making out distant objects with the right. When admitted, the right eye was much larger than the left, especially in the antero-posterior diameter. Myopia = 16 D, and there was a large posterior staphyloma. The left eye resembled a hypermetropic eye in size and shape. The lens was universally opaque. The latter was removed by suction.

DISLOCATION OF THE LENS INTO THE VITREOUS.

The patient, a man aged sixty-four, received a blow on the eye. Vision was immediately reduced to perception of light. When admitted, there was conjunctival injection, a tremulous and inactive iris, and the fundus oculi could not be illuminated. Four days later, no details of fundus were visible, and there were floating filaments in the vitreous. The lens was not visible. Vision: counts fingers at three feet.

VICTORIA DOCK DISTRICT DISPENSARY.

CASE OF MALFORMATION OF HEART AND ABSCESS OF BRAIN; UNUSUAL CONTENTS.

(Under the care of Mr. JULIUS CÆSAR.)

E. M—, aged nine, first came under observation in December, 1879, with the following history:—He was a full time and healthy child when born. At three months old his mother noticed that his cheeks, a circle round lips, the tips of fingers and nails, were very blue, and that the colour increased if he were excited or cried. At the same time the ends of the fingers and the toes began to enlarge.

These symptoms increased, but otherwise he appeared to enjoy good health up to about twelve months old, when a discharge, not offensive, from the left ear took place. At this time, also, he used to clutch his head as if it were the seat of great pain, and when old enough to make himself understood used to complain of great pain there. When

eighteen months old he had measles, bronchitis, and pneumonia, but appeared to recover from them fairly well. When three years old he had completed dentition. The discharge from the ear now ceased, and he began to walk; he was not at any period able to walk more than half a mile without fatigue and difficulty in breathing. Between five and six years his mother noticed, for the first time, that he dragged his right leg as if he had not power at the hip to lift it. Shortly after this his right wrist began to fail, then his forearm, and, finally, his entire arm. Then the leg became affected, the paralysis appearing to begin in the hip, and gradually extending to the foot, till at seven years and a half he had lost all power over these extremities, which about this time got acutely sensitive, so much so that the least movement of them caused him to cry, even touching them appeared to give him great pain. He had never talked plainly, but about seven years his articulation got very difficult and hesitating, till at last he could utter only half words. As for "mother" he used to say "mur," and for "father" "f-a-a." At all seasons of the year he felt cold to the touch, and used to complain of feeling cold, though clothed in flannel.

On August 18th last he had a convulsive fit during the night. When seen in the morning he was in bed comatose, and quite unconscious, the pupils were widely dilated, and his forehead suffused with a very deep blush. The pulse was rapid, full, and strong. He was unable to swallow even liquids. All his evacuations were passed involuntarily. He remained in this state for five days, and then appeared to get a little better, took some milk and egg, and seemed to recognise those about him. This continued for three days, when he relapsed into his former state of unconsciousness, which lasted till he died on August 31st.

At the necropsy thirty hours after death the pulmonary artery was found to communicate with the aorta a little way above the attachment of the two most left semilunar valves by an opening about the size of a sixpenny piece. These valves were perforated in several places. The ascending part of the aorta was as big as that of an adult. No murmurs were heard during life. The right lung was adherent to the thoracic wall and diaphragm, and both were the seat of tubercle. In removing the brain great difficulty was experienced in detaching the calvaria, so adherent was the dura mater to it. On examining the brain tubercles were seen scattered all over the base, and in the ventricles and fissures of Sylvius. The right hemisphere of the cerebrum was quite pulpy, the anterior part of the left hemisphere was in a like condition, but the middle and posterior lobes were quite hard except at one spot in the latter lobe, which was quite soft and fluctuated on pressure. On cutting into this spot it proved to be a large abscess extending from the middle cornu to the posterior cornu of the lateral ventricle, but not entering it. On examining the abscess it was found to contain a dense calcareous mass weighing 120 grains. The walls of the abscess were impregnated with a like material, and grated on the knife when cut. The remainder of the brain presented no pathological changes of importance.

Remarks.—The principal points of interest in this case were (1) the unusual form of heart malformation; (2) the existence of large perforations in the semilunar valves, unaccompanied by murmur; (3) the existence of so much brain mischief with comparatively so few symptoms.

QUEEN'S HOSPITAL, BIRMINGHAM.

COMPOUND COMMUNUTED FRACTURE OF THE HUMERUS; LISTERISM; RECOVERY.

(Under the care of Mr. JAMES F. WEST.)

THE following cases, of which the notes are abridged from those taken by Mr. J. W. Moore, house-surgeon, serve to illustrate the advantage of the antiseptic treatment in severe compound and comminuted fractures.

Charles F—, aged thirty-five, a saddler, was admitted on July 10th, 1880. He had been thrown off the top of an omnibus, and had fallen with his left arm doubled under him. The humerus was fractured just above the insertion of the deltoid, and again about three inches lower down. There were two small wounds on the inner side of the arm at the upper third, a little towards the back. He had lost about a pint of blood, and there was considerable shock. A piece of bone, about two inches in length and one-third of the circumference of the shaft of the humerus, protruded

from the upper wound, and, being loose, was easily removed; it was quite denuded of periosteum.

The patient was at once placed in bed; the wounds were syringed out with carbolic-acid solution (1 to 50), a fine silver suture was introduced into each wound, and the protective gauze &c. were applied after Lister's method, under the spray. The arm and forearm were bandaged in the extended position, with an inner and an outer straight splint, the limb being elevated and placed on a pillow. Evening temperature 98°4; pulse 110. He had a comfortable night, and the temperature next day was 99° in the morning and 99°8 in the evening. Pulse 100; respiration 24.

The wound was dressed for the first time (under spray) on July 12th, when the sutures were removed, and a small drainage-tube was introduced into the upper wound. Evening temperature 100°; this was the highest temperature registered. The patient was comfortable and free from pain.

On the 13th and following days the temperature was, without a single exception, normal.

The wound was dressed for the second time on the 15th; the lower wound was healed and the upper wound discharging only a little serum, and there was no pain excepting when the wound was dressed. The third dressing was on the 19th, under spray. A small quantity of pus was found on dressings, but there was no redness, oedema, or tenderness up the arm. It was dressed again on the 23rd, when there was scarcely any discharge of pus. The drainage-tube was left off. An inner splint of gutta-percha (with a window in to dress the wound) was made, extending from the axilla to the wrist, and embracing half the circumference of the limb, the long straight splint on the outer side being still retained. The wound was now easily dressed without any disturbance of the parts, and on the 30th, as it was quite sound, dry carbolic gauze was substituted.

On Aug. 2nd the wounds were quite solid; the forearm was bent to a right angle with arm. Gutta-percha splints were applied, and the patient was discharged in good health. The arm was in good position, and a fair amount of union had taken place. He attended as an out-patient for the next few weeks, and at the end of two months was able to resume his trade.

WOUND OVER THE PATELLA, WITH A SMALL PIECE CHIPPED OUT OF THE PATELLA; LISTERISM; RECOVERY.

(Under the care of Mr. JAMES F. WEST.)

Geo. J—, aged forty-two, a horsekeeper, was admitted on July 19th, suffering from a kick over patella from the hind leg of a horse. The wound was one inch in length, transverse, and had contused edges, all structures being divided down to bone, and a small splinter being chipped out. The bursa patellæ was readily explored with finger. The wound was syringed out under spray with carbolic lotion (1 to 50), and two silver sutures were applied. No drainage-tube was inserted. Dressed antiseptically. A Back splint was applied and the limb fixed with sand pillows, and he was confined to bed. The temperature was never higher than 99°. The patient slept well, and had no pain worth mentioning. He was dressed for the first time on the 21st, when the wound looked well and was free from redness and irritation. He was again dressed five days afterwards, and the sutures were removed; the wound was healed. At the next dressing dry gauze was placed on the wound. The patient was discharged cured on Aug. 2nd, with a cicatrix firm and solid, and the skin freely movable over patella. At no period had there been any buritis or synovitis. The patient was ordered to wear the back splint for a few days longer.

NEWARK HOSPITAL.

FRACTURE OF INNER CONDYLE OF RIGHT HUMERUS;
PERFECT UNION.

FOR the notes of this case we are indebted to Mr. J. D. T. Reckitt, house-surgeon:—

Henry G—, aged nine years, was seen as an out-patient on April 20th, 1879. He stated that whilst running at full speed he fell down, with both arms extended, and that the inner sides of both elbows came into violent contact with the pavement. There was great swelling of the elbow and parts about the inner condyle of the right humerus; motion of the elbow-joint was somewhat impaired and very painful. Upon close examination, the inner condyle was found to be

broken off and quite movable beneath the integuments, but there was not sufficient broken off to involve extensive fracture into the elbow-joint.

An inner angular splint was applied, and a pad of lint to maintain the broken fragment in position. The arm was kept at perfect rest, and cold lead-lotion applied. The swelling and pain quickly disappeared, and on May 15th the splint was removed, the condyle having become firmly united and not to be detected by manipulation. Passive motion was applied, and in a week longer he was able to use the arm as usual.

Remarks by Mr. RECKITT.—That bony union occurred so soon after the injury was somewhat surprising, more particularly as the boy was only just recovered from a very severe attack of typhoid fever; and in these particular fractures union, I believe, is often difficult to obtain and sometimes not obtainable.

Medical Societies.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

Amœboid Movements of the Colourless Blood-corpuscles in Leuchæmia.—*Nature and Treatment of Genu Valgum.*

THE ordinary meeting of this Society was held on the 9th inst., J. E. Erischen, Esq., F.R.S., President, in the chair. A suggestive contribution to the pathology of leuchæmia was made by Dr. Cavafy, who has observed a remarkable lack of amœboid movements of the leucocytes in a case of this disease. A paper by Mr. Brodhurst upon genu valgum, in which he discountenanced osteotomy, gave rise to a rather spirited discussion, Mr. Savory supporting the author in his strictures upon the prevalent practice of this operation, which was, on the other hand, upheld by Mr. Barwell and Mr. Parker, and, with certain reservations, by Mr. Haward.

A paper was read upon "Amœboid Movements of the Colourless Blood-corpuscles in Leuchæmia" by Dr. JOHN CAVAFY. The observations described in this paper were made on the blood of a patient suffering from leuchæmia, who was in St. George's Hospital, under Dr. Whipple, from April 30th to July 18th, 1879. The patient, a man aged twenty-six, states that he had been well, with the exception of occasional sick headaches, until a month before admission, when he began to feel extremely weak and languid. He got a cough a little later, and a week before he came he had hæmorrhages in the conjunctivæ and skin after severe retching. On admission he was found to be very pale, mucous râles were heard over the lungs, and a soft systolic murmur at the base of the heart. There were enlarged lymphatic glands in the axillæ, over the right clavicle, and in the right groin. The blood contained a large excess of colourless corpuscles, the proportion to the coloured being as one to six. During his stay in the hospital he became gradually worse, with occasional temporary improvement. He had epistaxis, and fresh hæmorrhages in the conjunctivæ and skin on several occasions. The spleen was not at first enlarged, but became so later, as also did the liver. The glands subsided a little at first, but again soon enlarged, and fresh ones appeared, especially in the neck and near the angles of the lower jaw. The pulse was always quick, and the temperature nearly always above normal. After leaving the hospital he improved slightly at first, but soon became worse again; the glands became of enormous size; there were numerous cutaneous hæmorrhages, and he became gradually weaker, dying early in October, 1879. There was no post-mortem examination. The blood was examined to determine whether the amœboid movements, which characterise healthy colourless corpuscles, were preserved. Twelve observations were made in all, at various intervals, from May 16th to July 14th,

the hot stage being used. The total number of colourless corpuscles in the field of the microscope was first counted, and the number of amoeboid corpuscles noted about every ten minutes, usually for half an hour on each occasion. The mean of these was then taken, and the percentage calculated, the results being tabulated in the paper. In determining whether amoeboid movements occurred, a very slight departure from the spheroidal shape was considered sufficient; but other observers might have been disposed to refer some of these very slight changes of form to pressure of the cover-glass, which would reduce the proportion recorded in the table. It was found that the character of the movements was much changed when they occurred at all, as they were very sluggish and ill-marked, although the observations were made at fever temperatures which stimulate normal corpuscles to great activity. It only now and then happened that one or two corpuscles showed comparatively active motions. The blood contained the three kinds of colourless corpuscles which have been found in health—lymphoid cells, ordinary colourless corpuscles, and rarely one or two large granular cells. Amoeboid specimens of each were found, but the first and the last kind showed mere traces of movement. It was found that coagulation took place much more rapidly in the later than in the earlier specimens. The table shows that only a very small proportion of the corpuscles was amoeboid, the highest found being 24 per cent., and the lowest 4 per cent. The proportion also decreased with the advance of the disease; the mean of the first six observations being about 12 per cent., while that of the last six only gives 6 per cent. As the first observations were made in a comparatively late stage of the disease (after the occurrence of hæmorrhage), further investigation must decide whether loss of amoeboid movement takes place at the earliest onset; it is very probable, however, that this will be found to be the case. For purposes of comparison the blood was examined in two cases of chloro-anæmia, and one of anæmia with leucocytosis from cancer of the stomach, and in all three amoeboid movements were active at ordinary temperature. The earliest observations on the point brought forward in this paper were made by Dr. Laking in 1873, but remained unpublished. The results were communicated by Dr. Pye-Smith to the Pathological Society in 1878, and in the same year to THE LANCET by the author of this paper. Neumann, also in 1878, found amoeboid movements wanting, or very sluggish, in a case of leucæmia, although they were active in the corpuscles of fluid from blisters in the same individual. The following conclusions may be drawn:—1. The colourless corpuscles in leucæmia are dead or dying, and hence incapable of development. 2. Amoeboid movement being practically lost, emigration from the blood-vessels is impossible. 3. Coagulation and thrombosis are largely favoured. Secondary leucæmic nodules and infiltration must be produced, not by emigration, but by extravasation, and probably also by lymphatic accumulation, as large numbers of cells must be prevented from entering the blood by lymphatic thrombi. Whether lymphatic new-growth also takes place must be decided by careful examination as to the presence of a true adenoid reticulum, and must be rejected if we find only a network of fibrin. In conclusion, it is pointed out that the absence of amoeboid movement may prove of great value in diagnosis, as serving to distinguish cases of true leucæmia from leucocytosis, a matter in which there are oftengrounds for hesitation. —Mr. SAVORY inquired whether the number of red blood-corpuscles was absolutely or relatively diminished, as if the leucocytes were inactive or dead this should affect the genesis of the red corpuscle.—Dr. SILVER said that in a case of lymphatic leucæmia recently under his care the white corpuscles, which were of various sizes, exhibited unusually active movements at ordinary temperature. The same occurred in a case of splenic leucæmia under Dr. Green's care. In both cases there was also a marked tendency of the red corpuscles to become fused into irregular masses, a change observed also recently by a Dublin physician in a case of essential anæmia. Of course it would not be right to draw conclusions from single cases.—Dr. PAYNE said that some years ago he made a post-mortem examination at St. Mary's Hospital on a man who died from exhaustion following a simple fracture of the femur. Around the fractured ends was a mass of soft imperfect coagulum; there was no true coagulum, no suppurative, no attempt at repair. It seemed to be a striking instance of want of "vitality" of the leucocytes, not permitting of the usual changes of repair.—Dr. CAVAFY, in reply, said that he had

not studied the red corpuscles in this case, but had observed simply the amoeboid movements of the leucocytes. The proportion of white to red corpuscles was 1 to 6. Dr. Silver's cases were interesting, and seemed opposed to his own observations, but they may have been in an earlier stage of the disease than in the case he had observed. Neumann had noticed the want of amoeboid movements in the white corpuscles in leucæmia, and Dr. Shann was at present observing a case at Addenbrooke's Hospital in which only a small proportion of leucocytes showed movements. Dr. Payne's observation tended to show that want of repair in the fracture was due to loss of vitality of the colourless corpuscles. The matter was open for further investigation.

A paper followed by Mr. B. E. BRODHURST, entitled "Observations on the Nature and Treatment of Genu Valgum." Genu valgum is regarded rather as a constitutional than as a local defect. It is accompanied by a relaxed condition of the ligamentous system, and it is preceded by flat foot. Thus the tibia is inclined outwards, and the weight of the body is thrown unduly to the inner side of the limb. The internal lateral ligament of the knee-joint consequently yields, and the inner condyle protrudes. The condyles of the femur are thus placed in an oblique position from without inwards, and from above downwards. There is usually a difference in the length of the condyles, the inner being about three-tenths of an inch longer than the outer. Sometimes, however, it is five-tenths of an inch, and again not more than one-tenth of an inch. This is observed both in the rickety and in the healthy femur. Examples are to be seen also where the difference in length between the inner and the outer condyle is almost inappreciable, and again other rare specimens exist where the inner condyle is fully one inch longer than the outer, and is misshapen. Knock-knee in its early stage disappears in the horizontal position, and can only be distinguished when the patient is erect, when, at length, it has become permanent, firm support is sufficient to remove it. But as the deformity increases and the femoral condyles become more oblique, the biceps femoris is rendered tense, the ilio-tibial band becomes tightly drawn, and the external lateral ligament is rigid. The question to be solved is, how is the limb to be restored so that a right line, passing, as in the normal condition, through the long axis of the femur and of the tibia, may strike on the top of the arch of the foot. In the first place it is necessary to remove the flat foot, or in other words, to restore the arch of the foot. Various modes have been adopted to restore the straight line of the limb; for example, forcible straightening, osteotomy, and tenotomy. 1. Forcible straightening has been employed both in young children and in adults. It is effected with considerable injury both to the bony structures and to the soft parts; but, according to M. Delore, permanent injury is not produced, and his patients are again able to walk in the course of six months. 2. Osteotomy has lately been performed by some surgeons in every case of genu valgum, even when the deformity was yet very slight, and the child only between three and four years of age. One operator claims to have performed osteotomy for genu valgum on nearly four hundred limbs. And it is not that one section alone is made, but perhaps three, or even four, are executed on the limb at a sitting. Notwithstanding these osteotomies on the condyle and on the shafts of the femur and the tibia, the deformity often remains almost as great as before the operation. And when the limb appears to have been straightened the deformity recurs, and the malleoli are seen several inches apart. Further, genu varum may be substituted for genu valgum. Also, partial ankylosis is not unfrequently induced, and the motion at the joint is much impeded. The growth of the limb also is interfered with, and a serious lameness is begotten where there was previously no lameness. Fatal blood-poisoning, also, has resulted more than once from these operations. 3. It is shown by a cast of a valgous knee which was taken when the patient was nearly eighteen years of age, that a very serious deformity existed, the inner malleolus being ten inches and a half removed from the median line. In this case the biceps tendon, the ilio-tibial band, and the external lateral ligament were divided, and the knee and the foot were brought, in the course of seven weeks, into their normal positions. When splints are insufficient to redress the limb, division of the tendon of the biceps femoris usually enables the limb to be straightened until adult-life is attained. But when in addition to the biceps the external lateral ligament and the ilio-tibial band are divided, the

knee may be straightened either immediately or gradually. In the adult gradual straightening is to be preferred. Any abnormal motion after division of the ligament is due to the lax condition of the internal lateral ligament, but this gradually lessens and at length ceases; unless the arch of the foot be raised and the retraction of the biceps be overcome, the inclination outwards of the tibia and the fibula must remain, notwithstanding osteotomy. In conclusion, it is stated that forcible straightening of the limb (*redressement brusque*) is unjustifiable; that osteotomy is wrong in principle and unnecessary, and that in children especially it is objectionable; but that division of tendons and fasciæ may be done without danger, and that through tenotomy we are able to reduce this deformity and to restore the thigh and the leg bones, and the bones of the arch of the foot to their normal positions.—The PRESIDENT said the paper contained several points of practical interest. He could confirm from his own experience the statement that genu valgum is often preceded by flat foot. As to osteotomy, there was no doubt as to evil consequences—even death—following an operation in which the knee-joint must be opened, and he hoped that surgeons who practised it would give their experience.—Mr. WARRINGTON HAWARD agreed as to the variations in the causes of genu valgum, many factors entering into its production. In some cases the ligaments, in others the bones, were at fault; and other cases were due to general debility. It was not, then, possible to lay down a special form of treatment to suit all cases. The examples of this affection might be divided into two sets—viz., those met with in young children, and those in subjects at or about the time of puberty. In young children rickets was a chief element in causation, the knock-knee being only one manifestation of the general condition. Such cases were to be treated constitutionally, the only local procedure necessary being to apply splints and to prevent the child bearing weight on its legs. On the other hand, the genu valgum that occurs in young growing ill-nourished girls and boys about the age of fifteen is mostly associated with flat foot and lateral curvature. There is little bony deformity, but laxity of ligaments and muscles. There are many cases in young rickety children with considerable knock-knee and but little flat foot, which could not be regarded as a factor in the production of the knee-deformity. In such cases there was marked elongation of the inner condyle, and it seemed reasonable to act on the condyle rather than on the tendon, which is not contracted. In such a case, of which he mentioned an example, it is impossible to forcibly straighten the limb. At the same time he had met with but few cases calling for osteotomy. In one case, which seemed most suitable for this operation, he was unable to perform it on account of the opposition of the parents, and after persevering by means of splints, a very satisfactory result was obtained. In another case of elongated condyle with lax ligaments following rheumatism, the limb was straightened after chiselling through the condyle; but the deformity returned as soon as the support was left off, owing to the laxity of the ligaments. There were cases, however, which were rightly treated by osteotomy; but he maintained it was incorrect to speak of this as an extra-articular operation. It was impossible, even on the exposed bones of a dead subject, to chisel off the condyle without opening the joint.—Mr. R. PARKER agreed that constitutional causes were largely at work in the production of genu valgum, and also laxity of ligaments; but there were other factors also. Flat foot was by no means often met with; when it occurs it follows rather than precedes the deformity produced by genu valgum. Mr. Brodhurst admitted there was lengthening of the inner condyle in a certain number of cases. Whether the lengthening be primary or secondary, it was not possible to straighten a limb with this condition unless very great violence were used; and Ogston's operation was directed to remedy this cause of the deformity. When the operation was carefully performed, the limb could be got quite straight; but of course, if care were not taken subsequently, it might relapse; and he attributed failure to the lack of continued supervision of these cases. He had never regretted operating for genu valgum in young children, who make good recoveries; and he did not regard osteotomy as more serious than tenotomy was in the early days of its introduction into surgery. He did not think osteotomy could be compared to the plan followed by Mr. Brodhurst, which, answers in certain cases; and it was not correct to say that osteotomy was now done in all cases of genu valgum. Mr. Brodhurst's plan had been practised for a very long time;

osteotomy was only recently introduced, and the great incentive to its performance was the insufficiency of the old method to cure the deformity.—Dr. E. HAUGHTON testified to the success attending Mr. Brodhurst's plan in a case in which it was adopted in preference to osteotomy, as being less free from danger. It was a bad case of genu valgum; and the limb was maintained in splints after the tenotomy, the splints being subsequently replaced by iron supports, which had now been removed.—Mr. BARKER said that no doubt some ill results had followed Ogston's operation, and some might have been unrecorded. But what had been the experience of the surgeon mentioned by Mr. Brodhurst, who had had three hundred of these cases? When looking up the subject after the fatal case which occurred in his own practice, he found records of one hundred and eighty cases, the only fatal ones being his own, and one dying from renal disease six weeks after the operation. A mortality of one per cent. could not be considered high even in minor operations. About a year ago he saw a case which had been treated by Mr. Brodhurst by tenotomy some eighteen or nineteen years previously. The patient was wholly unable to walk without a support, having worn a splint all the time, and much wished further measures to be taken; but owing to the laxity of the ligaments he was compelled to advise against osteotomy, and the patient was left unrelieved.—Mr. SAVORY concurred with Mr. Brodhurst in the opinion that osteotomy was being far too frequently performed. It was a "fashionable" operation, and every week case after case is recorded of "success" following it, so that one was tempted to ask what was meant by "success." If the patient escaped with life and limb, that was styled a brilliant success! Two things were to be considered, one was the use of the limb, the other its form or beauty. In a certain number of cases the latter was improved, but as to usefulness of limb (infinitely more important), those who record the successes give no definite information as to how far such people could walk before operating, and how far after? To the working classes it was of especial importance. He knew of one case, a postman, who could walk his ten miles a day before he was operated on, but since then he has never reached that. Surgeons who perform osteotomy to relieve this deformity should not record as a success the mere improvement in the shape of the limb, but should see that its utility was increased, and not diminished.—Mr. BARWELL said that in his experience flat foot was, as Mr. Parker had rightly said, secondary to knock-knee, and not a factor in its production. In many children the tibia becomes so curved from the genu valgum that the foot gets flat. There was undoubtedly, in many cases, very evident laxity of the ligaments, especially the external lateral. He believed the lengthening of the condyle was apparent and not real; it was due to obliquity of the epiphysis at its junction with the shaft of the femur, and he had produced the deformity artificially by driving in a wedge into the bone so as to produce obliquity. He had also found by experiment that with a femur fourteen inches long, and a tibia thirteen inches, and a deviation of eight inches, in order to remedy the deformity by adduction of the tibia it was necessary to separate the outer condyle an inch and a half from the tibia. During life this was done by Mr. Brodhurst by dividing the lateral ligament, the ilio-tibial band, and biceps tendon; and he did not see how this could add to the security of the limb. Mr. Brodhurst showed a case at the Clinical Society a year ago where this had been done, and the patient was unable to walk without support. For himself, he would much prefer to have his femur divided than the ligaments, especially if the knee-joint had to be torn asunder to get the limb straight. In reply to Mr. Savory, he could tell him of cases, and show him patients, in which the utility of the limb was greatly improved by the division of the femur. As an example, he quoted the case of a young lady, who before operation could not walk a hundred yards, but who afterwards was enabled to climb a mountain at Penmaenmawr, and who walks now five or six miles daily. (In reply to Mr. Savory, Mr. Barwell said this was certainly the case.)—Mr. BRODHURST, in reply, said he knew there would be difference of opinion on the subject. He agreed with Mr. Savory that osteotomy was overdone. He had seen several cases where it had failed, and he mentioned one. No doubt, occasionally genu valgum precedes flat foot; but the reverse is the rule—it is so in ninety-nine cases out of one hundred. The case shown at the Clinical Society was a girl of eighteen, and it was only six weeks after operation.

MEDICAL SOCIETY OF LONDON.

Tumour of Cerebellum.—Mitral Stenosis.—Reduplication of Cardiac Sounds.

AT the meeting of this Society on the 8th inst., the President, Mr. F. J. Gant, in the chair—

Dr. DOWSE read notes of a case of Tumour of the Cerebellum. A man, thirty-four years of age, who contracted syphilis ten years ago, began to suffer from ptosis of the left eyelid at the end of last year, followed by failing vision, first of the left and then of the right eye; he had also diplopia. In July severe headaches set in, and his gait became staggering; and occasionally he suffered from stiff neck, with retraction of the head. There was atrophy of both optic discs, especially the left. There was partial deafness of both ears; but with the exception of numbness of the fingers, sensation was normal. Memory was defective. On standing or walking there was weakness in the lower limbs with defective volitional co-ordination. There was complete absence of patellar-reflex. There was probably then a growth (possibly syphilitic) in the middle lobe of the cerebellum. The absence of tendon-reflex did not necessarily point to spinal disease, but it might be due to an inhibitory power exerted in the cord, preventing reflex action.—Dr. DAY doubted whether there was sufficient evidence of its syphilitic nature; and pointed out the difficulty in diagnosis between the headache of cerebral congestion and that of nervous exhaustion. He mentioned a case of cerebellar tumour where there was no headache.—Dr. GILBERT SMITH said there was in the London Hospital at present a patient suffering from cerebellar tumour, in whom there was marked reeling gait, slurred speech, impaired memory, and double optic neuritis, although vomiting, headache, stiff neck, pain on pressure, and paralysis were absent. Patellar-reflex was exaggerated.

Dr. SANSOM narrated a case and exhibited a specimen illustrating a mode of Causation of the Murmur of Mitral Stenosis. The patient manifested a systolic murmur with maximum at the base; at the apex a short murmur was interpolated between the second sound and the first sound, a pause preceding and succeeding it. This was found at the autopsy to be due to "buttonhole" constriction of the mitral valve with extreme dilatation of the auricle. It was obvious that the murmur heard during diastole was due to the flow through the mitral orifice unaided by the auricle. The rhythm of the murmur following the second sound exactly resembled that of reduplication of the latter.

Dr. SANSOM also read a paper on the causes and significance of Reduplication of the Sounds of the Heart. He first reviewed the various theories adduced in explanation of doubling of the first sound. These might be reduced to two. 1. That reduplications of the first sound are *real*, and are due to a want of synchronism in the systolic tension of the auriculo-ventricular valves of the right and left sides. 2. That they are apparent and due to an auricular immediately preceding the ventricular systole. He could not agree that the auricular systole is directly audible, but that it might cause a sound by communicating a presystolic tension to the mitral curtains under certain conditions. He adduced cardiographic tracings to prove that in certain cases of apparently reduplicated first sound the auricular systole was greatly augmented, and showed that the phenomenon might be the precursor of an undoubted presystolic murmur. As regards reduplication of the second sound, he had observed it in eleven out of thirty-seven cases of mitral stenosis. All observers are agreed that mitral constriction was the most common condition in which it was observed. He considered, from a review of the cases, that the reduplication of the second sound was often *apparent* and due to a tension communicated to the mitral curtains *early* in diastole, just as in quasi-reduplication of the first sound it was communicated *later* in diastole. The moment the ventricle becomes relaxed after its systole the blood retained in a state of tension (the pressure in the pulmonary circuit being heightened) in the auricle enters with force into the ventricle, and finding its way on the parietal side of the curtains of the mitral valve, causes them to bulge towards the ventricular cavity, and in so doing occasions the "click" of valve-tension, which, coming so soon after the second sound, closely resembles a reduplication of the latter. Although a frequent

it is not a universal explanation of this reduplication. In some cases it is very probable that the reduplication is real and due to non-simultaneous closure of the semilunar valves of the aorta and pulmonary artery. He agreed with Dr. James Barr of Liverpool, who held that over-repletion of either of the ventricles was the cause not of delayed but of anticipated sound.—Dr. GALABIN argued that reduplication was often rather apparent than real, cardiac murmurs closely approximating cardiac sounds, especially in the case of direct mitral murmur. Thus in mitral stenosis, the presystolic might be mistaken for a loud first sound and the true first sound for the second sound of the heart. He could not understand how valvular tension could occur when the valve was converted into an indurated ring. The apparent second element of a reduplicated second sound might be due to a short diastolic murmur of direct mitral character; and reduplication of the first sound apart from cardiac disease, due to the sudden tension of the ventricle after the closure of the valve.—Dr. MAHOMED believed that reduplications of the sounds were chiefly valvular in origin, although in mitral stenosis other sounds are often mistaken for reduplication of the normal cardiac sounds. He exemplified the cause of reduplication of the second sound by the recoil of two equal pieces of elastic, the one stretched to four inches, and recoiling to three inches; the other stretched to three inches, and recoiling to two inches; if stretched simultaneously they would not complete their inch of recoil simultaneously. He thus attributed the reduplication of the second sound to the asynchronous recoil of the aorta and pulmonary artery subject to abnormal variations in pressure in either one or the other. This explained the frequency of this reduplication in mitral stenosis when the pulmonary pressure was heightened. He similarly explained reduplication of the first sound, and he believed these views were identical with those advocated by the late Dr. Sibson. He did not think deduction could be drawn from cardiographic tracings, which did not signify the time of closure of the valves.—Dr. JAMES BARR (of Liverpool), in the course of his remarks, stated his belief that reduplication was due to asynchronous action of the ventricles, so that a normal doubling of the first sound occurs at the end of expiration from the increased stimulus to the right ventricle, and of the second sound at the end of inspiration from the early cessation of the right ventricular systole. In disease that ventricle which is best supplied with blood initiates the systole, although it may not complete its contraction until after the other ventricle has finished its systole; or both ventricles may begin systole together, but one may lag behind the other. He was certain there was this asynchronous contraction of ventricles (and of auricles also), each side of the heart having its own fibres.—Dr. SANSOM replied, and the Society adjourned.

OBSTETRICAL SOCIETY OF LONDON.

Congenital Dislocation of both Hips.—Rotatory Action of the Forceps.

AT the meeting on Oct. 6th, Dr. W. S. Playfair, President, in the chair—

Dr. POOLE related a case of so-called Congenital Dislocation of both Hips, and showed a little girl, aged four, with the following history:—The mother was suffering from alarming hæmorrhage, due to placenta prævia. Version was performed; the right leg brought down. The foot was fastened to a tooth-brush, and remained thus about five hours, when pains came on vigorously, and the child was delivered with ease. He did not remember whether any traction was applied to the leg. No abnormality was noticed until the child began to walk, when it was observed to limp, and the right leg was found to be in fault. The measurement from the anterior superior spine to the knee was half an inch longer than on the left side. There was considerable lordosis, with projection of the abdomen, and there was a space between the thighs in the standing position. The child had been taken to Mr. Adams, who pronounced both acetabula to be defective.—Mr. W. ADAMS said that it was a well-marked case of the so-called congenital dislocation of the hip, which, he thought, would be more accurately described as malformation of the acetabulum, with displace-

ment of the head of the femur. In this case both hips were similarly affected, and the lordosis, prominence of abdomen, large size and prominence of nates, shortness of legs as compared with trunk, and wide separation of the thighs, were characteristic. The top of the great trochanter, on each side, in the standing position, rose above the level of a horizontal line drawn from the anterior superior spine; but when the child was lying down, and a little gradual traction made from the knee, the great trochanter descended fully as low as its normal position—i.e., about an inch and a half below the level of the spine. This was demonstrated to the Society. As to causation, it had been asserted that this condition never exists except in cases of breech presentation, and is due to traction on the leg producing dislocation. In his experience of a large number of these cases, the presentation had generally been natural, and the labours easy. He believed the affection to be essentially a malformation, consisting in arrested development of the acetabulum. The production of pelvic deformity by this condition was proved by Dr. Carrochan of New York, who first called attention to the affection in 1844, and demonstrated it of a patient, of whom a life-sized model was now in the museum of St. Thomas's Hospital.—Dr. WYNN WILLIAMS concluded, from the history of the case and examination of the patient, that the ligamentum teres on both sides had been ruptured during delivery, and that the head of the bone was then drawn up against the edge of the acetabulum by muscular action.—Dr. GRAILY HEWITT thought it very desirable to ascertain whether, in the numerous cases referred to by Mr. Adams, any history could be traced of manipulating traction on the lower extremities during the labour, with a view to determine whether this had a tendency to cause such a condition.—Dr. CLEVELAND mentioned a case of a little boy malformed in this way, who had been brought over to him from Quebec, wearing an instrument for supposed spinal disease. The true nature of the case had been pointed out by Mr. Adams.—Dr. GERVIS asked Mr. Adams if spinal lordosis always accompanied these cases. If he had ever examined any after death; and if he had any experience of congenital dislocations of other articulations.—Dr. HERMAN had seen a case presumed to be one of congenital dislocation of the hip in a woman aged thirty. On the affected side the curve of the iliac crest was much flatter than on the sound side. He thought this due to the head of the femur being further back, so that it acted at less advantage in pressing inwards the anterior part of the innominate bone.

Professor STEPHENSON, of Aberdeen, read a paper "On the Rotatory Action of the Forceps." The author considered that recent modifications in forceps showed that the inventive faculty still moved in the grooves of the older and more imperfect ideas. The sole idea was how may we, with the head tight in the grip of the blades, draw with greater accuracy in a given straight line. What really is wanted is an improved form of the instrument, which will enable us to impart more readily the rotatory movements which we observe in nature. The division of the traction from the prehensile blades weakens the transmission of information by the handles to the hand of the operator; in his muscular and tactile sense should reside the true "indicating needle." The claim made for Tarnier's forceps, that they allow free movement of the head in all directions, is no more true than applies to the ordinary instrument if the operator attends to the directions which they supply. The opponents of the pendulum movement with forceps occupy good ground when they show it is contrary to the normal mechanism, and a fortuitous and risky mode of action; but they go too far when they include in their condemnation all so-called lever action. The true defence of the lever action is to throw out all that is haphazard, and give it scientific precision. The term "lever action" is objectionable; "rotatory action" is preferable. The forces of labour cannot be reduced to a single resultant, but always consist of a resultant and a couple, the former moving the head onwards, the latter imparting some movement of rotation. With forceps we have the power of producing both movements; and, as in nature they are always combined, so in art they should never be entirely separated. Hence with the onward traction made in the axis of the pelvis must always be combined such a movement of the instrument as will tend to impart to the head the rotatory movement which observation teaches us takes place at the particular stage of the mechanism.—1. *Flexion and extension.* With the head in the firm grasp of the forceps, especially if screwed up, there is a tendency to bring down both ends of the head through

an equal space, and so prevent due flexion from taking place. But, on the other hand, if the blades are applied with a diagonal grasp, the compressing power of the forceps may be made to promote flexion. But flexion or extension must chiefly be promoted by a modification of the rule of traction, which might be thus stated. Whilst the force should always be exerted with strict reference to the direction of the axis of the pelvis, the line of traction should be in a slightly curved direction; the curve passing out of the line of the axis in a direction corresponding to that of the sagittal suture, towards the side where the forehead lies, for flexion; to the side on which the occiput is, for extension. 2. The rotation of the occiput forwards might also be promoted by rotating the forceps on their axis, and bringing the handles slightly toward the side on which the occiput lies. The grasp must be light, so as to permit gliding between the blades. 3. As the head passes under the pubic arch the rule should be that whilst carrying the handles forward toward the front of the mother, a carefully applied slight rotatory action should be imparted to the forceps, so as to facilitate the change of the sagittal suture from lying oblique to approach near to that of the mesial line.—*Rotations in Narrowed Pelves.* The application of forceps tends to rotate the head from a transverse to an oblique diameter, and the frontal bone is liable to be thereby thrown on to the promontory. Hence the following rule:—When the occipital bone has descended below the level of the brim and is felt directed against the anterior wall of the pelvis, in order to clear the forehead and prevent injury to the frontal bone, the head should be rotated on a vertical axis, so as to throw the frontal bone off the promontory, and at the same time slight extension should be given to the head, to bring the forehead down to the side of the pelvis. The paper was illustrated with diagrams, which were explained by the author.—Remarks were made by the President, Dr. Roper, Dr. Edis, and Dr. Braxton Hicks.—In reply, Professor STEPHENSON said, in reference to an objection by Dr. Roper, that he doubted whether the head could rotate on a vertical axis when impacted in the brim, that all depended upon the meaning attached to the word impacted. Generally the head, though wedged in the narrow pelvis, was still movable on certain axes. Regarding occipital posterior positions, he agreed with the President and other speakers that the occiput rarely rotated forward with the ordinary mode of using the forceps. But it was possible to rotate it, and it was our duty to endeavour to do so. The "tentative" mode of employing the forceps referred to by Dr. Hicks was good, but we should not be content with it, for it might lead astray. We should endeavour to impart the rotatory movements with the precision obtained by exact knowledge.

EPIDEMIOLOGICAL SOCIETY.

THE first meeting of the present session of this Society was held on November 3rd, 1880, at University College, Gower-street, when the proceedings were opened by the President, Sir Joseph Fayrer, who delivered the inaugural address, of which the following is an abstract.

After congratulating the members of the Society on its marked prosperity, Sir JOSEPH FAYRER made a touching allusion to the losses sustained by the deaths of Dr. E. C. Seaton, Mr. Harry Leach, and Dr. Goodeve. Referring to the important work carried on by the Society during the last session, Sir Joseph Fayrer noticed especially a series of papers on Indian Fevers, and the discussion which followed them, and he expressed the hope that they might have the effect of drawing attention to the question, especially to the etiology of those forms of fever which, while presenting the phenomena of enteric fever, are considered by some to be due to general rather than to specific causes.

The subject of plague had been amply dealt with by three papers. The first was by Dr. Payne, one of the Commissioners appointed by the Government in 1879 to investigate the plague which had been prevailing on the banks of the Volga, in the province of Astrakhan, in 1878-79. This communication threw much light on the geographical distribution, history, progress, and diffusion of the disease, and on the measures taken by the Russian Government for its sup-

pression. The Commissioners considered that there was no evidence to support the theory that plague was introduced by Cossacks returning from the war in Asia, or that it was directly transferred from Resht or elsewhere on the Caspian Sea to Veltlianka, but that everything pointed to the conclusion that the disease had already gained a footing in the district (whether introduced from outside or springing up spontaneously in its soil) before the outbreak at Veltlianka. Dr. Payne remarks with regard to the possible "spontaneous origin," it appears that the same reasons which will hold to show that plague is endemic or springs up without being introduced from elsewhere, in other parts of the world, seem to apply here; actual proof of such an origin would be almost in any case unattainable, but the difficulties which beset all theories accounting for its introduction into the district certainly argue strongly in favour of such a view. With regard to the nature of the epidemic, its character and its morbid anatomy, the wide spread of the disease, with special reference to personal communication and the influence of local causes and contagion, the Commissioners had no opportunity of forming any opinion, as the disease had died out before their arrival. The information they obtained from those examined on the spot is all they had on which to form conclusions on these subjects.

An interesting summary of the German Medical Commissioner's Report was read by Mr. L. Hamilton. Dr. A. Hirsch of Berlin, whose account of the plague in Astrakhan differs from that of Drs. Payne and Colvill, describes it as a malignant, contagious disease, with all the character of Oriental plague, sometimes with buboes, sometimes without them. He attributes the outbreak to the importation of infected articles from the Asiatic seat of the Russo-Turkish war, and believes that it was not imported from Resht; neither is it indigenous to Astrakhan, where it had not appeared since 1808. Owing to faulty reports, the Russian Government did not avail itself of preventive measures until the plague had attained its maximum intensity, and was already approaching its natural termination. The report showed that considerable difference of opinion exists on the subject of the etiology and mode of propagation of the disease.

An interesting communication on Plague in India was made by Surgeon-General Dr. Francis. He pointed out its geographical distribution in Kumaon and Gurwhal, where it is known as Mahamurree, and he described the habits of the people of those districts. It has been characterised by glandular swellings, hæmorrhages, and rapid death; it is endemic, bubonic plague, caused by an animal poison which is generated by the operation of local conditions, is in no way modified by malaria, and is intensely contagious amongst the people themselves, although those who visit that country do not appear to suffer from it. The Pali plague, a disease having much the same character, appears to be closely allied to the mahamurree. Dr. Francis believed that this disease is largely due to local insanitary conditions.

Dr. Longstaffe read a paper on the Relationship existing between certain of the Zymotic Diseases, in which he argued that they should be classified under four headings—viz., the diarrhoeal group, relating to the heat of summer; the bronchitic, to the cold of winter; the scarlatinal group, and a provisional group, comprising all the other causes of death not known to be much influenced by meteorological conditions. One object of the paper was to suggest the probability that the poisons of erysipelas and puerperal fever were identical, while diphtheria and croup were also due but to one poison.

Cholera had not attracted so much attention as in former sessions, but a paper had been contributed by the late President, Dr. Murray, on this subject, showing, by an elaborate series of tables, the value of removal of troops or prisoners to other localities on the breaking out of cholera, and that the objections which had been urged against this operation on the score of expense, and the risks arising from exposure to sunstroke, had but little foundation.

The epidemic diseases of men and animals in the colony of Natal were brought under the notice of the Society by Surgeon-General Ross, C.I.E., who had recently acted as Chief Commissioner of the Stafford House Committee for the relief of the sick and wounded in the Zulu war. Mr. Ross stated that, although the climate had been proved, as a rule, healthy for human beings, it had been found most unfavourable to cattle. The disease affecting the troops in Ekowe was called typho-malarial fever, with rose-coloured spots, and affection of Peyer's glands. The diseases affecting

the lower animals were diarrhoea, pleuro-pneumonia, hæmoglobinuria, and one allied to anthrax.

The subject that has most engaged the attention of the Society has been that of certain forms of fever in India and tropical and sub-tropical climates, and several important communications on this subject had been made by men of large and varied experience. Papers by Dr. Chevers on Relapsing Fever, by Dr. Ewart on Enteric Fever, by Dr. Don on the Continued Fevers of Sub-tropical Climates, and by Dr. C. Gordon, C.B., on the Continued Fevers of India, have plainly shown that the subject still needs much investigation. The chief interest of the proceedings of the year may be said to have centred in the discussion arising out of the communications on enteric fever. It is only recently that this disease has been recognised as a cause of mortality in India, and now it appears from official reports that the death-rate from this disease among our young European soldiers is very high; the question, therefore, that has been so earnestly discussed is this: Are all the cases returned as enteric fever in which the symptoms and the post-mortem appearances are similar to those of enteric fever in this country due to the same causes? That is, are they the result of a specific poison generated in the intestines or its contents of one person and conveyed to another through the intervention of air, water, or some other medium; or are they not, in some cases, referable to what are known as climatic influences, by which is meant heat, moisture, malaria, miasmata, or to water in which these are dissolved or suspended with, perchance, the addition of other causes—ærial, telluric—of which we know nothing positively, but of whose existence as dynamic agencies we probably have indications in other epidemic diseases? As to the existence of a form of fever in India characterised by certain phenomena and pathological changes very closely if not exactly resembling those that characterise the enteric fever of Stewart, Budd, Jenner, and Murchison, there is a pretty general consensus of opinion. But on the question of causation there can be no doubt that a considerable divergence of opinion exists. It is a growing belief that the cause of some of the cases of the so-called enteric fever is to be sought in high temperature, malaria, miasmata, water contaminated by organic matter, not necessarily faecal, rather than in a specific poison generated in the intestines or in the alvine discharges after extrusion from the bowel; and perhaps in some state of body, especially in the young, that is induced by exposure to one or all of these. It cannot be disputed that the poison of the enteric contagion must be equally effective in producing fever wherever it occurs, and certainly not less so in India or the tropics than elsewhere. Few question its potency in England, though it is possible that twenty years hence, even here, this view may be somewhat modified. Some believe that the specific contagion theory will not explain the facts in all cases abroad; nor do they think that a certain train of symptoms and phenomena during life, and lesions observed after death, must necessarily be invariably due to one single cause, but rather that the bowel ulceration, diarrhoea, spots, and a certain range of febrile disturbance in the temperature, may be brought about also by other conditions such as those already referred to, and which make up what is known as climatic influence. It is difficult to resist the impression, whilst admitting enteric fever in India may originate as it does here, that other causes may be at work, and that cases of fever, which in India are not only called enteric, but present the phenomena in life and the changes after death that are characteristic of the disease in England, do occur, and not unfrequently, where it is more probable that climatic and other local conditions are the cause rather than faecal contagion, though it must be admitted that it is not possible to deny the possibility of faecal contagion where human beings have been.

The address was followed by a paper by Mr. NETTEN RADCLIFFE, who briefly described the outbreaks of cholera in Syria in 1875, Western Arabia in 1877-78, and Morocco in 1878, with a view of throwing additional light upon the origin of the two former outbreaks, and of questioning the nature of the latter outbreak. With respect to the Syrian and Western Arabia outbreaks, he endeavoured to show that it was premature to assume, as had been commonly assumed, that they had originated in the districts where they had occurred; and with regard to the Morocco outbreak, he adduced important evidence which tended to show that the disease which proved so fatal in Morocco in 1878 was not true cholera, but a choleraic affection, or rather a form of malignant dysentery, caused by the improper food which was

had recourse to by the population to assuage the pangs of hunger during the terrible famine from which the country suffered at the time.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.

Optic Neuritis.—Nodular Growth on Iris.—Primary Intra-ocular Hæmorrhage.

THE first ordinary meeting of this newly-constituted Society was held on October 28th, at the rooms of the Medical Society, Chandos-street, W. Bowman, Esq., F.R.S., president, in the chair. The bye-laws of the Society were read and passed; and on the motion of the president it was agreed that a committee should be formed for the purpose of communicating with the Board of Trade, with a view to remedying the possibilities of accident in the public services attributable to colour-blindness.

Dr. GOWERS exhibited two cases of Optic Neuritis. One, a girl, had been attacked by uncontrollable vomiting, succeeded by optic neuritis and paralysis of both sixth nerves. Under treatment, the neuritis had almost, and the paralysis quite disappeared. Dr. Gowers suggested local meningitis as the cause of the symptoms. The second case was that of a woman aged twenty-three, with vertical headache and a halting gait. At first the case was regarded as one of hysteria, but the vision began to fail, and double optic neuritis developed; and there was inability to move the eyeballs upwards. After eighteen months of treatment the neuritis subsided, but other symptoms remained. Dr. Gowers thought there was a lesion in the centre controlling the upward movement of the eyeballs, and suggested that the case was one of cerebellar tumour.—Dr. HUGHLINGS JACKSON pointed out how easily such cases were confounded with hysteria, and thought the diagnosis rested between meningitis and tumour.—Dr. STEPHEN MACKENZIE was inclined to believe the case one of tumour in the region of the superior vermiciform process of the cerebellum, stimulation of which had been shown by Ferrier to produce upward movement of the eyeball.—Dr. SHARKEY related a case at first taken for hysteria, where there was slight double optic neuritis, and where, after death, meningitis and cheesy tubercle in the brain and cerebellum were found.

Mr. NETTLESHIP showed a case of Nodular Growth on the Iris, following double iritis four months before. The iritis persisted on the left side, where a small yellow vascular nodule had grown. He believed it was not malignant, but felt doubtful whether an attempt should be made to excise the growth, or whether it would be better to remove the eye.—Mr. LYELL asked if there was any tubercular history. He had met with a similar growth in one eye. The patient was treated for iritis, but the growth continuing, its removal was attempted. This failed, owing to the softness of the growth, and ultimately the eyeball was excised. He thought such growths might be dealt with in their earlier stages.

A paper was read by Mr. HUTCHINSON on a case of Primary Intra-ocular Hæmorrhage, first into one eye, and subsequently into the other, with general remarks on the causes of the occurrence. The patient was a young man, who at the age of twenty-one lost his left eye by acute glaucoma, secondary to hæmorrhage into the vitreous, ciliary processes, and retina. Two years later the other eye became subject to sudden copious hæmorrhages into the vitreous, without pain or glaucomatous symptoms, the blood being quickly absorbed between each attack, but leaving finally opacity of the vitreous humour. There was no albuminuria. He was dyspeptic, habitually constipated, liable to rapid variations in local circulation, flushing, pallor, and cold feet. He was subject to epistaxis. The temporal arteries were large and tortuous, and Dr. Mahomed found his arterial tension too low. There was a strong family history of gout. Reference was made to a recent paper on the same form of disease by Mr. Eales of Birmingham. Mr. Hutchinson considered that inheritance of the diathesis took a very important share in the causation of the disease, but he did not try to explain the mode in which it operated,—whether by changes in the blood or the vascular walls, by increased arterial tension, or cardiac hypertrophy. The intra-ocular bleeding was considered as only one manifestation of a tendency to spontaneous hæmorrhage from various parts, in which a liability to inequality of circulation is the first factor,

various temporary influences acting as exciting causes. Often the male sex and the period of adolescence were among the most important; over-fatigue, indigestion, constipation, position of the head in sleep, and other influences, also took more or less share. Reference was made to some similar cases communicated to the author by Mr. Square of Plymouth.—Dr. HUGHLINGS JACKSON referred to the not unfrequent occurrence of slight ocular hæmorrhage in cases of Bright's disease and epistaxis. In one case of meningeal hæmorrhage in a young man the subject of epistaxis, a distinct clot of blood was discovered in one eye.—Mr. H. EALES (Birmingham) had been unable to obtain satisfactory evidence of gout in the cases related in his paper. In all his cases there was an unusual fulness of both veins and arteries in the other eye, and in one such supposed healthy eye he detected hæmorrhagic spots at the extreme periphery of the retina. One of his patients, since the publication of the case, had suffered from a severe attack of hæmorrhage. In another relapse of constipation had been followed by bleeding in the eye preceded by epistaxis, which had not been previously experienced for twelve months. Mr. Eales suggested that constipation might be due to deficiency of blood in the intestinal vessels, thus leading to over-distension in the systemic vessels, the veins particularly. In no case did he find the pulse over 60, and the second cardiac sound was invariably accentuated from high arterial tension.—Mr. HIGGINS asked why the hæmorrhage occurred in the eye rather than in the ear or elsewhere. In unsound glaucomatous eyes the sudden reduction of tension in the operation of iridectomy was a sufficient explanation of the intra-ocular hæmorrhage, which not unfrequently occurred, but in the cases under consideration there was no increased eye tension.—Dr. BRAILEY had found many instances of glaucoma in which the walls of the arteries of the eye were diseased. Dr. BROADBENT thought high arterial tension a sufficient cause for such effects. He had often met with cases of youths affected with headache, incapacity for work, and commonly with epistaxis; but he had not found retinal hæmorrhage in such cases, nor any gouty history. The relation between the cases read and constipation was to be explained by high arterial tension, and he advocated purging as a rational procedure.—Mr. BRUDENELL CARTER questioned the advisability of referring such cases to a "gouty" diathesis.—Mr. HENRY POWER referred to the occurrence of similar hæmorrhages in pregnant women as a proof of the cause being alteration in vascular tension.—Mr. HUTCHINSON, in reply, said that he was surprised at the evidence of low tension in his case, but suggested that the tension might not be the same in all parts of the body. He argued that varying degrees of tension in the eyeball might influence hæmorrhage into it. "Gout" was a term indicative of an understood and distinctive disease, and in the case read there was ample reason for assuming a gouty tendency.

The Society then adjourned.

Reviews and Notices of Books.

Atlas of Histology. By E. KLEIN, F.R.S., and E. NOBLE SMITH. Part 12. London: Smith, Elder, & Co. 1880.

THIS part, which is unusually large, opens with an account of the structure of the skin, and a particular description is given of the stratum Malpighii, and especially of the nuclei of the cells of this layer. It is shown that in the deeper cells the nucleus consists of a honeycombed reticulum without any nucleolus or limiting membrane; that in others the fibrils of the nucleus become arranged as a rosette; then they change into a star, when they receive the name of *monaster*, and later on into a double star, or *dyaster*. The cell then divides through a line separating the two asters. Each daughter star changes into a convolution, and this again forms a well-defined nucleus. The superficial layers of the stratum Malpighii are differentiated, and described as the stratum of granular cells of Langerhans, or stratum granulosum of Unna. This layer colours a deep purplish blue with hæmatoxylin. The granules are more or less discoid in form, and therefore appear rodlike in the profile view, and are a transition form between protoplasm and

keratin. The stratum Malpighii is firmly adherent to the surface of the corium by an albuminous cement, into which the branched lymph spaces and the connective-tissue corpuscles penetrate. The authors then give in succession the structure of the papillæ and the sweat-glands. It is stated that the human anus is surrounded by an elliptical zone presenting a number of large coiled gland-tubes, the circum-anal glands of A. Gay. Each of these, on minute examination, proves to be a huge sweat-gland. A very full account of the different structures of the hair-follicles, hair and sebaceous glands, succeeds. Each hair-follicle consists of the vascular hair-sac, the papilla, and the outer root sheath. The hair-sac is composed of an outer longitudinal and an inner transverse coat, and is continuous with the papillary layer of the corium and with the connective tissue of the septa which penetrate between the lobules of the adipose tissue. The inner surface of the transverse layer is lined with relatively short and broad unstriped muscle-cells. The hair-sac and papilla are separated from the next following or inner layer of the hair-follicle by a glassy hyaline basement membrane, which is a direct continuation of the basement membrane of the corium. It is divided from the outer layer of the outer root sheath. The outer root sheath is continuous with the stratum Malpighii of the epidermis. The root of the hair consists of the substance of the hair, the cuticle, and the hair sheath, or the inner root sheath. The central cells at the apex of the bulb become the axial cells of the hair, and those more laterally placed become the elongated cells of the cortex of the hair, or the cuticle of the hair. The next outer layer of polyhedral cells of the bulb is continuous with the membrane separating the cuticle of the hair from Huxley's layer. The one or two layers of cells next following pass into the layer of Huxley, and finally the outermost layer or two pass into the layer of Henle. All these parts are very clearly delineated both in transverse and in longitudinal sections in Plates xli. and xlii. The remainder of the section is occupied with a description of the sebaceous glands, the nails, and the lymphatics of the skin. Chapter 34 is devoted to the consideration of the eyelids, the conjunctiva, and the lacrymal glands; Chapter 35 to the cornea and sclerotic; Chapter 36 to the iris, ciliary processes, and choroid; Chapter 37 to the lens and vitreous body, and Chapter 38 to the retina. Plates xliii. and xliv. contain the drawings illustrating the microscopic anatomy of these parts.

The description of the retina does not add materially to what is already known, but rather consists of a carefully-made compilation of all recent work; even in this way, however, it will prove very serviceable to workers with the microscope.

Malaria: its Cause and its Effects. By E. G. RUSSELL, M.B., B.Sc. Lond.; Surgeon, Bengal Medical Service; Civil Surgeon, Kamrup, Assam. London and Calcutta: W. Thacker, Spink, and Co. 1880.

ENGLISH practitioners can no longer afford to disregard the study of tropical diseases, especially those of a chronic nature. Our colonial possessions within the tropics are now so enormous, and the means of transit from them so rapid (shortened as it has been by the opening of the Suez Canal), that the number of persons invaliding home is annually on the increase. Thus cases of malaria and its sequelæ, enlarged liver and spleen, and chronic dysentery, are much more frequently brought under the notice of the English physician than was the case thirty or forty years ago, when the tedious voyage round the Cape either killed or benefited the invalid. At the same time, tropical diseases remain a *terra incognita* to most of us. In the present volume Dr. Russell discusses most exhaustively the subject of malaria and its effects, and the work should be read by all who are liable to be called upon to treat the conditions to which it gives rise. The chapter which describes the malarial lesions of the stomach and

liver will perhaps be read with the most interest by the English practitioner. Dr. Russell offers a useful hint not to mistake the severe dyspepsia and gastric irritability associated with pale diarrhœa arising from too constant and prolonged a residence in malarious regions for hepatic disease induced by "free living"—a caution the more needed since, we fear, all dyspeptic troubles occurring in old Indians are apt to be regarded as due "to liver" provoked by unlimited brandy pawnee, hot curries, and tropical suns.

Dr. Russell ably discusses the relationship between ague and typhoid—a question that has been raised by Sir Joseph Fayer. Dr. Russell observes that the pyrexia of true non-malarial typhoid often so closely resembles that of true malarial remittents that in India the diagnosis between these two diseases is frequently extremely difficult, and must be decided almost entirely by other distinctions than types of pyrexia. Indeed, so great frequently is the difficulty of accurately distinguishing the one disease from the other, that there are still physicians who consider there are sufficient grounds for denying the existence or occurrence of typhoid in India. Dr. Russell believes there frequently occur epidemics in which the fever partakes both of the nature of typhoid and true malarial intermittent and remittent fever. He supports the view of the existence of a typho-malarial fever by quotations from numerous authorities, but omits the weight given to it by Lancisci, who observed that on opening the bodies of certain patients who had died of semi-tertiary fever lesions were found in the intestines which had perforated all the coats. The second part of the volume is devoted to an analysis of fifty cases of injury of the spleen. These injuries from the frequency of their occurrence, and the importance of their medico-legal bearings, are of peculiar interest to the medical practitioner in India, but their consideration need not detain us at present. We therefore leave Dr. Russell's volume, commending it to the notice of our readers as a book full of facts and of clinical research, and which must be considered as an authority on the subject of Malaria.

Practical Histology and Pathology. By HENEAGE GIBBES, M.B. H. K. Lewis, 136, Gower-street, W.C. 1880.

THIS is a small book written by a practical man, evidently well acquainted with his subject, and will be found of real service to those who wish to learn how to prepare good preparations for microscopical examination. The appliances required—microscope, knives, reagents, &c.—are first briefly described, and then the manner of obtaining all the tissues necessary for a thorough examination of the structures found in the human body, with directions for hardening them, are given. The chapter on staining is in some respects the most valuable, for Dr. Gibbes has made this subject a special study, and has obtained new and excellent results from using two and even three dyes at once; the methods by which others may be as successful are here plainly given. Two chapters are devoted to special directions for demonstrating the individual histological and pathological structures. The book is small, the directions concise and clear, but we believe the student will find in it all the help he can hope to derive from such a source, in a study where successful results can only be obtained by patience and perseverance.

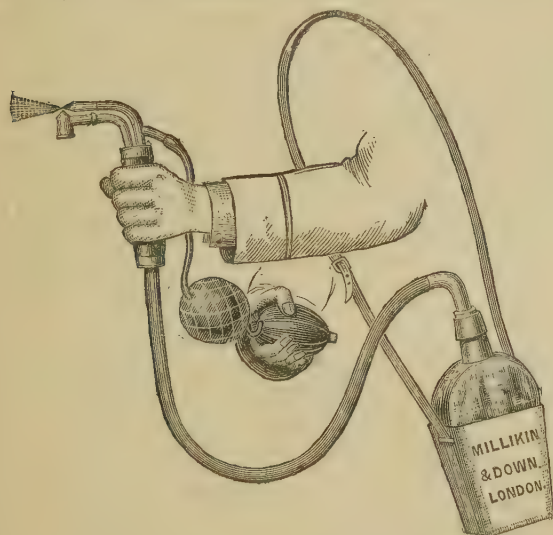
The Physician's and Surgeon's Visiting List, Diary, Almanack, and Book of Engagements for 1881.

THIS well-known "List" needs no praise. It is very compact and neat, and the various tables bound up with it make it most useful to the practitioner. Two of these call for special notice—one giving the days of incubation, &c., of the various fevers; the other, the corresponding degrees on the thermometric scales of different thermometers.

New Inventions.

NEW CARBOLIC HAND SPRAY-PRODUCER.

THIS is a modification of Lister's hand spray, suggested by Mr. Golding Bird. The size of the bottle usually supplied with the apparatus is often insufficient, whilst the holding of a larger bottle in the hand during a long operation is obviously inconvenient, especially if hot water be employed. These objections are overcome by supplying a bottle of four or more ounces' capacity (from which proceeds a specially-constructed flexible tube nearly a yard long and terminated by the spray-nozzle) carried at the side in a leather pocket by means of a strap slung across the shoulder.



In this way boiling water may be used, and the temperature may be thereby kept up for a considerable length of time, so that the spray resembles that from the steam spray. The simple apparatus is portable, and will be found especially serviceable in operations of short duration, dressings, and all cases where the steam spray is inconvenient or not available. The long flexible tube allows of the spray being turned in any direction, and the bellows can be readily changed from hand to hand, thereby avoiding fatigue. The apparatus is made by Millikin and Down, 3, St. Thomas's-street, London, S.E.

THE "CROWN JEWEL" STOVE.

Now that the question of London smoke is so much to the fore, every contrivance for affording heat without smoke is sure to command attention, and we have great pleasure in giving a short space to a description of a stove for burning anthracite or coke, made at the Detroit Stove Works, U.S.A., and on sale in London at the house of the agent, Mr. Harry Hunt, 117, Newington-green-road, N. It is intended for the heating of halls, passages, and public buildings. The form of the stove is rather elegant than otherwise, and it has the great advantage of allowing the fire to be visible through tall windows, so that it is thoroughly cheerful and pleasant to look at. It requires very little attention, needing only to be filled up with anthracite about twice in the twenty-four hours, so that, in America, a stove lighted at the beginning of winter is never allowed to go out; and the risk of its going out is lessened by the fact that the fire can be seen as well as felt. By means of dampers the rate of combustion and the amount of heat given off can be regulated to a nicety. There is no smoke, and consequently the flues never need cleaning; there is no escape of fumes when fuel has to be supplied; and by the consumption of

37 lb. of anthracite (value 4*d.*) per diem the manufacturers guarantee that the temperature of a moderate-sized house can be maintained at 25° F. above that of the outside air.

The stove is not expensive; and from what we saw of it in action at the late Food Exhibition in the Agricultural Hall, we can very strongly recommend it to the consideration of our readers.

"VEGETABLE-WOOL" GOODS.

MESSRS. WELCH, MARGETSON, & Co. have submitted specimens of articles of underclothing, jerseys, &c., made of Lairitz's pine-wool material. The fabric, which is composed of fibre prepared from the leaves of the pinaster, or black pine, is soft and of fine texture. In cases where the pine is deemed likely to prove helpful these articles will be found admirably adapted for use, and pleasant for wear. From a sanitary point of view, they certainly appear to possess physical properties superior to those of animal wool.

MEDICINE BOTTLE BAGS.

THESE paper bags are meant to save the dispenser the trouble of cutting up paper for wrapping medicine bottles in, and of stringing and waxing the parcel. They are made for bottles of all sizes, and seem a practical contribution to prompt and neat dispensing. They are the invention of Mr. George Jones, of Evans and Jones, Leadenhall-street.

PHARMACOLOGY AND THERAPEUTICS.

RESORCIN: A NEW ANTISEPTIC.

OBSERVATIONS have been lately made in Germany on the antiseptic and antipyretic action of certain members of the dihydroxybenzol group, *brenzcatechin*, *hydrochinon*, and *resorcin*. The latter has received most attention. It is a substance obtained from certain resins, especially from *galbanum*, and has been recommended as an antiseptic by Dr. Andeer of Warzburg. Its formula is $C_6H_4(H_2O)$, and it is readily soluble in most liquids, including bisulphide of carbon and chloroform, and can be employed in all modes of pharmaceutical preparation. It has a peculiar odour, somewhat like carbolic acid, and has a bitter-sweetish taste. It coagulates albumen readily, and thus is suitable for use as a caustic. The similarity between the chemical constitution of *resorcin* and carbolic acid led Andeer to make experiments which showed that it possesses considerable power of arresting decomposition and fermentation. A one per cent. solution will retard fermentation, and a stronger solution will arrest it altogether, and destroy the movements of infusoria and low organisms. Applied in different forms and strength to the uninjured skin of men and mammalia, it causes neither discoloration nor any profound irritation or evidence of paralysis. Injections of concentrated solutions into the muscles cause toxic effects. Application to the moist lips causes a white eschar. Administration by the mouth causes, if long continued, symptoms of poisoning, which are readily allayed by albuminate of iron and red wine. With the most intense toxic symptoms in men—convulsions, rigidity, &c.,—elevation of temperature was never found. Analytical observations show that *resorcin* causes a considerable increase in the secretion of sulphur, and thus it appears to cause a breaking up of sulphur compounds in the body, and with this is an increase in the nitrogenous excreta.

Dr. Andeer formulates the following conclusions regarding the pharmacological action of *resorcin*. It is a good antiseptic for the prevention of all abnormal fermentation processes which are associated with putrefaction. In one per cent. solution it prevents all putrefaction in such substances as pancreas, blood, and urine, which usually readily

undergo decomposition. Such liquids keep their natural odour. A solution of the same strength arrests putrefaction when this has already commenced, either through direct destruction of the excitants of putrefaction, or by coagulation of the liquids which serve as pabulum to them. In artificially produced septic processes a solution of the same strength has an antiseptic action as powerful as that of carbolic acid, without being absorbed into the blood-current of the animal to the same deleterious degree as carbolic and pyrogallic acids. Artificial, punctured, and incised wounds always heal by first intention, if treated with this solution.

Wounds of the cornea, conjunctiva, gums, or other mucous membranes, which have been irritated and infected with micro-organisms, heal rapidly if they have been cauterised with resorcin, and its application is equally efficacious in the treatment of subcutaneous abscesses and erysipelas. A 1 or 2 per cent. solution has no more action on the uninjured skin than plain water, and causes no eruption. It is thus well suited for use in the form of spray in surgical practice. Andeer recommends it also in abnormal processes of fermentation connected with the mucous membranes, in septic processes of the buccal cavity, "mycosal" affections of the stomach, intestine, and bladder, for the cauterisation of catarrhal, tubercular, and syphilitic ulceration, and in diphtheritic affections. For internal use, the dose recommended is a teaspoonful of a solution of one to five grammes, in one hundred parts of water. Alcohol, glycerine, and syrup of orange-peel are convenient liquid vehicles.

Lichtheim has investigated the properties of the same substance as an antipyretic. Two or three grammes in solution caused, in a few minutes, giddiness and tinnitus, flushing of the face, acceleration of pulse and respiration. In ten or fifteen minutes the patient began to perspire freely. With the sweating the primary stimulant effect rapidly subsided; the pyrexia also subsided. An hour after the administration of the resorcin the pulse and temperature had fallen to the normal, and the diaphoresis had ceased. The depression of temperature amounted in some individuals to 3° C., and the fall in the pulse-rate to one-third. The antipyretic effect, however, was found to be slighter the greater the tendency of the febrile disease to spontaneous remission. In pneumonia and erysipelas the fall of temperature was slighter than in typhoid fever, and severe cases of the latter were influenced less than slighter cases. The antipyretic effect was usually proportioned to the diaphoretic action, and was of briefer duration than in the case of salicylic acid and quinine; in about three hours it again rose rapidly, often with a rigor. The dose can, however, be repeated without injury to the patient. As a rule, little excitement was caused by it, but occasionally it produced transient delirium and tremor. The urine, after its administration, assumes a dark brownish-black colour on exposure to the air; and on the application of hydrochloric acid and heat, a dark-brown precipitate is produced, probably an oxidation product. The pulse, under its influence, becomes less frequent, and diuresis becomes slighter. It has no apparent specific effect in pneumonia, erysipelas, or typhoid, and in acute rheumatism it has no influence on the joint affection. In intermittent fever, however, it has an apparently specific action, comparable to quinine.

HYDROCHINON.

Another member of this group, hydrochinon, has been investigated by Brieger, who finds that it possesses a stronger antipyretic action than resorcin; '2 gramme depresses the temperature half a degree Centigrade. Larger doses, up to a gramme, cause symptoms of excitement similar to those caused by resorcin. Like it, also, the effect on the temperature in disease is very brief. It has no local irritating effect, and, injected under the skin, produces no more disturbance than water.

SALICYLATE OF SODA POISONING.

The disturbance of the special senses which results from salicylate of soda is usually believed to be confined to the ear. Slight disturbance of sight has, however, been recorded by several observers, and in a case recorded by Gatti complete transient amaurosis was observed. The patient was a girl, sixteen years of age, suffering from acute rheumatism, and had taken, in the course of ten hours, two drachms of the drug. Three hours after the last dose she awoke from sleep totally blind, with considerable mydriasis, but no disturbance of sensibility of the cornea or of the conjunctiva. There was no visible change in the fundus oculi. There was

considerable deafness. The urine did not present the salicylate reaction. Ten hours later, on waking from a sound sleep, sight had perfectly returned. Mydriasis and deafness continued for some time longer. Both urine and saliva continued free from the salicylate reaction, which seems to show that the drug was retained within the system instead of being eliminated.

ACONITIN.

Aconitin is a remedy which practitioners in this country have always hesitated to give internally on account of its highly poisonous properties and the uncertainty of its purity. The difficulty in dispensing so powerful a drug, especially in the form of pills, increases the liability to accidents. This hesitation will not be lessened by cases reported recently at Bordeaux by Dr. Armaignac, and from Germany. A patient suffered from violent pains in an eye the seat of cataract. Pills containing each a quarter of a milligramme of aconitin ($\frac{1}{40}$ gr.) were ordered, four to be taken daily. On the first day no special influence was observed. On the second, vomiting, giddiness, and prostration occurred, and the patient was found in a state of syncope, cold, with a cadaveric aspect, and a pulse of 44. Under the use of stimulants, and subcutaneous injections of sulphuric ether, the patient gradually recovered. In Germany three cases of poisoning by French aconitin are reported by Busscher. The doses which occasioned toxic symptoms were respectively four-tenths of a milligramme (about $\frac{1}{100}$ gr.), $\frac{1}{2}$ milligrammes (about $\frac{1}{200}$ gr.), and 4 milligrammes (about $\frac{1}{25}$ gr.). In the last case death occurred. Convulsive symptoms occurred first, and were followed by narcosis. The dose had been ordered by a practitioner under the impression that the French and German aconitia were similar in strength.

If aconitin is given internally at all, it is certainly unadvisable to use any form except that which is crystallised. The term was formerly, and still often is, an amorphous alkaloidal substance, which contains, in addition to the crystallisable aconitin, variable quantities of much less active basis. Another cause for the uncertain strength of this preparation arose from the readiness with which the crystallisable aconitin is decomposed in the preparation. Various chemical reagents split it up into benzoic acid and an almost inert base (aconine). Hence a demand for the pure crystallised alkaloid has sprung up, which is, according to the *Chemists' Journal*, very much in excess of the supply. The demand comes especially from America. Pure crystallised aconitin can only be prepared from *Aconitum napellus*, and this plant is not grown in America in sufficient quantities to enable manufacturers there to supply the local demand, and in Europe it is prepared only on a very small scale.

HYOSCYAMIN.

Unpleasant toxic symptoms after the use of moderate doses of hyoscyamin have been reported by M. Empis. The patient was suffering from paralysis agitans, and a twelfth of a grain of hyoscyamin caused symptoms of intoxication, while a second similar dose given on the following day caused nausea, violent delirium, tetanic spasms, dyspnoea, dysphagia, and strangury. The accidents subsided in the course of three or four hours. It should be remembered that active principles which cannot be crystallised are often of variable potency, according to the mode of preparation and the part of the plant from which they are derived, and they should therefore be used with caution.

THE ALKALOIDS OF HEMLOCK.

Hemlock contains, according to the observations of several investigators, two active principles: conia, having a paralyzing influence on the central nervous system; and another agent, acting like curara. A salt of hydrobromic acid, obtained from hemlock, has an action similar to conia; and Prevost of Geneva has asserted that the paralyzing effect of this salt is due to an action on the motor nerves—i.e., that it also acts like curara. This conclusion has led M. Boche-fontaine to make a fresh series of investigations on the action of conia. He finds that it is readily absorbed from the stomach, relieving local pain, and also inducing sleep. It abolishes reflex action and sensibility. After its administration, stimulation of the central end of a divided sciatic nerve causes neither pain nor reflex movements, while muscular contraction is still produced by stimulation of the peripheral portion of the nerve. These effects are diametrically opposite to those caused by curara; and the difference of action is further brought out by a comparative experiment on two frogs, which shows that conia lessens or abolishes

the physiological properties of the nerve-centres, before acting, like curara, on what Vulpian has called the "neuromuscular junction." In both dog and frog a sufficient quantity abolishes all nervous excitability, but this dose is always fatal.

Regarding the crystallisable salts of hydrobromic acid which can be obtained from hemlock, M. Bochefontaine finds that they may be divided into two groups. One is yellowish, is very toxic, and has the typical action of conia. The other, colourless, is less powerful, and has a different action. It has the same effect upon frogs as curara, but, instead of recovering as they do after a small dose of curara, they do not recover from such a dose of the salt as causes a similar effect on motor excitability. Even a dose insufficient to abolish voluntary movements causes death at the end of two or three days. Successive crystallisation of these salts tends to eliminate that which acts on the central nervous system, and to isolate the curarising principle.

THE ACTION OF PILOCARPIN ON THE PUPIL.

The mode of action of drugs which affect the pupil has always been a somewhat obscure subject, and an investigation into the mechanism by which pilocarpin contracts the pupil, by Drs. Laborde and Fitzgerald, is of considerable interest. Five milligrammes of the hydrochlorate of pilocarpin injected beneath the skin of an animal determines, in five minutes, not merely general diaphoresis, but also a strong contraction of the pupil, and this even though the third nerve has been previously divided, so that the central influence on the sphincter is at an end. The drug must therefore act by stimulating locally the fibres of the sphincter, or it must paralyse the sympathetic innervation of the dilating fibres. The local action, although intelligible when the drug is applied locally, is scarcely conceivable when it is introduced into the general system. The action on the sympathetic seems the more probable. If the third nerve has not been divided, and the action of the drug is closely watched, the first effect is a fixation of the pupil in a state rather of mydriasis than of myosis, apparently due to a simultaneous paralysis of both muscles; then the sphincter gets the ascendancy, and the pupil slowly contracts. That such a double action really takes place is shown by the effect of the drug when the sympathetic has been divided, the third nerve being intact. Then, the action of pilocarpin is to slightly dilate, not to contract, the pupil. Thus there is reason to believe that the drug acts as a paralyzing agent upon both sets of nerves to the iris, and the myosis is due to its action upon the third nerve being less than its action on the sympathetic, or to the fact that, when both are paralysed, the tonic force of the sphincter is the more powerful. It may be noted, however, that Albertoni, and recently Harnack and Meyer, have come to a different conclusion. Finding that when the pupil is strongly contracted by pilocarpin, irritation of the cervical sympathetic still gives rise to considerable dilatation, they believe that pilocarpin causes contraction by stimulating the third nerve. The fact, however, is quite reconcileable with the observations of Laborde and Fitzgerald, since the paralyzing action which they assume may be on the central connexion of the nerves, and then stimulation of the trunk would still cause contraction of the dilating fibres.

JABORIN.

In connexion with the slight mydriatic action which Laborde and Fitzgerald observed, it may be remarked that jaborandi has been found by Drs. Harnack and Meyer to contain an alkaloid, which they have termed jaborin, which dilates the pupil and has an action on the heart, the salivary glands, the intestines, and the central nervous system, exactly like atropin, and which is found also, like it, to antagonise the action of muscarin. These authors point out that many commercial preparations of pilocarpin contain also jaborin, and the presence of this substance may explain the mydriatic effect of pilocarpin observed by Laborde and Fitzgerald, at the commencement of its action and after the sympathetic had been divided. It is evident that to furnish conclusive evidence that pilocarpin acts on both sets of nerves, their experiments must be repeated with a preparation of pilocarpin from which all jaborin has been removed. It is possible that jaborin may turn out to be actually identical with atropin or with hyoscyamin. Professor Ladenburg of Kiel has lately asserted that there are only two mydriatic alkaloids, atropin and hyoscyamin—daturin, duboisin, and hyoscyamin being not merely closely related but actually identical.

LEPROSY.

To the Editor of THE LANCET.

SIR,—Cases of true leprosy are not so rarely seen in this country as it is generally supposed. We have met with them from time to time in the seaport towns on the north-east coast, having been brought over from Scandinavia; and, indeed, we have reason to think that they are occasionally overlooked. Although there can be no question as to the nature of Mr. Startin's case, still I think he is somewhat in error when he states (apparently on good authority) that "there could not be a more typical case." I have seen and carefully noted the lepers in the "Spedalskshed" hospitals of Bergen, and am of opinion that this case, taken as a type, would not have afforded the best representation of a leper, as it appears to have exhibited somewhat sparingly the distinguishing features of both the tubercular and anæsthetic varieties. A well-marked example of the tubercular form of the disease, besides the tumefaction of the corion, deposits of pigment, &c., presents the characteristic tubercles, hard or soft, as the case may be, on the nose, on ears, eyelids, lips, or conjunctivæ, and as far as this special class (which is by far the larger in Norway) is concerned, a case is certainly not typical without them. Nor is Mr. Startin's case a very good specimen of the anæsthetic variety, inasmuch as some of its distinguishing signs—viz., white (not discoloured), shining patches and areas, pronounced anæmia, mental torpor, and lardaceous deposits in internal organs, seem to have been absent. Notwithstanding Mr. Startin's opinion to the contrary, there is reason to believe, as I was assured by Drs. Danielsen and Moon in 1875, that leprosy is contagious during the acute or exanthematous period, although it is certainly not so in the later stages. I confess it is never contracted by the nurses or attendants in the hospitals in Bergen, but this is accounted for by the fact that the acute stage is past when the patients are admitted.

In Norway leprosy occurs pre-eminently amongst the dirtiest of the poor, ill-housed, ill-fed, and ill-clothed inhabitants, and although stale fish is a staple article of food with this class, there is no evidence whatever to prove that its consumption operates more than any other predisposing cause in the production of "spedalskshed." Dr. Manson, I read a few years ago, received some reward from the Chinese Government for the discovery that leprosy was caused through the introduction of a poison into the blood by the bite of the mosquito, and although little has been heard of this discovery since, the idea seems to receive support from many facts, and explains the curious occurrence of that dreadful malady in the arctic regions, where the mosquito abounds. We know little else that is new concerning the etiology of leprosy, since the committee of the Royal College of Physicians published their report in 1867, I think it was, but it is very desirable that its occasional presence in our midst should not be forgotten, in order that it may be at once recognised and not confounded with scrofula, syphilis, or other diseases which it often closely resembles. Mr. Startin's case is, in my opinion, well worthy of record.

I am, Sir, yours faithfully,

Hackney, Nov. 1st, 1880

SAM. WILSON, M.R.C.S., &c.

To the Editor of THE LANCET.

SIR,—The following will bear out Mr. Startin's statement in the case of "True Eastern Leprosy," published in THE LANCET of Oct. 30th—viz., that eating of bad fish does not produce leprosy:—

In 1875, when civil surgeon of Pooree, Orissa, I was investigating the theory of fish diet producing leprosy, and directed my attention to the Telooagoos, a class of fishermen who live in an isolated village of their own on the sea-coast. They number in all, I should say, about one thousand; their diet consists almost exclusively of fish (with vegetables, when procurable), and at the time I made my inquiries I failed to detect a single case of leprosy in the whole village, although leprosy is common enough in the city of Pooree, especially amongst the pilgrims. I may further add, that the Telooagoos were very partial to a form of dried decomposed fish, dried by exposure to sun and air.

I am, Sir, yours faithfully,

Manchester, Nov. 3rd, 1880.

H. W. HILL, M.B.,
Surgeon, Indian Army.

THE LANCET.

LONDON: SATURDAY, NOVEMBER 13, 1880.

THE commencement of a new session at the medical schools, and the announcement of an organisation designed to bring the Registrars of hospitals into close and practical relations in their common work, offer a fitting opportunity for the suggestion of one or two considerations of great moment to the progress of the healing art. Hospital work is continuous, but it is formally utilised for scientific purposes both at the schools and in the Societies chiefly during the season on which we are entering. Will those of our readers who are responsible for collecting the figures and facts by which the practice of medicine and surgery throughout the country is governed bear in mind how meagre and vague these data generally are when they come to be viewed in the light of the exact science of statistics? Notwithstanding the pains and carefulness of the great majority of observers, the records at command for the purposes of the statistician are comparatively more scanty than those furnished by the recognised workers in any other branch of science. This is in part, doubtless, due to the fact that the hospital services provide, after all, only a very limited field of observation, but it must not be forgotten that professional work generally takes its tone from, and in great measure follows the lead of, the hospitals. If a better system of reporting were adopted at the teaching centres, the improvement would, we may hope, speedily spread to the outermost circles.

What science—and therefore art—needs is a return under a common system of notation for the record of details of *all* cases falling under observation. Clinicians seem to forget that no “average” or “mean” can be accepted, more particularly when worked from a small number of facts, until it has been corrected by collation with the great mass of comparable facts to which it is naturally related. For example, the rates of mortality in particular diseases require to be corrected by the rate of mortality for disease as a whole, and this is especially necessary when the numbers forming the base of the calculation are small. So is it with each member of the series of medical facts and phenomena. It is impossible to form a true estimate of the comparative excellence of any two methods of treatment, or to ascertain the real significance of any symptom, unless the materials for the judgment to be formed have been collected and compiled in accordance with the known and inviolable laws of statistics. At present only selected cases are reported—or, as it would seem, even recorded in a *clinical* sense—at the hospitals. This is as though only the death of wealthy or poor, or tall or short, persons, should be returned to form the bases of a death-rate; and, to complete the absurdity, the *principal* factor, age, is either omitted or disregarded! The utmost that can be deduced from the reports of series of cases or the tables appended to hospital annuals thus compiled, is the fact—in so far as it is a fact—that a certain proportion of the cases treated in a particular institu-

tion, or in a certain way, by some individual practitioner, has resulted as the report shows; and under precisely similar circumstances the experience *may* be repeated. In order to make the returns supplied to the profession of any practical value, it would be necessary to work out the life status and expectancy of each hospital population and of the populations from which its individual members are taken. What, for instance, is the worth of the simple fact that a particular percentage of cases treated in a certain way, either medically or surgically, died or recovered, unless we are furnished with the means of judging how much of the mortality or recovery noted was due to conditions, such as the age and class of the population to which they originally belonged, and the vital expectancy of the hospital population into which they were imported? It is startling to discover the utterly valueless character of the great bulk of the returns commonly furnished. There ought to be a trained statistical officer attached to each of the hospitals, whose duty it should be to work out and correct the data furnished for general remark. If the existing Registrars are so qualified, and can be so brought together by the new Society as to work in harmony, great good will certainly result from the movement.

Meanwhile, the mere creation of a special clinical registry, constituted by an Association of Medical Registrars, will not place the returns on a satisfactory footing unless the general facts needful to make each special series complete are collected. It will be well if any recent or concurrent event should direct the attention of the Medical Faculties of hospitals to the indispensable, and, it would have seemed, self-evident, obligation under which they lie to organise and maintain a perfect system of clinical reporting. Notes of every case should be taken officially, and for the Faculty, with a view to medico-statistical purposes. The waste of priceless material which has been tolerated is astonishing, when we come to look at it in the aggregate. Questions relating to ages, heights, vital capacities, weights, and even the presence or absence of particular symptoms in certain morbid states, may at any moment crop up, and a general return may be essential to an accurate opinion; but although the data have been, so to say, thrown at our feet for years past, we have not taken the trouble to gather them. If medical men, who need the aid of statistics more, perhaps, than any other class of active workers, were better versed in the laws which govern the logic of figures, this system, or rather want of system, would not be longer tolerated.

THE progress of the cinchona cultivation in India has a very practical interest for the inhabitants of this and other countries. Large quantities of cinchona alkaloid are annually needed in India in the treatment of the malarial fevers which infest many parts, and the growth of enough bark in the country to supply Indian needs will afford appreciable relief to the too great demand on what is produced by other countries. Still greater will be the advantage if, as seems likely, cinchona bark can be grown in sufficient quantity to permit of its export.

The annual reports of the superintendent of the Government cinchona cultivation in Bengal, and of the Government quinologist, for the year 1879-80, have just been published, and the facts which they describe are of a very

encouraging character. Both are from the pen of Dr. G. KING, M.B., who has during the year fulfilled the duties of both posts. About three-quarters of a million of young trees were planted, and the efforts to propagate the *C. calisaya* and hybrid varieties have at last begun to bear fruit. The greater success of the Dutch in growing the former in Java led to a visit to those plantations by Dr. KING. He found that the results were largely due to the superiority in the volcanic soil and equatorial climate of Java. Dr. KING gained, however, some practical information on several points, one of which is the advantage of the Dutch method of shaving the bark from living trees, instead of uprooting them altogether. The entire produce of the plantations for the year was 361,590 lb. of dry bark, as against 261,659 lb. in 1878-79—a very satisfactory increase. Of last year's produce, 29,520 lb. were yellow, and the rest red bark. It is proposed to take 350,000 lb. of red bark as the crop of next year, but should it be found, as the season advances, that more is likely to be wanted, it is said that it will not be difficult to increase the quantity to 400,000 lb.

During the year four plants were received from Sir J. D. HOOKER of the valuable species of cinchona which yields the bark known in commerce as Carthagena or Columbian. Although long known in the market by its produce, this species has never been brought into cultivation in India. Seeds were brought from Columbia by Mr. R. CROSS, who was commissioned by the Secretary of State to go to South America to procure them. The seeds were sown at Kew, and the resulting plants sent to India. They are growing well, and there is every prospect that they will be successfully propagated.

The greater part of the bark is employed in the preparation of the "Cinchona febrifuge," an extract consisting of the more or less impure alkaloids. No less than 9434 lb. of this febrifuge were prepared, as against 7007 lb. in the previous year. The question of manufacturing a superior drug has been under consideration by a Special Committee appointed by the Government in 1877. After discussing the question of how far the febrifuge could be improved by excluding its amorphous constituents, the Committee recommended for trial a mixture of four parts of sulphate of quinine, eight of sulphate of cinchonidine, and nine of sulphate of cinchonine. The result of the trial showed that the antiperiodic properties of the febrifuge are not diminished by excluding the amorphous alkaloids, while the triple sulphate has the advantage of creating less nausea and gastric disturbance than the ordinary febrifuge. At the same time the Committee considered that the proportion of cases in which the febrifuge had been found to create nausea was so small, while its efficacy in the treatment of fevers has been so unmistakably established, that the remedial advantages to be gained by substituting for it a finer preparation are not sufficient to warrant any great increase of cost. They recommend, however, that the experiment should be made of erecting a small factory in which the preparation of the pure alkaloids of *Cinchona succirubra* could be carried on, so that the cost of producing the triple sulphate on a large scale can be ascertained. This proposal is now under consideration by the Government of India. The sale of the febrifuge to the public has increased considerably, a sure proof that it is rising in general

estimation; 2757 lb.—more than one-quarter of the total produced—was thus sold. The substitution of this febrifuge for the imported quinine has effected a saving of four lakhs of rupees, and the total saving since the factory commenced working has been greater than all the plantations have cost since they were opened.

The Calisaya bark is less suitable for the manufacture of the febrifuge than the red bark, and a surplus stock which had accumulated has been sent to Europe during the year. There is a prospect, however, that quinine may be made on the spot from this bark. The superintendent of the factory, Mr. GAMMIE, who is strongly recommended by Dr. KING, has devoted much time to an endeavour to prepare pure sulphate of quinine. His efforts have been so far successful that he has produced from both *Succirubra* and *Calisaya* barks quinine which is indistinguishable in appearance from that sold by the best European makers.

It cannot but be a matter of deep regret to all who take an interest in our Navy—and what Englishman does not?—that the Government have as yet given no indication of their intentions with regard to the Medical Department of that branch of the public service. The lamentable condition of unpopularity into which it has been permitted to fall has been only too well shown by the want of candidates for admission into it. When the Admiralty advertise twice, or sometimes thrice, a year for candidates, they are unable to obtain more than five, while the Army gets above eighty, and the Indian Service usually more than twice as many as they have vacancies to fill. The advice given to the students at the medical schools is, whatever you do, avoid the Navy, and this will continue to be the case until steps are taken to place the department more on a footing with that of the sister service, and to remove those well recognised grievances which afford justifiable grounds for this otherwise unpatriotic course. The Government has, since coming into office, had sufficient time to have inquired into this state of matters, and to have ascertained the extent of the evil and the nature of the remedies which are required, but yet the only resolution at which they appear to have arrived is that the question of the re-organisation of the service will be considered when the estimates for next year are being prepared. This course is open to the serious objection that the alterations which may be adopted will not be known till close upon the period when the next competitive examination will be held. In the meantime the young medical men who think of entering the public service will have made up their minds in favour of those two branches of which the conditions of service are known, and the Navy will be again unable to obtain the number requisite to fill up vacancies. It is quite clear that something must be done, and it is very difficult to understand the policy of postponing the consideration of so unavoidable a subject to a time when the office-work is increased by the additional labour involved in the preparation of the general estimates. Lord NORTH-BROOK is, we believe, fully alive to the necessity of obtaining medical officers for the Navy, and he may be well assured that he will never get anything like an adequate number until the conditions of service are greatly ameliorated. Among those which most urgently require attention are the rates of pay and half-pay, which

must be brought more into accord with those of the army medical officers; the system of compulsory half-pay must be modified, or some compensation granted for the loss of time it causes, and which seriously affects the rate of retirement; steps must be taken to assure to medical officers the choice of cabins in accordance with the regulations, and to prevent them being deprived of their right in this respect at the caprice of the captains; the rule requiring five years' service as Deputy Inspector-General before the officer becomes eligible for the higher grade, must be abolished; it would also be advisable to introduce a grade corresponding to that of Brigade Surgeon in the army, and to modify the rule respecting the age at which compulsory retirement is enforced, with a view to improve, to some extent, the prospects of promotion for the juniors. We sincerely trust that Lord NORTHBROOK will without delay direct his attention to this very important subject, as we feel assured the more he looks into it the more will he see the need for prompt action, and the sooner he puts the service on a proper footing, the more likely will he be to obtain an adequate supply of well-qualified candidates.

DR. GROSS of Philadelphia, in his work on Tumours of the Breast, has given statistics, partly original, partly obtained from other published sources, to show the natural duration of life in cancerous disease of the breast, and the influence upon it that partial or more complete operations have. It must be understood that Dr. GROSS's statistics refer only to malignant tumours of special histological characters—true carcinomata, and do not include all malignant growths met with in the female mamma. In 67 cases allowed to run their natural course the average duration of life was twenty-seven months, while in 224 cases, in which death occurred after operation, and with recurrence of the disease, the average duration of life was thirty-nine months; so that in these, the less successful cases, active surgical interference was enabled to add, on an average, a year of life in addition to the physical and mental comfort following the removal of a cancerous mass. But there is a better aspect of the question than this. Out of 519 cases in which an operation had been performed, as many as 47 were known to be free from any recurrence of the disease for periods varying from three to nearly sixteen years; 4 only of these 47 were dead, so that it is impossible to say how long the freedom from cancer will continue. The average time since the operation in the whole 47 was five years and nine months, and the disease had existed before operation on an average for eighteen months, so that the average duration of life in these cases, the majority of which were still alive, is seven years and a quarter. Dr. GROSS maintains that as death from metastases occurs at thirty-one months, and the average date of death of those who succumb with or without operation is thirty-three months, any patient who is alive and well, without any evidence of local or distal recurrence, three years after the removal of a cancerous tumour of the breast, may be considered to be cured. In the language of averages this assertion is no doubt sufficiently accurate, but there are so many cases on record where recurrence has been noticed at longer intervals, that, small though the percentage of such cases in the grand total is, it is obviously unsafe to

apply the average rule to individual cases, and speak with too much assurance of complete permanent recovery.

Valuable lessons are to be learnt from a study of the cases in which surgery fails to obtain results so good as these. One is the great frequency of local recurrence within three months from operation—more than 60 per cent.—with a steady and rapid diminution after that time. Another fact which comes out is that the axilla is far more often the seat of recurrence when the mamma only is excised than when the axillary glands also are removed. Each of these deductions points to the urgent necessity for complete, thorough operations, for cases in which the tumour reappears within a few weeks from its removal must be regarded as continuous growths rather than as true recurrences. Surgeons have naturally avoided opening up the axilla and interfering with the lymphatic glands unless they were evidently affected, and then oftentimes the prospect of doing good has been held to be too slight to warrant the operation. Where, however, the disease to be attacked is so deadly, bold measures are justifiable, and the only ones to be relied on. The direction in which all our recent experience points is that an operation for cancer should be not only early but very far-reaching, involving the removal of the neighbouring glands even when not palpably affected, and that in this way we may attain success far better than by less bold procedures.

In Dr. GROSS's statistics about one in six of the patients died of the operation itself, but this surely is a higher rate of mortality than is at all usual. Some years ago, before the application of strict asepticism to surgery, Sir JAMES PAGET spoke of 5 per cent. as the mortality which would probably always be met with. He was no doubt referring to the removal of the mamma alone, and the excision of the axillary glands increases the danger to some degree. But as by slow careful dissection injury to the bloodvessels can be obviated, and by well applied dressings and drainage, especially Listerian, the danger of retention and putrefaction of inflammatory exudation leading to blood-poisoning may be prevented, the additional risk is out of proportion to the subsequent advantage that accrues from this procedure. Such clinical experience as we have quoted above has an obvious bearing upon the obscure pathological question of the origin of cancer, and lends great support to those who regard it as in the first instance a local disease.

Annotations.

"No quid nimis."

M. PASTEUR'S INOCULATIONS.

OUR Paris correspondent enabled us to give, last week, a full account of M. Pasteur's remarkable communication to the Académie de Médecine, on his method of inoculation for the prevention of the "cholera of fowls." The facts are of great interest in their immediate application, and of still higher importance in the wider inferences which they suggest. M. Pasteur had previously ascertained that the disease is due solely to a microscopic organism which may be cultivated artificially, and, even after many successive cultivations, will still infallibly produce the disease. Of still greater importance, however, in connexion with human pathology, is the demonstration which his experiments supply, that a disease due to an organised contagium affords some protection

against its recurrence. A second attack is inversely proportional in severity to the first, and if the first attack was a severe one subsequent inoculation with the most virulent virus will produce no effect. The mere fact that the same organism, under different conditions of its own energy—differences which are expressed by no apparent morphological variation—produces the disease in different intensity, is one of great significance. Another important fact is that a very chronic form of the disease sometimes results from inoculation with a virulent virus, and that this appears to be due to the organisms becoming localised in certain organs, and remaining and developing there for months, and then suddenly passing into the blood, with the result of causing the bird's speedy death. The organism then contained in the blood is of considerable virulence, killing almost invariably. Its virulence is preserved by successive inoculations, if the interval between these inoculations is short, but is lessened if these intervals are long. Nevertheless, this virus, thus attenuated, will still produce an attack of the disease which protects against subsequent attacks. If the series of cultivations at prolonged intervals is extensive, the virus may ultimately lose all its virulence, apparently by its death. M. Pasteur attributes the attenuation to the influence of atmospheric oxygen, for he finds that if the organism is cultivated in hermetically sealed tubes, containing but little oxygen, the virulence remains unlesened, even after many successive growths at long intervals.

We have drawn attention to the chief feature of M. Pasteur's communication, not only on account of its interest and importance, but also to point out that its most important fact has been already anticipated by one of our own investigators in the same field. The fact is that successive cultivations may attenuate a virus, which, thus weakened, still confers protection against the inoculation of the virus in its most virulent form. The anticipation to which we refer is by Dr. Greenfield, and is of interest not only as a discovery of a general principle, but as showing that the observations of Pasteur have, indeed, the application to other diseases which this distinguished author suggests. We quote the anticipation in Dr. Greenfield's own words (THE LANCET, June 5th, p. 866):—"Further experiments have led me to the conclusion that the poison [of anthrax] becomes progressively less virulent in successive generations of artificial cultivation. I have thus been able to obtain a modified virus, which, when inoculated, produces much less severe symptoms, and appears to be partially protective against future more severe attacks."

CORK FEVER HOSPITAL.

A GENERAL meeting of the committee and subscribers of this institution was held on the 4th inst., to consider certain changes in the rules of the hospital as recently recommended by the Managing Committee, and to elect a resident medical officer and apothecary in the room of Dr. Adderley, resigned. A report was read from the medical officers, who entered a protest against the recommendations of the committee for the internal management of the hospital, and drew attention to Rule 4, which laid down the condition that the assistance of the physicians should be obtained before new rules were framed, a provision which was not acted upon. Further, they submitted that the physician in charge of a case was the only judge of the necessity of holding a consultation, but they had no objection to meet in formal consultation in any case involving special difficulty in its management, and suggested as a substitute for the rule of the committee, that the physicians when they thought it necessary in any exceptional case where there was a difficulty or doubt should hold formal consultations. As regarded the rule prohibiting the physicians prescribing any medicine not belonging to the Pharmacopœia and sanctioned by the committee, the medical

officers stated that they could not consent to be bound by any Pharmacopœia or by any other collection of formulæ, as such restriction would be detrimental to the interests of their patients, and would greatly hamper the staff in the discharge of their duty; while in reference to the latter part of the proposed rule, they reminded the committee that urgent cases might occur which, demanding immediate treatment, would compel the medical officers to wait for a meeting of the committee. At the same time the physicians did not object to consult as to the propriety of using an extraordinary remedy when the occurrence of an exceptional case might require to be given, when ordinary remedies had failed. After some discussion the further consideration of the matter was adjourned to that day fortnight, in order to give the subscribers an opportunity of considering it more fully. Mr. Atkins was unanimously elected resident apothecary.

NEW THEORY AS TO THE PATHOLOGICAL CHANGES IN THE BLOOD IN ACUTE RHEUMATISM.

AT the last meeting of the Cambridge Medical Society, held on Friday, Nov. 5th, Professor Paget, President, in the chair, Professor Latham advanced a new theory as to the pathology of acute rheumatism. He maintained that the first step was a lowering of the action of the "inhibitory chemical centre," or nervous centre, which controls oxidation in the muscular tissue. Following upon this, the oxygen from the oxyhæmoglobin, instead of entering the muscular tissue to be exhaled therefrom in the form of carbonic acid gas, had its sojourn in the tissue shortened, and passed into the blood in the form of lactic acid (a substance which appears in muscle almost instantaneously with its death); that the oxygen acted also more energetically on the muscular tissue, and the resulting lactic acid being oxidised rapidly in the blood, instead of in the muscular tissue, an abnormal amount of heat or pyrexia was developed.

He then argued that quina lowered temperature by simply impeding the carrying of ozone from the lungs to the tissues by the red blood-corpuscles, as in Binz's experiments with ozonised turpentine and guaiacum; and so the remedy might act beneficially in rheumatism, but would have no effect on the *materies morbi*. Salicylic acid, on the other hand, lowered the temperature and cured the disease by chemically combining with the substances from which the lactic acid is derived, and producing less heat than would result from the oxidation of that substance. He showed how the theory advanced explained the relapses which so often recur after apparent cure with salicylic acid, the necessity for large doses of the remedy, and the reason why it should be less curative in other pyrexial disorders, such as pneumonia, typhoid fever, &c. Referring to locomotor ataxy as an example, he suggested that possibly the local symptoms might be the result of the lactic acid acting upon the posterior columns of the spinal cord, producing functional change; and, in reply to a question in the discussion afterwards as to the connexion between rheumatism and chorea, considered that this disorder was the result of the lactic acid inducing functional change in the nervous centre which co-ordinates muscular movement, that centre being weak, and therefore a point of minimum energy, and this condition being hereditary or acquired. He also applied his theory to explain why the same cause (cold), which in one person appears to produce acute rheumatism, in others produces pneumonia, tonsillitis, &c.

Since the meeting Dr. Latham has extended his theory to diabetes. If it be true, it ought, he says, to explain the phenomena of that disease with a normal or subnormal temperature, and he maintains that the lowered nerve action is sufficient to do this. Salicylic acid may then (whilst the patient perhaps is taking ordinary diet) cause the sugar to disappear

from the urine and lessen the amount of that secretion without even altering the condition of the nervous system upon which the symptoms depend.

PREVENTABLE DISEASE AND SANITARY WORK IN INDIA.

THE Indian Famine Commission does not appear to have been very highly impressed with the progress of sanitary work and its influence on the prevention of disease in India. In the second part of their report they give an appalling picture of the loss of life by preventable diseases among the native population, and they say with reference to sanitary progress that "there is no room to doubt that the work hitherto achieved by district officers or the Sanitary Department falls very far short indeed of what is necessary to secure satisfactory improvement, or what the administration could effect if the matter were taken up seriously and funds were available." It seems to us that the apathy or indifference implied here is inconsistent with the concluding words of the sentence, to say nothing of the extreme difficulties which beset sanitary progress in India, arising from the habits of the natives and their prejudices, and which the Commission refer to. The observations of the Commission on the chronic character of the agencies which contribute to so formidable a proportion of fatal preventable disease, particularly in time of famine, the peculiar difficulties attending sanitary progress, and last, but not least, the limited funds available for securing this progress, prompt us to admire the advances which have already been made in the sanitary administration of India rather than to depreciate them and to impute indifference to the Government of India in the matter. We entirely agree with the Commission when they say that "every real step in advance made in this matter will have a most important effect on the health and the lives of millions and on their power of resistance in time of famine"; but we hesitate to accept their implied conclusion that the question of an "improved sanitation" (to use the marginal words of the report) had not been taken up seriously. It must not be overlooked, however, that, with one exception, the Commission was composed of Indian officials.

HYDROPHOBIA FIVE YEARS AFTER INOCULATION.

M. COLIN related to the Académie de Médecine, at its last meeting, a remarkable instance of prolonged incubation of hydrophobia. The case was that of a man who died a few minutes after being admitted (on August 31st) into the hospital, presenting maniacal excitation, exhortation, fear of drinking, and apprehensions, during more lucid moments, lest he should injure those about him. The autopsy showed no lesions, but some small cicatrices were noted on the left wrist and in the front of the thorax. Further inquiries showed that the man had been ill two days only. On the first he complained of a severe pain in the hepatic region and extreme thirst, although he could not drink; as soon as he raised a cup to his lips he was seized with shivering and spasm. The next day he complained of severe sense of constriction in the pharynx and a feeling of a wish to bite. The symptoms thus seemed clearly those of hydrophobia. No history could be ascertained of a bite from a dog during the previous five years. On Nov. 2nd, 1874, however, in Algeria, he had been bitten by a dog, which was attacking a comrade, to whose assistance he went, and who was also bitten. The latter had his wounds cauterised the next day, and died in eight days of hydrophobia. The patient of M. Colin was cauterised half an hour after the receipt of the bite. Some authorities, as Devergie, have maintained that the cases of prolonged incubation are really cases of "nervous hydrophobia," but the symptomatology of such a case as this seems too precise for the theory that an

attack so virulent could result from "nervousness." Hydrophobia is relatively common among the soldiers in Algeria, especially in the interior of the country, at the farms, where there are Arab dogs; and it is still more common among the civil population.

In regard to these prolonged periods of incubation in hydrophobia, of which this case presents an instance most remarkable, if not altogether beyond the reach of criticism, it is worth while to refer to one of the results obtained by M. Pasteur, of which we gave an account last week. It has long been a favourite explanation of these cases to suppose that the virus remained localised in the wound, developed there, and only caused the symptoms when, in consequence of some adventitious circumstance, it passed into the blood. M. Pasteur has shown that this explanation is, as regards some diseases, not a matter of theory but of fact. He has found that in the chronic cases of "cholera of fowls" the poison does develop in certain organs, and not, as in other cases, in the blood, and that when, after a variable period, the organised poison passes into the blood, severe symptoms come on rapidly, and the creature soon dies.

SUBJECTS FOR DISSECTIONS.

THE present supply of subjects is far from satisfactory. Notwithstanding that most of the London schools received some subjects during the summer months, a large number of students are still without parts. As a consequence of the inadequate supply applications have been made to some of the East-end Boards of Guardians, who have hitherto refused the privilege of allowing the schools to have the bodies of their unclaimed paupers for purposes of anatomical study. In most metropolitan unions this permission is readily given; and as by Act of Parliament only unclaimed bodies can be given up, it is difficult for us to appreciate the arguments which can have induced the visiting committee of the Shoreditch Workhouse to refuse their assent to the request. It is so obvious that, for obtaining any exact knowledge of the human body, a sufficient supply of subjects must be forthcoming, that we hope Boards of Guardians will not put forward any unnecessary difficulties, but will readily grant the authorities of the various medical schools every facility for carrying on such an all-important branch of medical education. The various safeguards laid down in the Anatomy Act are so stringent that the occurrence of any disrespect to the dead, or of outrage to the feelings of the relatives, is almost an impossibility; so that the lay authorities should carry out the spirit as well as the letter of a law which has been of so great service, not only to students of medical science, but to the community at large. We are glad to see that the Guardians of Bethnal-green have taken a fairer and more liberal view of this important question than their brethren at Shoreditch; and we hope that the other boards, to whom applications have been made, will follow their wise example.

REMOVAL OF FOREIGN BODIES FROM THE EAR.

M. ROUSTEN recently presented to the Société de Chirurgie of Paris a paper describing a means of removing foreign bodies from the ear by means of a cannula, and cited four illustrative cases in which it had been successfully employed. He urged the adoption of this plan in preference to the use of a syringe. A commission consisting of MM. Desprès, Delens, and Sée reported in reference to this suggestion that injections of water are nearly always successful, and are free from the risks attending the use of instruments of any kind, and that this opinion, in which all surgeons are agreed, cannot be upset by a record of four cases only. In the subsequent debate M. Gillette mentioned a case in which a pea was lodged in the external

auditory meatus for seven years notwithstanding many attempts to remove it. At the end of that time it germinated and swelled, and M. Gillette carefully syringed twice a day, with the result of removing it on the fourth day. We refer to this paper and discussion because the danger of using instruments for the removal of foreign bodies in the ear cannot be too much insisted on or too constantly borne in mind. It is so tempting to use some kind of forceps, or hook, or probe, or snare, but experience has abundantly proved the needless danger of all such procedures. In no case whatever should any instrument be employed until a thorough prolonged trial of well-directed syringing has been made and found to fail. And then, if further steps are necessary, anæsthesia should be considered a *sine quâ non* to any instrumentation, for a very slight movement of the head may easily suffice to destroy the membrana tympani and ossicles and set up mischief ending in deafness or even in death.

THE CASE OF DISTIN.

WE must disclaim any sympathy with the maudlin sentiment which makes some persons affect to find evidence of insanity in the case of every outrageous criminal. At the same time it is impossible not to feel that a grave public scandal will be created if Distin, the convict awaiting execution at Bristol, is hung without a medical inquiry. This man has, it seems, attempted suicide on no less than seven several occasions, once by taking vermin-powder, twice by trying to drown himself in the harbour, once by jumping over a bridge, once by jumping out of a window, once by hanging, and once by cutting his throat. Had he died on either of these occasions the verdict would doubtless have pointed to "temporary insanity" as the cause. Is there no ground for suspecting insanity now that he has, in a fit of jealousy, killed his paramour? There is also a history of injury to the head, and it seems his mental soundness has been actually suspected, as he was once submitted to medical examination by a surgeon now deceased. In the face of such a tale as this, we will not question the common sense and humanity of Sir William Harcourt by supposing that he will hesitate to interpose. Without waiting for any agitation or pressure, it is the plain duty of the Home Secretary to order a medical inquiry, whatever the result anticipated may be.

ON THE PART PLAYED BY THE STOMACH AND PANCREAS IN THE DIGESTION OF FAT.

A PAPER appears in the October number of the *Archiv für Anatomie und Physiologie* on the relative share taken by the stomach and the pancreas in the digestion of fatty substances, by Dr. Th. Cash. He begins by pointing out that Bernard long ago proved that the oleaginous constituents of the food must be emulsified before they undergo absorption through the agency of the intestinal, and especially of the pancreatic juices. His experiments were supported by those of Brücke, yet it has not been actually demonstrated that the breaking up of the fats into minute droplets and their investment with a soapy membrane, which is perfectly effected in the lacteals, is already accomplished in the intestine. Dr. Cash's experiments were undertaken under Ludwig's supervision, with this object in view. Dogs were kept fasting for eighteen hours or more. Food was now administered, and four hours subsequently the animal was killed with curare. The abdomen was at once opened and the intestine divided by ligatures into several portions of about a foot in length, so that each part retained the fluid it contained during life. The segments were opened, the contents tested with litmus-paper, and received in test-tubes. A quantity of water, equal to the fluid obtained, was added to each tube, warmed to 60° C., and filtered.

After the solid residue had been heated in this way several times with water, the cloudy fluid which had passed through the filter was placed in a cylindrical glass and subjected to centrifugal action for an hour or two. The oily portion of the fluid after this treatment swam upon the surface of the water. The contents of the small intestine were invariably found to leave an acid reaction, and on the surface of the fluid which had been subjected to centrifugal action, oil-drops accumulated of various sizes, which, however, never presented the slightest tendency to the proper colour of an emulsion, whilst the oil-drops could be easily made to coalesce, and could then be easily emulsified with a dilute solution of soda. It hence appears that fats are absorbed in the free state, and their conversion into an emulsion first takes place after absorption is effected.

THE KANDAHAR DESPATCHES.

THE *Gazette of India*, received by the last mail, publishes the despatches of General Primrose, of Aug. 30th, relative to the siege of the city after the Maiwand disaster. Par. 38, details the medical officers for the different gates and posts of the city in case of attack, with the following instructions, made by Deputy Surgeon-General O'Nial:—"Each medical officer will put permanently at his gate two dandies, or doolies. He will find some fixed place for them, in which they are always to remain, and he will take steps to insure that this place is known by the officer in command. On the assembly being sounded he will proceed at once with six additional dandies, or doolies, and the necessary surgical material, to his post, and will report himself to the officer commanding at the time. Medical officers will take care that their doolie-bearers are well acquainted with the route from their respective posts to the European and native Base Hospitals, and will take precautions against their crowding, or in any way obstructing the communications. Each medical officer will render assistance to all wounded or sick men, of whatever branch of the service, within his area. Surgical operations involving any delay are not to be performed at these posts. Assistance is to be limited to what is absolutely necessary to the men's transfer to the Base Hospital. The officers of the Base and Field Hospitals will have everything necessary for the treatment of the wounded always in immediate readiness." Par. 52, brings to the favourable notice of his Excellency the Commander-in-Chief the names of the following officers who, during the siege, rendered great assistance in the performance of their various duties:—Deputy Surgeon-General J. O'Nial, Surgeon-Major B. T. Giraud, Army Medical Department; and Surgeon-Major J. Arnott, Indian Medical Department.

MEDICAL MATTERS AT NEWCASTLE-ON-TYNE.

AS we anticipated, Mr. Page has been promoted from the position of Assistant-Surgeon to fill the office of Surgeon, rendered vacant by the resignation of Dr. Heath. The resignation of Dr. Heath is much felt by those interested in the work of the hospital and medical school. But it is gratifying to know that he retires in good health and with keen zest for the work of his profession. The elevation of Mr. Page creates a vacancy in the assistant-surgeonship, for which there will be a sharp contest. The candidates are: Mr. G. E. Williamson, F.R.C.S. Eng., Mr. J. D. Dixon, M.B., Mr. Hugh T. Bowman, M.S., M.B., and Mr. J. R. Baumgartner, M.R.C.S. It is probable that the contest will be principally between Mr. Williamson and Mr. Dixon, both of whom have strong claims on the governors. But it is no disparagement to Mr. Dixon to say that Mr. Williamson's claims are stronger than even his. He has distinguished himself as house-surgeon in the London Hospital, and succeeded in impressing nearly

all those who know him that he is fitted to take a high position in the practice of surgery. He is Mr. Dixon's senior; and not only has held the office of house-surgeon, but contracted typhoid in the discharge of his duties. He is, moreover, a Fellow of the College of Surgeons of England. There are over 100 students now in Newcastle, making it the largest provincial school, and larger than many of the London schools. Its pupils ought to do well. Not only is there a great field for medical and surgical teaching, but the Medical School is contiguous with the School of Physical Science, which is in a very thriving and effective state.

THE EDINBURGH GRADUATES' CLUB.

THE quarterly dinner of this club took place on Wednesday, the 10th inst., at St. James's Hall. The gathering of members was large. Prof. Lister occupied the chair. In proposing "Our Alma Mater," he discussed the reasons of the great success of the Scotch Universities, and attributed it largely to the fact that the teachers had time and inducement to stick to professorial duties, even after attaining eminence in practice. Dr. Matthews Duncan proposed the health of Professor Lister in terms of high appreciation. Amongst other things, he said that Professor Lister had been driven to the South of France to perform some of those experiments that had so much raised the character of surgery, a state of matters which, he thought, discreditable to our Government, which ought to further and reward such investigations. Amongst the visitors were Dr. John Williams, Dr. Stokes, &c. There has seldom been a more numerous or pleasant meeting of the club.

MEDICAL ATTENDANCE AND FRIENDLY SOCIETIES.

THE representatives of something like fifty Foresters' Courts have lately met in Plymouth, and discussed, among other things, the appointing a doctor for attendance on Friendly Societies and the families of members, the doctor to be confined to that work and prohibited from private practice. On being put to the vote, 28 were against and 25 supported the proposal. We agree with the majority in this division. To tie thousands of people to one doctor is to forget that the members of Friendly Societies, like other people, have their preferences, and if they have not, that at any rate their wives have. Moreover, the terms of remuneration offered for these appointments for doctoring wholesale are such as to attract only young men who want a start, and who then leave without any chance of establishing that permanent relation with a family which in a doctor is so valuable. "The family doctor" is not to be made in a year. He requires time and long experience. But he is as important to the working class as to the middle or upper class. These views are well indicated in a letter to the *Western Daily Mercury* by "Another Odd Fellow," and deserve great consideration.

TREATMENT OF FRACTURES AT THE ELBOW.

IN a recent paper Dr. Lewis S. Pilcher draws attention to the outward obliquity of the forearm, and records some measurements he has made with the purpose of testing its degree and constancy. He has measured the angle formed by the axes of the humerus and ulna, and found that not only does it vary considerably in different people, but even on the two sides of the same subject. The full, free, and proper use of the limb depends upon this angle, and it is necessary to attend to its maintenance when setting fractures near the elbow-joint; but as the sound limb is no certain guide for the injured one, it is difficult to determine upon the normal obliquity if it has been altered by the injury. Dr. Pilcher also urges the relaxation of all

muscles fixed to the fragments, and immobility of them until firm union has taken place; but we are unaware that these are other than the plainest and most universally held principles in surgery, although perhaps too often lost sight of in treating fractures near joints, from fear of ankylosis and the intervention of the bone-setting quack.

THE HOSPITAL SUNDAY FUND AND THE ALL SAINTS CONVALESCENT HOSPITAL.

THE papers announce the payment by the Lord Mayor of a cheque to the above hospital for £519 16s. 4d. The announcement is accompanied with the assurance that the Lord Mayor, before paying the money, had satisfied himself that a Committee of Management had been "duly elected." The Hospital Sunday Fund will stand still better in public estimation for thus vindicating its own Rule 4, requiring every participating charity to have a duly elected committee. We may fairly expect of the Distribution Committee that it will not again throw on the Council, or any member of it, the unpleasant duty of vindicating the most vital laws of the Fund. There is some reason to believe that the Eastbourne Hospital is not the only hospital that failed in the conditions of a grant.

"SUFFOCATING INFANTS."

ALLUSION having been obscurely made in the lay press to a suggestion of importance, for which the public are indebted to the late Mr. Wakley, we think it well to notice the matter specifically. In the course of his inquiries as coroner for Middlesex, Mr. Wakley discovered grounds for believing that a large proportion of the deaths by "overlying" were caused by the abuse of alcohol. These "accidents" occur chiefly on Saturday nights, following the weekly debauch of the poorer classes among whom they happen. The mischief works, as Mr. Wakley pointed out, in two ways: first, there is alcoholic poisoning through the milk, which tends to stupefy the infants, and predispose them to death; and, secondly, the semi-intoxication of the mothers throws them into a stupor, in which they lie upon and suffocate their children. It is as important as ever that these perils, incident to the practice of heavy drinking on Saturday nights, should be generally moderated.

PATHOLOGICAL SOCIETY OF LONDON.

WE remind our readers that the debate on Rickets will be opened on Tuesday next by Dr. C. Hilton Fagge. Drs. Barlow and Lees will also make a communication to the Society on the same subject, and Drs. Crisp and N. Moore are expected to take part in the debate, which will probably be adjourned to the next meeting of the Society. It is hoped that living and recent specimens will also be exhibited on the evenings specially devoted to the debate.

ROYAL COLLEGE OF PHYSICIANS.

THE Lumleian Lectures will be delivered this year by Dr. Reginald Southey—subject, "Bright's Disease"; the Croonian by Dr. Moxon, on the "Influence of the Circulation upon the Nervous System"; and the Gulstonian by Dr. Coupland, on "Anæmia." These lectures will be published in THE LANCET from the MSS. supplied to us by the several lecturers.

THE NEW JUDGE.

IT may interest our readers to be told that Mr. Watkin Williams, the newly-appointed judge, many years ago diligently studied medicine and completed his curriculum at University College; he acted as house-surgeon under Mr. Erichsen, the present distinguished president of the Royal College of Surgeons.

THORACENTESIS.

IN recent numbers of the *Gazette des Hôpitaux* is found a clinical lecture on Thoracentesis by M. Potain. He recommends the operation in all cases of empyema, and in all cases of serous pleurisy after fifteen to twenty days where purgatives and diuretics have failed to cause the absorption of the fluid. He urges that it should never be practised for hæmorrhax, on account of the difficulty of deciding when the source of the hæmorrhage is closed, and the impossibility of removing coagula; nor in pleurisy complicating phthisis with large cavities; but the early or middle stages of tubercle he regards as no bar to the operation.

THE Examinations at Oxford for the degree of Bachelor of Medicine will commence in the Medical Department of the Museum as follows:—The First (or Scientific) Examination, November 29th. The Second (or Final) Examination, December 6th. Candidates for either of these examinations and candidates for the certificate in subjects bearing on Preventive Medicine and Public Health should send in their names, on or before Nov. 15th, to the Regius Professor of Medicine, Medical Department, Museum.

AT the next quarterly meeting of the British Medical Temperance Association, to be held in the Medical Society's Rooms, Chandos-street, Cavendish-square, on Tuesday, Nov. 16th, 1880, at 4 P.M., the President, Dr. Richardson, will give an address on "Alcohol as an Antispasmodic—a Clinical Survey." "Exhibit: The Adulterants of Gin."

FROM recent advices it would appear that cholera is prevailing rather severely in Upper India; the Toondla Rest Camp is said to have been closed in consequence. Some anxiety is felt lest the disease should extend to the large camp to be formed at Lahore during the Durbar.

AMONG the new chairs to be established at Oxford, according to the "proposed statutes" drawn up by the University Commissioners, is a Waynfleet Professorship of Physiology, by Magdalen, when the revenues of the College will allow of it.

MR. EVAN ROWLAND, M.R.C.S. Eng., who served the office of Deputy Coroner to the late Mr. John Maurice Davies for twenty years, was on the 3rd inst. elected Coroner for the Aberystwith District.

LORD ROSEBERY was on the 6th inst. elected Lord Rector of Edinburgh University by a majority of 36 over Sir Robert Christison, Bart., the Conservative candidate, who polled 985 votes.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Wandsworth.—The reports of the medical officers of health (Mr. Kempster, Mr. Oakman, Dr. Nichols, Dr. Flowers Sutton, and Dr. Alexander Walker) for the several parishes in the Wandsworth district—namely, Battersea East, Battersea West, Clapham, Wandsworth, Streatham (including Balham and Tooting, and Putney and Roehampton), show, for the year 1879, an estimated population of 171,900, a birth-rate of 39·7 per 1000 inhabitants, and a death-rate of 20·5 per 1000, the death-rate for the whole of the metropolis being 23·3. The principal features in the returns of the causes of death during the year were the small mortality from small-pox, four deaths only having been recorded; the

"remarkable" decrease in the mortality from diarrhoea, attributed to the low temperature of the year; and the considerable fatality from diseases of the respiratory organs, constituting probably a third of the whole mortality of the district. "This heavy loss," say the reporters, "was no doubt due to the intense cold of the winter, both at the beginning and end of the year; and to the amount of rain which prevailed during the entire year." The following summary of the social position of the persons who died is of interest:—Nobility and gentry 3·3 per cent.; professional class 5·9 per cent.; middle-class 17·4 per cent.; industrial class 73·4 per cent.

The number of inquests held in the district during the year formed 3·7 per cent. of the total deaths, as compared with 4·2 and 5·0 per cent. in 1878 and 1877 respectively. On this it is observed: "We confess we do not find much satisfaction in this reduction of inquests, when we find that no less than eighty-nine persons died and were buried without attendance, certificate, or inquest. The number of deaths so summarily disposed of increases year by year, while the number of inquests steadily diminishes. No doubt a saving of time is effected to the coroner, and some expense avoided, by this economical arrangement; but is life rendered more secure, and crime made more difficult? The majority of those deaths are of children, and a large proportion of them are not even submitted to the coroner. Of these sixty-nine occurred in Battersea, nine in Clapham, six in Wandsworth, and five in Putney."

Wandsworth, it appears, suffers from an evil similar to that which so seriously affects Lewisham—namely, an inadequacy of the sewers to carry off storm and surface-water during rains such as were experienced in 1879. During the year regulations for the control of cow-houses were introduced, and are reported to have produced excellent effect. "The improvement in the dairies and cowsheds has been in some cases radical, necessitating rebuilding of the entire premises. We are certain," add the reporters, "that the regulations tend to improve the quality and purity of the milk by increasing the health of the animals, and to restore the confidence of the public in the use of one of the most valuable of our food supplies." Dr. Walker, the medical officer of health for Putney, observes on this subject: "The regulations admirably meet the wants of the milk trade, except in one particular—viz., the diseased condition of the cows. It is a fact of great importance that tubercular diseases are capable of being transmitted by cows' milk, and some sort of inspection of the condition of the animals should be instituted by qualified veterinary experts. Perhaps cows should be only allowed to be used until a certain age for dairy purposes, being then drafted to the slaughter-house." The Wandsworth district still suffers more or less from the piggery nuisance, but a number of piggeries were got rid of in the course of the year, and a hope is expressed that "the day is not far distant when the odour of a piggery will be unknown in the district." Hope also is expressed that the question of the water-supply of the district (as part of the greater question of the water-supply of the metropolis at large) has passed into a phase which will eventually lead to a supply from some other source than the Thames.

From the reports on the separate parishes of the district we gather that Mr. Kempster sees no evidence in his area of an injury to the health of young persons from the better education to which they are now subjected. Mr. Oakman attributes great success in the arrest of the progress of scarlet fever and measles to measures of disinfection, and he gives a noteworthy instance of the recklessness of builders in constructing new buildings. Investigating the conditions under which diphtheria prevailed in a family, it was found that the water-cistern had been placed immediately under the water-closet-pan, a layer of sawdust being spread over the cover of the cistern to soak up drippings from the closet, which was saturated. Dr. Walker comments upon the overflow of sewers, "the great fault of our modern sewage system," to which the parish under his charge is liable.

THE ARTISANS' DWELLINGS ACT.

A meeting of delegates from the Metropolitan Vestries and District Boards was held on the 5th inst. to consider a report respecting the Artisans' Dwellings Act, drawn up by a committee appointed on the 23rd January last, with a view to suggest for consideration such amendments in legislation on the subject as might seem desirable. The following were the conclusions of the report:—1. That no class of

citizens has a right to dwellings or sites for dwellings at the public cost; that only imperative considerations of public health can justify the outlay of the public money for such purposes as those of the Artisans' Dwellings Act; and if these considerations can be adequately provided for under Torrens' Act it is unjust to add to the heavy and constantly increasing weight of local taxation by enforcing the provisions of Mr. Cross's Act. 2. That owners of the class of property chiefly affected by these Acts should be placed under strong pecuniary inducements to keep it in proper and habitable condition; that if property has been kept in such a state as to be unfit for human habitation, or so as to become a nuisance, the penalty of such a course should fall upon the owners, and that the provisions of the Act should be vigorously applied whenever premises are in the condition contemplated by section 5, the Act of 1868, whether that condition has resulted from overcrowding, defective construction, the absence of sufficient area for light and air, or general dilapidation and uncleanliness. 3. That the working of the Artisans and Labourers' Dwellings Improvements Act, 1875, is impolitic and ruinously extravagant, and that in the interests of the ratepayers the provisions of the Acts known as Torrens' Act (1868-79) should be put in operation and fully exhausted by the local authorities throughout the metropolis before any further action is taken under Cross's Act. 4. That the cost of works under Torrens' Acts, whether executed by the owner or by the local authority, should be apportioned by the arbitrator between the parties holding the several freehold and leasehold interests, regard being had to their various responsibilities and the value of their interests. 5. That Torrens' Act, as amended, is capable of effecting most important results in improving and rendering healthy the habitations of the labouring classes in the metropolis, and that to this end it is desirable that each vestry and district board should adopt such measures by the appointment of standing committees, or otherwise, as may secure the prompt and effective working of the Act, and that if further powers be necessary in connexion with sanitary regulations, water-supply, or otherwise, it is desirable that such powers should be obtained without delay. 6. That the following amendments appear desirable in the Amendment Act. That section 5 be amended so as to limit the owner's power to require the local authority to purchase to cases in which the order of the local authority is to demolish the premises. That section 7 be amended by striking out the words "Local Government Board" in sub-section 1, and inserting in lieu thereof the words, "One of Her Majesty's principal Secretaries of State so far as relates to the metropolis." 7. That it will only be just and equitable that the compensation to be paid to the owners for acquiring lands should be a charge upon the whole of the metropolis, to be contributed by the Metropolitan Board of Works upon the application of the local authority. The other expenses to be paid by the local authority. 8. That it be recommended that all proceedings under the Artisans' Dwellings Acts 1875-9 be stayed until an opportunity has been afforded for a committee of the House of Commons to consider and report on the working of the Acts. 9. That it is desirable that a memorial to the Home Secretary should be prepared in accordance with the terms of this report, to be presented by a deputation at an early date, and that a copy of this report be forwarded to the Metropolitan Board of Works, with a suggestion that, if practicable, no fresh steps may be taken under Mr. Cross's Acts until such proposed inquiry has taken place.—A memorial prepared in conformity with these conclusions was read and adopted.

On the 8th inst. a meeting of the Council of the Charity Organisation Society was held to consider a report from a special committee appointed to examine the subject of artisans' dwellings in London. The committee reported to the effect that an amendment of the law was desirable, with a view of simplifying its operation; and recommended that a letter should be sent to the Home Secretary asking for the appointment of a departmental committee to make a searching and authoritative investigation into the causes of the delay, expense, and other evils that had attended the administration of the Artisans' Dwellings Act, and the sections of the Metropolitan Streets Improvement Acts (1872 and 1877) providing for the rehousing of persons displaced under these Acts.

THE BATH SMALL-POX SCANDAL.

A report of a committee of the Bath Board of Guardians on the late epidemic of small-pox in the city, adopted by the

Guardians at their meeting on the 20th ult., shows very clearly the neglect of the Urban Sanitary Authority of its duties during that outbreak. They appear to have shunted the duty of isolating cases upon the Board of Guardians, with the effect of causing part of the workhouse to be converted into a small-pox hospital, introducing the disease among the inmates, with the shocking result of infecting thirty-seven and killing five, and with the further not unimportant consequence of pauperising not a few patients. The actual number of patients admitted into the workhouse from without was not less than 140, and during the time these admissions were taking place the Urban Sanitary Authority—the Corporation of Bath—had an infectious-disease hospital of their own, situated not very distant from the workhouse, practically lying unused. The public are now asked to believe that the Corporation had "misconceived" their functions in respect to isolation! We have already had occasion to express our warm admiration of the way in which the Guardians came forward to make good the neglect of the Sanitary Authority, and we have avoided making any observations upon the manner in which their own special duties were performed under the circumstances, not wishing to appear to reflect upon a body of gentlemen who were placed under such unusual and difficult circumstances by the default of the Sanitary Authority. But the report now before us almost compels a reference to this particular subject. Isolation is but one cardinal element in dealing preventively with outbreaks of small-pox. Another cardinal element is the use of vaccination and revaccination in the infected localities. One of the most essential measures in steps taken for the purpose of arresting the spread of small-pox is the following up the cases as they occur by the vaccination and revaccination of the individuals residing in the same house with the patient or brought into contact with him, and this whether he be removed from the place and isolated in a hospital or not. Now the duty of securing this following up of the cases by vaccination rests with the Guardians, and the Local Government Board have issued very precise instructions as to the way it is to be performed. The reports we received at the time of the outbreak and immediately afterwards were remarkable for the absence of any reference to measures of this sort having been adopted in Bath; and the report now before us, although giving certain totals of vaccinations and revaccinations, makes no allusion to the execution of the measures advised to be carried out by Boards of Guardians under the circumstances of outbreaks of small-pox. The report, indeed, suggests that under the difficulties arising from the action of the Sanitary Authority with reference to the isolation of small-pox, and in their efforts to do the duties neglected by that authority, the Board of Guardians were compelled to deal imperfectly with their own special duties as to vaccination. We trust to learn that this was not the case.

It requires a robust faith in the principles of local administration not to have them seriously shaken as regards sanitary matters by this action of a local authority holding so high a position in the scale of municipal authorities as the Corporation of the ancient and wealthy city of Bath.

THE METROPOLITAN WATER-SUPPLY.

An adjourned meeting of representatives of the Vestries and District Boards of London was held in the Vestry Hall, St. Martin's-in-the-fields, on the 3rd inst., to consider their further proceedings in the matter of the water-supply of the metropolis. The resolution passed at the previous meeting (see THE LANCET, Oct. 30th) had been forwarded to the Home Secretary, but he had declined to state what intentions the Government had with reference to legislation on the metropolitan water-supply next session, expressing his willingness to receive any representations that the delegates might be desirous to make on the subject. Whereupon a resolution was passed to the effect "that the meeting having received the reply of the Home Secretary, the delegates should address themselves to the question of the proposed Water Trust; and that a sub-committee be appointed to prepare suggestions in reply to the Home Secretary's request, and to bring up a report for consideration." A committee of seven was appointed, and the meeting adjourned for a week—the intention being to offer these suggestions to the Government before the expiration of the time for Parliamentary notice.

THE RESTRAINT OF INFECTION.

At a recent meeting of the City Commissioners of Sewers, Dr. Sedgwick Saunders, the medical officer of health, asked their attention to the following anomaly in sanitary legislation. There were three persons lying ill with scarlet fever in a house in Mansell street, Aldgate. The father was a journeyman tailor working in his own room. On the outbreak of the fever he (Dr. Saunders) ordered that no more clothing should be brought into the house. The result was that the man's livelihood ceased, and he had an offer of breaking stones in the union or starving. With aid from the Mansion House poor box the man had been able to tide over the emergency. Dr. Saunders pointed out to the Commissioners the hardship occasioned to a poor man in requiring him to absent himself from his vocation in order to protect his neighbours from contagious disease. To such a man the law offered no compensation; and Dr. Saunders suggested that the sanitary authorities, whose funds were drawn from the public rates, ought to have power to apply their funds to the support of those people who were thus isolated from the practice of their vocation through considerations of public health.

PRIVATE MORTUARIES.

The Battersea Vestry has been instituting an inquiry into the private provision existing among undertakers in the parish for the custody of corpses previous to interment. Twenty-three undertakers' premises were inspected for the purpose of ascertaining the means they had at their disposal for the occasional care of corpses, and it appeared that three had private mortuaries, and nineteen take charge of corpses (if they receive them at all) in their shops, or in stables, or sheds. None of the undertakers knowingly take charge of the bodies of persons who have died of infectious disease. Mr. Whiteley, one of the members of the Vestry, on the report of the inquiry being presented, observed that he had twice attempted to obtain the sanction of the vestry for the erection of a public mortuary, and hoped shortly to have an opportunity of reopening the question. He thought it would be news to the Vestry as well as to the ratepayers at large that they already had twenty private mortuaries.

A protracted prevalence of scarlet fever in the village of Whittington was a subject of consideration by the Lichfield Board of Guardians, as Rural Sanitary Authority, at a recent meeting. The medical officer of health read a report on the subject, but after a desultory conversation it was allowed to drop, apparently on the ground that, as the persons attacked with the disease were only children, and that of the disease the weak alone died, energetic action on the part of the guardians was not called for. The chairman said that they were all greatly obliged to the medical officer of health (Dr. Monckton) for his report, but an appeal of that gentleman to the effect that if nothing was to be done with regard to Whittington the authority should turn their attention to Chase Town, where scarlet fever had broken out, appears to have been disregarded.

The Local Government Board has refused to constitute Bonchurch, in the Isle of Wight, an urban sanitary district, several of the inhabitants having recently memorialised the Board to this effect. It is understood that the Board is anxious to diminish rather than increase the number of sanitary authorities in the island, experience having shown that the inefficient sanitary administration of the island is largely dependent upon the too great number of its independent sanitary authorities. Dr. Ballard, of the Medical Department of the Board, has been recently engaged in an inquiry concerning the sanitary state and administration of the island.

A report has been presented to the Paddington Vestry by the medical officer of health on the alarming prevalence of scarlet fever and other fevers on the banks of the canal in the district, consequent, it is believed, on the foul condition of the water and the large accumulation of offensive mud in the channel. The vestry have instructed their solicitor to apply for an injunction to restrain the canal company from continuing the nuisance.

The Wandsworth District Board of Works have successfully prosecuted a builder for using mortar composed of mud and lime in the construction of certain houses. A fine of £3 was imposed, with £2 costs.

The Kingston Guardians have prosecuted an individual for neglecting to have his child taken to the public vaccinator for inspection on the eighth day after vaccination. The excuse made was that the child was indisposed at the time and unfit to be taken, but the magistrate refused to accept this explanation, and fined the defendant 15s. 6d., including costs.

The outbreak of scarlet fever at Chesham, to which we have referred more than once in our previous numbers, is we learn dying out, and the sanitary authority propose to expend £16,000 in sewerage the place. An application has been made to the Local Government Board for the loan of the money.

The new water-works at Doncaster, which have been completed at a cost of about £200,000, and have occupied six years in construction, were formally opened by the Mayor of the town a few days ago.

Dr. Ballard, of the Medical Department of the Local Government Board, has been engaged in investigating the outbreak of scarlet fever at Newlyn East.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

The rate of English urban mortality has been almost stationary during the past three weeks, but influenced by the unseasonably low temperature has exceeded the average for the time of year. In twenty of the largest English towns, estimated to contain in the middle of this year a population of seven and a half millions of persons, or nearly one-third of the entire population of England and Wales, 5442 births and 3258 deaths were registered last week. The births exceeded by 257, whereas the deaths were 17 below, the average weekly numbers during 1879. The deaths showed an increase of but 14 upon those returned in the previous week, and were equal to an annual rate of 22·7 per 1000, against 22·6 in each of the two preceding weeks. The lowest death-rates in the twenty towns last week were 15·6 in Portsmouth, 18·3 in Sheffield, 18·8 in Plymouth, and 20·5 in Birmingham. The rates in the other towns ranged upwards to 25·9 in Manchester, 26·1 in Leicester, 30·1 in Salford, and 30·3 in Liverpool. During the past five weeks of the current quarter the death-rate in these twenty towns averaged 22·2 per 1000, against 21·0 in the corresponding periods of the four years 1876-9.

The deaths referred to the seven principal zymotic diseases, which had declined from 1239 to 473 in the ten preceding weeks, further fell to 428 last week; of these, 150 resulted from scarlet fever, 78 from diarrhoea, 70 from fever (principally enteric), 50 from measles, 49 from whooping-cough, 24 from diphtheria, and 7 from small-pox. The annual death-rate from these seven diseases averaged 3·0 per 1000 in the twenty towns, and ranged from 0·7 and 1·9 in Plymouth and Sheffield, to 5·8 and 6·5 in Sunderland and Salford. The 150 deaths from scarlet fever showed a decline of 17 from the high numbers in the previous week, and the largest proportional fatality in Norwich, Sunderland, Oldham, and Manchester. Measles was most fatal in Salford, and whooping-cough in Portsmouth. The death-rates from enteric fever were proportionally excessive in Bradford, Leicester, and Portsmouth. The 24 deaths from diphtheria included 15 in London, 2 in Bristol, and 2 in Birmingham. All the 7 fatal cases of diphtheria were returned in London, where the prevalence of this disease again shows a tendency to increase. The number of small-pox patients in the Metropolitan Asylum Hospitals, which had been 77 and 105 at the end of the two preceding weeks, further rose to 114 on Saturday last; the number of new cases of small-pox admitted to these hospitals during last week was 24, against 12 and 38 in the two previous weeks. The Highgate Small-pox Hospital contained 9 patients on Saturday last.

The deaths referred to diseases of the respiratory organs in London, which had steadily increased from 124 to 333 in the eight preceding weeks, further rose under the influence of the low temperature to 355, but showed no excess upon the corrected average number in the corresponding week of the last ten years; 220 resulted from bronchitis, and 92 from pneumonia. The annual death-rate from lung diseases was equal to 5·1 per 1000 in London, and to 8·3 in Liverpool.

Of the 3258 deaths in the twenty towns last week the

causes were duly certified by a registered medical practitioner or by a coroner in all but 75 cases, or 2·3 per cent. The proportion of uncertified causes of death did not exceed 1·3 per cent. in London, while it averaged 3·2 per cent. in the nineteen provincial towns, and was largest in Bradford.

HEALTH OF SCOTCH TOWNS.

In eight of the largest Scotch towns, having an estimated population of rather more than a million and a quarter persons, the annual death-rate last week averaged 24·2 per 1000, against 19·6 and 24·2 in the two preceding weeks, and exceeded the average rate in the twenty large English towns by 1·5 per 1000. The rates in the eight Scotch towns ranged last week from 17·5 and 20·6 in Perth and Aberdeen, to 25·5 and 28·4 in Paisley and Leith. The deaths referred to the seven principal zymotic diseases in the eight towns, which had been 107 and 149 in the two previous weeks, declined again to 115 last week; they included 54 from scarlet fever, 20 from fever, 15 from diphtheria, 15 from diarrhoea, 8 from whooping-cough, 3 from measles, and not one from small-pox. The annual death-rate from these seven diseases averaged 4·6 per 1000 in the eight towns, and was 1·6 above the average rate from the same diseases in the twenty English towns. The zymotic death-rate in the eight Scotch towns ranged from 0·7 and 2·0 in Greenock and Aberdeen, to 5·6 and 6·3 in Glasgow and Edinburgh; scarlet fever showed fatal prevalence in each of the two last-mentioned towns. The fatal cases of scarlet fever in the eight towns, which had been 47 and 51 in the two preceding weeks, further rose to 54 last week, and included 30 in Glasgow and 19 in Edinburgh. The 20 deaths referred to fever, principally enteric, showed an increase of seven upon the number in the previous week; 13 occurred in Glasgow, 3 in Edinburgh, and 2 both in Leith and Perth. The 15 deaths from diarrhoea showed a marked decline from the previous weekly number. Ten of the 15 deaths from diphtheria occurred in Glasgow, and 3 in Dundee; while 4 of the eight fatal cases of whooping-cough were returned in Dundee. The deaths referred to acute diseases of the respiratory organs (bronchitis, pneumonia, and pleurisy) in the eight towns, which had been 120 and 121 in the three preceding weeks, further rose to 127 last week; the annual death-rate from these diseases last week was equal to 5·1 per 1000 in the eight Scotch towns, against 4·5 in London.

HEALTH OF DUBLIN.

The rate of mortality in Dublin again showed a marked excess last week. The annual rate of mortality in the city, which had been equal to 32·7 and 34·8 in the two preceding weeks, was 34·4 last week. During the past five weeks of the current quarter the death-rate in the city has averaged no less than 33·6 per 1000, against 21·0 in London, and 22·2 in Edinburgh. The 207 deaths in Dublin last week were within three of the number in the previous week, and included 36, or 17 per cent., which were referred to the seven principal zymotic diseases, corresponding with the number in each of the two preceding weeks; 13 resulted from scarlet fever, 9 from fever (principally typhus and enteric), 6 from diarrhoea, 6 from whooping-cough, one from measles, and one from diphtheria. No fatal case of small-pox has been recorded during the past fortnight. The annual death-rate from these zymotic diseases was equal to 6·0 per 1000 in Dublin last week, while it did not exceed 2·7 in London, and was 6·3 in Edinburgh. The fatal cases both of scarlet fever and whooping-cough corresponded with the number in the previous week, while those of diarrhoea showed a further decline. The deaths referred to fever (including typhus, typhoid, and simple), which had been 3 and 6 in the two preceding weeks, further rose to 9 last week; fever fatality in the city has been considerably higher during the past five weeks than it was during last quarter. The deaths of infants showed a further decline from recent weekly numbers, and the deaths of elderly persons were sixteen fewer than those in the previous week.

HEALTH MATTERS GENERALLY AT HOME AND ABROAD.

TYPHOID FEVER IN QUEENSLAND.

An interesting report has been published by the Parliament of Queensland relative to the prevalence of typhoid fever at Toowoomba. It was held necessary to appoint a commission

of inquiry on the subject, which was formed of Mr. Wm. Henry Groom, M.L.A., Dr. John Thomson, and Mr. John Garget. The results of the inquiry show with what lamentable success the grossest sanitary evils attaching to old towns in England have been reproduced at the antipodes. Toowoomba is a municipality containing from 700 to 800 dwellings. The filth of these is deposited in about 500 cesspits, and the water-supply is derived from 300 wells. Both cesspits and wells are hollowed in a porous soil, the well being the deeper of the two, and as a rule twenty feet only intervenes between a cesspit and a well. That the liquid contents of the cesspits percolate into the wells there can be no doubt. Dr. Howlin gave evidence to the effect that "after a heavy rain the water had risen in the closet [cesspit] to within two or three feet of the seat, and after a week the whole would disappear; and he further noticed that a good drink of water from the well (the water-supply of the house), though not nauseous to the taste, would bring on a sharp outbreak of diarrhoea." The surface of the ground was not less filthy than the subsoil, and this neglect of cleanliness extended to banks and offices, and even Government properties. The *gaol*, indeed, appears to have been the only place kept in decent order. Under conditions of this sort it is not surprising to find that during a prolonged drought Toowoomba has suffered severely from typhoid fever. The Commission attribute the outbreak to the drought lessening the supply of water to the wells, and this becoming in consequence proportionally more impure; the "total neglect of ordinary cleanliness," and to ignorance. Toowoomba has, in fact, to begin at the beginning of decent requirements for health preservation, and the Commission recommend the "proclamation" of the district under the Health Act, 1872; the nomination of a medical gentleman either as a member or an officer of the Local Board of Health, and the appointment of a qualified inspector; the total abolition of all cesspits and the substitution of the dry-earth system; the proper disposal of slop-water; the stopping of the present well-water-supply, and the immediate use of reservoir water or rain-water; the supervision of Chinamen's gardens, the banishment of all pigs from within the municipality; the registration of disease; and the instruction of the young at school.

FEVER ON THE LOWER MISSISSIPPI.

A recent number of the United States National Board of Health Bulletin (vol. ii., No. 15) contains several interesting letters and reports on the subject of a prevalence of fever on the Lower Mississippi. The fever in question has given rise to wide differences of opinion as to its nature, and to a sort of disagreement between the State Board of Louisiana and the National Board. On the one hand, Dr. Steenberg and others representing the National Board, after personal investigation of the disease, have come to the conclusion that a mild form of yellow fever exists in addition to malarious fever connected with the rice-fields, and the National Board, guided by their judgment, have placed funds at the command of the State Board for use in instituting, as they think, necessary preventive measures against yellow fever. On the other hand, the medical advisers of the State Board, also after personal investigation, take a different view of the disease from the advisers of the National Board. They hold it to be solely a form of malarious, remittent fever, which is designated "rice-fever," and which has been increasing of late in prevalence on the Lower Mississippi contemporaneously with an increasing cultivation of rice in the lowlands. The State Board has accepted this conclusion, and declined the pecuniary assistance proffered by the National Board. The letters and papers deserve an attentive consideration.

YELLOW FEVER ON AN ENGLISH SHIP.

The *Liverpool Daily Post* reports that information has been received in Liverpool of a terrible outbreak of yellow fever on board the London ship *Jorawur*. The news comes from Roseau, Dominica, and is dated the 2nd ult. The *Jorawur*, a fine vessel of 1736 tons register, was formerly H.M.S. *Vulcan*, but was afterwards converted into a merchant vessel. It appears that on the 10th of September she put into St. Kitts for water and provisions, being then on a voyage from Guadaloupe to Trinidad. Shortly after leaving Guadaloupe yellow fever broke out, and twenty men, including the captain, were attacked, four of them dying. The *Jorawur* had been thirty-two days out from port when she put into St. Kitts, having met with strong

adverse currents. At St. Kitts she was put in strict quarantine, and afterwards supplied with provisions and water. It transpired that on the voyage of the vessel from Calcutta to Guadalupe there was serious mortality from yellow fever. She had on board 670 coolie emigrants, and twenty-seven of these died. The fever also attacked the crew, and eight men succumbed, making, with the four men who died on the passage from Guadalupe to St. Kitts, a total mortality of twelve men of the crew of the unfortunate vessel. The *Joravour* on leaving Calcutta had a crew of fifty hands, and when she reached St. Kitts they were reduced to thirty-eight.

The Bangor Town Commissioners, at a meeting held on the 1st inst., adopted a scheme to supply Bangor with water at an estimated cost of £7000. Dr. Cameron of Dublin made an analysis of the water from Conlig, where it is proposed to obtain the supply, and has stated that the water is a good one. A sum of £3000 will also be expended in the sewerage of the town.

ABSTRACTS OF THE

INTRODUCTORY ADDRESSES

*Delivered at the Dublin Hospitals and Medical Schools,
Session 1880-81.*

ROYAL COLLEGE OF SURGEONS' MEDICAL SCHOOL.

MR. SWANZY, speaking of ophthalmic surgery, said it was a branch of the medical profession which required special attention, as was evident from the census returns, which showed that one in every 852 of the population was blind. No branch of the profession possessed such means of exact methods of diagnosis and treatment—in fact, it was the nearest approach to an exact science which medicine or surgery possessed. Each step in the study of ophthalmic medicine and surgery showed how intimate in many instances was the connexion of diseases of the eye with general constitutional disturbance; for example, with Bright's disease of the kidney, diabetes, locomotor ataxy, &c. Like others, he recognised the fact that the student was over-lectured. Already the students had to bear their old burdens in the curriculum along with some of the new, but they might look to the professors for any assistance in their power in the removal of difficulties that beset their progress. They were all aware of the unsatisfactory condition of the army and navy medical services, and more especially of the Indian Medical Service. In the latter, more particularly since 1864, the officers had to endure insults, disappointments, and breaches of faith on the part of the Government which no doubt had influenced students in refraining from joining that service until they had received some guarantee that they would be treated as educated gentlemen who served a country. At present the College had under consideration a new scheme of medical education. The College was worthy of the esteem it had enjoyed, and of the love and pride of its licentiates, and it would be so to the end of time if preserved from the dire calamity of a conjoint scheme. Though that was not the place to discuss the question, yet he could not help saying that if a conjoint scheme were adopted the College would become a mere ornamental institution.

ST. VINCENT'S HOSPITAL.

DR. QUINLAN having alluded to the death of Mr. O'Leary, said that it was impossible to over-estimate the importance of clinical attendance in hospital, for without thoroughly studying disease at the bedside, they could never pursue their profession with safety to the public or satisfaction to their own conscience. No amount of reading or cramming could replace the careful personal observation in the wards, where, while so much appeals to the eye, the ear, and the other senses, still more is hidden from ordinary casual view, and is only to be appreciated by trained perception and patient inductive reasoning. The lecturer then referred to the ophthalmoscope, laryngoscope, spectrum analysis, microscope, &c., as aids to medical science; but while they carefully studied them, it would be a grievous error to rely

unduly upon them, and to neglect the careful painstaking clinical observation of disease. The physician who relied on the former and neglected the latter was like *Æsop's* astronomer who fell into the pit while he walked along, his eyes fixed upon the stars, but unobservant of the common objects in the path on which he walked. It was hardly necessary to allude there to the importance of medical chemistry, for physiology and pathology were year by year becoming applied branches of it, and pharmaceutical chemistry was annually adding to their armoury remedies of the most potent character. He could not refrain from expressing his wish that chemistry, botany, and physics could be learned and disposed of at the preliminary examination, before the student entered upon his four years' regular medical curriculum. There was too much forced into the present four years' curriculum; and while something was being constantly added on (as recently ophthalmology and vaccination) nothing had been taken off. The tension was becoming too great, and the obvious remedy was the diminution of the lectures to one course in each department, except anatomy and dissections, in which there ought to be two separate courses—a junior and a senior. The lectures should be changed from mere professional discourses to half of demonstration and a remainder of catechetical examination, and no student should get a certificate who had not attended a proper proportion of the lectures, and at each satisfied his teacher as to his knowledge of the previous one. He had tried this double system with success. In conclusion, he impressed upon them to devote themselves from the very beginning to their hospital and school studies, beginning now to take so keen and deep an interest in the furtherance of medical science and education, and by the fact that the profession was now, through its accredited representatives, always consulted on questions of medical reform by each successive Government.

MEATH HOSPITAL.

MR. HEPBURN having referred to the death of Deputy Surgeon-General Joshua Henry Porter, one of the brightest ornaments of the school of Irish surgery, next addressed his observations to those who had chosen medicine as their profession. Every facility would be afforded them to make the acquaintance of a practical knowledge of their profession easy to them. He often thought of those who then held the foremost rank in the hospital, and of whom, in the retrospect, we felt constrained to say, "There were giants in those days." But though their Graves, their Cramptons, their Stokes, their Porters, and other worthies had passed away—though those ancient great ones, who made so high a reputation for their hospital, were gathered to their fathers, the spirit which animated those great and good men, and which earned for them their high renown, has lived in their successors. If those mighty spirits of old could revisit the scenes of their former labours they would find an increasing body of intelligent, diligent, and high-toned medical students. In conclusion, students were not to suppose that idleness and dissipation were manly. There was no true manliness except in the honest performance of duty. What meant the monuments of Wellington, Nelson, and Gough, which adorned their city and park; had they been erected to do honour to individuals merely? No; but in order to keep alive in the hearts of each succeeding generation the virtues for which those heroes were distinguished. Duty, however, and the fear of God were the guiding principles of those great men, and they were influenced by those principles. If they, before whom life was just opening, were stimulated by the recollection of their noble deeds, he had no fear for their success in the profession they had chosen. He had not touched upon what might be called the burning questions of the day, which, in his opinion, were best reserved for occasions when discussion could be elicited; he had preferred rather to give them advice at the outset of their career as to how the golden opportunities presented to them in that hospital might be best utilised.

MATER MISERICORDIÆ HOSPITAL.

MR. MADDEN especially directed his observations to those young men who were about to join the ranks, on the nature of the profession they had chosen, and the method by which they might prepare themselves for its responsibilities. Unlike other professions, medicine was cosmopolitan, and,

whenever learned, might be practised in all countries and under all circumstances in which men are stricken by disease or accident and seek to escape from death. No portion of medical training could for a moment vie with engaging students in the hospital, to which all other branches of medical education should be made subservient. Pupilage did not end on emancipation from the terrors of examination. These but guard the portals of that wide domain of science which the longest life would not suffice them to explore thoroughly. In Dublin they had up to that time escaped any permanent settlement of those erratic medical hybrids—the lady doctors, despite the encouragement afforded them by the Irish College of Physicians in their hopeless contest against Nature's laws. There were some masculine women, just as there were some effeminate men. Neither were good types of their kind, and it needed no serious argument to prove the futility of any attempt founded on such exceptional cases on the part of either sex to fill the place and assume the functions of the other. He who would worthily fill the office of a true physician should possess a heart attuned to sympathy with suffering humanity, as well as a mind stored with the science which ministers to its relief. He recommended the cultivation of some taste for literary pursuits, and especially for the ancient literature of their profession. Those young men about to commence the study of medicine might be congratulated on the near prospect of having a feasible system of University education within their reach. In the new Royal University they might hope to find an institution in which every Irish medical student might seek, and if worthy might obtain, the great advantage of a university stamp on his medical qualification.

RICHMOND HOSPITAL.

MR. STOKES discussed some of the practical effects on medical and surgical science of the promulgation of the germ theory. A special interest attached itself now to this subject, as it had been the means of bringing about a revolution in surgical practice, which would be attended with as great, or even greater, benefits to humanity than even the discovery of Jenner. What it had done for surgery was already clear and defined, and he would be bold indeed who would fix the limits of what antiseptic surgery may yet do. In medical science the results were not yet perfectly tangible, but sufficiently so to prove that we are on the threshold of discovery of a therapeutic knowledge, to be made use of not merely for the cure, but also for the prevention of disease. The germ theory dealt simply with the competence of living organisms to produce the phenomena of disease, and did not necessarily take cognisance of the question whether or not organisms may originate *de novo*, and putrefaction had been proved beyond a doubt. The competence of germs to produce one kind of fermentation was admitted by all; but the competence of germs to produce the phenomena of disease was the special subject of discussion between the supporters and the opponents of the germ theory of disease. Referring to the loss they had sustained by the death of Sir Dominic Corrigan, the lecturer stated that even from his early boyhood Sir D. Corrigan was distinguished for zeal, earnestness, and assiduity, and his great success in after-life was mainly to be attributed to these qualities. Though not a voluminous writer, the contributions to medical literature of Sir D. Corrigan were, some of them, in truth, essentially classical. The outcome of close, diligent, and accurate observations, rendered fruitful by study, his contributions stood out in bold relief in the medical literature of this century as gems, the beauty and truthful lustre of which time could never tarnish. The present was a time in the history of the profession than which none was ever more important or critical. Never had public opinion been more or as much directed on it as at present, as evidenced by the deep interest now taken in all matters connected with sanitary science, in the efforts that have been made, and are being made, to reform professional examinations, in the fact of the universities.

LEDWICH SCHOOL OF MEDICINE.

MR. BENSON having alluded to the death of his predecessor, Dr. Rainsford, said that there was no profession possessed of such versatility, none in which so much liberty of thought and action was allowed, as in Medicine. Every

medical man worthy of his calling was an eclectic free to follow whatever line of action or investigation he might prefer, and bound only to succour the needy, to be present where there was disease or death. Were he to deal with the much-vexed question of medical education reform, he would have advocated a one-portal system for each of the three divisions of the kingdom, a minimum pass examination, held under Government, the passing of which was to be the *sine qua non* for registration, advising at the same time that the rights and privileges of the now existing schools, colleges, and examining bodies be so far unchanged that no student should be allowed to present himself for this examination until he had first obtained the double qualification from some of the recognised corporations—that, in fact, the student be allowed to study how he liked, and obtain his diplomas where he pleased, as at present, with this exception only, that it should not be possible for him to register until he had passed the Government, nor to present himself for this examination until he had obtained the double qualification. The tendency would then be to level up instead of down, and the only one to suffer would be the much-enduring student, who would have three instead of two examinations to pass; but the third being a repetition of the former would cause him little anxiety if he knew his work for the others. The lecturer concluded by referring to the use of the ophthalmoscope as an aid to medical diagnosis.

SCHOOL OF PHYSIC, TRINITY COLLEGE.

THE inaugural address was delivered by Dr. John Malet Purser, King's Professor of Institutes of Medicine. Dr. Purser, in the course of his remarks, referred to the improvements in the new Physiological Laboratory, and impressed upon his hearers the great importance of a knowledge of physiology in medical education. He also drew attention to the amount of lectures required at the present time for medical students, declared it was overdone, and sympathised with those present at the large number of lectures at which attendance was required.

FILARIA DISEASE.

DR. PATRICK MANSON, of Amoy, in some "Additional Notes on *Filaria Sanguinis Hominis* and *Filaria Disease*," in the eighteenth issue of the valuable Chinese Medical Reports published by order of the Inspector-General of Customs at Shanghai, which has just reached us, continues the report of his extremely valuable and praiseworthy researches, and supplies additional evidence in support of the parasitic causation of Elephantiasis Arabum. Stimulated by the criticisms of the late Dr. Tilbury Fox, he specially set himself the task of gathering fresh proofs wherewith to meet the objections raised by that physician. It will be remembered that Dr. Fox argued that it was not proved that *E. Arabum* and lymph-scrotum are the same disease, but that the escape of *chyle* in the urine and into the scrotum probably marks quite a different condition of things from the ordinary effusion of *lymph* into the tissues. He said the chylous discharge might be due to filariæ or the adult nematoid, but its occurrence in the same subject with *E. Arabum* was merely a coincidence, just as chyluria and leprosy may coexist. To this Dr. Manson replies that it is at the outset a highly significant fact that the coincidence is not an infrequent but a common one, and he proceeds to add some very important new facts. From a consideration of six cases (met with in the course of nine months) of a "group of cases which belong strictly neither to pure elephantiasis nor to pure lymph-scrotum, but are either a combination of these diseases or the transitional stage of one passing into the other," he was struck by the fact that there was one feature common to all—viz., enlargement of the groin glands. On drawing off the lymph from these glands, he always found filariæ present, apparently old and moribund, though he could get none from the blood of the finger. But he also examined the lymph from the enlarged groin glands in a case of elephantiasis of the leg uncomplicated by any scrotal disease, and found filariæ both on the side affected and on the opposite side, though there were none in the blood. In

another highly interesting case of an "elephanto-œdematous" condition of the legs accompanied by transient fever, Dr. Manson discovered in an enlarged groin gland "one free filaria embryo and eleven ova," thus apparently establishing the fact that *Filaria Bancrofti* is oviparous.

Dr. Manson in former communications had remarked that the filaria embryos were often temporarily absent from the blood, and in the present paper he adds further important results. From a series of systematic examinations made every four hours, he found that "unless there is some disturbance, as fever, interfering with the regular physiological rhythm of the body, filaria embryos invariably begin to appear in the circulation at sunset; their numbers gradually increase till about midnight; during the early morning they become fewer by degrees, and by nine or ten o'clock in the forenoon it is a very rare thing to find one in the blood"; and he further made out that the same law holds good in the dog, though not to the same extent. In the light of his former discoveries, the adaptation of the nocturnal habits of the filaria to those of the mosquito is very suggestive.

The outcome of Dr. Manson's remarkable discoveries, made in a thoroughly scientific manner, with great persistence and expenditure of labour, and under many difficulties, in conjunction with those made by Lewis, Bancroft, and others, is summed up in the following conclusions, which we give in his own words:—

1. The parent filariæ live in the lymphatics; this is proved by their young and ova being found there, even when absent from the blood.
 2. They do not live in the glands, but in the lymphatic trunks on the distal side of the glands. Lewis and Bancroft found them in tissues some distance from any gland.
 3. They are oviparous.
 4. The eggs are carried by the lymph current to the glands, and being too large to pass ($\frac{1}{160}$ v. $\frac{1}{250}$ "), they are arrested there till hatched.
 5. After hatching, the free embryo passes along the lymph vessels, and enters the general circulation.
 6. Resting in some organ during the day, it circulates with the blood during the night;
 7. Whence the mosquito abstracts it, and acts as its intermediary host.
 8. In certain cases the ova, or embryos, produce obstruction of the lymph circulation through the glands, either directly by their size, or indirectly by causing inflammation.
 9. If the obstruction be partial, varicosity of glands and afferent lymphatics results, but by means of the anastomoses the lymph circulation is continued, carrying the embryos with it into the blood. Lymph-scrutum, or chyluria, or varicose groin glands, with hæmatozoa, are therefore the symptoms of partial obstruction of the lymphatics.
 10. If the obstruction be complete, one or other of two things happens: (a) The accumulating lymph so distends the vessels that they rupture, and a lymphorrhagia results, which is more or less permanent. In this case the lymph does not quite stagnate, but being able to circulate, though in a retrograde manner, it remains fluid. The symptoms of this form of obstruction are therefore lymphorrhagia from scrotum or leg, varicose glands, and filaria embryos in glands, and perhaps in discharged lymph, but none in the blood. (b) If the lymphatics fail to rupture, there is complete stasis of lymph, and excessive accumulation in the tissues on the distal side of the glands; solidification of the glands and tissues and elephantiasis results. No embryos are found in the blood, as none can pass the glands, and the parent worm or worms probably die choked, so to speak, by the stagnant and organising lymph and their own young. Consequently, in pure elephantiasis, as a rule, no embryos can possibly be found in the blood or gland lymph.
- Should these conclusions prove correct it is manifest that a remarkable discovery has been worked out; but still many facts press for solution, and of these some are as follow: Has the elephantiasis of Europe the same causation? As first steps in this problem, we know that filaria embryos have been discovered in the blood in England by Dr. Gabb, and we also know that dogs in France are largely the subjects of nematoid filariæ. Again, how is it that *E. Arabum* only occurs as a sporadic disease in Australia, where Dr. Bancroft discovered the parent filaria (probably introduced from Amoy by the Chinese)? And how is the curious inconstant co-existence of chyluria and *E. Arabum* in many countries explained, as, for example, the co-existence at Rio de Janeiro and not at Bahia, and the marked prevalence of lymph-scrutum in Lower Bengal?

THE SERVICES.

THE INDIAN MEDICAL SERVICE.

The Government of India have issued the following notification in the *Gazette*:—"With a view to afford medical officers of the Indian service employed on civil duties the opportunity of acquiring the latest experience of military medical administration before their nomination for promotion to the administrative grade, which nominations will be made at a date to meet as nearly as possible foreseen vacancies, the Governor-General in Council is pleased to notify that such officers, in the event of their not having performed military duty for six months within the three years immediately preceding the time of their probable promotion, shall, on nomination, be required to spend six months in medical charge of a native regiment at a station which is the head-quarters of a Deputy Surgeon-General, with whom they will be associated, in view to their acquiring a thorough acquaintance with the details of the office and the administrative system in force with British and native troops. An officer thus selected shall, when in charge of a native corps, relinquish the pay of his civil appointment, receiving in lieu that of an officer of his rank in medical charge of a regiment; but he will retain a lien on his civil appointment, to which he may, should he desire to do so, revert on the expiration of the six months, and await his turn for promotion. Officers, on proceeding to join regiments, and on reverting to civil duty, will be treated as officers on the military establishment, and travel under the warrants of their rank."

ARMY MEDICAL DEPARTMENT.—Surgeon-Major Alfred Malpas Tippetts to be Brigade-Surgeon, vice J. C. H. Wright, M.D., granted retired pay; dated 25th August, 1880. Surgeons-Major Charles William Griffith, Hunter Alexander Colan, and Benjamin Hinde, M.D., are granted retired pay, with the honorary rank of Brigade-Surgeon; dated 10th November, 1880. Surgeon William Henry Garde to be Surgeon-Major; dated 14th October, 1880.

ADMIRALTY.—Surgeon William Tait, M.B., to the *Royal Adelaide*, additional, for temporary service at Plymouth Hospital.

Correspondence.

"Audi alteram partem."

THE INFECTION OF PHTHISIS.

To the Editor of THE LANCET.

SIR,—A very important fact is brought under consideration by the remarks and cases of Dr. Thompson, published in this week's *LANCET*—viz., that it is clearly possible for a healthy person to be infected by inhaling atmosphere rendered impure by the breath of a phthisical patient.

Another point of importance is, the pathological changes produced by this infective process, and the possibility of rapid recovery thus in contrast with the ordinary tubercular process. There appears to be some doubt respecting the question, whether the pathological changes in one case could be fairly called tubercular, though having many of the characters of that condition. It matters little, however, from a practical point of view, whether the inhaling of a tainted atmosphere produces tubercular or pyæmic conditions. It may be assumed that they are both of serious nature, and probably that the tubercular condition may co-exist with the pyæmic in certain cases.

The inquiry naturally occurs whether a large hospital for tubercular phthisis would be so beneficial as one where the atmospheric conditions of required purity could be more easily preserved. It also occurs to me to ask whether in the treatment of tubercular or any other form of pulmonary disease which renders the atmosphere dangerous for the patient and those around him there is any plan better than others for purifying the atmosphere. It was with this view that I sent a short paper to the meeting of the British Medical Association last August; and assuming the possibility of atmospheric disinfection for sanitary and other purposes, I have been waiting to see whether others have been directing attention

to this subject. There are, no doubt, many like myself, who have followed closely the progress of the germ theory, and have already applied the knowledge possessed on the subject to the treatment of pulmonary phthisis, &c. The question of atmospheric conditions evidently takes precedence of others when considering the subject of the treatment of phthisis pulmonalis.

I am, Sir, yours truly,

Savile-row, Nov. 9th, 1880.

ROBERT LEE.

MUSIC AS A THERAPEUTIC AGENT.

To the Editor of THE LANCET.

SIR, — The experiments which are related in THE LANCET of October 30th, on the physiological action of music, are interesting as affording a scientific explanation of a very familiar fact. That music quickens the breathing and makes the heart beat faster is well known, and it is not difficult to infer that this results from stimulation of the centres, regulating the cardiac and respiratory functions. It is instructive to learn that strychnia increases whilst bromide diminishes the effect thus produced on the circulation, but this is precisely what might have been anticipated *a priori* from our knowledge of the action of these drugs on the nervous centres. That idiosyncrasy is apparent in the effect produced is also, a matter of common observation. This is sometimes explainable, no doubt, by physiological peculiarities, as in the case of one of my relatives, who is, I believe, absolutely incapable of distinguishing any tune whatever. At other times the effect caused by musical sounds depends upon mental conditions, and is influenced by circumstances accompanying their production.

Whatever may be its mechanism, there is no doubt that music does exert a powerful physical action, and now that the fact is officially recognised by physiologists it may be well to call attention to the therapeutics of music, too much neglected, perhaps, at the present day. Pythagoras held that music might be made serviceable in the treatment of various diseases, and so have many generations of physicians down to our own time. "Music," says Esquirol, "acts upon the physique by determining nervous vibrations, by exciting the circulation. . . . It acts upon the morale by fixing the attention upon sweet impressions, and by calling up agreeable recollections." "In the treatment of mental disease," says the same author, "I have constantly used music. It calms and soothes the mind, although it does not cure; it is, however, a precious agent, and ought not to be neglected." Pinel, who was no mean authority, also gives ample proof of its value in his classical treatise upon mental alienation.

At the present day concerts are a standard element of treatment in many lunatic asylums, but as usually conducted they may be considered to form part of the general hygienic and moral treatment, and to differ entirely from the therapeutic selection of various kinds of melody, according to the particular condition of the patient.

The use of music as a remedy may be truly said to date from the very origin of medicine. In one of his odes Pindar relates that Æsculapius himself so treated some of his patients, and the god's conduct seems to have been followed by his mortal successors. "The confidence of the ancients in the therapeutic virtues of music," says Fournier-Pescay, "was carried to a great length, and our present knowledge does not allow us to believe with Homer, Plutarch, Theophrastus, and Galen, that it can cure the plague, rheumatism, or the bites of reptiles. One is also obliged to doubt the evidence of Diemerbroeck, Bonnetus, Baglivi, Kircher, Haffener, and Desault, concerning the cures which they attribute to music in cases of phthisis, gout, plague, hydrophobia, and bites of reptiles." If the word "reptiles" refers to the "tarantula," there is also high authority in favour of the opposite opinion. Speaking of the different means used to relieve the "tarantati," Hecker says that they were as nothing in comparison with the irresistible charms of musical sound. It was customary at the beginning of the seventeenth century for whole bands of musicians to traverse Italy during the summer months, and the cure of the "tarantati" in the different towns and villages was undertaken on a grand scale. The different kinds of "tarentella" were distinguished by different names, which had reference to the moods observed in the patients. "There was one kind of 'tarentella' which was called 'panno rosso'—a very

lively impassioned style of music, to which wild dithyrambic songs were adopted; another called 'panno verde,' which was suited to the milder excitement of the senses caused by green colours, and set to Idyllian songs of verdant fields and shady groves; a third was named 'cinque tempi'; a fourth 'moresca,' which was played to a Moorish dance; a fifth 'catena.'" The score of one of these dances, from Athanasius Kircher's "De Arte Magica," will be found in the Sydenham Society's translation of Hecker's very interesting volume.

Burton, in his "Anatomy of Melancholy," has a chapter entitled "Music, a Remedy," which contains a sufficient number of quotations to serve for a treatise upon the subject. Burton's opinion was most emphatic. "Besides that excellent power it hath to expel many other diseases, it is a sovereign remedy against despair and melancholy, and will drive away the devil himself." Amongst the curiosities of past medicine may be ranked Porta's theory of the specific property of sounds emitted through different kinds of wood. He believed that instruments made with the woods of medicinal plants produced different kinds of music, endowed with therapeutic virtues in the same diseases as those for which the woods themselves might be used. In the early days of electricity a similar idea was embodied in the Italian method of "intonnacature," which consisted of the application of sparks to the body through a tube containing any medicinal agent which might be indicated, and which was supposed to "dynamise" the spark with its special force. Quite recently the properties of different kinds of woods have been again discovered by a Paris physician, who has enriched science with xylotherapy, and there is good reason to believe that the same enlightened capital will soon give the world a new electrical method which will be uncommonly like its Italian predecessor. Fournier-Pescay, who contributed the article "Musique" to the "Dictionnaire des Sciences Médicales," relates a number of cases benefited by the use of this agent, which cannot possibly be controverted. Amongst these are several which are worthy of mention. His own child was relieved of "constant pain" and insomnia by the sound of the flute, which was recommended, by the way, by Pliny for the cure of sciatica. Vocalisation in a minor key was afterwards substituted with good effect. Dodart (says the author) relates the case of a musician who was cured of a violent fever by the pleasure he experienced at hearing a concert in his room. Bourdois de la Mothe prescribed music as a last resource under the following circumstances:—A young lady was dying on the eighteenth day of a severe fever. The pulse was vermicular, the *facies* Hippocratic, and the extremities icy cold. Upon leaving the room, Bourdois caught sight of a harp, and it occurred to him to make the experiment. The husband's scruples gave way to the hope of saving his wife, and an excellent harpist was fortunately at hand. For thirty long minutes no change was observed, but ten minutes later the breathing improved, becoming deeper and quicker. The musician redoubled her efforts. A warm glow was diffused through the cold limbs, the pulse became more full and regular, and an epistaxis to the amount of eight ounces occurred, after which the patient recovered her speech. A few days later she was convalescent.

Desessarts, in a work published in 1811, relates similar cases, though of lesser gravity. It would be easy to fill pages with anecdotes of the effects produced upon individuals by the sound of music. Boyle speaks of a Gascon knight who was unable to hold his water when a certain instrument was played; and the same thing has been recorded of others. But the most remarkable observation, from a medical point of view, is related by Hallé, and quoted by Fournier-Pescay in the article already mentioned. A very sensible woman, and an excellent musician, could never hear her pupils play a certain piece, arranged for the piano and several harps, "without experiencing a uterine evacuation resembling the menstrual discharge."

Those who may wish to pursue the subject further will find plenty of information in the authors whom I have quoted, and particularly in Fournier-Pescay. There is an interesting account of the emotional effects produced in two elephants by different kinds of music, played as an experiment in their hearing, before a number of scientific men, at the Paris Jardin des Plantes; and, besides a mass of erudition and anecdote, there are also a number of clear directions as to the choice of suitable melodies for particular cases.

I am, Sir, yours faithfully,

Paris, Nov., 1880.

OSCAR JENNINGS.

"DENTAL SURGEONS," "SURGEON-DENTISTS."

To the Editor of THE LANCET.

SIR,—I trust that in fairness to the dental profession you will allow me to make some remarks upon Mr. Napier's letter in THE LANCET of to-day. Mr. Napier writes as though the Dental Act had for the first time conferred upon unqualified dentists the right to adopt the title Surgeon Dentist or Dental Surgeon, the truth being that they possessed this right, virtually undisputed, before the recent legislation. Attempts had been made some years previously to prevent them so styling themselves, but it was ruled by the higher courts of law that unqualified persons *bond fide* in practice as dentists might use these designations as they had used them unchallenged for generations; and an appeal to confirm a conviction in a test case—a very flagrant case—was literally "pooh-poohed" by the Lord Chief Justice. Further, it was found that there was the utmost unwillingness on the part of the Legislature to interfere with these "vested interests." It, therefore, became a question either of allowing in future an indefinite number of uneducated men to commence practice as dentists, or of permitting those already in practice to continue, and preventing the abuses for ever after. This latter the Dentists Act has done. It is still possible for the Legislature, in amending the faulty Medical Act of 1858, to introduce a clause forbidding under any circumstances the misuse of the prefix "surgeon;" and, I may be allowed to remind you, dentists are not the only offenders in this matter, for a quack styling himself surgeon-chiropodist or using a similar deceiving title cannot, in the present state of the law, be interfered with.

In conclusion, I must beg to state once more, in order to correct an important misapprehension, that the Association of Surgeons Practising Dental Surgery has no valid title to speak in the name of those it professes to represent. The majority of dental surgeons are not members of it; and at the time it was started its foundation was protested against in your columns by a large number of dental surgeons, comprising those whose scientific and other work has been mainly instrumental in placing dentistry in its present improved position.

I remain, Sir, your obedient servant,

Wimpole-street, Nov. 6th, 1880.

HENRY SEWILL.

GUY'S HOSPITAL.

To the Editor of THE LANCET.

SIR,—I cannot hope to stem the torrent of obloquy directed by your articles against the staff of Guy's until I show that it is undeserved; but I think it would have been more generous to have written in our aid than for our discomfiture. The withdrawal of an injudicious letter, however humiliating, may yet be wise, when it saves from dismissal two of our seniors. The withdrawal may be regarded as a defeat, but it is by no means an "unconditional surrender." There is, indeed, much yet to be done. I have shown elsewhere how strangely altered the governing body has become, under the process of self-election, from that which Thomas Guy appointed. It is now *vis consili experts*. To obtain some alteration in the constitution of this body so as to prevent recurrent disaster, and to secure a fair representation of the profession in council, ought to be the endeavour of every one interested in hospital management. We are told that we represent the profession, and that it is humiliated. If so, whence should have come our support? Of the dozen medical schools in London which has moved to our assistance? Of the hundreds of teachers two only have taken up our cause.¹ The profession has looked on amused but not self-interested. It would see the hospital dismantled, the junior staff ruined, and four hundred students scattered to the winds before it would move a finger in our support. And further, we are assured on every side that there are hungry malcontents but waiting for the fall of a great reputation to rush in and plunder among the ruins.

I am, Sir, your obedient servant,

R. CLEMENT LUCAS, B.S.

¹ I refer to the generous letters of Mr. Brudenell Carter and Mr. T. Holmes.

CALF LYMPH.

To the Editor of THE LANCET.

SIR,—Having had several calves placed at my disposal for the purpose of vaccination by a farmer friend, I have for the past three weeks been operating upon them and from them. I have most successfully vaccinated several children. The subject of animal vaccine being now to some extent before the profession of this country, I am desirous of using my present stock of calf lymph for the benefit of my brother practitioners; and it occurred to me that the best medium of effecting such a distribution would be through THE LANCET, as more medical men would get the opportunity of testing for themselves the effects of pure animal vaccine than if I gave my stock away amongst my private friends. I may state that I vaccinated my first calf from lymph procured from the animal vaccine establishment at Utrecht; and that all the steps of my progress are known to Dr. Buchanan, of the Local Government Board, and to Dr. Robert Cory, of St. Thomas's Hospital, the latter gentleman having kindly come down here and assisted me at the vaccination of two calves. I will be happy to send two tubes of lymph to any medical man desirous of using it, on his sending me a case to convey the tubes in, and a stamped addressed envelope; and, in conclusion, I must ask for a report of the success, or not, of the lymph from every person obtaining a supply.

I am, yours faithfully,

Manningtree, Nov. 9th, 1880.

J. W. COOK, M.D.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

At a meeting of the Council, held on Thursday last, the minutes of the previous meeting were read and confirmed; Mr. Birkett was re-elected member of the Board of Examiners in Dental Surgery; and Sir James Paget's motion, to give up after September, 1881, the preliminary examination held by the College, was carried and referred to a committee to consider and report thereon. Mr. Holden's motion to discontinue the annual Report of the President on the affairs of the College was deferred.

Obituary.

DR. WILLIAM AITKEN,

DEPUTY SURGEON-GENERAL, MADRAS ARMY.

WE regret to announce the sudden death of Dr. William Aitken, at Douglas, Isle of Man, on Nov. 3rd, probably of heart disease, but more likely of apoplexy, as he had never complained of any cardiac symptoms, and was apparently in rude health up to the very moment of his death, which took place while he was sitting quietly reading a book in his chair about ten o'clock at night.

Dr. Aitken was born at Dunbar in 1819, and was therefore sixty-one years of age. He was a graduate of Edinburgh University, and for some time filled the chair of Midwifery in the Madras Medical College. He came of a family of doctors, for although his father was not one, three of his uncles were, and all of them were in the Public Services. Indeed, strange to say, the last of them died only, at the age of ninety-one, about ten days before him. That was James Aitken, of Talbot-square, who, after being fifteen years Master of the Mint at Madras, retired some fifty years ago, and was ever after a Government pensioner.

ST. MARY'S HOSPITAL MEDICAL SCHOOL.—In reference to a paragraph which appeared in our last issue, we are asked to state that two graduates of Christ Church, Oxford, were bracketed equal for the £125 scholarship—viz., Mr. George Gresswell and Mr. J. Holdsworth Fisher. Fourteen candidates presented themselves, of whom three were B.A. Oxford, three B.A. Cambridge, and six matriculated students of the University of London.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—

The following gentlemen passed the Primary Examination in Anatomy and Physiology at meetings of the Board of Examiners on Tuesday and Wednesday last:—

Edwin F. Hatton, Toronto, Canada; Owen H. Evans and John S. Collins, Dublin; Francis R. S. Corser and Manley M. Fitzpatrick, Edinburgh; Herbert Owen, Stephen T. Salter, and R. L. Knaggs, Cambridge; Henry Mason, Glasgow; Archibald Watson, Paris; John W. McVitie and Rowland Owen, Liverpool; Frank Harrison, Sheffield; Charles D. Nuttall, David N. Ruck, Charles B. Meller, John T. Tupholme, Henry W. Dodd, and C. Richmond Benson, St. Bartholomew's Hospital; Edwin W. Reilly, Calcutta and Edinburgh; William P. O'Connor, University College; Charles J. Power, Cambridge and St. Thomas's Hospital; George W. B. Slader, Alfred P. H. Griffiths, James A. Marsden, Henry C. E. Cooper, Ralph H. Browne, and William W. Floyer, Guy's Hospital; Edwin Creighton, St. Thomas's Hospital; Aubrey S. Findlay, Middlesex Hospital; John Maye, London Hospital.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Nov. 4th:—

Bird, Ashley, Clifton, Bristol.
Burton, Charles Fred., New John-street, Birmingham.
Clatworthy, Herbert, Chatham, Kent.
Jenkins, Thomas Griffith, Colomenely, Ruthin, N. Wales.
Trevor, Henry Octavius, Nether Stowey, Somerset.
Willie, John, Cloughton, Scarborough.

The following gentlemen also on the same day passed their Primary Professional Examination:—

Edalji Dorabji Patel, Bombay; Charles Watts Whistler, St. Thomas's Hospital.

MR. OLIVER PEMBERTON, F.R.C.S., of Birmingham, has been placed on the Commission of the Peace for the county of Warwick.

MR. EDWARD BATES, late Medical Officer for the Bonvilstone District of the Cardiff Union, has received a superannuation allowance of £30 a year.

A LATE ATTENDANT on the insane at Northumberland House, Stoke Newington, was last week fined £15 at Bow-street Police Court for wilfully neglecting a patient who committed suicide.

MR. EDWARD RODGETT, of Darwen Bank, Preston, has given the sum of £4000 for the erection of a detached infirmary in connexion with the Royal Albert Asylum, Lancaster. The occurrence from time to time of cases of infectious disease amongst the inmates of the asylum has drawn attention to the need of such a provision as the generosity of Mr. Rodgett has now supplied.

SANITARY INSTITUTE OF GREAT BRITAIN.—At a recent examination held by the Institute, seven candidates were present, and certificates were awarded to H. P. Boulnois, M. Inst. C.E., W. K. Burton, A. Harland, and C. Innes, M. Inst. C.E., who passed the examination for Local Surveyors; and a second certificate was awarded to A. Harland, who also passed the examination for Inspectors of Nuisances.

MEDICAL SOCIETY OF THE COLLEGE OF PHYSICIANS IN IRELAND.—The following officers have been appointed for the session 1880-81:—President: George Johnston. Vice-Presidents: John T. Banks, Walter G. Smith. Council: J. H. Benson, F. Churchill, J. M. Finny, T. Fitzpatrick, A. Foot, S. Gordon, T. W. Grimshaw, R. J. Harvey, Thomas Hayden, H. Kennedy, J. W. Moore, J. M. Purser. Honorary Secretary and Treasurer: Alex. Nixon Montgomery.

UNITED HOSPITALS RIFLE ASSOCIATION.—On Wednesday, the 3rd inst., the first meeting of this Association took place at Wormwood Scrubs. The Association was formed last July for the purpose of uniting all volunteers of whatever corps, at the different hospitals, and improving their shooting by offering a challenge cup to be competed for annually by hospital teams. Three hospitals, Guy's, King's, and St. Bartholomew's, have already joined, and the treasurer has a large sum in hand for the cup. It is hoped that by next year the Association may be in so flourishing a state as to warrant an application to the U. R. A. for leave for the competition to be held at Wimbledon. The meeting on Wednesday attracted a large number of men, who were divided into three classes, marksmen, drilled members and recruits, Queen's ranges.

BEQUESTS ETC. TO MEDICAL CHARITIES.—Mr. Dunstan Leech, late of Witley, bequeathed £100 to the Cottage Hospital, Witley, £200 to the Guildford County Hospital, and £200 to University College Hospital.

SURGICAL SOCIETY OF IRELAND.—The following are the office-bearers for the ensuing session:—President: Alfred H. M'Clintock. Vice-President: Samuel Chaplin. Council: Edward H. Bennett, Philip Bevan, William Colles, Anthony Corley, Henry G. Croly, Edward Hamilton, J. S. Hughes, Archibald Jacob, Rawdon Macnamara, Edward D. Mapother, Humphrey Minchin, E. Stamer O'Grady, George H. Porter, B. Wills Richardson, Wm. Roe, Philip C. Smyly, Wm. T. Stoker, William Stokes, Wm. Thomson, Jolliffe Tufnell, William Wheeler. Honorary Secretaries: Messrs. Richardson and Tufnell.

NATIONAL EYE AND EAR INFIRMARY, DUBLIN.—This institution will shortly be removed to Molesworth-street, where a suitable house has been obtained, which will give the necessary accommodation required when certain alterations and additions have been carried out. The new hospital will contain twenty-six beds, with separate day-rooms for men and women, operating-room, board-room, consulting-room, waiting-rooms, &c. The architect's plans have been approved of by the Managing Committee, but no works will be actually contracted for until the required money has been obtained, or a reasonable prospect of obtaining it exists. About £500 is still required.

THE ROYAL SOCIETY.—The following is the list of officers and council nominated for the year ensuing. The elections will take place, as usual, on St. Andrew's Day, November 30th:—President: William Spottiswoode, M.A., D.C.L., LL.D. Treasurer: John Evans, D.C.L., LL.D. Secretaries: Professor George Gabriel Stokes, M.A., D.C.L., LL.D.; Professor Thomas Henry Huxley, LL.D. Foreign secretary: Professor Alexander William Williamson, Ph.D. Other members of the council: William Henry Barlow, Pres. Inst. C.E.; Rev. Professor Thomas George Bonney, M.A.; George Busk, F.L.S.; Right Hon. Sir Richard Assheton Cross; Edwin Dunkin, V.P.R.A.S.; Alexander John Ellis, B.A.; Thomas Archer Hirst, Ph.D.; William Huggins, D.C.L., LL.D.; Professor John Marshall, F.R.C.S.; Professor Daniel Oliver, F.L.S.; Professor Alfred Newton, M.A., Pres. C.P.S.; Professor William Odling, M.B., V.P.C.S.; Henry Tibbatts Stainton, F.G.S.; Sir James Paget, D.C.L.; William Henry Perkin, Sec. C.S.; Lieutenant-General Richard Strachey, R.E., C.S.I.

Medical Appointments.

Intimations for this column must be sent DIRECT to the Office of THE LANCET before 9 o'clock on Thursday Morning, at the latest.

- BISS, C. T., M.B., M.R.C.P.L.,** has been appointed Assistant-Physician to the Middlesex Hospital.
- BOYD, R. J., L.R.C.P.Ed., L.R.C.S.Ed.,** has been appointed Assistant Medical Officer to the Cambridge, Isle of Ely, and Cambridge County Asylum.
- BRODIE, W. H., M.B., C.M.,** has been appointed House-Surgeon to the Northern Infirmary, Inverness.
- BURGESS, E. A., M.R.C.S.E., L.S.A.L.,** has been appointed Medical Officer to the Clun District of the Clun Union.
- CASE, P. W. P., M.B., C.M.,** has been appointed Assistant Medical Officer to the Infirmary of the Whitechapel Union, vice Gibson, resigned.
- CLARK, A., M.A., M.D., F.R.C.P.,** has been appointed Consulting Physician to the North-West London Hospital, Kentish-town-road.
- CUNNINGHAM, A., M.B., C.M.,** has been appointed Medical Officer to the Sydney District of the Chepstow Union, vice Tackwell, resigned.
- EDWARDS, J. P., L.F.P.S.G., L.S.A.L.,** has been appointed Medical Officer to the Workhouse of the Wolstanton and Burslem Union, vice Kendall, resigned.
- FITZMAURICE, U., L.K.Q.C.P.I., L.R.C.S.I.,** has been appointed Medical Officer to Listowel Workhouse.
- GIBSON, J. H., M.D., M.Ch.,** has been appointed Medical Officer to St. John's-wood District of the St. Marylebone Union, vice A. J. Bell, resigned.
- GILBERTSON, R., M.R.C.S.E., L.S.A.L.,** has been appointed Consulting Surgeon to the Cardiganshire Infirmary.
- GRACE, H., L.R.C.P.L., M.R.C.S.E.,** has been appointed Medical Officer of Health for the District of St. George, Gloucester, for one year.
- HADDOW, Mr. G.,** has been appointed Junior Clinical Assistant to the Glasgow Hospital and Dispensary for Diseases of the Ear, vice Mr. W. B. Violette, whose term of office has expired.

HARRIES, T. D., L.R.C.P.L., F.R.C.S.E., has been appointed Consulting Surgeon to the Cardiganshire Infirmary.

JONES, M., L.R.C.P.L., M.R.C.S.E., L.S.A.L., has been reappointed Medical Officer of Health for the Borough of Aberystwith, for one year. £50 per annum. Also Consulting Surgeon to the Cardiganshire Infirmary.

KEETLEY, C. B., F.R.C.S., has been appointed a Surgeon to the Surgical Aid Society, vice W. Allingham, F.R.C.S., who has been appointed Honorary Consulting Surgeon, and also a Member of the Committee.

KNAPP, E. M., M.R.C.S.E., has been appointed Assistant House-Surgeon to the Bristol General Hospital.

MASTERMAN, G. F., L.K.Q.C.P.I., M.R.C.S.E., has been appointed Medical Officer to the Astley District of the Martley Union.

NEWMARCH, B. J., M.R.C.S.E., has been appointed Senior Resident Medical Officer to the Royal Free Hospital.

PAGE, F., M.D., M.R.C.S.E., has been appointed Surgeon to the Newcastle-on-Tyne Infirmary, vice Heath, resigned.

PORTER, J., M.R.C.S.E., L.S.A.L., has been reappointed Medical Officer of Health for the Town and Port of Fleetwood.

POWELL, R. D., M.D., F.R.C.P.L., has been appointed Physician to the Middlesex Hospital.

PRITCHARD, E. J., M.B., C.M., L.S.A.L., has been appointed Medical Officer to the Wolvey District of the Hinckley Union.

ROBERTS, J., M.R.C.S.E., L.S.A.L., has been appointed Consulting Surgeon to the Cardiganshire Infirmary.

ROBERTSON, Mr. J. C., has been reappointed Senior Clinical Assistant to the Glasgow Hospital and Dispensary for Diseases of the Ear.

ROSS, J., M.D., C.M., has been appointed Medical Officer to the Higher Hawes District of the Aysgarth Union.

SEARLE, G. C., M.R.C.S.E., L.S.A.L., has been reappointed Medical Officer of Health for Lower Brixham. £20 per annum.

SMITH, R., M.B., C.M., has been appointed Assistant Physician to Charing-cross Hospital.

VERNEDE, Mr. F. E., has been appointed Medical Officer of Health for the Poole Urban Sanitary District, vice Lawton, whose term of appointment has expired.

WALKER, J. S., M.D., M.R.C.S.E., L.S.A.L., has been reappointed Medical Officer of Health to the Local Board of Smallthorne.

WITCHFELL, Mr. G., has been appointed Medical Officer for the First "A" District of the Westminster Union.

Births, Marriages, and Deaths.

BIRTHS.

COOKE.—On the 6th inst., at Henley-on-Thames, the wife of J. Benson Cooke, L.R.C.P., L.R.C.S., prematurely, of a daughter (still-born).

COTTON.—On the 24th ult., at Abingdon-street, Northampton, the wife of George Cotton, M.R.C.S.E., of a daughter.

CROSS.—On the 1st inst., at Stanhope-terrace, Regent's-park, the wife of John Cross, M.D., of a daughter.

GURDON.—On the 31st ult., at Hopton, Thetford, the wife of Edwin J. Gurdon, L.R.C.P. Ed., of a son.

SKIMMING.—On the 8th inst., at Tudor Lodge, East Molesey, Surrey, the wife of Robert Skimming, M.D., F.R.C.S.E., of a son (still-born).

MARRIAGES.

BLAND—ROME.—On the 3rd inst., at St. John the Baptist's Church, Enderby, Leicestershire, William Charles Bland, M.R.C.S.E., of Milton, Southsea, Hants, to Emma, youngest daughter of the late Joseph Rome, of Groundslo, Staffordshire.

BRANDER—CLAY.—On the 23rd Sept., at Murree, Punjab, Edward Salisbury Brander, M.B., F.R.C.S.E., Surgeon, Bengal Medical Staff, second son of Colonel M. J. Brander, Bengal Staff Corps, to Minnie Edith, third daughter of Major-General E. Bertie Clay, late Bengal Staff Corps.

DICKSON—SHAW.—On the 3rd inst., at St. John's Church, Worksop, Edward Dalzel Dickson, M.D., M.R.C.P., Physician to the British Embassy, Constantinople, to Lucy Lillias Martha, youngest daughter of the late Charles Shaw, of Malta.

FOTHERGILL—HAMMERSLEY.—On the 4th inst., at St. Thomas's, Marylebone, J. Milner Fothergill, M.D., to Adelaide Beatrice, younger daughter of William H. Hammersley, Esq., of Bridge House, Staffordshire.

HUNTER—BLACKWOOD.—On the 10th inst., at Burnbank-terrace, Glasgow, Walter Hunter, M.B., C.M., of Nottingham, to Annie Pollock, youngest daughter of the late William Blackwood, Esq., of Glasgow, and niece of Dr. Pollock, of Springbank, Newton-Mearns, Renfrewshire, N.B.

DEATHS.

AITKEN.—On the 3rd inst., very suddenly, at Derby-terrace, Douglas, Isle of Man, William Aitken, M.D., Deputy Surgeon-General, Madras Army (Retired).

ANDERSON.—On the 7th inst., at York-place, Portman-square, Alexander Anderson, M.A., F.R.C.S. (by examination), in his 77th year.

BOOTH.—On the 3rd ult., at Barnfield House, Oswaldtwistle, John Booth, M.D., of Oswaldtwistle, Lancashire, aged 84.

CARRINGTON.—On the 29th ult., at Dunkeld, Athole, Forbes Carrington, M.D., of Dunkeld, and Sutherland-gardens, W.

GILES.—On the 23rd ult., at his residence, East India Dock-road, Limehouse, William Giles, M.D., aged 69.

MERYON.—At Chorges-street, Mayfair, Edward Meryon, M.D., F.R.C.P., aged 71.

WALKER.—On the 7th inst., at Netherwood-road, West Kensington-park, W., Henry Read Walker, M.R.C.S.E., third son of the late Sanderson Walker, M.D., of St. Michael's, Azores, in his 51st year.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET OFFICE, November 11th, 1880.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radiation in Vacuum.	Max. Temp. Shade.	Min. Temp.	Rain fall.	Remarks at 8.30 A.M.
Nov. 5	30.37	W.	35	35	..	43	32	..	Foggy
" 6	30.41	W.	45	41	..	52	34	..	Foggy
" 7	30.41	S.W.	47	45	61	54	43	..	Bright
" 8	30.20	N.W.	47	44	72	50	44	0.12	Cloudy
" 9	30.34	N.W.	33	..	..	48	30	..	Foggy
" 10	30.04	N.W.	47	43	..	53	31	..	Foggy
" 11	..	W.	50	49	..	53	42	..	Raining

Notes, Short Comments, and Answers to Correspondents.

PUNCTURE WOUND OF KNEE-JOINT SUCCESSFULLY TREATED WITH COLD AFFUSION.

DR. A. H. NEWTH, of Hayward's Heath, sends us a record of the following case:—"Mr. T.—, while nailing a piece of wood to an upright support, which he steadied with his right knee, accidentally drove the nail into the joint to the extent of an inch. The wound was on the inner side just below the patella. There was intense pain both on movement and pressure around the joint. He was seen at once, and carbolic spray, with ether, applied for a short time. The joint was covered with lint dipped in weak carbolic-acid solution, occasionally renewed. Over this a stream of ice-cold water flowed constantly. The treatment was continued for four days. At the expiration of this time all inflammatory action had subsided, and, beyond a slight stiffness, the patient suffers no inconvenience."

Dr. W. H. Rollins, (Boston, U.S.A.)—The paper will appear in an early number.

MR. C. C. WHITEFOORD.

To the Editor of THE LANCET.

SIR,—On the 31st ult. a representative of the press reporting for the Coroner's Court in Central Middlesex called at my residence, and, expressing surprise at my continued existence, informed me that my name was on the coroner's list of inquests for the following day.

As various reports of my "death" had appeared in certain papers, I took the opportunity of retaining the services of my visitor to contradict the report generally, he undertaking to call upon and communicate with all the morning and evening papers, while I supplemented his action by writing autograph letters, acknowledgments of which I enclose for your perusal.

I have during the past week been the recipient of much correspondence and of many kind inquiries, and even of hysterics from hysterical subjects, and (to descend from the sublime to the ridiculous) of circulars from advertising undertakers and funeral contractors; but it was on the 6th inst. that I was interviewed by a gentleman about to establish himself in medical practice in London, whose attention had been called by a mutual friend to a notice of my death inserted in THE LANCET, and whose visit to me resulted from an inference being drawn that "a genuine bona-fide death-vacancy medical practice" would be "for disposal."

May I so far further encroach on your valuable space as to state that I have since my reported "death" attended three ladies of my *clientèle* in their accouchements, receiving from the husband of one, in addition to my fee, an honorarium of one guinea.

I remain, Sir, your obedient servant,

Albany-street, Nov. 8th, 1880. C. C. WHITEFOORD.

FISI-EATING AND LEPROSY.

The publication of several letters on the above subject is unavoidably postponed till next week.

H. A., (Liverpool).—The card is, of course, very objectionable; but no good purpose would be served by reproducing it in our pages.

E. H. M.—Application had better be made direct to the Secretary of the Senatus Academicus.

W. A. M.—We do not name particular physicians or surgeons.

THE DRAINAGE-TUBE IN PLEURITIC EFFUSION.

To the Editor of THE LANCET.

SIR,—May I make an addition to your report of the meeting of the Medical Society on the 1st inst.? I am reported to have said that my "plan was to insert a drainage-tube should the second tapping be followed by return of the effusion." I wish to add that this only applies to cases of empyema, as I would not advise the use of the drainage-tube so long as the fluid remains merely sero-fibrinous.

I am, Sir, faithfully yours,

Queen Anne-street, W., Nov. 1880.

F. DE HAVILLAND HALL.

BILE AS A PRESERVATIVE.

A WRITER in the Louisville *Medical Herald* offers the following remark on this subject:—"Five years ago I had for microscopical examination a sample of albuminous urine, which contained bile and large quantities of tube-casts and renal epithelium. The renal derivatives were so numerous and so beautifully coloured that a drop of the sediment was placed on a slide and covered—a ring of cement run round,—intending to use it as a temporary mount for class-demonstration. The casts &c. remain perfect to this date. Would not iodised serum to which a small quantity of bile has been added prove a good preservative and colouring agent for organised products of this kind?"

"A NOTE ON INTENTION IN THE DETERMINATION OF SEX AND OF THE MENTAL AND PHYSICAL INHERITANCE OF CHILDREN."

To the Editor of THE LANCET.

SIR,—I am thankful to "A. G. P." for affording me an opportunity, by your favour, of supplying one or two omissions in my recent paper on the above subject. The question of multiple pregnancy to which he alludes was not treated by me, because I was anxious to avoid trespassing on your space to the extent necessary for a discussion of details. I cannot now venture to do more than indicate the data from which my general inferences are deduced. First, let me say that nothing is more unreasonable than to assume that multiple pregnancy and birth implies multiple conception. As a matter of fact, there is commonly an appreciable difference in the size and—though less obviously—in the development of children born at the same period, which seems to point to a difference in their actual age. This is nearly always noticeable when twin-children are of different sex. Meanwhile it is quite consistent with my interpretation of the law governing sex to suppose that the energy of the one parent may be called into action by the ardency of the other, and that the force which determines sex may, consequently, proceed first from one side and then from the other. At the same time I doubt whether well-authenticated cases of multiple pregnancy, with the birth of children of different sex, after a single conception exist. In the majority of instances twins are of the same sex, and generally female. My own total experience in midwifery, counting only cases in which I have noted the sex of the children, does not greatly exceed one thousand cases, an obviously insufficient number to go upon, considering the comparatively small proportion of twin births—little more than one per cent.—and the circumstance that I have only seen two cases of triplets; but I believe the statistics of obstetric practitioners will bear out my conclusion. I will not do more than throw out the query whether there is any instance on record of twins of different sex with a really single placenta? It would not upset my hypothesis if cases of this nature could be adduced; but I doubt if they can. The fusion of two ova is clearly possible, though independent development from two is more probable, and commonly occurs.

I should like to embrace this opportunity of supplementing my general statement as to transmission and heredity made in the paper which appeared in your columns on October 23rd, by saying that I most firmly believe in the communication of mental impressions by the female. In a paper on "Ideation in Utero," which you allowed me to place before your readers on Dec. 16th, 1876, I submitted that mental processes of thought and feeling taking place in the mother during pregnancy affect the child, probably by impressing the molecules of the fetal cerebrum, by way of nutrition through the maternal blood. I am more than ever convinced of the accuracy and practical importance of that hypothesis. I will now add that the reproduction of characteristics resembling those of the father in the son is in a large measure effected through the agency of the female. Where there is strong affection on the part of the mother for her husband, his likeness, physical and mental, is as it were impressed on his son through the agency of the mother's psychic force—to use a term which stands for, rather than expresses, an unknown potentiality: a force which undoubtedly exists, although we cannot define it, and which plays a prominent part in the propagation of the species. This is a consideration which should be recognised; it explains many of those "exceptions" which actually prove, though they seem to detract from the authority of, the rule. The "feeling," impulse, or sentiment which pervades the mind of the mother does certainly control or influence the development of the child. Peculiarities of feature and form that impress her powerfully, whether with admiration or abhorrence, are therefore likely to be reproduced in her offspring; and if her mental conceptions are peculiarly strong, the impression may be transmitted in exaggerated intensity. The same result will thus follow the working of love or fear. These things happen commonly in the case of the male child, which is in a special sense the mother's. The likeness which female children bear to their male parents is the direct effect of reproduction in kind. The maternal influences are less evident in a female than in a male offspring.

The practical bearings of this subject are obvious. First, the probable influence of intention in the determination of sex is in itself of moment to the happiness of families and the good of the community. Second, there is the opportunity offered of suppressing, and perhaps progressively extinguishing, hereditary disease, by the selection of a sex unfavourable to the development of such disease.

Yours obediently,

Welbeck-street, Nov. 1880.

JOSEPH MORTIMER GRANVILLE.

M.B., being a private practitioner, and in no way connected with the Poor-law authorities, is, we think, entitled to his guinea for examining a supposed lunatic and certifying. A letter should be addressed to the Clerk of the Board of Guardians, and failing a satisfactory reply, application should be made to the Secretary of the Local Government Board, Whitehall.

Mr. Roberts, (Buckhurst Hill.)—We deem it inexpedient, as a rule, to comment on newspaper reports.

THE BRITISH MEDICAL TEMPERANCE ASSOCIATION AT BRISTOL.

To the Editor of THE LANCET.

SIR,—Your correspondent, "Temperance," is somewhat unfortunate in his attempt to show "the utter untrustworthiness of the statistics set forth to show the advantage of total abstinence over even temperance," seeing that those to which he refers are perfectly correct. I may be allowed to explain, for the benefit of your readers, that these and other like facts were embodied in a paper which I had the honour of reading last month at a meeting of medical men in Bristol, which paper has been printed by the National Temperance League, 337, Strand, W.C., under the title, "What shall Medical Men say about Alcoholic Beverages?" price 1d. Anyone interested can see in that paper the figures in question, with several others. I derive no profit from its sale.

As the matter is of far deeper importance than the mere establishment of my *bona fides*, I should be glad of the opportunity of showing the error into which "Temperance" has fallen through imperfect knowledge. If he will refer to Parke's Practical Hygiene, first edition, p. 469, he will find the following table of the mortality among the adult male population from 16 to 70 (all but an insignificant number of those in benefit clubs are between these ages):—From 16 to 20, '730 per cent.; 21 to 30, '974 per cent.; 31 to 40, 1,110 per cent.; 41 to 50, 1,452 per cent.; 51 to 60, 2,254 per cent.; and 61 to 70, 4,259 per cent. The average mortality from 16 to 70 being, therefore, 17.94 per 1000, or 1 in 55. If the ages 16 to 60 be taken (and this will probably include 90 per cent. of the members), then the average mortality is 13.02 per 1000, or 1 in 76. When it is recollected, further, that the members of benefit clubs are picked men, it need not be a matter of surprise that there should be in a certain club a mortality of 9.9 per 1000 in the course of ten years, and in another, during eight years, of 7.09 per 1000, or 1 in 141.

It should be remembered, also, that in all benefit clubs a certain number lapse from membership from various causes as time goes on, and when their increasing age would raise the average mortality; on the other hand, there are always young healthy men coming in to lower the mortality. Any difference, however, in the mortality of two clubs in which all the conditions, except as to their drink, are the same, will enable us to ascertain what influence alcoholic liquors exert. Even if the whole difference may not be due to one cause, yet I think there is sufficient evidence to show that the tendency of alcoholic liquors is to injure health and shorten life, and this conclusion becomes enormously strengthened by the multiplication of instances in which a low death-rate is coincident with total abstinence, and still more when this is found in every case where sufficient numbers and time are taken.

There is further confirmation of this kind beyond that previously given. I have before me the last three annual reports of the National Division of the Sons of Temperance for 1878-80 inclusive. The average membership was 14,028, and the deaths of members in these years were 97, 120, and 129, average 115—that is, 8.2 per 1000, or 1 in 121. Moreover, we have Government statistics respecting our soldiers. Dr. W. B. Carpenter long ago published the Government returns of the mortality in the Madras army in 1847, in which the deaths of intemperate soldiers were 44.58 per 1000; of the temperate, 23.15 per 1000; and of the abstainers, 11.11 per 1000. Allowing for difference of climate, this mortality of 1 in 90 is parallel with the other instances.

In a few months there will be published the first quinquennial report of all Friendly Societies registered under the Friendly Societies Act, in which all the statistics will be strictly comparable, and in which the average age of the members in each Society will be given. This last item of information is the only unknown point about the statistics I have given; but it is highly improbable that there is any such great difference between the abstaining and non-abstaining Societies in this respect as greatly to alter their relative position, and it may be confidently expected that the returns, when published, will clearly demonstrate the immense superiority, as regards health and longevity, of a total-abstaining over a non-abstaining community.

I am, Sir, yours obediently,

J. JAMES RIDGE,

Hon. Sec., British Medical Temperance Association.

Enfield, November, 1880.

Surgeon.—The inquiry is too vague to allow of a specific reply. There is no book issued with the title mentioned.

Dr. G. Harley is thanked.

BRONCHITIS COMPLICATED WITH DIARRHŒA.

To the Editor of THE LANCET.

SIR,—I not unfrequently meet with cases of acute bronchitis complicated with severe diarrhœa in teething children. I should be thankful if any of your readers would favour me with an effectual prescription for this formidable combination.

Yours faithfully,

ALFRED BERNARD, M.R.C.S.

Queen's-road, Upton-park, Nov. 8th, 1880.

TIME AS AN ELEMENT IN THE APPRECIATION OF MEDICAL SERVICES.

THE following significant story by a Dakota Territory medical practitioner is taken from the *Michigan Medical News*:—

"I was called at midnight to see a gentleman who had just returned from a late dinner, where, in hasty eating, he had lodged a large fishbone in his throat. I provided myself with an emetic, cesophagus forceps, and other paraphernalia designed to give him relief, and hurried off to him. I found him pacing up and down, with a look of intense distress and anxiety, occasionally running his fingers down his throat, and gagging. He told me in tones of despair that he thought it was all up with him, but begged me, if the least glimmer of hope remained, to proceed at once in my efforts to relieve him. He extravagantly declared that he would give a million dollars to have that fishbone removed. I assured him that such cases were frequent, and ordinarily not attended with much danger, before proceeding to carry out measures for his relief. His fears underwent some diminution on the strength of this, and he then declared that fifty thousand dollars would no more than repay the skill and art required to extricate the unwelcome intruder. I smiled, and proceeded to introduce the forceps, but after several efforts failed to grasp the bone. His fears again induced him to mention a fabulous sum as the meed of the service that would expel the object of his terrors. I then gave him the emetic; its depressing effects causing his generosity to rise again, barometer-like, to a very high pressure. In a little while the emetic disburdened him of the greater part of his dinner, and with it up came the fishbone. He gave a sigh and look of relief, and, solemnly looking toward me, said, 'Doctor, I would not have that thing in my throat again for five dollars!' My fee eventually resolved itself into the 'valuable experience' that the occasion afforded me."

Post-mortem.—If the friends distinctly refused their assent, such a proceeding is undoubtedly illegal; at the same time we question whether another practitioner should advise or initiate any proceedings in the case.

Mr. Woods.—We think the remonstrances might well have elicited a courteous reply; but the matter is not worth troubling about.

WE have received from St. John's, Antigua, a communication dated Oct. 25th, 1880, without a signature.

Mr. W. H. Folker.—We are not aware of the source of the statement quoted.

Mr. James Hawkins is thanked for his letter.

"FEVER" STATISTICS IN MADRAS.

To the Editor of THE LANCET.

SIR,—A few days ago I had an opportunity of seeing the Memorandum of the Army Sanitary Commission on the Health Returns of British Troops in Madras for 1878. With your permission I desire to make a few remarks thereon.

It appears to me that the value of the Memorandum is seriously diminished by the unsatisfactory statistics upon which it is based, and that there were good grounds for supposing, as I shall presently show, that there "has not been such an advance in the sanitary improvement of several of the stations as might have been expected."

In the Army Medical Department Report for Madras separate statistics for the several diseases constituting the group of "continued fevers" are not given; but seeing that only three diseases of this group—simple continued fever, febricula, and enteric fever—are mentioned in the Report, and that it is recorded that there were seven admissions for enteric fever, it follows that, after deducting these seven, the admissions for simple continued fever and febricula were 1935, or more than one-half of the total admissions (3812) for all diseases of the febrile group. Contrast this with the Bengal Presidency, in which the admissions for simple continued fever and febricula were about one-fourth, or 6434 out of 23,608; and with Bombay, in which the admissions for these two diseases were less than one-seventh, or were only 1274 of the total (8935) for the febrile group.

When contrasting Madras with the other Presidencies in respect to the occurrence of enteric fever, it is curious to observe the almost complete absence—only seven cases—of enteric fever from the disease returns of the Madras army. This seeming immunity can, I think, be very satisfactorily accounted for, as will be explained further on.

The longer I remain in India, and the more opportunities I have of observation, I am becoming more convinced that the indiscriminate use of the classification "simple continued fever" is open to grave objection. I have known where more than one-half of the admissions for all fevers were recorded as simple continued fever, and where on change of medical officers such name of a disease ceased to appear. I have also known the most malignant and fatal disease recorded as simple continued fever. This is a matter within the knowledge of Dr. Gordon.

I merely give these instances to show the laxity with which the designation is used. Instead of being a "refuge for cases of an uncertain character," I look upon the employment of the name "simple continued fever" as an indication, in the majority of cases, of an inexact and careless diagnosis. I have seen this name so often misused that I should be very much inclined to abolish it altogether from the Army Returns by the same means as Dr. Gordon so successfully used in

respect to enteric fever in the Madras command—that is, by issuing endless and perplexing memoranda and circulars of directions, and calling for so many special reports as to make it almost impossible for a medical officer to record a case as enteric fever.

As regards the small number of cases—only seven—of enteric fever, it appears to me that the "very decided reduction" of Dr. Gordon can be very easily accounted for, and also the fact that the disease is only recorded as having occurred at two stations (Secunderabad and Kamptee) in the Madras command. What seems to me strange is that in the face of almost overwhelming opposition and difficulties any cases were recorded at all.

In order that you may form some conception of the difficulties and obstructions to be surmounted, I may mention that during 1878 Dr. Gordon issued eight circulars of directions to medical officers, covering eight and a quarter closely printed pages, on the subject of enteric fever; two of these were republications of circulars issued in 1876-77. The first required the medical officer in charge to institute a full and searching investigation into the history of the case, the direction of the investigation being indicated under six headings, with several sub-headings. In this circular the printed directions alone covered two pages, with the exception of eight lines, and the special report was required *in duplicate*; this was afterwards changed to a single copy. In March another circular, with further directions, was issued. In July a circular of five paragraphs and several minor headings appeared with reference to the report on the eruption, and directed medical officers to "record precisely" what was required under the various headings. In August there were two circulars of further orders; one of these embraced twenty-two printed headings, and ordered that *in every case* considered as of enteric fever a return made out in "strict accordance" should be forwarded immediately on the termination of the case in recovery or death. In September two more circulars were issued. It might now be supposed that the climax was reached, but such was not the case. Early in the following January, 1879, another circular appeared, directing medical officers in future to furnish with their "special reports" a transcript from the case-book and a temperature chart. When it is taken into consideration that copies of all these special reports, &c. &c., have to be kept in the hospital books, and when it is considered how much time, worry, and unnecessary labour are involved in recording a single case of enteric fever, and that to comply with all the complicated instructions would almost fully occupy a medical officer's whole time, it will be easily understood how it is that enteric fever has practically ceased in the returns of the Madras army. I have been told by an officer of long standing that as long as Dr. Gordon was in Madras he would never record a case in his hospital as enteric fever. The statistics go far to prove that others were acting likewise.

It is earnestly to be hoped that the present enlightened administrator who is in charge of the health of the Madras army will, in the interests of the service, take an early opportunity of annulling such regulations. I look upon them as injurious in many ways. They render statistics valueless by practically preventing medical officers from recording diseases according to their knowledge and judgment, and they may be mischievous by tending to the absence of all those precautions which would otherwise be required to prevent the spread of infectious disease.

It is asserted that at no station in the Madras Presidency are there any *filth* causes capable of predisposing to enteric fever; but the Sanitary Commission (page 6) very wisely say that on this point other proof is required than mere assertion. I have served in the four divisions of the world, and I can honestly affirm that I have never seen *filth* approaching in any degree to what I have seen in the Madras Presidency. I can point out stations where the dry-earth system was not in existence, and where the air in the barrack-rooms was polluted by the effluvium from the exposed excreta. I can go further and point out where the ground was polluted by the burial of excreta in the immediate vicinity of the barracks. Years hence, when wells are sunk, as is not unlikely, in these very spots, the past history, if known, would account for any outbreak of disease that might otherwise appear obscure. I can also point out where collections of ordure were within one hundred yards of the barracks where a large European force was stationed. I have myself seen two cartloads of fresh human ordure, the stench in the neighbourhood being overpowering; yet with the existence of these, which are simple, unvarnished facts, to say that there are no *filth* causes is to me incomprehensible.

As regards the water-supply, I am pleased to see (page 9) that the Sanitary Commission do not accept its asserted purity. I have seen stations where the water-supply was most disgusting. It has often appeared to me that the difficulty of getting pure drinking-water was one of the chief causes of drunkenness in the army. This cause operates more in India than elsewhere, and, I believe, drives men to visit the canteen. I have no hesitation in saying that the attention given to the purity of the water, as far as I have had opportunities of judging, is, as a rule, wholly insufficient. I could point out where wells supplying troops are in the hollow at the sides of the public road, where the drainage of the locality passes in their vicinity, and where they are used in common by the native civil population. I could also point out where the most foul impurities existed beside them—at one station heaps of animal and vegetable filth, at another station one of the principal wells had within about thirty yards of it a large tree growing; under this tree, on the higher ground at the side of the hill, was the place where the filth carts of the station were deposited when not employed removing the night soil. I have seen the surface water running in, and no adequate protection from pollution.

I am, Sir, yours faithfully,

Sept. 17th, 1880.

A. M. D.

SNOW-BLINDNESS.

DR. REED, of Detroit (says the *Canadian Journal of Medical Science*), claims to have cured snow-blindness by the administration of nitrite of amyl.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. G. Harley, London; Dr. Acland, Oxford; Dr. Mahomed, London; Mr. C. Lucas, London; Dr. de Havilland Hall, London; Mr. C. Heath, London; Dr. G. Thin, London; Mr. Benthall, London; Mr. Hulke, London; Dr. Althaus, London; Dr. Brailey, London; Mr. M'Call, Glasgow; Mr. Pollard, London; Mr. Bernard, London; Dr. W. Curran, Warrington; Mr. W. H. Brown, Leeds; Dr. Robertson, Huddersfield; Dr. Latham, Cambridge; Mr. Bradburn, London; Dr. Spencer, Bath; Mr. P. Smith, Shepton Mallet; Mr. H. Arnold, Liverpool; Dr. Keen, Philadelphia; Mr. M'Kinney, Mineral Ridge, Ohio; Dr. W. L. King, Fredonia; Dr. Allan, Glasgow; Mr. Folker, Hanley; Dr. Bowker, Sydney; Mr. Taunton, Winchester; Mr. Hawkins, Plymouth; Mr. J. Mann, Glasgow; Dr. Bayes, London; Mr. Leet, Liverpool; Mr. Hardy, London; Dr. Shepherd, London; Mr. Barker, London; Dr. Anderson, Dundee; Dr. A. Emrys-Jones, Manchester; Mr. Whiteford, London; Mr. T. Woods, Gillingham; Mr. Boyd, London; Dr. Ridge, Enfield; Dr. Gee, London; Dr. Churchward, South Norwood; Mr. Sewill, London; Mr. Murphy, London; Mr. Clare, Handsworth; Mr. Roberts, Buckhurst-hill; Dr. Coleman, Surbiton; Dr. Ackman, Guernsey; Dr. Newth, Haywards Heath; Dr. Yeo, London; Dr. Cameron, Dublin; Dr. Sheen, Cardiff; Mr. Kesteven, Holloway; Dr. R. Lee, London; Mr. Fawcett, London; Mr. Bailey; Dr. Madden, Dublin; Mr. T. Bell, Uppingham; Dr. T. C. Fox, London; Dr. Daly; Dr. W. R. S. Jefferiss, Isleornsay, Skye; Mr. J. Stirling, London; Dr. Cook, Manningtree; Dr. Mundie; Dr. Thomas, Paddington; Mr. Annington, Cambridge; Mr. Richardson, Burton-on-Trent; Mr. Sydenham, Bournemouth; Mr. Freeman, London; Mr. Whitaker, Derby; Miss Rosser, Southall; Messrs. Richardson and Co., Leicester; Mr. Ireson, Yaxley; Mr. Henry; Messrs. Harvey and Reynolds, Leeds; Mr. Churton, Painton; Mr. Frushaw; Mr. Hughes, Horncastle; Mr. M'Connell; Mr. Mosse; Messrs. Roberts and Co., London; Mr. E. May; Mr. Smith, Halifax; Mr. J. B. Crozier, London; The Secretary of the Society of Arts; Medical Student; W. S.; Phoenix; Chirurgicus; E. H. M.; Coombe; Post-mortem; D.; Medicus; S. Helens; E. P. and J. P.; S.; X.; F.R.C.S.; M.B.; Surgeon; Alpha; &c. &c.

LETTERS, each with enclosure, are also acknowledged from—Dr. Whalley, Bradford; Mr. Scott, Newport; Mr. Horne, York; Mr. Woodall, Scarborough; Mr. Webb, Exeter; Mr. Shertliff, Kingston; Mr. Leaver, Stratford-on-Avon; Mr. Harrison, Sunderland; Mr. Benthall, Hartlepool; Mr. Wolfenden, Bolton; Mr. Walker, Crick; Dr. Corner, London; Mr. Morris, Swansea; Dr. Ridge, Enfield; Miss Cobb; Mr. Horder; Dr. Gurdon, Hopton; Dr. Jones, Coleshill; Mr. Cooke, Henley-on-Thames; Mr. Horrey, Manchester; Mr. Donaldson, London; Dr. Redwood, Rhydney; Mr. Boyce, Shrewsbury; Mr. Booth, Oswaldtwistle; Miss Porter; Dr. Jones, Bangor; Mr. Evans, Bromsgrove; Mr. Squire, London; Mr. Eltoft, Camden-town; Mr. Roberts, Alfreton; Messrs. Beddingfield, London; Cantab. Kineton; G. H., Chester; M.D.; C.M., Maryport; Beta; A. R. B.; H. F. E.; Surgeon, Kennington; R., Manchester; D. X.; C. J.; K. Y. Z., Newcastle-on-Tyne; P., F.R.C.S.; X. Y. Z., London; M.D., Greenheys; Delta, Manchester; C. G.; A. B., Watton; Medicus, Kirkham; S. K.; V. C.; Medicus; D. G. H., Southampton; C. H. B.; F.R.C.S.; Iricus; &c.

Statesman and Friend of India, *Sanitary Journal*, *House and Home*, *Science*, *Le Concours Médical*, *Cambrun News*, *La Crónica Médica*, *Staffordshire Daily Sentinel*, *Weekly Gazette*, *West Middlesex Advertiser*, *Poole Sun*, *Anales del Circulo Medico Argentino*, *Barbados Herald*, *Allgemeine Wiener Medizinische Zeitung*, *Glasgow Herald*, &c., have been received.

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Medical Diary for the ensuing Week.

Monday, Nov. 15.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS. — Operations, 10½ A.M. each day, and at the same hour.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL. — Operations, 1½ P.M. each day, and at the same hour.

METROPOLITAN FREE HOSPITAL. — Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL. — Operations, 2 P.M.

ST. MARK'S HOSPITAL. — Operations, 2 P.M.; on Tuesday, 9 A.M.

MEDICAL SOCIETY OF LONDON. — 8½ P.M. Mr. W. Spencer Watson, "On a Case of Recurrent Epistaxis successfully treated by the Injection of Perchloride of Iron." — Dr. R. J. Lee, "On the Diagnosis and Treatment of Whooping-cough." — Dr. Robert Boyd, "On the Lunacy Acts and Medical Relief."

Tuesday, Nov. 16.

GUY'S HOSPITAL. — Operations, 1½ P.M., and on Friday at the same hour.

WESTMINSTER HOSPITAL. — Operations, 2 P.M.

WEST LONDON HOSPITAL. — Operations, 3 P.M.

PATHOLOGICAL SOCIETY OF LONDON. — 8½ P.M. Discussion on "Rickets," to be opened by Dr. Hilton Fagge; Dr. Crisp, Dr. Barlow, Dr. Lees, Mr. Warrington Haward, Dr. Norman Moore, Mr. Shattock, and others are expected to take part in the discussion. — Mr. Pearce Gould will show a Child with Congenital Malformation of Leg and Foot.

Wednesday, Nov. 17.

NATIONAL ORTHOPÆDIC HOSPITAL. — Operations, 10 A.M.

MIDDLESEX HOSPITAL. — Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL. — Operations, 1½ P.M., and on Saturday at the same hour.

ST. THOMAS'S HOSPITAL. — Operations, 1½ P.M., and on Saturday at the same hour.

ST. MARY'S HOSPITAL. — Operations, 1½ P.M.

KING'S COLLEGE HOSPITAL. — Operations, 2 P.M., and on Saturday at 1 P.M.

LONDON HOSPITAL. — Operations, 2 P.M., and on Thursday and Saturday at the same hour.

GREAT NORTHERN HOSPITAL. — Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL. — Operations, 2 P.M., and on Saturday at the same hour.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN. — Operations, 2½ P.M.

ASSOCIATION OF SURGEONS PRACTISING DENTAL SURGERY. — 7½ P.M. Council. — 8½ P.M. Mr. Augustus Winterbottom: "Cases of Neuralgia dependent upon Non-irrupted Teeth."

SOCIETY FOR THE ENCOURAGEMENT OF ARTS, MANUFACTURES, AND COMMERCE. — 8 P.M. Opening Meeting of the Session. — Address by Mr. F. J. Bramwell, Chairman of the Council.

Thursday, Nov. 18.

ST. GEORGE'S HOSPITAL. — Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL. — 1½ P.M. Surgical Consultations.

CHARING-CROSS HOSPITAL. — Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL. — Operations, 2 P.M., and on Friday at the same hour.

HOSPITAL FOR WOMEN, SOHO-SQUARE. — Operations, 2 P.M.

HARVEIAN SOCIETY. — 8½ P.M. Mr. Henry Power: "Cases of Injury to the Eye, with Remarks on the appropriate Treatment." — Dr. Ferrier, "On a Case of Cerebellar Tumour, with Remarks."

Friday, Nov. 19.

ST. GEORGE'S HOSPITAL. — Ophthalmic Operations, 1½ P.M.

ST. THOMAS'S HOSPITAL. — Ophthalmic Operations, 2 P.M.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL. — Operations, 2 P.M.

Saturday, Nov. 20.

ROYAL FREE HOSPITAL. — Operations, 2 P.M.

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The postal arrangements relating to the distribution of THE LANCET will be considered from time to time in the interests of subscribers. Tables of Contents, with the Index of Advertisements, for each Number can be had on application to the Publisher.

Agent for the Advertising Department in France—J. ASTIER, 66, Rue Caumartin, Paris.

Lectures ON

THE RELATIONS OF SARCOMA TO CARCINOMA.

Delivered at the Royal College of Surgeons in June, 1880,

By HENRY TRENTHAM BUTLIN, F.R.C.S.,

ERASMUS WILSON PROFESSOR OF PATHOLOGY TO THE COLLEGE,
ASSISTANT-SURGEON TO ST. BARTHOLOMEW'S HOSPITAL, &c.

LECTURE III.—PART I. CENTRAL TUMOURS OF BONE.

MR. PRESIDENT AND GENTLEMEN,—Most of the central tumours of bone may be included in one or other of the three groups in which in my last lecture the subperiosteal sarcomas were arranged—namely, round-celled, spindle-celled, and mixed-celled. But to these three must be added a fourth group, comprising the myeloid or giant-celled sarcomas. As I am not inclined to admit many of the tumours which are now included as myeloid, I will define as clearly as I can the meaning I desire to attach to the term Myeloid Sarcoma, but it may be well before doing so to discuss for a moment the giant-cell. This body may be described as a mass of protoplasm, usually of large size, flattened, and containing from two or three to many nuclei. Its form may vary considerably; so may the number of its nuclei; but large size and many nuclei are its characteristic features. Such cells may occur not only in central but in subperiosteal tumours, especially in close proximity to the bone. Such cells may occur, too, in tumours of the soft parts wholly unconnected with the bones, or may be found among the products of certain inflammations, especially those of bone. Many theories of their origin and nature have therefore been evolved, but the consideration of them need not long detain us here, for we are not concerned with these cells in the abstract, but with them only as they form the main part of certain tumours—I might perhaps say of certain tumours of bone of central origin, for I think I am within the truth in saying that such cells as these never occur in numbers so large as to form the bulk of a tumour of the soft parts, or even of a subperiosteal tumour. Their presence in such quantity in sarcomas of central origin may be explained on the theory that they are derived from the remains or still-existing germs of the many-nucleated cells of foetal marrow, or on the theory that they are connected with the destruction of the bone, which invariably occurs during the growth of central tumours. Whether they are the agents by which that destruction has been accomplished, or are mere accidental products formed during or as the result of such destruction, it is not more needful for us to discuss than it would be to discuss the exact origin of the round or spindle or mixed forms of cells, of which all sarcomas are for the most part composed. I may, however, point out certain facts connected with their occurrence in tumours of bone, and certain deductions which may be drawn from those facts.

First: they may form as much as four-fifths of a central tumour, but never comprise its whole bulk, for with them are always mingled round or more often spindle cells.

Second: a tumour which has grown far beyond the limits of the bone in which it took its origin may still be composed four-fifths of giant-cells.

Third: a tumour of central origin may contain no giant-cells, but may be formed solely of round or spindle cells.

Fourth: they are not of equal occurrence in the tumours of all bones, but exhibit a marked predilection for certain bones; the lower jaw, the femur and the tibia above all others, and even for certain parts of these bones, as the lower extremity of the femur and upper extremity of the tibia.

Fifth: a tumour which contains them in great abundance exhibits a maroon or dark-red colour, or a fleshy colour and appearance, likened by Sir James Paget¹ to that of the

muscular substance of the mammalian heart and peculiar to these and no other tumours.

From these facts it may be fairly argued—First: that the growth of giant-cells, and perhaps their origin, may occur independently of the destruction of bone. Second: that the development of giant-cells does not necessarily accompany bone-destruction, or if it does, the cells must sometimes disappear with startling rapidity. Third: that the conditions of their existence and of their growth, perhaps even their origin, are largely determined, not merely, by the presence of bone, but by the presence of a certain kind or quality of bone, or by the conditions of life existing in certain bones. Fourth: that the typical colour and appearance of a myeloid tumour are due to the presence in it of a large number of giant-cells. Fifth: that the presence of a large number of these cells may be deduced from the colour and appearance of a tumour. For these and similar reasons tumours which are composed largely of giant-cells may be said to have established a just claim to be grouped apart from other growths, as myeloid or giant-celled sarcomas—myeloid in admission of the right established by thirty years of use; giant-celled in accordance with the nomenclature of the other groups of sarcoma; and, lastly, sarcoma because of their undoubted connective-tissue origin, and their part-composition of round or spindle cells. But in this group I shall include only those tumours which are so largely constituted of giant-cells that these cells produce a decided effect upon the appearance of the tumour; in other words, that they colour the tumour maroon or red. A few giant-cells scattered through the substance of a round or spindle tumour can scarcely be expected to affect its course or tendencies, and I can conceive no reason for classing such a tumour in accordance with these, its least abundant and probably least important elements.

The 63 cases of central sarcoma here collected include 20 round-celled, 18 spindle-celled, 9 mixed-celled, and 16 giant-celled. In 17 cases the femur was the affected bone; in 13 the tibia; the lower jaw in 11; the skull and ulna each in 4; the humerus in 3; fibula in 2; and, in a single instance each, 9 other bones. To these relative proportions I shall have to refer in the consideration of the tumours of certain bones, but for the bones of the extremities they are probably nearly correct.

For the better comparison of the central sarcomas it will be convenient to employ the same order and method as that which was adopted in the study of the tumours of subperiosteal origin, and to consider separately the tumours of each bone affected.

Those of the FEMUR are again more numerous than the tumours of any other bone, and include all four varieties: 5 round-celled, 4 spindle, 3 mixed, 5 myeloid.

The round-celled tumours occurred in patients from nineteen to fifty-five years old, in patients, therefore, for the most part much older than those who were the subjects of subperiosteal round-celled tumours. They exhibited a similar tendency to attack the lower portion of the bone, for three of them were of the lower epiphysis and one of the lower portion of the shaft. One case, however, was of the upper epiphysis. It is related by Mr. Bryant in the Guy's Hospital Reports,² and is interesting on many accounts, for it differed as much from the round-celled tumours as from any of the other tumours of the femur. It was most rapid in its course, for although the patient died four days after resection, apparently from blood-poisoning, the disease was already widely generalised. This widespread generalisation is itself a point in which it differed from the rest as much in the manner as in the fact of its occurrence. For among the organs affected were the lymphatic glands, a circumstance so rare that in every case where it is noted I shall try with care to ascertain its cause. In this instance the enlargement of the inguinal glands was observed before the operation was performed. I imagine it was only slight enlargement, and was regarded rather as inflammatory than sarcomatous. But after the patient's death the lumbar glands were also found enlarged, and both the inguinal and lumbar glands were described as infiltrated. One of the latter was subjected to microscopical examination by Dr. Goodhart, who said it was an ordinary lymphatic gland with its cellular element predominating. It may therefore be maintained that the glandular enlargement was really of the nature of simple hypertrophy, or inflammatory, not directly connected with the tumour of the femur, but perhaps connected with

¹ Lectures on Surgical Pathology, 1853, vol. ii., p. 214.
No. 2986.

² Third series, vol. xx., page 364.

CENTRAL TUMOURS OF BONE.

No. of case.	Sex.	Age.	Seat.	Simple or mixed.	Affection of surrounding parts.	Duration of operation.	Nature of operation.	Total duration.	Cause of death.	Recurrence after operation.	Affection of glands.	Affection of lungs.	Affection of other parts.
1	F	42	<i>Femur: Round-celled.</i>										
2	M	55	Lower epiph.	Simple	0	96 m.	Amp. thigh	—	—	0	0	0	0
3	M	36	Upper epiph.	Bony spic. Simple	0	5 m.	Resection	9 m.	Disease	0	Inguin. & lumb.	Yes	Liver, kidney.
4	M	28	2nd and 3rd thirds	"	—	3 "	Amp. thigh	—	—	—	0	—	Well nine months after operation.
5	F	19	Lower epiph.	"	0	3 "	"	3 m.	Shock	0	0	—	No post-mortem examination.
6	F	36	<i>Femur: Spindle-celled.</i>										
7	M	38	1st third	Cartilage	Muscles	6 "	Amp. hip	6 "	Pyæmia	0	0	Yes	0
8	M	13	Lower epiph.	Simple	—	4 "	Amp. thigh	—	—	—	—	—	—
9	M	32	1st third	"	Muscles	8 "	Amp. hip	10 m.	Disease	0	Axilla, pelvic	Yes	Tibia of same leg.
10	M	32	3rd third	Cartilage	—	27 "	Amp. thigh	27 "	Pyæmia	0	—	—	No post-mortem examination.
11	F	19	<i>Femur: Mixed-celled.</i>										
12	M	57	Lower epiph.	Bony spic. Simple	Muscles	2 1/2 "	"	—	—	—	—	—	—
13	M	29	Lower epiph.	Simple	—	4 "	"	6 m.	Pyæmia	0	0	0	0
14	M	43	2nd third of diaphysis	"	—	6 "	"	—	—	—	—	—	—
15	F	18	Lower epiph.	"	0	10 "	"	8 m.	Disease	—	0	0	Well sixteen months after operation
16	F	21	"	"	0	18 "	"	—	—	—	—	—	—
17	F	21	"	"	0	7 m.	Amp. thigh	—	—	—	—	—	Well three years after operation.
18	F	45	<i>Tibia: Round-celled.</i>										
19	M	27	Upper epiph.	Simple	Muscles	25 "	Amp. knee	26 m.	Pyæmia	—	0	—	No post-mortem examination.
20	M	13	"	Calcified	Ligs. & femur	6 "	Amp. thigh	—	—	—	0	—	Well five years and a half after operation.
21	F	29	<i>Tibia: Spindle-celled.</i>										
22	F	54	Upper epiph.	Simple	—	13 "	"	—	—	—	0	—	Well a year after operation.
23	F	43	2nd third of diaphysis	"	Skin, ligmnts.	15 "	"	—	—	—	0	—	—
24	F	65	Upper epiph.	"	0	24 "	Amp. knee	24 m.	Exhaustn.	0	0	—	No post-mortem examination.
25	M	39	<i>Tibia: Mixed-celled.</i>										
26	M	26	Upper epiph.	Simple	—	3 "	Amp. thigh	9 "	Bronchitis, &c.	0	0	—	No post-mortem examination.
27	M	55	"	"	—	45 "	"	54 "	"Con- sumptn."	0	0	—	No post-mortem examination.
28	M	26	"	"	0	6 "	"	—	—	—	0	—	—
29	M	31	"	"	0	23 "	"	28 m.	Pyæmia	0	0	—	No post-mortem examination.
30	F	20	<i>Tibia: Myeloid.</i>										
31	M	30	Upper epiph.	Bone Simple	0	11 "	"	—	—	—	0	—	—
32	M	37	Upper epiph.	Simple	0	15 "	"	—	—	—	0	—	—
33	M	31	<i>Fibula: Mixed-celled.</i>										
34	M	56	Upper epiph.	Simple	Muscles	27 "	"	28 m.	Pyæmia	—	0	—	No post-mortem examination.
35	M	70	<i>Fibula: Myeloid.</i>										
36	M	63	Upper epiph.	Simple	0	12 "	"	—	—	—	0	—	Well seven months after operation.
37	F	30	<i>Metatarsus: Spindle-celled.</i>										
38	F	26	Tarsal and metatr. bones	Simple	—	—	0	11 m.	Disease	—	1 poplit., inguin., medias.	Yes	0
39	M	20	<i>Humerus: Round-celled.</i>										
40	M	56	Upper epiph.	Simple	Muscles	—	0	8 "	Disease	—	Lumbar & mesc.	0	Other humerus and one femur.
41	M	70	<i>Humerus: Spindle-celled.</i>										
42	M	63	Upper epiph.	Simple	—	1 m.	Resection	1 m.	Pneumon.	—	0	0	0
43	F	30	<i>Ulna: Round-celled.</i>										
44	F	26	Upper epiph.	Simple	0	9 m.	"	6 m.	Pyæmia	0	0	0	0
45	M	20	<i>Ulna: Spindle-celled.</i>										
46	M	20	Lower half	Simple	Muscles	12 "	Scoopg. out	—	—	0	0	—	Well some months after operation.
47	F	27	<i>Ulna: Myeloid.</i>										
48	F	27	L. diaphysis	Simple	—	72 "	A. forearm	—	—	0	0	—	Well four years after operation.
49	F	23	<i>Radius: Myeloid.</i>										
50	F	23	Lower epiph.	Simple	0	12 "	Resection	—	—	0	0	—	Well four years after operation.
51	M	27	<i>Metacarpus: Spindle-celled.</i>										
52	M	27	2nd meta- carpal bone	Simple	0	24 "	Remvl. bone & forefinger	—	—	—	—	—	—
53	M	27	<i>Clavicle: Spindle-celled.</i>										
54	M	27	Sternal third	Simple	Muscles	15 "	Resection	—	—	—	0	—	—
55	M	24	<i>Scapula: Spindle-celled.</i>										
56	M	24	Spine	Simple	"	5 "	"	—	—	—	0	—	—
57	M	—	<i>Lower Jaw: Round-celled.</i>										
58	M	—	Body	Simple	0	18 "	"	18 m.	Shock	—	0	0	—
59	M	25	"	"	Muscles	7 "	"	7 m.	Disease	In 6 wks & 3 ms.	0	—	No post-mortem examination.
60	F	5	"	"	9 "	2 "	"	—	—	—	—	—	—

CENTRAL TUMOURS OF BONE—continued.

No. of case.	Sex.	Age.	Seat.	Simple or mixed.	Affection of surrounding parts.	Duration to operation.	Nature of operation.	Total duration.	Cause of death.	Recurrence after operation.	Affection of glands.	Affection of lungs.	Affection of other parts.
43	F.	16	Lower Jaw: Spindle-celled. Body	Calcified	0	12 m.	Enucleated	—	—	Soon; remd. 7 ys. later	0	—	—
49	M.	32	"	"	Skin	120 "	Resection	120 m	Operation	—	0	—	No post-mortem examination.
50	M.	18	Lower Jaw: Mixed-celled. Body	Bone	0	13 "	"	—	—	—	0	—	—
51	M.	50	Lower Jaw: Myeloid. Body	Simple	0	—	0	84 m.	Mollities ossium	—	0	0	Two of jaw, one of sixth rib.
52	F.	33	"	"	0	10 m.	Resection	—	—	—	—	—	Well three years after operation.
53	M.	27	"	Bone spic.	0	10 "	Enucleation	—	—	0	0	—	Well two years after operation.
54	F.	17	"	Bone	0	5 "	Resection	—	—	0	0	—	Well ten months after operation.
55	F.	37	"	Simple	—	60 "	"	—	—	0	0	—	Well one year after operation.
56	F.	65	Ribs: Mixed-celled. Shaft	Bone	0	—	0	36 m.	Disease	—	0	0	Brain and head of femur.
57	M.	40	Sternum: Round-celled. Body	Simple	0	—	0	3½ "	"	—	0	0	Skull, ribs, vertebræ, pelvis.
58	F.	19	Pelvis: Spindle-celled. Sacrum	Bone	Muscles	—	0	12 "	"	—	0	0	0
59	M.	55	Vertebræ: Round-celled. 2nd lumbar & others above & below	Simple	Mcs. &c.	—	0	110 "	"	—	0	0	Liver.
60	M.	66	Skull: Round-celled. Vault	Bones	0	7 m.	Lig. common carotid Incision	8 "	Hæmorrhage	—	0	0	0
61	M.	49	Vault occiput	Bone spiculæ	Soft parts	—	—	7½ "	Disease	—	Cerv. & submax.	0	Multiple of skull, liver, spleen, ribs, and clavicles.
62	M.	47	Vault	Simple	0	—	0	7 "	"	—	0	0	Sternum, ribs, humerus, & vertebræ.
63	M.	51	Sphenoid	"	Adjacent bones	—	0	148 "	"	—	0	0	One rib.

the blood-poisoning from which the patient died. I prefer, however, to regard the affection as secondary to the sarcoma, the round cells of which could not well be distinguished from those forming a lymphatic gland.

The explanation of the phenomenon lies probably in the infiltrating nature of the tumour, which spread along the ligamentum teres to the acetabulum, and in all directions into the surrounding muscles, the internal obturator, internal iliac, and even the adductors, from which it could gain easy access to one of the deeper femoral glands, and travel thence along the lymphatic channels. With the exception of this case these round-celled tumours were less malignant than the corresponding tumours of superficial origin. Their less malignancy is evidenced especially in the first and second cases. In the former, the tumour had existed eight years at the time of amputation, and even then there was no sign of its dissemination. In the latter the patient died from bronchitis and exhaustion at the end of nine months from the first appearance of the disease, which was shown by the autopsy to be still completely localised. A few bony spiculæ were present in this tumour, otherwise none of these round-celled growths was mixed with other form of tissue.

Two of the four cases of *spindle-celled* sarcoma are distinguished from the others by originating in the upper portion of the femur, and by their greater malignancy. One of them died from the effect of operation, a woman thirty-six years old, who, five months before her admission to the hospital, while walking quietly across her room, suddenly felt the right thigh crack two or three times. At the same instant the thigh became the seat of violent pain, and her progress was for the moment interrupted. From the time of this strange circumstance she suffered almost continuous pain, and soon a swelling was observed, which increased at first slowly, then with great rapidity. But for some time after the accident (if one may so speak of it) she was able to walk, although with difficulty and much pain, proving, I imagine, that the femur had not given way when it was felt and heard to crack, or at least that its continuity was not completely broken. Had there been a history of pain previous to the accident, or indeed even of discomfort in the thigh, and had there occurred with the cracking a spontaneous fracture of the bone, the occurrence would have been an illustration of what is not uncommon in tumours of central origin—namely,

of fracture as an early symptom of the existence of such disease. The tumour formed a smooth, almost hard, but yet elastic swelling of the right femur just below the great trochanter. The skin was not affected, and the glands were not enlarged. Amputation at the hip-joint was performed by Mr. Callender with complete success so far as concerned the removal of the growth, but a fortnight later the patient died with symptoms of pyæmia. The femur was fractured four inches below the upper end. The upper fragment was widened out and filled with a semi-transparent mass, looking and feeling like soft cartilage, in which were many cystoid cavities containing glairy fluid. The surrounding muscles for a short distance, and even the capsule of the hip, were infiltrated with the new growth, but the interior of the joint was intact. The microscope discovered cartilage of various forms, but for the most part cellular, a somewhat rare variety even in tumours. Around and even within the mass of cartilage was a quantity of round and spindle-celled tissue, which could scarcely be distinguished with the naked eye. All the tissues and organs of the body were free from the disease except the right lung, the lowest lobe of which contained one small nodule bearing similar characters to the primary tumour. I have given a rather longer account of this tumour because it is an example of what would, by many pathologists, be termed an enchondroma of the femur, and might therefore be employed to illustrate the occasional malignancy of a tumour made of cartilage. I have already given reasons for including these tumours among the sarcomas, and need now only draw attention to the rich mingling with the cartilage of spindle and other cells. In the other case generalisation was much more extensive, but the longer duration of the disease may help to explain the difference. The two features in this case which appear most to deserve attention are the tumour of the tibia of the same limb and the affection of certain of the lymphatic glands. The former is very rare, but I imagine this tumour bore the same relation to the tumour of the femur as do other secondary growths when the affection is conveyed through the medium of the blood. For it appeared late in the course of the disease, about the time we may presume the lungs and glands became diseased, and was nowhere continuous with the tumour of the femur. Of the relation which the affection of the glands bore to the original tumour I am not sure, but imagine they were affected

through the medium of the blood and not the lymph, for the femoral glands were not enlarged, those of the groin scarcely at all, while the glands in the pelvis and in one axilla are said to have been extensively diseased. If the disease of the pelvic and axillary glands was of the same nature, it is evident both sets of glands could not have been affected through the lymphatics from a single source. The last tumour of the sub-group contained cartilage, but only tiny islets scattered in its wall, for it was a large blood cyst, and contained only a small proportion of solid substance.

The sub-group of *mixed-celled* tumours contains little of marked interest, for two of the patients were not traced after their recovery from amputation, performed in each case early in the course of the disease, and the third patient died from the effect of the operation.

Of the *myeloid* tumours of the femur I shall not have much to say, but may point out that all five were unmixed with other tissues, and that neither of them grew into the surrounding soft parts, general statements which cannot be made of the other varieties of sarcoma. One case is distinguished by its fatal termination, and by the fact that it is the only one in which no operation was performed. Many features of its history and course are very characteristic not only of myeloid but of other central sarcomas of the femur. The first symptom was pain, which endured a month, when the femur gave way almost spontaneously. It was not till three or four months after the fracture that the presence of a tumour was observed. From that time, however, its growth was rapid, and five months later the patient died, as if worn out by the distress occasioned by the tumour, which yet was never very painful. The purely local nature of the disease was very singularly marked. It grew from the interior of the shaft about the junction of its middle and lower thirds—a rare position for myeloid sarcoma—destroyed the bone, and pushed aside the muscles, but did not involve them in its growth. Nowhere in the body was there any trace of dissemination of the tumour.

Two of the patients who had been amputated were seen, one sixteen months, the other three years, after the operations. Both were in good health.

Regarding now the characters common to most of these tumours of the femur, and comparing them, as, be it even unconsciously, we must do with those of the superficial growths, the most apparent and most important are their less fatal nature and often slower course. Of three patients it is recorded they were alive and well at periods respectively of nine months, sixteen months, and three years after operation. Only eight deaths are reported, and although this does not prove that the other patients are still alive, or remained free from sarcoma, the comparative mortality of this table, and of that of the subperiosteal sarcomas, is strikingly to the disadvantage of the latter. Even of these eight deaths three were due to causes directly connected with the operation. Indeed, five might be said to have so died, but I prefer to regard two of them as deaths from generalisation of the tumour, which was present in both cases. Extensive generalisation was very rare, while, on the other hand, two patients on whom no operation was performed, and whose disease pursued what may be regarded as its natural course, were free from secondary tumours.

I have already spoken of the rare occurrence of affection of the glands, but may here draw attention to the fact that the only tumours with which was associated enlargement of the glands were both of the upper portion of the femur. When I mentioned a moment since the slower course of these central tumours, I had no intention of implying that every case was characterised by long duration, but merely that long duration was a not infrequent character, and as proofs of this I may cite Nos. 1, 9, and several of the cases of myeloid sarcoma. Another noticeable feature in this group of tumours is the comparative simplicity of the tissues of which the tumours were composed, for if we exclude two, in which small spiculae of bone were scattered through their substance, there remain only two the soft substance of which was mixed with cartilage, and even in one of these the proportion of cartilage was scarcely more than microscopic. How far the relation of the periosteum to the subperiosteal growths causes the formation in them of bone and cartilage is difficult to estimate, but its influence is probably not small. Ofttimes the position of the periosteum is indicated through them by a line of bone or earthy salts. The strong disposition exhibited by central tumours to attack the lower epiphysis, or the lower third, is very ap-

parent. Lastly, many of the patients were older than those who suffered from subperiosteal tumours, the range of age extending from thirteen to fifty-seven years, instead of from nine to forty-one; while the distribution of cases among the decades was pretty equal.

It is peculiarly unfortunate that, although there were five deaths of persons suffering from tumours of the TIBIA, there was not in one case a post-mortem examination. For this reason the series is far less complete than could be desired. Yet there are certain characters which can be clearly read, and are too important to be overlooked. The scale of ages commenced at eighteen, and ceased at sixty-five—a point of difference from the tumours of the femur which might be regarded as accidental were there not a similar relative difference in the cases of subperiosteal tumours of the two bones. The absence of earthy salts or cartilage was as conspicuous in the tumours of the tibia as in the tumours of the femur. With perhaps one exception, the relation which these tumours bore to the tumours of the femur is similar to that which existed between the superficial tumours of the same bones. The exception was the rarity of ulceration of the integument covering the tumours of central origin, which probably was partly due to their slower growth and the efficient protection afforded by the bony or fibrous capsule by which they were surrounded. The points of accordance were the slightly more advanced age, to which I have already alluded, the position of the growth, the longer duration of the cases, and the complete absence of recurrence in the stump and of affection of the glands. The upper epiphysis or upper end was even more frequently the seat of central than of subperiosteal growths; indeed, all of them, save two, were of the upper epiphysis. Their long duration is exhibited in the column of duration to the period of operation, in the column of complete durations, and in the last column, where a statement is appended of the condition of those who were traced long after operation. The first of these columns shows that from one to two, or even more, years not uncommonly elapsed before amputation was performed. The second column shows that only one of the recorded deaths took place within two years of the first appearance of the tumour, and even this was due to causes connected with the operation. In the final column the good health of two patients is recorded, one five years and a half, the other a year, after operation. The two patients who died from causes not connected with the operation died in each case from some affection of the lungs, the nature of which could not be ascertained. Freedom from recurrence in the stump can be stated with certainty only of a few cases, but absence of glandular affection—that is, of affection of the femoral and inguinal lymphatic glands—can be unhesitatingly affirmed of many of them.

Before we leave the tumours of the tibia, let me draw attention to a feature of the disease well worthy of notice. This tumour, a growth of large size, is limited by a fibrous envelope on all sides, except towards the knee, where the cartilage, thinned and more cupped than usual, but still intact, intervenes to protect the joint. This is a prevailing character, not only of tumours of the tibia, but of tumours of the articular extremities of all long bones. The articular cartilage possesses a singular power of resistance or incapacity for contagion, differing in a striking manner from even the hardest bone in this respect. Long after the bone has been destroyed and the fibrous tunic is broken through, the cartilage maintains its integrity, only yielding at length, in a few rare instances, to the boring force of vertical columns of cells projected from the tumour and penetrating it through a series of fine pores. The calcifying sarcoma, No. 20, destroyed the joint, and produced ankylosis by following the unusual course of infiltrating the crucial ligaments and spreading thus from the tibia to the femur.

NEW HOSPITAL IN ST. PETERSBURG.—The Community of St. George, as a memorial of the first decade of its existence, has laid the foundation of a new hospital, which it proposes to establish on the banks of the Neva in St. Petersburg. The cost of the building is estimated at eighty-five thousand roubles. The site which has been purchased is occupied by the ancient palace of the Empress Anne, which modified as required, is to be included in the new structure. The hospital, when completed, will consist of four sections, each containing fifty beds. The wards will be on the first floor, the ground floor being devoted to the administration, stores, &c.

ON CATARRH OF THE STOMACH IN CHILDREN.

By EUSTACE SMITH, M.D., F.R.C.P.,

PHYSICIAN TO H.M. THE KING OF THE BELGIANS, PHYSICIAN TO THE EAST LONDON CHILDREN'S HOSPITAL AND TO THE VICTORIA PARK HOSPITAL FOR DISEASES OF THE CHEST.

THE susceptibility in early life to catarrhal disorders, and the variety of derangements which may be induced in children by exposure to cold, have often been the subject of remark. In childhood the mucous membrane is especially liable to be affected by chills, but the "cold" does not always show itself in the form of sore-throat or cough. In babies and young children gastro-intestinal disorders are perhaps the most common derangements set up by changes of temperature; and in older children, and even in adults, a gastric or intestinal catarrh, or a combination of both, is a sufficiently familiar consequence of exposure to cold. In the child we meet with every variety of gastric catarrh, from the severe acute attack with high fever, which is comparatively rare, to the more common subacute non-febrile gastric derangement, which is milder in character and quickly subsides. Even in children it is exceptional for acute gastric catarrh to be accompanied by pyrexia; therefore in cases where fever is a prominent feature in the derangement the diagnosis is sometimes difficult. The following case, which was seen in consultation with Dr. Günther of Hampton Wick, affords a good illustration of this variety of gastric catarrh.

Miss C. K—, aged six years, had been delicate and subject to occasional failure of appetite for some months. For about a week she had been feverish, the bodily temperature rising sometimes as high as 104° Fahr. Her appetite had been completely lost, but she had not suffered from sickness. The bowels, at first sluggish, had been somewhat relaxed for two days, the motions passed being moderate in quantity, but loose, rather offensive, and bright yellow in colour. She had occasionally complained of abdominal pains. During the whole time of her illness the child had snuffled slightly, and at first her throat had been a little sore, but there had been no cough. She had complained sometimes of frontal headache, but had not been delirious.

At my visit I found the child lying in bed, with her face turned away from the window, as the light, she said, hurt her eyes. There was no sallowness of complexion. Her expression was placid, and not at all anxious or distressed. The tongue was a little furred on the dorsum, and rather red at the tip and edges. She was thirsty, but had no desire for food. The abdomen was soft, without tenderness or distension. The spleen was very indistinctly felt; it seemed to be slightly enlarged. There was no rash of any kind on the body, nor any oedema of the legs. The urine was not albuminous. The heart-sounds were healthy. There was no rhonchus or other abnormal sign about the lungs. Respiration regular, 24; pulse regular, 108; temperature 101° F. (at 4 P.M.)

This case, which was seen on the seventh or eighth day of the illness, when the ordinary eruptive fevers could be excluded, might have been acute tuberculosis, typhoid fever, or acute gastric catarrh. The occurrence of fever, with a history of previous delicacy of health, was quite in keeping with the ordinary course of tuberculosis. There was, however, no family history of any such complaint, and this important fact, together with the complete absence of distress or anxiety in the expression of the child, and the absence, also, of any oedema of the lower extremities, was held sufficient evidence to exclude the presence of this formidable disease.

Between typhoid fever and acute gastric catarrh the distinction was more difficult. The temperature, it is true, although always elevated, had not followed the course of the temperature in a typical case of enteric fever; but in children this fever is often mild, and frequently deviates from the ordinary type. Again, the absence of eruption did not exclude typhoid fever, for the eighth day is early for the rash to appear, and in children typhoid spots are sometimes absent altogether in undoubted cases of the disease. On the other hand, the state of the spleen was doubtful.

Some slight enlargement was suspected; if so, the fact pointed distinctly to typhoid fever.

In favour of acute gastric catarrh was the slight snuffling, the mild sore-throat, the complete absence of delirium, or of apparent discomfort, and the irregularity of the fever. Altogether, the symptoms pointed, perhaps, more decidedly to gastric catarrh than to the more serious disease, but it was impossible positively to exclude typhoid fever, and therefore a guarded opinion was expressed as to the nature of the case. The temperature fell on the following (eighth or ninth) day, deciding the question in favour of catarrh; for typhoid fever, even in its mildest form, does not subside before the fourteenth day.

When gastric catarrh, instead of occurring in one solitary attack, as in the above instance, recurs repeatedly at short intervals, the diagnosis is more easy. Cases of recurring gastric catarrh of greater or less severity are far from uncommon; and these attacks, if the intervals between them are short, may exercise a very injurious influence upon the health and general development of the patient. Children the subjects of such catarrhs become pale and thin, for their nutrition is being constantly interrupted. By its influence upon appetite and digestion the catarrh checks for the time the introduction of nourishment into the system, and nutrition is hardly restored on the cessation of the attack when a return of the derangement suspends it again as before. In this way the child may become an almost constant sufferer from disordered stomach, and his continued ill health and persistent wasting excite the gravest apprehensions amongst his relatives. Such cases are often supposed to be cases of consumption; and, indeed, if there be any inherited chest weakness, long-continued interference with nutrition, such as is produced by a frequent recurrence of these attacks, may go far to encourage the tendency to phthisis.

The recurrent form of acute febrile gastric catarrh is well illustrated by the following case, which I saw with Dr. Lister of Croydon. The patient, a little girl aged seven years, was pale and short for her age. She had been wasting slowly for eighteen months. During the whole of this time she had suffered every two or three weeks from attacks of feverishness. In these illnesses the general symptoms were the same. The temperature rose to 103° and 104° F. The child looked sallow in the face, and was very irritable and languid. She was thirsty, but refused her food. Sometimes she vomited, but in the earlier attacks the bowels were never relaxed. She got thinner and weaker, and looked ill. A few months previously she had had a severe attack at Lowestoft, in which she had been slightly jaundiced. Six weeks before her visit to me she had a still more violent attack, which had left her completely jaundiced. This had been followed, for the first time in her experience, by diarrhoea, and for a fortnight the motions were green and slimy, and sometimes contained clots of blood. They were passed with straining and some pain. At the time of her visit the looseness had in a great measure subsided, but the child still had a faint yellow tint of the skin. Her heart and lungs were healthy, and there was no sign of enlargement of her bronchial glands. Between the attacks of illness the child was said, as a rule, to be fairly well. On the subsidence of the fever her appetite would return; and she would begin to regain flesh. Unfortunately, before her strength could be said to be thoroughly restored, it would be again reduced by a fresh access of fever.

Jaundice in children, in the large majority of cases, is catarrhal. In this child its occurrence with the two last attacks of fever helped greatly to explain the nature of these attacks, and the cause of the continued ill-health from which the child was suffering. Besides, in the most recent illness a new feature had been noticed in the diarrhoea which had followed upon the jaundice, and had still further delayed convalescence. In this diarrhoea the characters of the stools, which contained mucus and blood, and were passed with straining and pain, pointed to a catarrh of the lower bowel. Explaining, then, the earlier attacks in the light afforded by the later, we were enabled to arrive at the conclusion that the child's sensitiveness to changes of temperature showed itself in the form of repeated attacks of acute gastric catarrh, accompanied by fever. This fact being once established the treatment of the case was conducted upon the principles to be afterwards described, and the child had no return of her feverish symptoms.

A very similar case of recurrent febrile gastric catarrh was sent to me by Dr. Royston.

Edward A.—, aged seven years, “has all his life been subject to feverish attacks. These have been more frequent since he had measles in the spring. The attacks come on every five or six weeks. They are preceded by stammering and twitching, and are always followed by sore-throat. During the illnesses the child coughs a little, looks sallow, is very dark under the eyes, and complains of pain on the top of his head. He refuses food, but is very thirsty. Lately he has been sick at these times; formerly he used to have diarrhoea. The boy is rather stout for his age. He appears to be suffering from these repeated attacks, for he is not so strong as he was. He is irritable and subject to fits of crying. Has rather a sallow complexion. Heart and lungs quite healthy. Liver and spleen of normal size.”

(To be concluded.)

TWO CASES OF FRACTURE OF THE SKULL, IN ONE OF WHICH TREPHINING WAS FOLLOWED BY COMPLETE RECOVERY.

By RICKMAN J. GODLEE, M.S., F.R.C.S.,
ASSISTANT SURGEON TO UNIVERSITY COLLEGE HOSPITAL.

EXAMPLES of successful trephining are so comparatively uncommon, and the indications for performing the operation so obscure, that it seems right to put the following two cases on record: one in which a complete recovery followed the operation, and another in which, owing to the difficulties of diagnosis, the patient was allowed to die unrelieved.

CASE 1.—F. McC—, aged twenty-three, on July 28th of the present year was spending his evening at a gymnasium, when he accidentally got in the way of a sixteen-pound shot, which was being put by one of his companions. The shot struck him on the right side of the head, above the temple, knocking him down and producing a slight wound. The patient was carried to the next room, and then taken in a cab to University College Hospital, both of which facts he afterwards clearly recollected, but beyond this point his memory became a blank. He distinctly remembered making objections to being brought to the hospital, because he thought his mother would be very anxious about him. On his admission about 9.15 P.M., he walked from the cab into the casualty room, and when examined by the house-surgeon was found to be quite conscious, answering questions rationally but slowly, and expressing himself as feeling dazed. There was a small punctured wound of the scalp on the right side, three inches above the zygoma, and two inches behind the external angular process of the frontal bone. A distinct ridge corresponding to a depressed fracture was to be felt passing across the wound, there being at this time but little extravasation of blood into the tissues. He vomited once before he was taken to the ward, and at this time his pulse was 60 and his respiration 30. Three-quarters of an hour later, at 10.30 P.M., he was very drowsy, but still conscious when roused, though the rousing was a matter of some difficulty. The pupils were then equal, but the grasp of the left hand was weaker than that of the right. The respirations were slow and shallow, the pulse a little under 60. Very soon after this he was seized with a violent clonic spasm of both sides of the body, that on the right side being, however, much more marked than that on the left, and the left side of the face being almost unaffected. There was no deviation of the eyes; the pupils were widely dilated. The spasm was so violent that the patient almost rolled out of bed, and at the same time he became markedly cyanotic. During the spasm the pulse became rapid, reaching 112, but it soon dropped to 70 or 80. This attack was followed by others of a similar character, but of shorter duration, in the intervals of which he lay quite unconscious, groaning and turning restlessly in bed, resisting attempts to examine or move him, with his respiration considerably impeded, and occasionally quite stertorous. He was in this condition when I first saw him, and thus although, owing to the effusion of blood into the tissues of the scalp, it was now impossible to feel the depression, the gradual but rapid onset of the symptoms, the present state of complete unconsciousness, the weakness of the left side, and the stertorous

breathing, determined me to cut down at once on the seat of injury.

It was necessary to anaesthetise the patient on account of his struggling. When he was under the influence of chloroform a crucial incision was made at the seat of injury, and after raising the periosteum with the flaps, it was seen that a fracture existed in the parietal bone, which ran forwards and inwards towards the coronal suture. The bone in front of, or outside the fissure was splintered and depressed about an eighth of an inch, and blood was escaping freely through the crack. I at once applied a large trephine, and removed a circle of bone, including as much as possible of the depressed portion. The inner table was more splintered than the outer, and the loose pieces had to be taken out with forceps and an elevator. When the hole was cleaned, it was found that the dura mater was intact, but separated very widely from the bone, so that a probe could be passed beneath the latter for nearly its whole length in the direction of the forehead; the interval between the dura mater and bone being occupied by fluid blood, which welled up freely. The anterior branch of the middle meningeal artery passed across the middle of the trephine hole, and it was clear that the bleeding was occurring from one of the accompanying veins, which was lacerated. I was puzzled at first in trying to arrest this hæmorrhage; the endeavour to pass a small needle beneath it, armed with fine catgut, resulted only in pricking the vein again; but on seizing the bleeding point with a pair of catch-forceps, and tying in the usual way, the ligature held, and all bleeding stopped at once. The wound was brought together with silver sutures, and a small drainage-tube was placed in it; this, however, had worked its way out by the following day, and was not reinserted, as the place left for it gaped sufficiently widely to allow of the escape of the small amount of serous discharge which took place afterwards. During the operation strict antiseptic precautions were observed.

The sequel of the case is shortly told. On removing the bone the pulse rose immediately from 72 to 84. On recovering from the anaesthetic the patient was perfectly conscious and he has remained so ever since. The temperature reached 100.2° on the following day, and for several days afterwards remained about 99°. On August 11th—i.e., twelve days after the operation, it went up to 101° for some unexplained reason, but next day it was 99°, and after that normal. The wound seemed at first to have healed by first intention, with the exception of a few granulations near the centre, which required occasional touching with nitrate of silver, but about ten days after the operation a few drops of bloody serum accumulated in the deeper parts on two occasions. No pus was seen throughout. The patient vomited a good deal the day after the operation, and his bowels were sluggish. He was kept on a rigid milk diet, and occasional purgatives or enemata were administered. The only symptom he ever complained of was a general dull headache occasionally. A boracic dressing was substituted for the gauze when the wound became superficial, and this was continued until it had healed. He left the hospital on August 27th, and after spending a month at Eastbourne returned to his employment.

I saw him again on Oct. 6th; he was then perfectly well; he found his memory and mental powers unimpaired, and was doing his usual work, that of a clerk, without difficulty. The scar is firm, and I think some bone is being thrown out, as the sense of resistance beneath it is very great. The case was a particularly favourable one on account of the shortness of the interval between the injury and the operation, and from the absence of complication, but I feel sure that the strict observance of antiseptic precautions removes the most dangerous element from this usually deadly operation. It will be found useful in cases of this kind to supplement the shaving of the head by the application of a solution of carbolic acid in glycerine to the surrounding hairs, which are thus rendered an antiseptic dressing in themselves. This may be reapplied whenever the dressings are changed.

CASE 2.—H. L—, aged forty-one, on May 14th, 1879, was leaning against the door of a loft which happened to be unfastened. It gave way, and he fell on his head into the yard below (which was paved with cobble-stones)—a distance of about fourteen feet. He was stunned at the time, but rapidly recovered; and when he came to the hospital at 12 o'clock he showed no symptoms of a serious injury, and was admitted chiefly because of the nature of the accident. After 1 P.M. he was noticed by the nurse to be sleepy, and it does not appear that he ever actually spoke to her after

that time. At 2 P.M., and several times afterwards, he vomited; and it was observed that he turned over always to the right side, and almost fell out of bed. He slept a good deal. When he was roused he opened one eye—the nurse thinks the left, but cannot be sure; he seemed to understand when spoken to, and nodded in reply, but never actually conversed. If some beef-tea were offered him, he always looked into the cup and tried to take it, but instead of doing so he pushed it away apparently involuntarily; at one time he almost bit a piece out of the cup, and when it was put to his lips his attempts at swallowing only resulted in the fluid escaping at the sides of the mouth. About 6 P.M. the nurse set him up for the purpose of giving him some beef-tea, and spoke rather sharply to him, thinking he was shamming. He did not succeed in taking the food, and in a few minutes it was observed that his breathing had become stertorous; and when, a short time afterwards, he was seen by the house-surgeon he was found to be quite insensible, in an apparently deepening coma, with a pulse of 54; his left pupil being widely dilated, while the right was firmly contracted. There was apparently no paralysis on either side of face or body.

I saw him at 8.15 P.M., and found him in the condition described. The stertor was loud, and evidently caused by the dropping back of the tongue; in fact, on one occasion the breathing stopped completely, and was only restored on pulling forwards the tongue; a piece of bandage placed under the chin, and fastened to the head of the bed, relieved this difficulty in a great measure. Not only was there no paralysis of the limbs, but a pseudo-voluntary effort was made when the hand was grasped. It was thought at one time that the left side of the face was weaker than the right, but this weakness, if it existed at all, was almost imperceptible. The left temporal region—i.e., that away from the injury—had a doughy feel, as if blood were extravasated amongst the tissues, but there was no fulness of the orbit or of the veins of the conjunctiva or the fundus oculi.

It may be thought that these symptoms were enough to justify the application of the trephine over the middle meningeal artery on the left side—i.e., the side opposite the injury; but it must be borne in mind that the onset of the symptoms, having only been observed by the nurse, was very imperfectly reported, that the only unilateral symptoms consisted in the dilatation of the left pupil and the fulness of the left temporal region, and, lastly, that the patient appeared to retain a sort of voluntary power over his limbs.

Under the circumstances, it was decided to wait a short time, and when I again saw him at 11 P.M. the slight alteration that had occurred in the symptoms seemed rather to be in the way of improvement, the pulse being now 120 and compressible, though somewhat irregular, the left pupil having considerably diminished in size, and the movements of the limbs showing apparently a somewhat more voluntary character. I did not therefore feel justified in performing the operation at the time, and he was left till next morning. During the night the condition scarcely altered; the bowels did not act, the urine was passed freely in the bed, and contained a trace of sugar. There were now coarse mucous râles in the chest; and the temperature was 102°. In the middle of the day the only alteration in the symptoms consisted in the fact that the breathing was gradually becoming more obstructed, and late in the afternoon this difficulty rapidly increased, so that the patient died about 6 o'clock. Throughout the day the vomiting continued at intervals.

The post-mortem examination showed that a fracture of the skull extended from the seat of injury into the middle fossa of the opposite side. The hæmorrhage from this had caused the fulness in the left temporal region. The anterior branch of the middle meningeal artery was ruptured (as was found by injecting water through the external carotid artery) just at the point at which the trephine may be most satisfactorily applied in these cases—viz., two inches above the zygoma, and two behind the external angular process of the frontal bone. From the rupture an extensive hæmorrhage had occurred, a large clot, five ounces in weight, having separated the dura mater from the skull, and greatly indented the brain. The only other lesion discovered consisted of two very superficial spots of bruising on the left temporo-sphenoidal lobe.

Here, then, was a case in which trephining would in all probability have saved the patient. It seems worthy of being placed on record, because the symptoms which were so obscure as to lead us to suspect some more grave injury appear to have depended altogether on the pressure resulting

from the hæmorrhage. It is also of great importance to notice that almost no unilateral symptoms were present, a fact which need hardly surprise us when we remember that the pressure must be equally distributed over the whole of the interior of the cranium. It has been pointed out that a widely-dilated pupil is often found on the same side as the clot in similar cases, and this symptom appears to be one well worthy of notice, though it must be confessed that our knowledge of the meaning of the different conditions of the pupil after injuries to the brain is at present very imperfect.

I cannot help thinking that if, as was stated above, the introduction of antiseptic surgery has rendered trephining a far less formidable operation than it used to be, we ought to become less shy of resorting to it. If a distinct interval of consciousness have occurred after the accident, and symptoms so severe as those occurring in the present case supervene, and if there be anything at all to guide us to the side on which the hæmorrhage have taken place, I do not think we are justified in denying the patient the chance which the performance of the operation affords.

Henrietta-street, Cavendish-square, W.

AN ADDRESS PRELIMINARY TO THE DISCUSSION ON RICKETS,

*Delivered before the Pathological Society of London,
Nov. 16th, 1880.*

By C. HILTON FAGGE, M.D., F.R.C.P.,
SENIOR ASSISTANT-PHYSICIAN, GUY'S HOSPITAL.

IT is unpleasant on such an occasion to have to begin with anything like an apology; but unless I explain how I come to be here to-night, you, when you have heard me, will assuredly think that I have done very little justice to my task. On being asked by your Council to open a discussion on Rickets I wrote, as I thought, to decline. I said that I had no new observations to offer you; for although I have always felt a general interest in the subject, I have kept no notes of the cases which I have seen. But your Secretary told me that what was needed was not so much a series of new facts, as a general statement of the questions in regard to the disease which seemed most to require elucidation and discussion, and this I thought I could furnish to you. Other members of the Society, he assured me, had valuable observations on particular points to bring forward; and in offering to you the following remarks, I would disclaim for them any higher position than that of being simply introductory.

There are, I think, good reasons why the subject of rickets should now be taken up by this Society. One is, that in spite of the labours of Sir W. Jenner, and of many others, there is still too great a tendency to attribute to local causes the deformities caused by it, and to overlook the fact that these deformities belong to a general disease. Only a few weeks ago I heard a very eminent physician, in examining the body of a child who had died of bronchopneumonia, speak of the pigeon-breast as if it were merely a result of the pulmonary affection. In that case there were at the wrists and ankles no obvious signs of a rachitic change. But a section through the lower end of the tibia at once showed an abnormal state of the epiphysal line. Is it certain that a pigeon-breast is ever seen in a child whose bones are absolutely healthy? I should like to put this question to the Society, and to follow it with another—Does a rachitic thorax ever acquire the characteristic grooves on each side near the ends of the rib-cartilages without the intervention of some degree of bronchial catarrh? A very slight cough, lasting only a few days, may undoubtedly flatten the sides of the chest in a rachitic infant. But can this result be effected by the mere elasticity of healthy lungs?

The settlement of these questions, and of many others, is greatly retarded by the circumstance that during life it is impossible to determine absolutely the fact that rickets is not present in a slight degree. Even in a child not very fat I have more than once failed to detect any "beading" of the rib carti-

lages through the skin, notwithstanding that at the autopsy they were found to be diseased. And I may notice that the enlargement is often much more marked on the pleural side than towards the surface. On the other hand, there is naturally a slight elevation where the cartilages and the bones meet; and in thin children I have seen this mistaken for "beading," when in reality not the slightest rachitic change was present.

This difficulty as to the clinical recognition of rickets in certain cases is, I think, of great importance in regard to what will probably be the chief subject discussed here this evening—the relation, namely, between the disease and the recently discovered osseous lesions of inherited syphilis. M. Parrot, indeed, ignores rickets altogether. For him a rachitic change in a bone is merely a modification of the syphilitic affection, occurring only in children over six months of age, and attended with an enlargement of the extremities of the bone, and with the formation of a pearly-white osteophyte in its interior and on its surface. He would seem to be almost unacquainted with those histological characters which enable rachitic lesions of bones to be traced from their very commencement. My friends, Dr. Barlow and Dr. Lees, of course, take up a very different position from this. But it has seemed to me that even they, in their observations, have been too ready to assume the absence of rickets when they found no obvious beading of ribs and no marked swelling of wrists or ankles. They do not appear to have been fully alive to the importance of slicing the bones at an autopsy, and of examining their epiphysal lines, both with the naked eye and microscopically. Until this procedure shall have been systematically carried out in a sufficient number of cases, I think that it will still remain doubtful whether cranio-tabes is really related to syphilis rather than to rickets.

There is, however, another and a somewhat different question—namely, whether syphilis may not be one of the causes of rickets. At first, when one is taught that inherited syphilis produces certain definite osseous lesions, one is naturally disposed to think that what has to be done is to draw a hard and fast line of distinction between these lesions and those due to rickets. But what we know of syphilis in adults surely points to a different conclusion. We know that besides producing an immense variety of affections peculiar to itself, it also acts as one of the two causes of the lardaceous change in the viscera, and many suppose it to be also a frequent cause of atheroma of arteries, and perhaps of phthisis.

The characteristic changes of rickets are far more obvious in fresh bones than in those which have been kept in spirit; but I have brought with me a few specimens which have been collected during the last few months, and which show the irregularity of the epiphysal line, the enormous increase in the breadth of the semi-transparent bluish zone of proliferating cartilage, &c.

I have already remarked that rickets is a general disease. The points which show that it is not confined to the osseous system are indeed such as singly might appear trivial, but taken together they possess considerable significance. I am not now referring to the visceral lesions described by Sir Wm. Jenner, and afterwards by Dr. Dickinson, as affecting spleen and liver and lymphatic glands. I have failed to find these lesions in the great majority of rachitic children whose bodies I have examined, whereas I have found a large fleshy spleen in many children who have been free from rickets. And I am much disposed to agree with Dr. Gee, who, after stating that the appearance of the spleen in rickets generally differs in no respect from that which is seen after ague, or in inherited syphilis, adds that in his opinion the affection is really a result "not of the rickets, but of the general state of health which caused the rickets." This, however, is a matter on which valuable experience will no doubt be forthcoming in the course of the present discussion.

Nor can I attach much importance to the so-called "prodromata" of rickets—sickness, diarrhoea, tumefaction of the abdomen, languor, drowsiness, &c. It seems to me that all of them are really either independent effects of the improper dieting and other conditions which give rise to rickets, or else themselves accessory causes of the disease. And it is certain that when one is called to a case of croup or of broncho-pneumonia one often has to deal with an advanced stage of rickets, although the child's mother may have thought it perfectly well up to the time when the acute illness began.

But there are three well-known symptoms of rickets which appear to have no direct connexion with the osseous changes. One is a restlessness at night, which impels the child to throw off its bedclothes, even in cold weather. Another is the tendency for profuse perspiration to break out over the head, neck, and chest, especially during sleep. The third is the sensitiveness of all parts of the body to even gentle pressure. Dr. Gee has shown that this tenderness is by no means confined to the bones, and that the muscles of the loins or of the abdomen are sometimes no less painful when pressed upon, however cautiously.

There is one point with regard to the urine, on which I should be glad to elicit further information. Some months ago I was asked by Dr. Paddon of Putney, to see with him a rachitic boy, whose most obvious symptom was that he passed large quantities of uric-acid crystals. Such a circumstance is surely not common in a child. Since then I have met with another case in which I was told that the urine was extremely irritating and caused scalding pain during micturition. Can this have any bearing upon the supposed presence of lactic acid in the urine? which is certainly one of the points that needs further confirmation.

As to the state of the brain in rickets there are some discrepancies of opinion among different writers. The skull is obviously large, out of all proportion to the narrow face and stunted body. But Ritter von Rittershain showed by accurate comparative measurements that as a rule it is not bigger in rachitic children than in healthy children of the same ages. If so, a very improbable notion suggested by Trouseau falls to the ground—namely, that the softness of the cranium allows of the more easy development of the nervous centres, and that rachitic children consequently possess intellectual faculties in advance of their years. Surely it would be more reasonable to attribute the precocity of such children rather to their being thrown so much into the company of adults, and to the contemplative habits induced by an unfitness for rough play and games. And Dr. Gee speaks of the brain as being dwarfed like all other structures, and describes an effusion of fluid within the cranial cavity to fill up a vacant space there. I should like to ask the Society whether it is certain that hydrocephalus is really a frequent complication of rickets, as all writers seem to say. It is at any rate certain that the skull is sometimes greatly increased in size, without there being any fluid in its interior. I well remember, although I have unfortunately no notes of, a case which I saw in the Evelina Hospital, and which was taken without question for one of very advanced hydrocephalus, until at the autopsy the brain was found to fill the cranial cavity completely. When a grown-up person has a rounded projecting forehead, as was the case with the novelist Thackeray, is the popular opinion correct that an hydrocephalus existed in infancy and has been recovered from? Might there not have been simply a rachitic state of the bones of the skull?

A curious complication of rickets, of which I have seen an example, is a chronic cerebritis. A child, eighteen months old, who had had frequent fits since the age of four months, was admitted into Guy's Hospital in a state of insensibility. It lay on its left side, and whenever it was moved into any other position its whole body became rigid, the mouth being affected with clonic spasms. It died in a few days, and the cerebral membranes, which themselves were thin and transparent, were found to be everywhere adherent to the surface of the brain, so that a thin superficial layer of the cortex peeled off with them. The white substance of the hemispheres was markedly indurated, and had a yellowish colour, and the limit between it and the cineritious matter was ill-defined. This was especially the case at the antero-lateral part of the brain on the right side.

But in many cases spasmodic affections occur without any change in the brain being discoverable. Of laryngismus stridulus, I believe that many observers say that it never occurs except in rachitic children. A year or two ago I had to examine the body of an infant, concerning whom all that I could learn was that it had died suddenly. The ribs showed the appearance characteristic of rickets, and this suggested to me that the cause of death was, perhaps, laryngismus, an idea which was afterwards confirmed by the mother's statement that it had suffered from that kind of disorder. I have certainly seen one case of laryngismus in a little girl, whose general bodily configuration, although she had been brought up by hand, seemed at first to negative the idea that she could possibly be rachitic. But afterwards, when this child got an attack of bronchial catarrh,

her ribs became for a time slightly flattened, and I began to think that her case might not really be an exception to the rule. Tetany is another affection that occurs chiefly in those who are the subjects of rickets.

Both the chemistry and the histology of rickets have been carefully studied, but with regard to each of them I think that there are still points open to discussion. The most recent analyses that I have met with are those which Friedleben made, and the results of which are recorded in the *Jahrbuch für Kinderkrankheiten* for 1860. He found the percentage of earthy salts to be from 33 to 52, which is considerably higher than that obtained by earlier investigators, though it is of course much below the normal percentage of 63 to 65, yielded by the bones of healthy children. But it seems to me that we cannot too carefully guard ourselves against the supposition that any figures of this kind represent the actual composition of the osseous tissue itself, or even that they prove it to differ from the normal. No one can examine the microscopical specimens which I have placed on the table in front of you without seeing that in the bones from which they were taken, if dried and submitted to analysis, there would have been a large proportion of various other structures besides the osseous. Even within the bony trabeculae themselves there are often to be seen very numerous and large islets of residual cartilage-matrix. Why the point is of importance is that, if there were in rickets a real alteration in the chemical constitution of the bones, affecting every particle of their substance, we could hardly doubt that the disease must exist at a very early period, if not from the first setting-in of the process of ossification within the foetus. It does begin earlier than used to be supposed, being not unfrequent in children less than six months old. But whether it is ever present at birth seems to be very uncertain. Cases of foetal rickets have been described by several observers; but all that is as yet known with regard to their histology leads to the conclusion that the lesion is altogether different from that with which we are now concerned.

The curvatures which arise in the shafts of the long bones in rickets show, of course, that these bones are throughout soft and yielding. But it does not necessarily follow that the whole of their substance must be altered in composition. Their diminished resistance may fairly be ascribed to the preponderance of a light and spongy texture, not only in the parts formed since the commencement of the disease, but also in older parts, where it may well result from an over-activity of the absorptive processes which are always at work in their interior.

For there is in rickets one essential and characteristic histological change, which certainly is not diffused through the entire mass of the bones, but affects only their growing surfaces, when they join cartilages, or lie beneath periosteum. Indeed, it would be strictly accurate to say that rickets is not a disease of the osseous tissue at all, but of the soft tissues. Even the so-called "beading of the ribs" is really an enlargement of the costal ends of their cartilages rather than of the ribs themselves. I shall not attempt to describe to you the details of the remarkable morbid process which is observed, and of which I have a series of beautiful specimens, prepared for me by the kindness of my colleagues Mr. Symonds and Dr. Carrington. It is well known that the cartilage cells of the intermediate zone, instead of forming short vertical columns, which should be arranged with much regularity side by side, multiply, so that they become converted into rounded masses of enormous size, some of which bulge towards the cartilage, while others dip and extend far into the bone. The cells themselves have an abnormal appearance, which is aptly indicated by the epithet "dropsical" applied to them in a recent paper by Klebs. Rindfleisch defines rickets as depending upon an acceleration of the changes which usher in and prepare the way for the formation of bone, without the actual ossification keeping pace with them; but, in regard to this definition, I doubt whether the amount of proliferation which must normally take place has been sufficiently appreciated. It seems clear that for a long bone to increase in length, so much as it does from childhood onwards, there must be a far more abundant multiplication of the cells at each epiphysal line than would be indicated by the short columns which are visible at any one time. It may be, after all, that what takes place in rickets is not so much an excessive as an irregular and perverted process of growth. I must also remark that the formation of the so-called "cartilage bone," the occurrence of "provisional calcification" of cartilage-

cells, has appeared to me a much less prominent feature of rickets during its active stage than I should have expected from the accounts given by writers on morbid histology.

With regard to the origin of rickets, it is perhaps worth while to allude briefly to a recent revival of the old "lactic-acid" theory. Wegner of Berlin showed in 1871 that if, while administering minute doses of phosphorus to young animals, he withheld lime-salts from their food, there arose an affection of the bones exactly like rickets. He supposed that the phosphorus acted as a stimulant to the ossifying tissue. Heitzmann has since stated that lactic acid is capable of acting in a similar way. The hypothesis, therefore, as it has been promulgated by Senator, is that the disease is the result of an irritant action upon the growing bones of that acid (which is thought to be formed in the alimentary canal in excess from milk or other articles of food), there being at the same time a deficiency of phosphate of lime, consequent either on its being ingested in too small quantity, or on its being carried away through the bowels by diarrhoea. The weak point in this speculation is of course the circumstance that no excessive formation of lactic acid has been proved to occur.

As to the causes of rickets, again, there are a great variety of opinions; but I think not very many accurately determined facts. In this country the prevailing doctrine is that improper feeding of infants is the chief, if not the sole cause. But among Germans it is interesting to notice that Vogel, in the last edition of his work, says not a word about the possible influence of diet, and insists on defective ventilation—the want of fresh air—as the most important factor in the etiology of the disease. And of ourselves there are some who think that it is especially apt to be caused by farinaceous food, such as potatoes, when given too early; others attribute it mainly to a premature deprival of the natural food of a baby—its mother's milk.

Most English observers doubt whether rickets is capable of direct hereditary transmission. If it occurs in the children of a rachitic parent, they think that in each generation the hygienic influences have been adverse. But Vogel says he knows many families in which, the parents showing distinct signs of having been formerly affected, the children have all become rachitic in turn, in spite of every precaution. Sir Wm. Jenner has expressed a doubt whether impairment of a father's health has any tendency to induce rickets in his offspring; whereas Ritter von Rittershain thought that he traced it to the presence of tuberculous disease in the father more often than in the mother. But, among the poor, how are we to say what links there may have been between the supposed cause and the effect? The illness of a labouring man may deprive his wife of nourishment, throw heavy work upon her, and in many different ways render her likely to bear weakly infants; it may prevent the children from receiving proper food, may interfere with their being taken out into the open air, may confine them in small and cramped rooms, and may limit their supply of warm clothes.

A point on which Sir Wm. Jenner has laid great stress is that the first child of a family, or even the first two or three children, are often found free from rickets, when later ones are affected with the disease; and, again, that when a woman has once had a rachitic infant, those that follow are almost sure to suffer. But this may be due either to the progressive enfeeblement of the mother's health by repeated childbearing, or (among the poor) to the overcrowding and deficient food and clothing which are implied by a large family; while children of even the better classes are often kept far too much in-doors, when there is only one nursemaid for several of them.

The only conclusion seems to me to be, that the conditions of life in large towns are too complex, and too little capable of being isolated from one another, to allow of a separate study of their effects. Hitherto it has not been possible to trace rickets to any one special exciting cause; but, on the other hand, we are surely not justified in saying that no such cause exists.

It is clear that if rickets can be set up by feeding a child improperly, or by any other unfavourable conditions of life, it is not, in a strict sense, a diathesis. Thus one can no longer, with Sir William Jenner, set forth a contrast between it and other diathetic conditions. But its relation towards tuberculosis is a question of great interest and well deserves further elucidation. Dr. Eustace Smith, while doubting the diathetic character of rickets, remarks that it "never occurs in children in whom the tubercular disposition is well marked." At first this appears a striking state-

ment, but it loses all its significance when we remember what are supposed to be the signs of a tubercular disposition; since for a rachitic child to present them would be almost a contradiction in terms. And it would seem that it must be impossible to uphold Sir Wm. Jenner's distinctions between scrofulosis and tuberculosis, now that so many pathologists find grounds for maintaining that cheesy glands and chronic joint- and bone-diseases commonly form the starting-point of an infective tuberculosis. For my own part, I must confess that I doubt whether any special configuration of body carries with it a *positive* tuberculous tendency. It seems to me that the only character presented in common by the majority of phthisical and scrofulous individuals is a *negative* one—namely, the absence of a perfectly robust and vigorous frame. In whatever direction the body deviates from the highest standard of health, except as the result of the actual presence of some other disease, I believe that the liability to tuberculosis is increased. If so, however, one would certainly expect that rachitic children should often be also tuberculous. Sir Wm. Jenner, indeed, himself states that rickets does not by any means exclude tubercle, and I have lately met with a case in which both diseases were present in the same infant. As regards family tendencies to tubercle in those who are the subjects of rickets, Ritter von Rittersheim proved that a large proportion of the fathers of rachitic children were tuberculous, whereas Sir Wm. Jenner alludes to a table made for him by Dr. Edwards, which appeared to show that the offspring of phthisical parents were actually less likely than those of non-phthisical parents to become affected with rickets.

In conclusion, I would urge as slight additional incentives to the study of rickets by English physicians, its great frequency among us, and the fact that one of the traditional names for it is *morbus Anglicus*. The suggestion was even once made that it originally spread from this country to the Continent; but the name in question probably had its origin in the title of a treatise published by Whistler at Leyden in 1684, "*De Morbo Puerili Anglorum*." The term rachitis was first proposed by Dr. Glisson, of Cambridge, two years later. One can hardly doubt that he really adopted it on account of its similarity in sound to the word rickets, which was a popular name for the disease in the west of England, where it seems to have been first recognised. But Glisson, in his work on the subject, offers to his readers the choice of a Greek root, *ῥαχίς*, on the ground that the spine is one of the first parts to be attacked! It has probably seldom happened that the fabricator of a scientific appellation has thus himself made apparent the weakness and inaccuracy of its etymology. But I have little doubt that there are many other terms which, having been made, instead of growing spontaneously, have no better origin; and, if so, what can be more futile than to spend time and labour in searching out for such bastards a legitimate pedigree, to which they really have no claim?

THE ADMINISTRATION OF ANÆSTHETICS.

By ROBERT SAUNDBY, M.D. EDIN., M.R.C.P.,
ASSISTANT-PHYSICIAN, LATE PATHOLOGIST AND CHLOROFORMIST, TO
THE GENERAL HOSPITAL, BIRMINGHAM.

It may be assumed that the anæsthetic agents usually employed in practice are ether and chloroform. Moreover, it may be affirmed that they are so safe and satisfactory that while we all shall welcome any better, it is not wise to abandon these well-tried means for every new compound possessing anæsthetic properties, with nothing else to recommend it but its novelty.

But these agents are neither satisfactory nor safe unless properly administered with due discrimination of the cases suitable to each. The reports of deaths from both chloroform and ether which appear nearly every week point to the urgent need for those who have larger practical experience than ordinary to formulate their opinions. Even at the risk of being considered dogmatic, I shall try to state accurately what are the methods I use, the precautions I have found necessary, and the errors I have learnt to avoid in the administration of anæsthetics; and I hope by clearly enun-

ciating my own views to raise certain questions in a definite manner, which shall be capable of being affirmed or denied, but at any rate must be answered.

The agent to be preferred.—As a general rule, I prefer ether, because I believe it to be safer, the public believes it to be safer, it is a perfectly satisfactory anæsthetic, and its after-effects are less depressing than those of chloroform. The kind of ether I use is Macfarlane's methylated ether, as made for Dr. Keith, because it is cheaper, and in every way as good as the more expensive kinds. The apparatus I employ is a towel folded lengthwise, with three or four thicknesses of paper between the folds, made into a cone by twisting it on one hand, and fixing it with a few safety pins.

Preliminary arrangements.—No solid food should have been taken for at least three hours before the time fixed for the administration. I can recommend the plan proposed and practised by my friend Mr. Priestley Smith of administering a dose of chloral hydrate an hour before. Do not give brandy or any other stimulant just before administering ether; it is unnecessary, will probably be vomited, and introduces another factor into the conditions which we should try to keep as simple as possible. Examine the chest and make inquiries as to cough in all cases. Inflammation of the lungs or air-passages forbids the use of ether. The vapour of ether irritates healthy lungs, often to an excessive degree, and sometimes causes a slight bronchitis for a day or two, while occasionally it gives rise to fatal oedema of the lungs, even where no previous disease existed in these organs. It is therefore plain that all inflammatory conditions of the lungs are likely to be made worse by ether. Chloroform is to be preferred in all such cases. Cardiac disease *per se* does not contra-indicate ether, as the drug aids a weak heart. In aortic incompetence with badly filled arteries the circulation becomes better during the administration of ether. In mitral disease the case is somewhat different. It must be remembered that ether frequently causes spasmodic dyspnoea, which ordinarily need cause no alarm, and calls for nothing but temporary suspension of the administration, but during which there is great venous turgescence, and the right side of the heart is necessarily overloaded with blood. So that wherever I have reason to believe that the right side of the heart is weak and dilated I should prefer chloroform to ether. The same would hold good of dilatation of the right ventricle apart from mitral disease.

Fractures, herniæ, and other conditions in which complete muscular relaxation is required are cases in which, *ceteris paribus*, I should use chloroform.

Operations about the face can sometimes be performed only with difficulty, or not at all, while ether is being administered; in these chloroform must be employed.

Young children take chloroform with such ease and safety that it is to be preferred for them.

Method of administration.—The orifice of the cone should be large enough to cover the lower two-thirds of the patient's face, and take in the chin and lower jaw. It is always preferable to have the patient lying down with his shoulders a little raised, and his head not much higher than his shoulders; the pillow should be firm and flat; unfasten anything that is round the patient's neck; ask him to turn his head with the *right* cheek on the pillow, to shut his eyes and mouth, to breathe through his nose; tell him to try to go to sleep, and assure him that the ether will be given him cautiously. Pour about an ounce of ether into the cone, and approach it slowly towards the patient's face; with a little encouragement he will soon submit to having it brought quite close, for partial anæsthesia is rapidly induced. When once it is close to his face it should not be removed for some minutes, in spite of any struggles or protests. Fortunately, patients rarely recollect what occurs at that time if the cone has been approached gradually. The ether should be given liberally, as atmospheric air is being excluded, and the patient is respiring nothing but ether vapour. Stertorous breathing is a sign that the patient is "over," and that the operation may begin. If there is much lividity, stop giving ether for a short time, and the natural colour will soon return. The ether must be given almost continuously throughout the operation. Stertorous breathing is not a warning of danger. On the contrary, I like to hear this noisy breathing, as I feel sure my patient is going on all right.

Cautions.—It is absolutely necessary that one person should do nothing else but administer the anæsthetic. He should never leave his post to assist or perform other duties. His business is to give the anæsthetic and to watch the

breathing. He should let his own breath, as it were, hang on the breathing of his patient, so that he cannot breathe himself till his patient breathes. In this way he will be able to detect the slightest irregularity. With ether there is often some spasm, and respiration stops for a time, but a tap on the chest or rotating the head starts it again, as a rule. If inspiration seems difficult, remove any mucus from the fauces with the finger, draw out the tongue with a pair of artery forceps and pull it well forward, so as to open the glottis. If this does not succeed, artificial respiration must be resorted to while the tongue is still drawn forward, but it is satisfactory to say that I have never yet needed to have recourse to it.

The colour of the skin of the ears is a good index to the state of the circulation. If these are livid, the administration should be stopped temporarily.

After the operation.—It is prudent not to leave the patient, or at least except in the care of a properly qualified medical attendant, until he has shown signs of returning consciousness. This may be hastened by sponging his face with cold water, or slapping it gently with a wet towel, not so roughly as to cause marks. Sometimes holding the nose provokes a long inspiration through the mouth, followed by the sudden return of consciousness. This manœuvre is of no use when ruder measures fail, but it may precede them, and is often successful.

Where chloroform, for any of the reasons given above, is to be preferred, I administer it on a towel folded square. The preliminary arrangements and precautions are much the same as in the case of ether; but the patient requires, if possible, more careful watching. The reflex sensibility of the eye must be tested frequently; when it is abolished the operation may commence, and the chloroform should be administered with caution. Stertorous breathing is a warning to suspend the administration. Should respiration stop, the tongue must be drawn out, and artificial respiration commenced at once. The respiration must be watched continuously. The pulse may be disregarded, as it gives no timely warning of approaching danger. *Although chloroform does not require to be administered continuously, it is not less necessary to continue to watch the respiration, even though no chloroform is being given.* Accidents often happen from disregard of this precaution. The chloroform may be safely poured freely on the towel, but this should be cautiously approached to the face, until finally the fingers of both hands press its lower edge against the margin of the jaw, while the surface of the towel forms an angle of forty-five degrees with the face. The experience of the Edinburgh school affords the widest basis for affirming the practical value and safety of this method of administering chloroform.

I have had two deaths from anæsthetics—one from chloroform and one from ether. The former was a case of gummatous disease of the larynx, for which tracheotomy was performed when the patient was nearly moribund from asphyxia. It was in my early days, and at the present time I should decline to administer any anæsthetic in such a case. The other was from acute œdema of the lungs supervening some hours after the administration of the ether, and which I fully reported at the time. Both were hospital cases. In the numerous administrations I have had in private I have never met with a case which has given me any cause for alarm, though many have given me much anxiety. Indeed, I may say I never administer anæsthetics without anxiety; for it appears to me no slight thing to hold a fellow-creature suspended between life and death for an hour or more, during which each respiration is watched for anxiously, and all our attention is strained to notice the first indication of impending danger.

In conclusion, I will recapitulate the points which I desire especially to insist upon:—1. Ether is to be generally preferred as an anæsthetic. 2. Inflammatory affections of the lungs and air-passages absolutely contra-indicate its employment. 3. It should be the sole business of one person to administer the anæsthetic during an operation. 4. The breathing must be watched so long as the patient is under the influence of the anæsthetic, whether it is still being administered or not.

FOOT-AND-MOUTH DISEASE.—After the lapse of nearly two years, foot-and-mouth disease has again made its appearance in Lancashire. It is supposed to have been introduced by some Scotch cattle purchased recently in Scotland. The disease has also broken out at Sheffield.

NITROUS OXIDE AS AN ANÆSTHETIC IN SQUINT OPERATIONS.

By W. A. BRAILEY, M.D.,

CURATOR AND REGISTRAR, ROYAL LONDON OPHTHALMIC HOSPITAL.

As nitrous oxide, though of late occasionally used and favourably spoken of in America by Dr. Mathewson and others, has, I think, not been hitherto tried in this country, the following brief recital may be of interest.

W. S. W.—, aged eighteen, healthy and robust, is the subject of a convergent strabismus of his right eye of four millimetres. It having been decided to use nitrous oxide, he was put fully under its influence by Mr. Spencer in eighty seconds, and was retained so for two minutes and a half, during which time a tenotomy of the right internal rectus was performed. During the last thirty seconds of this time the inhaler was withdrawn. He recovered instantly after the operation, without any unpleasant symptoms, though he declares that he felt some pain during its terminal stages.

A tenotomy being now seen to be necessary on the other eye, the gas was again administered. This time, however, he did not come under its full influence till the expiration of four minutes. His conjunctivæ became extremely tumid and congested. The tenotomy occupied ten minutes, owing partly to the awkward position of the operator on the left hand of the patient, on account of the inhaler, and partly to a tendency to the return of sensibility on the least shifting of the inhaler.

Recovery from the anæsthesia was almost immediate, and no unpleasant after-effects of any sort were experienced. The inhaler employed was that of Clover.

Nitrous oxide is preferable to both ether and chloroform, in being more safe, more rapid in its effects, and much more agreeable to take. It leaves no unpleasant after-effects at all comparable with the others. In this respect it as much excels ether as in the question of safety it is superior to chloroform. The want of full relaxation of the muscles is no impediment to its use in strabismus. Its average cost is rather more than that of the others; but this is of no moment if the advantages above claimed for it are established. Doubtless a face-piece offering less impediment to the operator could easily be arranged.

Though squints may be efficiently operated on without the use of an anæsthetic, yet this procedure undoubtedly involves considerable pain to the patient.

A METHOD OF MORE EFFECTUALLY SECURING SAYRE'S JACKET AFTER IT HAS BEEN CUT.

By NICHOLAS GRATTAN,

SURGEON TO THE COUNTY AND CITY OF CORK HOSPITAL FOR WOMEN AND CHILDREN.

IN treating spinal disease I have lately adopted a plan for fastening Sayre's plaster jackets after they have been cut, which I consider better than the old method of having them bound with leather and laced. The jacket should be sawn and cut through a quarter of an inch at each side of the median line, and the middle strip of half an inch wide removed. Two pieces of strong telegraph wire must be procured, the entire length of the jacket, the layers of bandage of which the jacket is composed, are, at each side, to be equally divided, and the wires placed between them; then the strips of bandage and the lining-vest must be firmly top-sewn together over the wire, in the same manner as the steels are secured in the front of a lady's stays. Just inside the wire, through the jacket and vest, holes are to be bored with a small bradawl down each side of the jacket, at intervals of an inch. The jacket having been put on, and laced very loosely with whipcord, the patient must be suspended, the jacket brought into proper position, and the cord drawn tightly and fastened.

Plaster jackets laced in this manner will be found even stronger than before they were cut, and they can be removed at intervals, for the purpose of cleansing the patient, and when reapplied will be found as effective as ever.

My reason for removing a strip half an inch wide, is that

I have almost always found on cutting a jacket that it has become too large, either through the patient having diminished in size or the jacket having stretched.

This plan renders the surgeon quite independent of the workman, as with a knife, a bradawl, needle and thread, and a piece of stout wire, any jacket can be cut up and reapplied by the surgeon himself in a short time.

A Mirror OF

HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

UNIVERSITY COLLEGE HOSPITAL.

CASE OF EXTENSIVE EPITHELIOMA OF THE LOWER JAW
AND FLOOR OF THE MOUTH; REMOVAL; SATISFACTORY
STATE TWO YEARS LATER.

(Under the care of Mr. CHRISTOPHER HEATH.)

THE following case is a very encouraging one to those surgeons who do not hesitate to operate on cases of extensive epithelioma, in which all the disease can be removed and no glandular complication exists. The very serious nature of the case if left untreated when the disease involves the mouth is too obvious to all, but it unfortunately happens that the early stages of epithelioma of the gum are either overlooked or are maltreated by inefficient caustics. In a recent case Mr. Heath succeeded in removing the alveolus and a considerable amount of disease from beneath the tongue without any external incision, employing Paquelin's cautery for the sublingual portion.

The following notes were taken by Mr. Easmon.

John S—, aged sixty-eight, plumber, was admitted on the 9th of January, 1879, with epithelioma of the left lower jaw and continuous mucous surfaces of the floor of the mouth and cheek. In the early part of October, 1878, the patient noticed that his three left lower molar teeth were loose, and they were accordingly extracted. About the beginning of November he noticed, for the first time, a small sore on the left side of the floor of the mouth, corresponding in position to the teeth removed. This gradually and almost painlessly increased in size. The patient began to suffer likewise from nausea, especially in the morning. A medical man who was consulted ordered red wash for the mouth. Three weeks later he began to apply caustics, which he did six or eight times altogether. About a fortnight before admission the sore began to bleed and continued to do so. There was no history or evidence of syphilis, and patient alleged he had always been healthy. He was a smoker. He did not know the cause of death of either of his parents, both of whom, he said, had lived to old age. His brothers all died at a comparatively early age, ascribed, by the patient, to their unhealthy occupation as masons. He was unable to give an account of the nature of their last illness.

On admission he was a corpulent but very anæmic man, looking younger than his real age, and had general tremors. He was losing flesh, because the condition of his mouth allowed him to take but little food. The bowels were regular, and the general health fair. He suffered from sleeplessness, and pains about the affected side of face of a radiating and lancinating kind.

On opening the mouth, an ulcerating mass of new growth was observed involving the left half of the floor of the mouth, and adjoining alveolar process of lower jaw, the surface of which was composed of large vascular granulations, ragged and covered at the posterior part with small sloughs. To the feel it was soft and extremely tender, extending *backwards* as far as the ascending ramus of the jaw, *inwards* to the middle line, and in front beyond this to the right as far as the right canine tooth, which was very tender when pressed upon, although on the outer side—i.e., between the gums and lips—it was not evident beyond the

mid-line. The structures at the floor of the mouth were involved to a considerable depth, but the tongue was free. *Externally* it involved the alveolar process of the lower jaw on the left side, and extended to the junction of its gingival mucosa with that of the cheek. The teeth of both upper and lower jaw were discoloured; the left lower molars and the right lower molars and bicuspidis were absent.

No enlargement of lymphatic glands could be felt in the neck, nor was there any induration or tenderness beneath the jaw. There was a sanious fetid discharge from the growth, and slight stomatitis. The tongue was furred, especially at the back, and red at edges.

Urine: sp. gr. 1018; neutral; high coloured; no albumen or sugar.

The heart and lungs were healthy. Neither spleen nor liver was enlarged.

On Jan. 22nd, at 3 P.M., the patient was put under the influence of chloroform, and Mr. Heath extracted the right lateral incisor tooth, and then cut through the lip and soft structures down to the lower border of the jaw. The jaw was then sawn through at the point where the tooth had been extracted. A string was now passed through the tongue by which that organ may be drawn out if necessary in case of impediment to breathing (which did occur once or twice during the operation). Mr. Heath next divided the structures beneath the lower border of the jaw, beginning at the lower end of his first incision, and ending just in front of angle of jaw, the facial artery being secured by hare-lip pin ligature. Turning back the cheek flap, the jaw was sawn through about an inch and a half in front of the angle, and the piece of bone included between the two saw-cuts, together with the greater part of the growth attached, removed by dividing the soft parts of floor of mouth attached to it. At this stage much hæmorrhage occurred, chiefly from the lingual artery and its branches, which were all ligatured. The dental foramen in the portion of jaw left behind having been closed with a spigot of wood, the remainder of the growth was dissected off the flap. The parts were then mopped out with a strong solution of chloride of zinc; all suspicious particles removed; the flap was brought down and secured by four or five fine wire sutures, two hare-lip pins and twisted sutures being employed to secure the lip with an additional suture of fine silk at the upper part at the verge of its mucosa. At the posterior part of the wound a small opening was left, through which the end of the ligature applied to the facial artery was allowed to protrude, acting instead of a drainage-tube. The edges of the wound were finally painted over with collodion, and covered with dry lint, and the patient put to bed. The string in the tongue was allowed to remain and kept out of the mouth, in case its use should become necessary.

On examining the growth removed it presented all the naked-eye appearance of an ulcerating epithelioma, involving the alveolar process as far back as the last molar tooth, while forwards it was coextensive with the excision. It spread outwards to the adjacent part of the cheek, but involved only the mucosa, and not the deeper structures. Inwards it reached along the floor of the mouth as far as mid-line. The tongue was not involved. The posterior section of the face showed two questionable-looking spots of probably an extension of the growth.

The patient's pulse became irregular and feeble after the operation, and he appeared somewhat collapsed, but brandy was administered, and he had ice to suck. There was little trouble with the tongue, and he slept well during the night. Next morning the pulse was still feeble, but regular, and the patient seemed to be in good spirits.

On the 24th patient complained of headache. He had slept fairly during the night. The pulse was very weak, 92; temperature 99°; respiration 24. As he had not taken his food well an enema of beef-tea and brandy and eggs (of each one ounce) was administered. The mouth was carefully washed out with a good quantity of warm solution of Condy's fluid lotion. Discharge not very offensive.

On the 25th he had slept fairly well. He complained of pains in the lower lip and up the left side of the face. The pulse was still very weak, 92; temperature 99°. The parts were well syringed out.

On the 27th the patient was looking quite bright. The parts were doing very well. The sawn surfaces of the bone could be seen covered with granulations.

On the 29th the temperature was normal, and the patient had thoroughly recovered from the effects of the operation.

The discharge from the mouth drained through the lower opening, and was only slightly offensive.

From this time the patient made a rapid and steady recovery, and was discharged on February 21st to go to Eastbourne. He returned in March with the mouth quite healed. In November, 1880, the patient visited the hospital in perfect health, having grown stout and strong for his age. The mouth was perfectly sound, the gap in the jaw being filled by firm, dense cicatrix, covered with healthy mucous membrane, and the right side of the jaw being drawn inwards by the action of the muscles, as is usual in cases of division of the mandibles.

GLASGOW ROYAL INFIRMARY.

INTRODUCTION OF A TRACHEAL TUBE THROUGH THE MOUTH FOR THE ADMINISTRATION OF CHLOROFORM DURING AN OPERATION FOR THE REMOVAL OF EPITHELIOMA FROM THE MOUTH AND FAUCES.

(Under the care of Dr. MACEWEN.)

FOR the following notes we are indebted to Mr. McCall, house-surgeon.

J. B—, aged forty-five, was admitted on July 31st, 1880, suffering from epithelioma of the posterior portion of the tongue on the right side, and also of the right pillar of the fauces, extending to the epiglottis. Eleven weeks previous to admission the patient's attention was drawn to the tumour. For several years he had been in the habit of indulging excessively in alcohol. His heart was enlarged and was slow and feeble in action. He had slight chronic bronchitis. His mind was somewhat obtuse.

On August 3rd a tube was inserted through the mouth into the trachea, through which chloroform was administered. The upper portion of the epiglottis was occluded round the tube to prevent the entrance of blood. An incision was made through the right cheek from the angle of the mouth to that of the lower jaw, the latter being sawn through and held aside. The right half of the tongue, with the exception of a quarter of an inch from the tip, was removed, as well as the implicated portion of the fauces. The bleeding was arrested, the angle of the jaw drilled and secured by a couple of wire sutures, the soft parts being brought together, the patient was roused from the chloroform, and the tube was withdrawn from the trachea.

On August 10th the wound was looked at for the first time, and found healed, with the exception of the apertures through which the wires from the jaw protruded. The wires were removed, the one on August 31st, the other on Sept. 5th. A slight swelling remained on the right side of the face.

Remarks.—The insertion of the tube into the trachea was easily effected; it was followed by little spasmodic cough; the inspirations were perfectly carried on through it. The administration of the chloroform through the tube, the extremity of which projected several inches beyond the mouth, was continuous during the whole operation, without in any way interfering with the operator. This is the fourth patient on whom these tubes have been passed through the mouth into the trachea.

ASHBURTON AND BACKFASTLEIGH COTTAGE HOSPITAL.

CHRONIC EFFUSION INTO BURSA PATELLÆ AND BURSA LIGAMENTÆ PATELLÆ; COMMUNICATION BETWEEN THE TWO BURSAE.

(Under the care of Dr. JAMES ADAMS.)

D. T—, aged sixty-nine, a shoemaker, with marked congenital talipes varus in each foot, was admitted on July 17th, 1880, with an unhealthy ulcer, as large as half-a-crown, over right patella, and with the bursa patellæ and bursa ligamentæ patellæ much distended with fluid. The two bursæ communicated, for the fluid could be distinctly pressed from one to the other. The patella could be obscurely felt through the bag of fluid over it. For two years he had had considerable enlargement of the knee, unattended with pain and not interfering with his work. About two months before admission the skin over the patella broke down, and a fortnight before admission there was, he said, a copious discharge of fluid from this spot. Twice during the last two months he had the bursæ tapped and emptied, but the fluid soon returned.

On July 19th a grooved needle was passed into the bursa patellæ through the ulcerated surface, and five or six ounces of straw-coloured fluid pressed out. There was no pus. He was kept in bed, and a bandage applied as tightly as possible over both bursæ. A poultice of linseed-meal and charcoal was applied to the ulcer.

On the 26th the ulcer was healthy, and healing. Lead-lotion was ordered instead of the poultice. There had been a small amount of fluid discharge from the bursæ, sufficient to stain the bandages.

On August 3rd the bandages were taken off. The bursa patellæ was normal, but the bursa ligamentæ patellæ was refilling. Tincture of iodine was applied twice a day to it. Five grains of iodide of potassium and one-sixteenth of a grain of perchloride of mercury were taken thrice daily.

On the 10th the bursa ligamentæ patellæ was getting larger. Cantharides plaster was applied over it instead of tincture of iodine. To continue the medicine.

On the 19th the patellar ulcer was filling up. The internal and local medication had no effect on the refilling bursa. It was therefore punctured with a small lancet, at the lower part, under carbolic spray. Two ounces of dark-coloured fluid were evacuated, and the wound was then strapped firmly with diachylon plaster, and a common splint put on under the knee, with a pad tightly bandaged over the bursa. He was kept in bed a week with splint and pad on, and every other day a probe was passed as far as possible through the lancet puncture into the bursa. He was discharged Aug. 28th with both bursæ empty.

When seen afterwards there had been no return of fluid in either bursa.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Congenital Deformity of Leg and Foot.—*Congenital Malformation of Heart.*—*Rickets.*—*Cranio-tabes.*

THE ordinary meeting of this Society was held on Tuesday last, Mr. T. W. Nunn in the chair. There was a very large attendance of members, attracted by the discussion on rickets. In accordance with the desire of the council a short portion of the time was devoted to the consideration of a living specimen and a card specimen. The debate on rickets was opened by Dr. Hilton Fagge, who was followed by Drs. Barlow and Lees. Dr. Crisp spoke to the occurrence of rickets in the lower animals, and then, on the motion of Dr. D. Powell, the discussion was adjourned.

Mr. PEARCE GOULD showed a child three years old, the youngest of a family of seven children, all the others of whom were well formed. The mother of the child, when between two and three months advanced in pregnancy, fell heavily on her face and belly, and received a severe shake. The pregnancy advanced normally, but the child at birth was found to have a deformity of the left leg and foot. The thigh and knee-joint were normal, but the leg was shorter than its fellow; the tibia was sharply curved forwards below, and over the prominence of the crest the skin was grooved. There was nothing to be felt of any part of the fibula. The foot was small and short, and had only the three inner toes, the two outer of which were webbed. The child walked on the inner malleolus of the tibia, and inner side of the foot. The muscles of the leg were all present, and Mr. Gould thought he could feel a thick interosseous membrane running down the outer side of the leg. There was no evidence of the existence of the cuboid and fourth and fifth metatarsal bones. The biceps cruris muscle was small, and could be traced to its attachment to the outer condyle of the tibia. Dr. Meyersohn had collected eleven cases of complete absence of the fibula. In Dr. Förster's work on malformations another case is figured, and Dr. Humphry has stated that he found a specimen of absence of the fibula and cuboid on both sides in the Musée Dupuytren, and the case shown would make a fourteenth case. Instances of absence of a part of the fibula are more frequent.—Mr. ADAMS thought cases of partial absence of fibula were not unfrequent; he had seen several such, in all there was a dimple in the skin, which had been taken as evidence of intra-uterine fracture,

but this was incorrect. He thought in such cases there was really fusion of the two bones; it was well to remember that in the adult there was always three to five inches of shortening.

Dr. PEACOCK showed as a card specimen a Heart removed from a child six years old, in which there was marked stenosis of the pulmonary artery, a large aperture in the ventricular septum, the aorta arising from both ventricles. The foramen ovale was closed. This was the commonest of all the congenital deformities of the heart.

THE DISCUSSION ON RICKETS

was then opened by Dr. HILTON FAGGE, whose address we publish in full in another page.

Dr. LEES communicated the results of an investigation which had been carried on by Dr. Barlow and himself, with a view to determine the true nature and causation of the condition called *cranio-tabes*, which has since the time of Elsässer, its discoverer, been generally accepted as the first sign of rickets. *Cranio-tabes* consists in an abnormal softening of portions of the parietal and occipital bones, causing them to yield to moderate pressure, and impart to a finger pressed upon them a sensation like that derived from stiff parchment or from the surface of a bladder. There is now no doubt that some symptoms occurring in the first year of life, which have been ascribed to rickets, are really due to congenital syphilis, and it seemed a question worthy of examination whether *cranio-tabes* is not really a result of syphilis, and how far it seems to be connected with rickets. It was soon found that the condition was one quite common amongst the children of the poor of less than one year of age. The authors collected 100 cases, and investigated them as carefully as they were able. For the second 50 cases printed forms were used which directed attention—(1) to the maternal history, especially as to previous miscarriages, or stillborn or premature children; (2) to history of syphilitic symptoms in older children; (3) to the history of the child suffering from *cranio-tabes*, including syphilitic symptoms and those usually deemed rickety; (4) to its weight and age, with an account of the way it had been fed; (5) to its present symptoms in detail, especially the state of the skin, mouth, nose, voice, skull, thorax, long bones, and viscera, particularly the liver and spleen. The results of these investigations were submitted to the Society in a tabular form, from which it appeared that in 70 out of the 100 cases the condition of *cranio-tabes* was marked, in 30 it was slight. After weighing the evidence as to syphilis in each case, the authors felt satisfied as to the existence of the taint in 47 cases, and thought that this conclusion could not fairly be challenged in more than six or seven instances. In about 40 more of the cases there were some indications of syphilis, of greater or less value. In 12 cases no evidence of syphilis could be found. It was pointed out that even in these latter syphilis might possibly be the cause at work, for the children of undoubtedly syphilitic parents at times show nothing beyond *cranio-tabes* and *marasmus*. Cases were narrated which seemed to show that sometimes *cranio-tabes* is the only sign of a gradually diminishing syphilitic taint. It was pointed out that marked *cranio-tabes* not unfrequently occurs in well-nourished infants, who have never had a day's illness, and have been brought up exclusively at the breast. A list was given of seven such children, with their age and weight. A list of the weight and age of nine *marasmic* children, who were extremely wasted, and yet had no *cranio-tabes*, was also given. The inference was that *cranio-tabes* is not simply a part of a general *marasmus*. Some comments were made on the cases narrated by Elsässer and on the difference in symptoms accompanying the *cranio-tabes* according to Elsässer, and in the experience of the authors. The conclusion at which they arrived was that syphilis is by far the largest factor in the causation of *cranio-tabes*. To determine whether it is the sole cause it would be necessary to examine a large number of infants in reference to whom the question of syphilis could be absolutely excluded. The authors strongly suspect that when this has been done it will be found that *cranio-tabes* is always a result of syphilis. To determine whether it has any connexion with rickets they tabulated the rickety symptoms (if any) observed in 53 cases of *cranio-tabes*, arranged according to age, from two to nineteen months old. It was found that all the later cases in this table showed some, though at times very slight, evidence of rickets. It would not, however, be safe to infer at once from this fact that *cranio-tabes* is the first sign of rickets without an inquiry into the manner in which the children

had been fed. Of the thirty-five infants in this table of not more than six months old twelve had been brought up exclusively at the breast. Not one of these showed any evidence of rickets whatever. Fourteen had been partly suckled and partly fed by hand; 9 suckled for less than one month or not at all. Nine of the former 14, 6 of the latter 9, showed distinct signs of commencing rickets. Of the 15 children in this table of more than six months of age, 5 were still partly suckled at the time that their *cranio-tabes* was noted. Of these 1 showed very slight signs of rickets, 1 slight signs, and 3 a moderate amount. But of 9 who had been suckled for less than six weeks, 2 showed slight signs, 3 a moderate amount, and 4 a marked degree of rickets. These facts tend, so far as they go, to show that the rickety manifestations bear some definite relation to the diet. The fact, therefore, that all the older cases of *cranio-tabes* showed some signs of rickets does not itself prove the truth of Elsässer's idea, for they were all more or less improperly fed. And a syphilitic child may be expected to be at least as liable to injury from a faulty diet as a child free from this taint. Even if it could be proved that *cranio-tabes* is the first sign of rickets, that would, of course, in no way invalidate the proof that *cranio-tabes* is itself the result of syphilis. The only conclusion would be that syphilitic children are specially apt to become rickety. Whether it is so or not is uncertain; for themselves the authors confessed that if *cranio-tabes* and enlargement of spleen be transferred from the category of rickety symptoms to that of the symptoms of inherited syphilis, they have as yet no proof that syphilis *per se* is a cause of rickets.

Dr. CRISP had found rickets most common in children reared in poor, overcrowded neighbourhoods, but had seen many cases among the well-to-do classes. He thought the cause lay rather in the quality than the quantity of the food. He thought the cause of rickets was better known than that of any other disease, but it was a cause that might produce other diseases, and, in illustration of this, cited the case of a family in which one child died of tubercular meningitis, and another of chronic hydrocephalus, and a third suffered from severe rickets, which caused permanent deformity. Among animals the disease was so widespread that there were no vertebrata in which it might not occur when they were placed under special favouring conditions, but it was not so prevalent as in man. Dr. Harley had shown at the Pathological Society the bones of a rickety horse, Dr. Dick the bones of two Italian greyhounds, also rickety, and he himself had more recently exhibited the rickety bones of several young pheasants which had been kept in a confined space and fed on improper food. London-bred poultry, which are often not well fed and kept in bad air, have a marked deficiency of phosphate of lime in the sternum, which is soft and bent. A young ostrich hatched at the Zoological Society's Garden died at once from the falling in of its soft ribs; and all the lions born in the Gardens had soft bones, and nearly all of them had died before reaching maturity, while lions born in travelling menageries often live. Large dogs are often thus diseased, as are also lambs in cold, bleak places. Rickets had also been seen in foals not getting enough milk, or where the mother was being worked. It had also been seen in the hog. These facts were sufficient to show that the same changes follow in animals and children when placed under similar conditions as to air and food. Another conclusion he drew was, that as syphilis was not known in animals, it had no connexion with the production of rickets. In reference to the results obtained by giving lactic acid to young animals, he thought that too much stress should not be laid upon them, for probably similar effects would follow the administration of many other extraneous matters; thus Guérin fed young dogs on flesh exclusively, and produced rickets.

The meeting then adjourned.

CLINICAL SOCIETY OF LONDON.

Stretching of Facial Nerve for the relief of Spasm of Facial Muscles.—*Myxœdema.*—*Persistent Gyrate Erythema.*

THE ordinary meeting of this Society was held on the 12th inst., Dr. E. H. Greenhow, F.R.S., President, in the chair. The subject of nerve-stretching for the relief of facial spasm was raised in a paper by Dr. Sturge and Mr. Godlee; and Mr. Croft related a case of division of the infra-orbital nerve for neuralgia. A paper on myxœdema

was read by Dr. Duckworth, and typical cases shown by Drs. Sémon and Hadden. Dr. T. C. Fox read a paper on a peculiar form of persistent erythema.

The following is the abstract of a paper on "Stretching the Facial Nerve for the relief of Spasm of the Facial Muscles," by Dr. ALLEN STURGE and Mr. GODLEE:—The patient, a lady of seventy-two, had been sent to Dr. Sturge by Mrs. Garrett-Anderson. She had enjoyed good health until the death of her husband, six years ago; after this her nervous system suffered much; she had fits of depression and debility, and before long twitching began round the right eye, extending subsequently to all the muscles supplied by the right facial nerve. She had gone through various courses of treatment without result, and she finally consented to have the facial nerve stretched. This operation was performed by Mr. Godlee on July 20th by means of an incision behind the ear, from the level of the external meatus nearly to the angle of the jaw. The sterno-mastoid and the parotid glands were pulled in opposite directions, exposing the upper border of the digastric, close to which the nerve was found as it emerged from the stylo-mastoid foramen. The nerve was raised on a hook, and pulled with moderate force; after a few such pulls the right side of the face was completely paralysed. The wound was dressed antiseptically, and the wound healed without a drop of pus or the slightest constitutional disturbance. The face remained paralysed for two months, and for some days after the operation there was a good deal of pain on the right side and also in different parts of the head, which returned at intervals during these two months. When seen on Oct. 19th, three months after the operation, the face at rest was nearly symmetrical on the two sides, but there was still a good deal of deficiency of movement in the muscles on the right side. She was, however, rapidly improving, every week making a considerable difference. The operation has now been performed five times, three times in Germany by Baum, Schüssler, and Eulenberg, once in America by Dr. James J. Putnam, the present case being the first operation of the kind in England. In all these cases there was temporary paralysis after the operation, varying from two weeks in Baum's case to five months in Eulenberg's. It was remarkable that in every case in which the facial nerve had been stretched for spasmodic tic the operation had been successful, whilst in several cases of spasmodic affection of other parts, as of the arm, &c., stretching the nerves of the part had produced no good effect. In these latter cases the spasm had usually been of an elaborate character, allied rather to chorea; whereas the former is a simple incoördinated spasm of all the muscles supplied by a single nerve. This latter character would indicate a lesion in the centre, from which the facial nerve takes its immediate origin—i.e., the medullary centre, whereas the former would point rather to a lesion in a coördinating centre higher up in the cerebro-spinal axis. Stretching the nerve certainly produces an immediate effect upon the nerve trunk itself, and it probably also produces a remote effect upon the nerve centres, which effect would be greater upon the lower centres, such as that for the facial nerve in the medulla, than in those further removed, which are supposed to have to do with coördination. In all cases where nerve-stretching is employed for spasm it will be very important to note whether the spasm is of the simple or coördinated variety, with a view to ascertain its relative value in the two varieties. The operation is rendered difficult on the living subject by the depth of the nerve and the constant trickling of blood into the wound. The operator should therefore secure a good light and efficient assistance. The posterior auricular vein may very likely be cut in the first incision, and the posterior auricular artery at any period during the dissection. No vessel of any consequence is, however, likely to be injured if the wound be not carried more deeply than the digastric muscle; should this level be passed, the surgeon will find himself in dangerous proximity to the internal jugular vein.—Dr. BUZZARD said that the plan introduced by von Graefe, of pressure over a branch of the fifth nerve, often succeeded in arresting spasm of the facial muscles; and division of the twig would often stop the spasm for a long time. He had had one such case under his care some years ago. In another case the

irritation of the facial nerve appeared to be due to accumulation of cerumen in the ear; for the spasm ceased on removal of this. The constant current was, however, also used in the case. He thought that it was fair to conclude that the seat of derangement was in the medulla. He had had no experience of nerve-stretching in these cases; but he had under his care in hospital at present a man who was the subject of most severe facial neuralgia. The supra- and infra-orbital nerves were submitted to stretching, and the pain was remitted for six weeks. On its recurrence the nerve-stretching was repeated.—Dr. WALSHAM had successfully stretched the infra-orbital nerve in a case of epileptiform neuralgia early in the present year; there had been no recurrence of pain. In considering the manner in which nerve-stretching operates in such cases, he had arrived at a conclusion different from that of Dr. Sturge, believing that it produced an alteration in the nutrition of the nerve-trunk, from the nerve being separated from its sheath. He founded this hypothesis on the fact that experiment on the dead subject showed no alteration in the centre from forcible stretching of the nerve; that in animals no effect was produced unless the nerve was injured; and that the theory of shock was insufficient to account for the results of the operation.—Dr. STURGE, in reply, said that pressure was made on a branch of the fifth nerve with no effect on the spasm. The patient had been under several eminent neurotic physicians, and was anxious to have something more done; so Dr. Sturge did not pursue any other line of treatment.—Dr. GODLEE said they hoped to record the condition of the patient at the close of the session. In reply to Mr. Walsham, he said that he was doubtful whether in the ordinary procedure of nerve-stretching the nerve could be separated from its sheath. He had a few days before treated another case of facial spasm in the same way. In that case the spasm was bilateral, but greater on the left than right side. He had seen many physicians and surgeons, and all possible sources of irritation had been inquired into. Cold increased the spasm. As there was a tender point on the left supra-orbital nerve, he had previously divided this nerve, but without result.—Mr. CROFT related a case in which, three years ago, he was asked by Mr. Liebreich to cut down on the infra-orbital nerve. The patient, who had suffered from most severe facial neuralgia with spasm for six years, was a native of Adelaide, and went to Hamburg to be under the care of Dr. Oscar Liebreich, whose brother was staying with him at the time. They both agreed that excision of a portion of the infra-orbital nerve should be done, and the patient came over to London. Mr. Croft excised five-eighths of an inch of the nerve, and also stretched it. The patient recovered very quickly, and five days after the operation left for Australia. For a time the pain was completely subdued; then it recurred with some spasm. At the end of six months he had an attack of gout with another attack of neuralgia, after which he was free from pain for another six months, when it again recurred. Mr. Croft, in reference to Dr. Sturge's view, could not admit that the disease was central in these cases. He referred also to the perfect relief afforded by excision of the bulbous ends of nerves in a stump of the leg, followed by stretching. The patient had suffered from great pain in the stump and spasm of the knee.

Dr. DYCE DUCKWORTH read notes of Two Cases of Myxedema, and exhibited the patients. Case 1: A stout woman, aged forty-seven, admitted into St. Bartholomew's Hospital in August last. She was a native of Birmingham, but had lived in London for twenty-five years. Had had nine children and several miscarriages. No syphilitic history. Her complexion was fair, and her hair a light-red. The skin of the face was puffy (especially eyelids and lips) and waxy-looking, with the exception of patches of vascularity over the malar bones. The face, scalp, and left shoulder presented several moles, acquired and not congenital, to which Dr. Duckworth drew attention, having seen similar moles in eight or nine cases of the disease. The thyroid was small; the integuments of trunk and limbs were swollen and puffy. The mucous membranes were anæmic, and the blood somewhat of damask rose tint. The hands were large and clumsy; thoracic and abdominal organs seemingly natural, but action of heart was feeble, and pulse generally under 60; appetite capricious; occasional nausea and vomiting; constipation; catamenia had ceased for six months; urine, sp. gr. 1015 to 1022, free from albumen and glucose. The physiognomical features suggested chronic renal disease. Speech was slow, voice harsh and snuffing. She was very slow in expressing her ideas; her walk was deliberate and

shuffling, gait waddling. She was easily thrown off her balance, and never ventured to cross the street. Movements were slow, but brisker in warm weather. The least chill was acutely felt. The temperature of the left side of the body was lower than that of the right, observations for eighteen consecutive days showing variations from 93°4' to 97°8' on the left side, and 95°4' to 99°4' on the right. The swelling began three or four days ago. She had led an unhappy life with a brutal husband, and been much exposed to blows and ill-usage. Seven years since she was in Guy's Hospital suffering from paresis of the right leg, with anaesthesia about the ankle. She improved under electrical treatment and tonics. During her stay at St. Bartholomew's Hospital she suffered much from cold, and was always dull and morose. Stimulants readily stupefied her. She took various tonics and arsenic, and as much good food as possible, but no improvement resulted. There was no albuminuria at any time. Case 2.—A married woman, aged forty-six, born at Retford, but had lived for twenty years in Clerkenwell. She was well grown, with dark hair, sallow complexion, vascular patches over malar bones, and puffiness about the eyelids. The facial aspect denoted chronic nephritis. There was one mole on the left cheek. The expression was dull and languid. The thyroid body seemed natural. The hands were "spade-like." There were slight bronchial catarrh and constipation. Pulse 80. Legs oedematous, the right pitting more than left. Urine: sp. gr. 1005, acid, not albuminous. The catamenia had become irregular this year. She had noticed herself becoming stouter for eight years. Two or three years ago she found she could not ply her needle so freely as formerly. Her speed and general movements have become slower. She could walk fairly well if not hurried, but was very timid in the streets. Sometimes she fell down, and had difficulty in preserving her balance. She took a long time to dress herself. There was marked susceptibility to cold and changes of temperature. Temperature: in right axilla 99°4'; in left 97°2'. She complained that her food did not taste properly. She had good health till eight years ago. There was no family predisposition. The case presented many of the well-recognised features of the disorder, and seemed to be progressing slowly. No treatment appeared to control or modify the cachexia in any noteworthy degree. Dr. Duckworth added that the connexion of acquired moles in such cases was interesting. He had found them now in eight or nine cases, and pointed out the concurrence of defective mental conditions with moluscum fibrosum as suggestive of the association of moles with the defective mental powers in myxoedema.—Dr. SÉMON had brought a case of myxoedema to show to the Society. In addition to the typical symptoms she presented a marked falling off of hairs from all parts of the body. Her teeth also showed a tendency to break off, and there was a puffy condition of the gums. She suffers from loss of memory and hallucinations. The history of the case pointed to a central rather than peripheral nerve-disorder—the symptoms starting from an injury, followed by pain in the head. In this case, as in so many others, there had been frequent pregnancies. She had had fourteen children and seven miscarriages. Dysphagia had been noted in some cases. In this one there was no difficulty in passing an œsophageal bougie. There was no diminution of sensation in the palate or pharynx. The laryngeal mucous membrane had a glistening appearance, and the vocal cords were notably anæmic.—Dr. HADDEN had brought a case at the request of Dr. Ord. This patient showed a brittle condition of the nails. The quantity of urea excreted was also deficient. He had recently seen a case in a male subject, all others on record being females. He thought the condition pointed to some profound lesion of the sympathetic.—Dr. DUCKWORTH said that he had come to the conclusion that the disease was one of central origin, due to trophic derangement. In reply to Dr. Theodore Williams, he said that a few of the temperature-observations were taken with the surface-thermometer; but most of the temperatures recorded were axillary.—The PRESIDENT suggested that Drs. Sémon and Hadden should put their cases on record in the Society's Transactions.

Dr. T. COLCOTT FOX described to the Society, and exhibited drawings of, two unique cases of Persistent Gyrate Erythema, affecting the two elder members of the same family in a precisely similar manner, in whom it had existed fourteen and sixteen years respectively—i.e., since they were about four years of age. The patients were never entirely

free from eruption, but every few months they were subject to acute outbursts, lasting from ten days to six weeks, which covered the greater part of the trunk and upper limbs, but especially affected the shoulders, the buttocks, and thighs, and the eruption was always associated with intolerable irritation. There was no clue to the cause in the family or personal history. The festooned eruption always began by erythematous papules of the size of millet seeds. These quickly subsided, leaving an enlarging annular erythematous bordering, which always preserved an equal breadth as the erythema subsided within the border in equal ratio to the advance of its outer border. These circles fuse with neighbouring ones, to form the gyrate figures, which gradually die away in a week or ten days, leaving a good deal of pigmentation. The desquamation is peculiar, inasmuch as it is very rapid and is quickly thrown off, leaving only a ragged white bordering attached to the inner edge of the erythematous rings. The eruption was clearly of the erythematous type, and such festooned figures are quite in keeping with what we know of the evolution of many erythemata. There was no fungus present, and no evidence of hereditary syphilis. The aspect presented by the eruption was a most unusual one, and had excited much interest in several skin clinics of the metropolis. The great peculiarity in the case, however, was its extreme persistence.—Dr. CARRINGTON had recognised the male patient as having been under Dr. Pye-Smith's care at Guy's Hospital. Many remedies were tried, and finally arsenic, which led to marked improvement; and Dr. Pye-Smith thought the eruption therefore a form of psoriasis.—Dr. F. TAYLOR said the case had also been under his care at Guy's Hospital about four years ago. The eruption then appeared rather more highly coloured than as represented in the drawing by Dr. Fox. Only temporary relief was given by treatment.—Dr. CAVAFY thought the subsidence of the rash under arsenic lost in importance as an element of diagnosis from the fact stated by Dr. Fox, that it had occasionally subsided spontaneously. He agreed with Dr. Fox as to the chronicity of some of the erythemata, one instance of which is that of the so-called "urticaria pigmentosa."—Dr. FOX said he had only the patient's statement to go upon as to the effects produced by different remedies. Urticaria pigmentosa was a good instance of a chronic erythematous rash.—The PRESIDENT mentioned a case of urticaria pigmentosa which persisted for five years, and was unaffected by treatment.

The Society then adjourned.

MEDICAL SOCIETY OF LONDON.

Recurrent Epistaxis. — Diagnosis and Treatment of Whooping-cough. — Pauper Lunacy Laws and Medical Relief.

At the meeting on the 15th inst., F. J. Gant, Esq., President, in the chair—

Mr. SPENCER WATSON read a paper on a Case of Recurrent Epistaxis of twenty months' duration. The patient was twenty-nine years old. He suffered from headache and marked constipation; he had no gouty tendencies or other constitutional disease. The headaches and epistaxis were attributed to the breathing consumed air over and over again in the ill-ventilated room in which he slept, and to the straining at stool consequent on the difficulty of defecation. The change to a well-ventilated bedroom, and the use of perchloride of iron solution as a douche, were followed by very rapid improvement, and at length by the total cessation of the habitual bleeding. Ergot administered internally had entirely failed, though given in large doses.—Mr. PEARCE GOULD remarked on the difficulty often met with in treating these cases, and inquired whether belladonna (which, given in small doses, had cured a case that had resisted plugging and perchloride of iron) had been tried internally. He thought better success attended plugging of the anterior nares with a piece of sponge steeped in solution of perchloride of iron, than the more common and less acceptable method of plugging the posterior nares.—Mr. WORDSWORTH referred to a case in which he had ineffectually plugged both posterior nares in an elderly gentleman. The hæmorrhage was subsequently arrested by the

administration of the oil of turpentine in small doses.—Dr. JAGIELSKI advocated the more frequent use of internal remedies. He had found small doses of *nux vomica* frequently repeated to be of service.

Dr. R. J. LEE then read a paper on the Diagnosis and Treatment of Whooping-cough. The early history of this singular malady was briefly traced from the year 1678, when for the first time the name appeared in the bills of mortality, to the present time; and the question was raised whether the disease had really increased of late, or had only recently been more accurately diagnosed. His own observations extended over several years, and the chief points of diagnosis worthy of attention were the frequency with which young children and infants were attacked without the symptom of the "whoop" occurring, so that many infantile disorders really due to whooping-cough were referred to some other cause. The infectious nature of the malady and the period of incubation, deduced from a series of twenty-one cases, were shown to be easily estimated in hospital practice, and the conditions under which adults contracted whooping-cough a second time were pointed out. The train of symptoms in infants was detailed, and the frequency with which serious and often fatal diarrhoea occurred was mentioned. As to treatment, it was urged that there were probably good reasons for inquiry into the popular belief, that the waste products of the distillation of coal had a beneficial effect in relieving the cough. Singularly good results were obtained by the inhalation of carbolic acid. The trial of turpentine, creasote, &c., was recommended, as the use of these drugs was stated to have been attended with considerable success. No specific value could be claimed for any of the numerous remedies which had been at different times extolled; he said that circumstances must direct the appropriate use of them in different stages of the disease. There was little need to discuss the view that the symptoms were referable to nervous derangement, while the question of law to prevent the spread of the disease remained unanswered.—Dr. JAGIELSKI had found *drosera* a valuable remedy, especially in those cases which were accompanied by vomiting and dyspeptic symptoms.—Mr. SPENCER WATSON asked whether diet was important in the treatment, for he had seen great improvement follow the substitution of milk diet for an ordinary diet of meat.—Dr. MAIR had found quinine combined with belladonna useful, and also a blister to the nape of the neck in many cases. He confirmed the statement as to the frequent absence of the whoop in the cough, which, however, had other characteristic features.—Mr. NAPIER testified to the value of the antiseptic treatment advocated by Dr. Lee, which was also of advantage as limiting the spread of disease.—Dr. LEE, in reply, said he thought belladonna superior to *drosera*, but would give this remedy a fair trial. The question of diet was important, but in the case of young children there was little choice; and in infants he never departed from simple milk food. The peculiarity of the cough in infants was of value in diagnosis, and was characteristic although the whoop might be absent. The best method of volatilising carbolic acids and other agents would be the subject of a future communication.

Dr. BOYD read a paper on Pauper Lunacy Laws and Medical Relief, having reference to the delay under the Pauper Lunacy Act in the admission of patients to asylums, to the facilities given by the Acts to crowding them with aged, infirm, and incurable paupers, and to the necessity of reversing the law, and instead of having the asylums, as at present, auxiliaries to union infirmaries, applying portions of workhouses and vacant prisons (after making suitable alterations in them and placing them under the jurisdiction of the justices) for the reception and classification of incurable cases of insanity, thereby saving the expense of further additions to those costly institutions, lunatic asylums. *Medical relief* to be separated from *poor relief*, and given to the poor of the working classes, without pauperising them, as so efficiently done in France (where no poor law exists)—e.g., at Le Salpêtrière and La Bicêtre, which the parochial infirmary of St. Marylebone very much resembled before it was put under the Poor-law Board and at the time that it was recognised as a medical hospital. Such an institution, affording an opportunity of studying every form of disease, should be opened to pupils for clinical instruction and to medical practitioners engaged in pathological investigations.—Dr. CHRISTIE (Ealing) thought a full discussion of this subject to be much required; it had a political and public aspect as well as a medical.

A sub-committee upon the question—composed of Dr. R. Boyd, Dr. R. J. Lee, Dr. Christie, and the hon. secs.—was recommended to the consideration of the Council.

Reviews and Notices of Books.

Osteotomy; with an Inquiry into the Etiology and Pathology of Knock-knee, Bow-leg, and other Osseous Deformities of the Lower Limbs. By WILLIAM MACEWEN, M.D., Surgeon and Lecturer on Clinical Surgery, Glasgow Royal Infirmary. London: J. and A. Churchill. 1880.

FOR Dr. Macewen there is but one disease producing the bony deformities in childhood and early life, and that is rickets. He refuses to recognise other causes of softening of bones, or irregularity in growth. From his own observation he gives three examples of well-marked rickets occurring at puberty, and he considers that the disease may be induced at any time during the growth of the body by any causes of general malnutrition. Of all the bony deformities of the lower limbs knock-knee is for many reasons the most interesting, and it receives the fullest and most careful treatment at Dr. Macewen's hands. From his measurements he concludes that the deformity is usually the product of many factors, the most constant of which is an inward curve of the lower end of the diaphysis of the femur, noted 120 times out of 166 observations; next in frequency and importance is abnormal elongation of the internal condyle of the femur, in 84 per cent. of cases, the increase in length varying from one-half to one inch and a quarter; the condyle is often also enlarged inwards; in about 30 per cent. of cases there is an irregular growth of the tibia also, but this is usually of much less influence in determining the deformity. The different and now rather numerous operations for its cure are described and discussed, and the reasons why supracondyloid osteotomy is preferred are fully stated. The main advantages of this method are, that it does not open nor interfere with the articulation of the knee in any way, and that it deals directly with the most constant alteration in the shape of the femur. Dr. Macewen is a disciple of Professor Lister, and is at pains to point out that osteotomy cannot be done so thoroughly subcutaneously as tenotomy, and that antisepticism has done for it what subcutaneous surgery did for tenotomy. Although in many instances air is effectually excluded from the wound, yet there are others where this cannot be done; and the results of compound fractures teach us that even where the wound in the soft parts is a clean incised one antiseptic surgery holds out the most certain hope of perfect success. At any rate, Dr. Macewen's success, from the point of view of recovery from the operation (the only results given in the book), has been signal. He has operated on 330 patients, performing 835 osteotomies, and has had three deaths, one from tubercular meningitis, one from diphtheria, and one from pneumonia, which had set in prior to the operation; in eight cases only was there any suppuration, and in seven of these the cause was known to be avoidable. Where several osteotomies are demanded in the same patient—and Dr. Macewen speaks of having made ten—they have all been done at one and the same time. The book might have been with advantage relieved of repetition in several places, but we confidently recommend it to the study of all interested in the removal of these common but often disastrous deformities.

Index-Catalogue of the Library of the Surgeon-General's Office, United States Army. Authors and Subjects, Vol. I. A—Berlinski. With List of Abbreviations of Titles of Periodicals indexed. Washington: Government Printing Office. 1880.

IN 1873 Dr. J. S. Billings published a catalogue of the Library of the Surgeon-General's Office (United States

Army) in two large volumes. In the following year a third or supplementary volume, containing anonymous works, reports, transactions, and periodicals, was issued. At that time the library contained 25,000 volumes and 15,000 single pamphlets, and the catalogue gave the enormous number of 50,000 titles, exclusive of cross references. Since then the collection has grown largely, and is now, both as regards quantity and quality, one of the finest in the world.

The Index-Catalogue is practically an entirely new work. It is formed after a different plan from that of the earlier catalogue, and includes titles of both authors and subjects, arranged in dictionary order in a single alphabet. This plan, it would seem, was selected after some discussion and deliberation as being, upon the whole, the most serviceable to those who were likely to use the catalogue. To the pure bibliophile separate catalogues of authors and of subjects would, of course, be more convenient, but to the majority of those who will most frequently need and use the work the mixed form will, perhaps, be more acceptable.

Of the amount of labour and time bestowed upon the preparation of the work some idea may be gained when it is stated that under the subject-headings are included the titles of most of the original articles in the medical journals and transactions contained in the library. Under the word "Albuminuria," for instance, there are over fourteen closely-printed columns of references to separate works on this subject, and to original articles in various periodicals. "Amaurosis" has eighteen columns devoted to it; "Amputation" seventy columns; "Anatomy" seventy-four; and "Aneurism" no less than one hundred and thirty columns. These references are not, however, indiscriminately massed together, but are systematically arranged and classified. To take the last-named word, "Aneurism," as an example. There is first a large number of references to works and articles dealing with the subject of aneurism generally, and then come other references under various headings in alphabetical order, as *circoid*, *diagnosis*, *dissecting*, *false* and *traumatic*, &c. &c., and, finally, a very complete list of references to aneurism of special arteries. There are, for instance, not less than thirty-nine columns of references to aortic and abdominal aneurisms, and nearly twenty columns to popliteal aneurism. Furthermore, a glance at the pages of the Index-Catalogue gives a very good indication of the age and extent of literature of any particular subject. The references to the literature of the comparatively recent subject of antiseptic surgery occupies ten columns, exclusive of independent and special references to abscess, ligature of arteries, ovariectomy, and other matters relating to antiseptic surgery. There are nearly six columns of references to the interesting but antiquated and exploded subject of alchemy. This list contains the titles of thirty-seven different works, some very scarce, by Glauber. It is, however, necessary to bear in mind the caution given by Dr. Billings in the preface. Though often of the greatest value in indicating the writings of an author and the chief editions, the catalogue is not a complete medical bibliography. It is a catalogue of what is to be found in a single but thoroughly representative collection of medical works, and should only be used as such.

The combined completeness and accuracy of the catalogue is the best monument to the intelligence, industry, and attainments of Dr. Billings and his assistants. Though the first volume does not go beyond the "Berlinski," it includes 9090 author-titles, representing 8031 volumes and 6398 pamphlets. The one thousand pages comprise also 9000 subject-titles of separate works and pamphlets, and 34,604 titles of articles in periodicals. An alphabetical list of medical periodicals employed in the Index-Catalogue occupies 126 pages.

The prospective labour still before the compilers of this valuable work is indeed so gigantic, and the standard of those who have undertaken it so high, that the accomplishment seems almost unattainable. Meanwhile, Dr. Billings and his assistants have earned the sympathy and gratitude of every lover and student of medical and surgical literature.

[THE name of the publishers—Messrs. John Smith & Co. 52, Long-acre—was inadvertently omitted from our notice last week of the "Physician's and Surgeon's Visiting List, Diary, Almanack, and Book of Engagements for 1881."]

THE TREATMENT OF GENU VALGUM.

To the Editor of THE LANCET.

SIR,—I crave permission to make a few remarks on the above subject, in amplification of those contained in your report of the discussion at the Royal Medical and Chirurgical Society on Tuesday Nov. 9th.

I would first wish to modify a little what I am reported to have said about flat foot: "Flat foot was by no means often met with;" *add*, as an *antecedent* condition to genu valgum: when it occurs, it is the direct *consequence* of the genu valgum, and results from the weight of the body being thrown unduly on to the inner ankle. Then in comparing the two operations, osteotomy and tenotomy, I wished to say, in proportion to our knowledge of how to avoid surgical accidents, I did not consider osteotomy more dangerous to-day than was tenotomy at the time it was first introduced into surgical practice.

The object of the paper was to altogether discountenance forcible straightening and osteotomy as means of treatment for this deformity and to advocate tenotomy. Mr. Brodhurst will, I think, fail to secure many followers, for it is hardly reasonable that one and the same method of treatment can be successful in a deformity which may depend on very different pathological lesions. Although an advocate of osteotomy in *certain cases*, I do not range myself among those surgeons, referred to by Mr. Brodhurst, who operate "in every case of genu valgum, even when the deformity was yet very slight." I was disappointed that a mere statement was advanced in support of such a sweeping assertion instead of facts. Fortunately it matters little, for the opinion of the majority in this matter, as others, will ultimately prevail.

Osteotomy is one of the many outcomes of Listerism, without which it would be a very formidable operation. Even with it, it is a serious matter; but so is the deformity, and it unfortunately occurs most extensively in that class of life where its ill effects are most severely felt. Owing to the length of time required for the proper carrying out of Mr. Brodhurst's method, it is inapplicable in a considerable number of patients, and then the question between osteotomy or nothing has to be decided. On the other hand, in cases where the internal condyle has become longer than normal, I fail to see how any plan of treatment can be efficient which does not take this circumstance into consideration. Unless the condyle be shortened in some way the deformity can only be overcome by separating the external condyle from its corresponding tuberosity, thus seriously weakening the joint.

I will again urge that the greatest incentive to osteotomy has been the utter insufficiency of the older methods in a certain class and in a certain number of cases.

It was suggested that no statistics of osteotomy had been published. I venture to believe that detailed statistics of the older method by tenotomy would be a great deal more useful, as well as suggestive. And I further think the statement would be truer of tenotomy than of osteotomy.

I remain, Sir, &c.,

ROBERT W. PARKER.

Old Cavendish-street, W., Nov. 15th, 1880.

THE first prize of 500 dollars, offered by the National Board of Trade of the United States of America for the best essay and draft of an Act to prevent injurious Adulteration and regulate the Sale of Food, without imposing unnecessary burdens upon commerce, has been awarded to Mr. G. W. Wigner, F.C.S., F.I.C., of London, honorary secretary of the Society of Public Analysts.

THE LANCET.

LONDON: SATURDAY, NOVEMBER 20, 1880.

IF Dr. HABERSHON and Mr. COOPER FORSTER will forgive our appropriating much of the phraseology of their recent letters to the Governors of Guy's Hospital, we should like to say:—For some time past it has appeared to us *impossible* that they and other men of spirit connected with that institution could continue to hold their offices as physicians and surgeons. It is easy to understand that “the pleasure and pride” every member of the medical staff must have “formerly” found in his work at “a hospital which has hitherto been held in the highest honour throughout the world,” together with “long-cherished associations and a natural desire not to separate themselves from their colleagues” during a period of difficulty and disaster, may have led these gentlemen to defer their resignations, though we cannot discover the grounds for their “hope of a speedy issue to the present miserable strife.” At the same time recent events in this struggle proceeding at Guy's could not but convince Dr. HABERSHON and Mr. COOPER FORSTER that “the chances for their hospital of wise and enlightened government are still very remote.” We will not carry the appropriation further. Some of the expressions selected by the senior surgeon for the setting forth of his views are scarcely those we should ourselves have chosen. Meanwhile it is matter for general congratulation that the two senior members of an insulted and discredited staff have ceased to sanction by their official connexion a system of hospital management which, whether regarded from the utilitarian or the politico-religious standpoint, is wholly impracticable, and, as it has been repeatedly described in these columns, both mischievous and absurd—ridiculous in its economic aspect, and injurious to the interests and common safety of the sick poor. It would have been a calamity as well as a scandal if, misled by a false representation of the state of public feeling and the mature opinion of their profession, Dr. HABERSHON and Mr. COOPER FORSTER had longer delayed the discharge of a self-evident duty to themselves, their colleagues, and the community. It would have been incomparably better if, waiving minor considerations—which indeed were comprehended in the greater and graver question of principle—the seniors had retired some weeks ago, throwing the onus of a choice of policy on the staff as a whole. We recognise and understand the feelings that prompted the view they took, but it has not been possible, and it is still impossible, for us to approve it. A more spirited course would, we are convinced, have saved both the medical staff and the Governors of Guy's Hospital from most disastrous blundering in what is, in truth, a much more serious business than those actively concerned in the imbroglio seem to have perceived.

For ourselves, it may appear that we have taken, and continue to take, a view of this most unhappy controversy which is at once much more urgent and critical than that adopted by our contemporaries. It has been for us a repre-

sentative struggle throughout, and with unfeigned regret we have seen that the medical staff did not so regard it. A narrow view of policy has been urged upon, and adopted by, the physicians and surgeons of this great metropolitan hospital; whereas a broad view and a generous and high-minded concern for the principles at stake in the controversy were required, and alone permissible. Our view has not been the popular one; but it has, we are persuaded, and will hereafter be proved to have been, the only view consistent with the interests of the sick poor, and the dignity and usefulness of the profession we claim to represent. Nothing which has recently occurred in connexion with the lay management of Guy's Hospital has changed the *real* aspect of its affairs. Those who are striving to find an excuse for changing their views and amending their counsels, will not find a footing of sound argument to go upon. If it is right for Dr. HABERSHON and Mr. FORSTER to resign now, it was still more incumbent upon them to take that step a month ago. The charges made in the letter which was awkwardly indited and still more awkwardly withdrawn some weeks since are repeated, and in terms certainly not less irritating than those for which something like an apology has been formally tendered. The “offence” once condoned and forgiven has been again committed. What are we to understand? There is only one interpretation possible; the opinion of the seniors has not been supported by the staff as a whole. The original letter, which was made the ground for requiring the resignation of Dr. HABERSHON and Mr. COOPER FORSTER, expressed the mature judgment of the seniors. It was withdrawn under the pressure of the juniors, to avoid a general break-up. The seniors have now thrown off the yoke, and are free to tell the President, Treasurer, and Governors, what they think of them and their policy.

It was a blunder of policy to withdraw the whole of the original letter. It was not a carefully written or very temperate letter, but it told the truth. The system of management at Guy's Hospital has been, and is, *mischievous*. We do not share the implied opinion that those who are responsible for that system have been actuated by personal motives. We believe the most crooked policy is often adopted, and the worst disasters are brought about, with the best of good intentions and the most upright of philanthropic purposes. Self-sufficiency and fussy ignorance will wreck the most earnest and honest of enterprises. We can well believe the President, the Treasurer, and every one of the Governors of Guy's Hospital, to have been animated by sincere and benevolent aspirations for the well-being of the institution entrusted to their care; but that their policy has been mistaken is at length, as it ought to have been months ago, evident to everybody except themselves. Even those who flatter and essay to support them know they have shown a strange want of tact, and acted with mingled irritability and weakness. These considerations do not, however, in the smallest degree, or in any other way, affect the question at issue, which is simply this: Who are the proper persons to organise and administer the working system of a medical institution? The obvious, and we take leave to say the *only* rational, answer, is: of course the medical men officially connected with and directly responsible for the charity. They, and

they alone, can possibly know what is wanted to make a hospital effective for the benefit of the sick poor, and they must be the arbiters in every question of administration which can possibly arise. If the Governors of Guy's Hospital are wise, they will adopt this common-sense view of the matter, and, waiving their egotism, will embrace the opportunity offered by the resignations of Dr. HABERSHON and Mr. COOPER FORSTER for a reconsideration of the whole question, with a view to placing everything on a new and fair footing. The crisis has come, and it remains to see whether those most actively concerned in its production are sufficiently alive to its dangers, and self-sacrificing enough, to make the necessary concession. The inner truth about this vexatious business at Guy's lies in a nutshell. There have been faults of method and temper on all sides. It is inconceivable that men of position and character like the majority of the Governors can have wilfully done wrong. It is foolish to think they have, and fatuous to charge them with having, done so. Unfortunately, however, the Governors have been misled and ill-advised. As honourable men we anticipate that they will now put themselves right. As regards the conduct of other of the Governors and their agents, it is unbecoming the self-respect of representative members of an enlightened profession to quarrel with them. Mistakes have been made in this respect, and the time has come to repair the evil and to adopt a policy at once more sagacious and influential because less irritating.

Meanwhile what will this hospital medical staff do? The seniors have, tardily perhaps, discharged their duty. Will the staff accept the further humiliation of having outsiders placed at their head? Will outsiders be found willing to be placed in that "bad eminence"? It must not be supposed that we have no sympathy with the physicians and surgeons of all ranks attached to the hospital and its school. It is impossible not to feel that Fate has been wondrously cruel to them. The predicament in which they are now left must excite compassion, though it is one in which their indecision and want of unanimity have placed them. We have, indeed, a lively sense of the manifold difficulties that beset the path of duty which lies before our brethren at Guy's. The way may lie through troubled waters, but these will be less harmful than the muddy path which the staff has for some time past been painfully following.

It is too early yet to speak with any approach to certainty of the results likely to accrue from the formal discussion on Rickets at the Pathological Society. The disease is so widespread among us, so constantly recognised, especially by out-patient physicians and surgeons, and its more characteristic manifestations are so familiar even to the laity, that it would seem to be a disease peculiarly fitted for debate, and one on which a good deal of light might thus be thrown. But as far as the discussion has at present proceeded this hope seems scarcely likely to be realised. Dr. HILTON FAGGE disclaimed any intention of advancing new theories or recording new facts, but his paper, which we publish to-day, was no doubt as able a presentation of some of the problems demanding attention as the subject allowed. It indicates pretty accurately the lines along which the subsequent discussion will travel. Dr. FAGGE

has done well to raise the question, "What is rickets?" No doubt it is a general, not a local disease, although its more serious symptoms are commonly changes in the bones. But by what general or local, other than bony, changes can we recognise the disease? Is a marked susceptibility to catarrh a cause or a symptom of the disease? Are the changes in the spleen and lymphatic glands, pointed out by Sir W. JENNER, peculiar to rickets, or merely common to any condition of general ill-health in young children? And, again—a point to which Dr. FAGGE did not allude—to what age is rickets limited? Dr. FAGGE spoke as if it were merely a disease of childhood. Is it not rather a disease met with at all periods of growth? Have not all surgeons met with children at puberty suffering from general malaise, muscular and osseous pains—growing pains as they are popularly called, and osseous deformities of the growing ends of bones, especially those producing genu valgum? And is not this as truly "rickets" as the disease so common in the first two years of life? From such questions as these we are perforce led to ask if there be a distinct disease—rickets—at all? In growing bones certain peculiar changes are no doubt observed, but are they not the simple results of general malnutrition of that particular tissue? The spleen and lymph-glands are other tissues specially active in childhood and youth. Are not the results of general bad health—the absence of perfect robustness and vigour, as Dr. FAGGE would call it—in these tissues those that have been supposed to be characteristic of rickets? If, in answer to this, we are told of the three special symptoms of rickets that Dr. FAGGE agrees with Sir Wm. JENNER in laying important stress upon, we are bound to state that no one of them is beyond criticism. Do we not constantly see the profuse sweating said to be characteristic of rickets in other instances of general weakness—phthisis, convalescence from acute specific diseases? The restlessness, too, is found acutely produced by rapid hæmorrhage, or more slowly manifested in fevers and other exhausting maladies; while the aching pains and tenderness in muscles are too frequently seen during convalescence from other diseases, or in their acuter stages, to warrant our attaching great weight to them. Dr. FAGGE refuses to recognise sickness, diarrhoea, and tumid belly as a part of rickets. We now know that the medulla of bone is of considerable importance in the function of hæmopoiesis, and the changes that take place in it may therefore be supposed to be peculiarly active during pregnancy, when a great strain is thrown upon the mother's blood, and its condition then bears some resemblance to that of the "intermediate zone" of growing bones. And this actively changing medulla of pregnancy is found to be liable to a disease that, at any rate, bears some coarse analogies to rickets; for must we not see in the great increase of an unhealthy medulla in mollities ossium with deep-seated bone-pains a resemblance to the irregular development of the intermediary zone in rickets with so-called articular pains? And may we not go further and say that the so-called "strumous glands" so common before and just after puberty, when these structures are actively developing, are as truly "rickety" as the lymphatic glands mentioned by JENNER and DICKINSON? Have we not in them changes similar to those in the growing ends of rickety bones—

an irregular and excessive growth in place of regular development? To sum up, we would ask the question, *Is there such a disease as rickets at all?* Are not the changes and symptoms usually attributed to that disease the simple, common results of a state of general malnutrition in persons and on tissues in an active state of growth, having their close counterparts, if not exact analogues, in diseases of later life, and affecting rapidly growing parts? We have put it in the form of a query, for it hardly seems the time to dogmatise when the whole subject is under discussion, but there are other pieces of evidence that might be adduced in support of the affirmative answer to our question. One of these was prominently brought out by Dr. CRISP, who gave abundant and distinct evidence that rickets is not only a disease which may be met with in all vertebrata, but that in very many cases it has been produced artificially, by bad air or bad food, or cold or damp. Does not this fact mark off the bone changes as distinct from a special disease? Does it not clearly point to them as being the result of general ill-health, not requiring even one particular cause, but apt to follow the serious breach of any hygienic law by young animals?

The issue raised by Drs. BARLOW and LEES was narrower; and valuable as is their statistical investigation, it cannot be held to satisfy inquiry. The fact that fifty per cent. of children with cranio-tabes are the subjects of inherited syphilis does not prove that the syphilis is the specific cause of the bone change. What percentage of syphilitic children have cranio-tabes? And further, what proportion of such children develop afterwards the usual signs of rickets? Is the pathological change in cranio-tabes analogous to that in the ends of growing long bones, or to other syphilitic manifestations? Such questions as these must be answered before we can speak definitely as to the significance of this symptom. The widely-open fontanelles of tabetic crania are certainly not peculiar to syphilitic children, and the delayed ossification they signify may be merely the indication of a lack of perfect robustness, whether from syphilis, bad air, bad food, or insufficient clothing. On the pathology of cranio-tabes we much need enlightenment, and its elucidation will probably do much to set at rest the question Drs. BARLOW and LEES have opportunely raised. Much then is open for the subsequent speakers in this debate to deal with, and we may hope that answers will be forthcoming to these, and to the many other questions raised on Tuesday last.

THE English Church Union is fond of being in hot water. It is not content with having a controversy with the law courts and with the Reformation. It proposes now to have a controversy with the Hospital Sunday Fund. It lately passed the two following resolutions:—

“That the recent discussion at a meeting of the Hospital Sunday Fund Committee of the religious character of the management of a Convalescent Home is unquestionably beyond their province, and a subject with which, from their assumed unsectarian character, they are utterly incompetent to deal.

“That this meeting of churchmen and subscribers express their opinion that a repetition of such a discussion will prevent the clergy and laity of the Church of England from

supporting the Hospital Sunday Fund in their accustomed generous and hearty manner.”

The English Church Union, with much modesty, assumes in the second resolution the right to speak in the name of the clergy and laity of the Church of England. It is a matter of public notoriety that it has no right to assume so to speak. It is an intensely narrow society, and represents rather a sect in the Church of England than the Church of England itself. There is no reason to think that the Church of England at large, or the Nonconformist churches of the kingdom, in any degree misunderstand the real nature and spirit of the question that has lately been most intelligently and generously discussed in the Council of the Hospital Sunday Fund, and, so far, wisely settled. It will be wise in the English Church Union not to raise any questions as to the number of churches it represents, and as to the proportion between the sums such churches contribute to the Hospital Sunday Fund, and the amount they withdraw from it for the support of charities with an obvious ecclesiastical bias. This is scarcely the place for such questions and comparisons, but we will venture to say that the small party represented by the English Church Union has more to lose than the Hospital Sunday Fund by refusing to the Council of that fund the right to demand that proselytism shall not be recognised as one of the functions of a hospital, and that the opinions of religious patients shall be respected.

Even at the cost of losing the contributions of proselytisers, the Hospital Sunday Fund must secure the recognition of these principles. The great bulk of the members of the English Church and of Nonconformist Churches will agree with Professor MARKS that hospitals are not the place, and sickness is not the time, to disparage and to controvert the creeds of patients. For the present the Council of the Hospital Sunday Fund have acted wisely in trusting for the protection of patients to the fourth law of the Fund, which requires that all participating institutions shall be governed by a *Committee*. Any ordinary body of Englishmen will believe that a Committee “duly appointed”—i.e., elected by a body of subscribers of presumably various religious opinions—will see that proselytism is prohibited in a hospital professing to receive persons of all creeds. If this belief should be invalidated by experience, the Council of the Hospital Sunday Fund will have to enact a new law to this special end. We have it on the authority of the English Church Union that the Hospital Sunday Fund is unsectarian in its character. It is the very glory of the Fund, in the eye of the public, to be at once religious and unsectarian—to be raised by all Churches for the relief of suffering. But this very quality of the Fund is abused by the English Church Union, and regarded as involving “utter incompetence” to deal with faults in the religious administration of hospitals. The Hospital Sunday Fund may have to choose between the English Church Union and the general religious public who supply its funds. But if the Fund is to be maintained, there is no room to doubt how its choice must go. It is not to be tolerated that money coming from such sources is to be applied to grossly sectarian uses. It may suit the purpose of the English Church Union to pose as the advocate of religious freedom, and to represent the Hospital Sunday Fund as violating its “unsectarian character” in demanding respect for all creeds.

Such misrepresentation may do some harm to the Hospital Sunday Fund, and more harm to institutions like those of Clewer and Eastbourne. It is very easy even for ecclesiastical societies to do harm in this world. But the English Church Union will not long impose on the English public if the Council of the Fund have the courage and the intelligence to see the principles and the feelings that are at stake.

THE Indian Government has, in compliance with Dr. D. B. SMITH'S desire, published in full his explanation regarding the expenditure of the Medical College Hospital. We pointed out some time ago that, in justice to Dr. SMITH, this course should have been at once followed. We are now bound to express our opinion that the explanation does not in any degree modify the conclusions at which we arrived from the study of the official documents as originally published. It is a long, wordy, and, in many points, irrelevant document, and is mainly occupied with a defence of his conduct as principal of the Medical College, and, therefore, responsible for the management of the hospital. But this was quite unnecessary, as the Lieutenant-Governor had stated in his official minute that he "has never for a moment called in question the praiseworthy devotion with which the officers attached to these institutions have discharged their onerous professional labours. The Lieutenant-Governor fully appreciates their efforts to advance the cause of medical science, and to do all that science and skill can dictate to alleviate the sufferings of the sick under their charge." The question at issue between the Lieutenant-Governor and the medical officers in charge of the hospital was not as to the manner in which their professional duties were discharged, but whether these institutions were managed as economically as they should have been, and whether there was not a want of effective administration, "which added enormously to the Government expenditure, without, in many cases, benefiting the patients." Dr. SMITH enters into a long detail of the history of the hospital from 1866 to 1879, and gives extracts from the report of a committee appointed in 1870 to inquire into the scale of hospital diet, and he seems to consider it a sufficient defence of the administration that the control over the general expenditure "was in strict accordance with the existing regulations and orders of the Government," and that the expenditure was kept within the sanctioned limits. But he subsequently states that "the former dietary system of this hospital was, in my opinion, a cumbrous, faulty one. I never pleaded for its imperfections, and I have no desire to do so now. But I was not in any way responsible for its introduction. The system, such as it was, had received the assent of the Government long before I joined the hospital, and I had it placed in my hands as an approved system, and one which, according to regulation, was month by month submitted for audit." And, again, he says:—"I considered the system cumbrous and faulty. In making over charge to Dr. COATES I particularly brought to his notice the fact that I thought the whole system required revision, and I then begged him to bring its imperfections carefully to the notice of Government (as I myself should have done had I remained longer), with a view to the adoption of an improved system." These remarks of Dr. SMITH appear to us fully to justify the conclusions of the Lieutenant-Governor as to the

necessity for a sweeping reform of the system. It may also be fairly asked why did Dr. SMITH delay his representation of the "cumbrous and faulty" character of the system in operation until he was about to proceed on leave to England, and then delegate to his *locum tenens* the not over-pleasant duty of showing up the defects of the "approved system"? A considerable portion of Dr. SMITH'S letter is taken up with an examination of details which might with great propriety be brought under the notice of the head of his department, but which do not appear to have much bearing upon the wide general question of hospital administration. A careful perusal of Dr. SMITH'S letter forces upon us the conviction that the Lieutenant-Governor was fully justified in the conclusions at which he arrived, that the medical officers of the hospitals had shown zeal, devotion, and skill in the discharge of their professional duties; but that there was a want of effective administrative supervision which seriously affected the financial condition of these establishments. That the introduction of a better system was required is very manifest; it yet remains to be seen whether that has been attained by the recent changes. We think the Indian Government has acted wisely in publishing Dr. SMITH'S letter, as it removes all appearance of injustice done to that officer, but it may be questioned whether he acted prudently in calling for its publication.

Annotations.

"Ne quid nimis."

THE ROYAL COLLEGE OF SURGEONS AND PRELIMINARY EDUCATION.

As we announced last week, the Council of the Royal College of Surgeons has adopted the following motion, by Sir James Paget:—

"That the Council, having assented to the recommendation of the General Medical Council, that 'it is desirable that the Examinations in General Education should be left to the Universities and to such other Bodies engaged in General Education and Examination as may from time to time be approved by this Council, &c.,' and being satisfied that such examinations are now sufficiently numerous and accessible to all persons desirous of studying surgery, and will be duly under the supervision of the General Medical Council, give notice that the Examinations held, with their authority, by the College of Preceptors will cease to be held after September, 1881."

This step will be acceptable to those who believe that the status of the medical profession can be satisfactorily raised only by requiring of those who enter it a better general education than heretofore. As we have more than once had occasion to point out, the preliminary examination hitherto conducted by the College of Preceptors, for, and with the authority of, the Council of the College of Surgeons, has not been in all respects creditable. The subjects for examination in French, German, Latin, and Greek have not been changed for many years. Our readers may perhaps remember that one of the examiners not long ago threw the blame of this upon the Council of the College of Surgeons. A move has at length been made; and when it is remembered that the discontinuance of the preliminary examination will diminish the annual income of the College by £500, the Council must be credited with some degree of public spirit for the step they have resolved to take. It is only proper that they should in return be furnished with some guarantee that the substitute examinations will be of adequate scope and character.

THE PUNISHMENT OF CHILDREN.

No one who has had much to do with children can doubt that punishment is necessary to their proper discipline, or that sometimes it needs to be administered with considerable severity. The sentimental theory that children can be trained and taught "wholly by kindness" generally issues in a practice which is the converse of the principle laid down by Hamlet—"I must be cruel to be kind." There are, however, certain forms of punishment which compare most unfavourably with the old-fashioned birch, and ought to be discouraged, if not interdicted. We have repeatedly pointed out the evils and injuries likely to result from the boxing of ears and the smacking of faces. These "methods" should be summarily repressed by those who are the masters of school-masters and school-mistresses. Cases which have recently occurred have too forcibly illustrated the truth and need of our many warnings. Nevertheless, punishments of this class are still daily inflicted, and until some hard lesson has been taught the pedagogues who resort to this stupid mode of stimulating the dull intellect, there will be consequences of which the few that come to public knowledge are probably a small percentage. The practice of keeping children without their proper food, of locking them up in dark closets, or even of placing them in solitary confinement in light rooms, cannot be defended, because injurious to body or mind. The imposition of tasks is a shortsighted policy, seeing that it makes learning a terror, whereas it ought to be a delight. Can no disciplinarian devise a suitable discipline for youth? Until that discovery is made, it would be better to fall back on the old birch, properly and moderately applied. It made the flesh smart, but it broke no bones; and few, if any, of its so-called victims failed to profit by its occasional administration.

THE TREATMENT OF TYPHOID FEVER.

THE debate on the treatment of typhoid fever, held at St. Thomas's Hospital on the 10th inst., in connexion with the Metropolitan Counties Branch of the British Medical Association, although interesting, did not elicit much that was novel. The president of the Branch, Dr. Habershon, occupied the chair, and the debate was opened by Dr. Bristowe, who dealt with the subject under the heads of food, medicines, alcohol, and baths. A milk diet was urged as of chief importance. Dr. Bristowe doubted if any remedies had direct effect in controlling hæmorrhage. Alcohol was not necessary, except in a few cases, when it should be given for its stimulant effect. As to baths, he doubted their efficacy, and thought that if they were as valuable as statistics showed, their good effects should be obvious whenever they were tried. In two cases he had had he thought fatal pulmonary congestion had been produced by the use of baths. He concluded his remarks by sketching the manner in which he himself would wish to be treated were he the subject of the fever. Dr. Broadbent, who followed, thought the diet should not be wholly restricted to milk, which it was important to give only as a food, and not as a drink to relieve thirst, for diarrhoea was often produced by the undigested curds. Sometimes beef-tea set up diarrhoea. Besides correcting the diet when diarrhoea was present, he would use opium enemata. In cases of hæmorrhage he gives large doses of opium to arrest peristalsis; ergot and turpentine were also useful. Opium was also of great value in the relief of tympanites. He described his attitude towards baths as one of gradually increasing confidence. Dr. Cayley read a letter from Dr. Brand of Stettin, giving some remarkable statistics from the military hospitals of Germany in favour of the bath treatment—a chief element in success being the adoption of the method at the very onset of the disease. This was possible in private practice and in military hospitals, but not in the civil

hospitals, where patients do not seek admission until they are compelled to do so by the advance of the disease. In Germany it had been found possible to carry out the bath treatment in private practice. The treatment was certainly *not* a dangerous one. Dr. Norman Kerr made some remarks, in which he admitted the need of the medicinal use of alcohol in some cases of the disease. Dr. Collie said that out of 100 cases seventy-five would get well with simply good nursing, fifteen would die, and the remaining ten might or might not recover. Such was his experience, and he had abandoned the bath treatment, as not only useless but even dangerous. He could not put faith in continental statistics, and thought that many cases of mistaken diagnosis were included in them. Dr. Ord had certainly seen good effects from the use not of cold but of slightly tepid baths in selected cases of high pyrexia, which he believed had a relative effect as well as a control over the whole morbid process of typhoid fever. Dr. Mahomed spoke in favour of the cold-bath treatment. He also mentioned a case of severe hæmorrhage which he had recently successfully treated by transfusion.

It must be evident that if the cold-bath treatment is to be properly tested it should be applied systematically in every case of the disease, and the earlier the treatment is commenced the more likely is it to control the fever. In this country this treatment is on its trial, and it is important that the trial should be a fair one and carried out in full confidence, and at the same time with the caution which every physician would naturally employ in order that no ill effects may be produced by it. The facts adduced from Germany and France are too strong to allow prejudice to prevent the treatment from being fully introduced here if it be found that these results can be substantiated.

THE THIRD INTERNATIONAL CONGRESS OF HYGIENE.

THE printed summary of the labours of this great gathering of sanitary reformers has reached us after some delay, and we recognise among the speakers and the representatives of the various European nationalities the same names that were familiar to us during the second International Congress, held at the Paris Exhibition in 1878. We may at once state that the fourth Congress will be held at Geneva in September, 1882, and it is confidently anticipated that London will have the honour of entertaining the fifth Congress in 1884. At Turin, as at Paris, the number of English members present was very limited, while, on the other hand, the various continental nationalities were not only numerous represented, but several Governments sent official delegates; and His Majesty King Humbert presided in person at the first sitting of the Congress. Among the various resolutions adopted we note one in favour of a permanent international committee to study and prevent the spread of epidemics; another urging the appointment, in each State, of a Central Health Bureau with a special budget and functionaries independent of political fluctuations. The principle of compulsory vaccination and revaccination in all countries, and the construction of disinfecting ovens in all large centres, together with enforced purification by dry heat of all infected bedding and clothing, were unanimously proclaimed. Among the minor questions, we note a protest against the incomplete consumption of oxide of carbon by gaslights, and a resolution in favour of large type for school books, which at present are too often printed in a manner calculated to strain the eyesight of the children. A lateral light in schoolrooms was considered preferable to a skylight. Short hours of study were recommended, and it was urged that in each important educational establishment elementary principles of hygiene should be taught by a medical professor. The Congress also advocated the construction of barracks in the form of detached pavilions, and urged that soldiers should first join the ranks

in April or October, instead of, as at present, in mid-winter. The examination for naval captains should comprise a far larger knowledge of naval sanitation. The Congress also urged that in publishing statistics relating to lying-in hospitals care should be taken to give the average duration of the sojourn of the patients in the establishments, otherwise it would be impossible to estimate their respective degree of salubrity. Such, in a few words, were the principal points discussed and opinions adopted by this concourse of sanitary reformers. The proposal to meet again at Geneva was hailed with enthusiasm, for most persons are glad of an excuse to visit Switzerland; and sanitary matters are understood better by the twenty-two legislative bodies of this small Federal Republic than by some among the neighbouring powerful and centralised kingdoms.

PIGMENT IN GIANT CELLS.

THE giant cells of pulmonary tubercle have been the subject of many observations during the past few years, but M. Cornil believes that he is the first to call attention to the frequency with which they contain pigment. Various stages in the pigmentation may be observed. In some cells, which possess a marginal zone of nuclei, and which have been treated by picrocarminate of ammonia, the nuclei are well coloured, while the protoplasm remains of an orange-yellow. In the middle of this protoplasm and around the nuclei are a few black granules. In other giant cells these black granules are more numerous, and occur within the nuclei as well as in the protoplasm of the cell. When the degree of infiltration is still greater, the giant cells do not show a single nuclei coloured by carmine, but only a rose-coloured mass densely infiltrated with fine granulations which are accumulated at points probably representing the previous nuclei. Although thus altered, the giant cells have preserved their form, size, and usual prolongations, but the tubercle has commonly become altogether fibrous, and presents interlacing connective and elastic fibres, which form concentric zones around the giant cells. Among these fibres there are flattened connective-tissue elements, or small round corpuscles, which are also often pigmented. These masses of fibrous tissue are, in turn, enclosed in lung tissue, which is in a state of interstitial pneumonia, with septa thickened, and alveoli containing round cells filled with pigment. M. Cornil points out that the giant cells in fibrous tubercle seem to have undergone degenerative induration, and that the carbonaceous particles, from whatever source they come, once deposited in these elements, remain there indefinitely, and, indeed, help to preserve rather than to destroy the cells.

TRINITY COLLEGE, DUBLIN.

LAST week Sir Edward B. Sinclair, King's Professor of Midwifery in Trinity College Medical School, delivered an inaugural address. After referring to the past of obstetric medicine, and to the high position which it at present occupied, he mentioned that the chair of Midwifery, which was established in 1869, and to which he was then appointed, was placed in connexion with Sir Patrick Dun's Hospital. Afterwards the maternity now connected with that hospital was established, though not without great difficulty, and was now a flourishing institution. As he had been an army medical officer, the requirements of the wives of soldiers presented themselves to his view, and it occurred to him and the lady superintendent of Sir P. Dun's Hospital that it would be an excellent thing if they could make midwives of the soldiers' wives. This project was brought under the notice of the Duke of Cambridge, received the approval of the military authorities, and had since been carried out. The plan adopted was to give gratuitous instruction to a selected number of the wives of soldiers, and since 1869 he had sent to the British army no less than 400 midwives,

who had been trained in Sir P. Dun's Hospital. Sir E. Sinclair said that it had become apparent that there ought to be an extension of the practice for the purpose of providing the soldier "on service" with a well-trained hospital nurse, for, as they all knew, that was not a function which could be performed by the midwife. General nurses who attended cases of zymotic diseases and erysipelas could not approach the bedside of the woman in confinement. This idea had lately been taken up by Viscountess Strangford, who expended her time, fortune, and health in works of practical charity. She had pointed out the expediency and practicability of training the wife of the soldier as his hospital nurse, and she was at present endeavouring to establish a teaching system for this purpose in London.

EDWIN BOOTH AS HAMLET.

ALTHOUGH matters theatrical lie outside the domain of THE LANCET, we have always made it a custom to direct the attention of our readers to every fresh exponent of Shakspeare's greatest character, because we feel that the study of this puzzling psychological fiction has perhaps more genuine interest for members of the medical profession than for any other class of persons.

Edwin Booth gives, we believe, a correct view of the Prince's mental condition. Of a sensitive and affectionate organisation, he is profoundly affected, both mentally and physically, by his interview with the Ghost; and Mr. Booth succeeded in producing the impression, without any strain or effort, that this trying ordeal left an effect upon the nature of Hamlet so that, to use a common expression, he was never quite the same man afterwards. His interview with Horatio and Marcellus after the disappearance of the Ghost was a really fine rendering of a most difficult part of the play, and from the time of the Ghost's exit to the fall of the act drop it was evident that the mental shock had been terribly severe—that it was an effort to him to collect his thoughts, and that while conversing with his friends his mind was often far away.

For the rest, we must say that Mr. Booth's representation, although it was not marked by any very original or striking points, was, from a merely technical point of view, one of the best pieces of stage-performance we ever saw. The minutest syllable that Mr. Booth uttered, even in his most subdued tones, was, we believe, plainly audible in the far corners of the pit and gallery. To hear a fine voice, used with consummate skill, giving utterance to Shakspeare's masterpiece, is in itself a great treat—a treat which many popular Shakspearian actors quite fail to give us. Again, Mr. Booth's command of what is known as "stage business" we have never seen excelled. His actions were rapid, suitable, free from all exaggeration, and, if we may be allowed the expression, exquisitely neat. The use which he makes of a pair of delicately-chiselled, nervous hands is such as any actor might envy. To give an example, his attitudes and manner while questioning his friends, in the first act, as to the circumstances of the Ghost's appearance to them, were at once masterly and easy. Mr. Booth has an expressive face and a fine figure, and his pronunciation is quite free from Americanism.

FRACTURE OF THE SACRUM.

By its position and structure the sacrum is peculiarly free from liability to fracture except from bullet wounds, and, although it is sometimes found fissured, or even comminuted in severe crushes of the pelvis, simple uncomplicated fracture of this bone is a very rare accident. Erichsen has seen one such case, the injury being a blow from the buffer of a railway carriage, and proving rapidly fatal. Agnew says that simple transverse fracture of the sacrum is usually accompanied by fatal injuries to the pelvic viscera. A remarkable

case has recently been put on record in Paris. A woman, thirty-six years of age, was brought into the St. Lazare Hospital with the history of having fallen about eight feet on to her buttocks. She fainted, and when she was conscious was quite unable to sit. A slight transverse depression corresponding to the middle of the sacrum was readily felt from the back, the part was very tender, and pressure gave fine crepitus; extensive ecchymosis quickly occurred over the whole sacrum. From either the rectum or vagina the line of fracture was readily felt, and the projection forwards of the lower half of the sacrum verified, this part of the bone was easily moved with crepitus. Reduction was easily effected by the finger pressed back from the front, and displacement did not recur. A bandage was applied firmly round the pelvis and the patient kept in bed. Defecation gave intense pain, and the woman was unable to lie on her back for a fortnight, but sat up in bed on the twenty-eighth day, and got up in the ward on the forty-second day. There were no signs of pressure upon or other injury of the lower sacral or coccygeal nerves. In cases where there has been a tendency for the displacement to recur various mechanisms in the rectum have been employed to keep the bone in position, such as a plug of wood, a stuffed silver cannula which could be opened to allow the passage of fæces. The ease with which in the above case the reduction was effected shows that the displacement was due to the direction of the fracturing force, and not to the action of the muscles attached to the lower fragment. The main difficulty in the treatment of these cases where the fracture is the sole injury is the intense pain in defecation, and the local disturbance it induces. Some have, by means of opium, kept the bowels confined and then cleared the rectum by an enema every week or ten days. It is still better to diet the patient very carefully with a view to the production of the smallest possible quantity of fæces, which may then be easily and almost painlessly removed by means of an enema every three or four days.

CONSIDERATENESS IN PATIENTS.

A WRITER on club practice in the *Western Daily Mercury*, to whose former letter we have already referred, communicates a second letter on the same subject, urging the advantage of mutual considerateness on the part of doctor and patient in all club arrangements as tending wonderfully to harmonious and pleasant working. This same quality of considerateness is very valuable, too, in private patients; and, strange to say, there is the greatest possible difference in patients with respect to it. Some patients almost never send at inconvenient hours, nor disturb the arrangements of the day by rash messages. Other patients, again, are attacked with illness just after their medical man has returned from his visit to their end of the town, and send off post haste demanding his immediate attention to an ailment which existed yesterday, and will keep quite well till to-morrow. The former patients have great advantages. The practitioner soon finds out the value of messages. He knows that when the considerate patient sends a message out of time it means urgency, and he acts accordingly.

TENDON-REFLEX.

AN important paper is contributed to *Brain* (Part X.) by Dr. Augustus Waller, "On Muscular Spasms known as Tendon-Reflex." His suggestion is that the now well-known phenomenon, "patellar tendon-reflex," is not a spinal reflex, but merely a peripheral reaction of muscle, and that it is only a test of spinal conditions in the sense that other peripheral reactions of muscles (electrical or mechanical) are tests of spinal conditions. The experimental data of the paper are furnished by measurements of the interval between percussion of the tendon and contraction of

the muscle. These are to the effect that on the normal human subject the above interval does not sensibly differ from the latency of the muscle to electrical excitation of its substance, or of its motor nerve; and that all these intervals, likewise the interval between percussion of the substance of a muscle and its contraction, and that also between percussion of a motor nerve and contraction of a supplied muscle, do not differ more than can be accounted for by differences in the intensity of stimulation, the normal interval or latency of all these phenomena being from $\frac{1}{100}$ to $\frac{1}{50}$ of a second. The paper is concerned only with the physiological interpretation of tendon-reflex as a direct "neuro-muscular" effect of the mechanical stimulus; it does not attack the clinical significance of the test.

THE PREVENTION OF FOGS.

Dr. C. W. SIEMENS has communicated to *Nature* of Nov. 11th a plan for remedying the growing evil of London fogs. The essence of the scheme is a reduction of the amount of coal consumed for domestic and other purposes. Dr. Siemens advocates the substitution of a special gas-grate for the ordinary coal-fire. Two sketches illustrate the article and show at once the simplicity and efficiency of the plan. The two chief drawbacks to the gas-grates in common use are the expense and the obnoxious fumes that are given off. Both these Dr. Siemens professes to have got rid of, and he claims for his plan an economy of heat, fuel, and money. The bottom of the new grate consists of a solid iron plate instead of bars, and this plate is rivetted to a stout copper plate facing the back of the grate. In front, between the iron plate and the lowest bar of the grate is an interval of about an inch, into which is fixed a half-inch gas-pipe perforated with holes of about one-twentieth of an inch in diameter, placed zigzag at distances of three-quarters of an inch along the upper surface. When in use the cavity of the grate is filled with coke, which is heated by the jets of the gas-flame. From some comparative experiments Dr. Siemens concludes that the coke-gas fire is not only warmer and cheaper than an ordinary fire, but is smokeless. "I hold," he states, "that it is almost barbarism to use raw coal for any purpose, and that the time will come when all our fuel will be separated into its two constituents before reaching our factories or our domestic hearths. Such a measure would not only furnish us with a complete solution of the smoke question, but would be of great value also as a money saving." Dr. Siemens generously adds, that he has taken up this question without any idea of profit, and shall be happy to furnish builders and others desirous to introduce the coke-gas grate with the necessary indications to ensure success.

CHIAN TURPENTINE IN CANCER.

A RATHER remarkable improvement in a case of recurrent scirrhus of the breast subjected to treatment by Chian turpentine has just been recorded in Paris, in a letter addressed to the *Tribune Médicale* by Dr. Sabah of Eauze. In June, 1878, M. Lannelongue of Bordeaux removed a mammary tumour, the clinical and microscopical characters of which were those of scirrhus cancer. In April, 1880, Mme. D— again consulted M. Lannelongue, who, however, decided against another operation, owing to the degree with which the axillary glands and chest-wall were invaded by a recurrence of the growth. Treatment by Chian turpentine was commenced on October 13th, when the right breast was double the size of the left, and was traversed by enlarged vessels, the axillary glands completely involved, the arm swollen, and the hand paralysed, and lumbar pain so severe and continuous as to require injections of atropine and morphia three times a day. The general health, however, was not affected. The drug was given hourly, and for the

first two days produced diarrhoea; but on the third day the pain began to subside, and the arm to diminish in size. On the ninth day the menses, which had been suppressed for more than five years (the patient was forty-two years old), returned, and lasted five days, during which the turpentine was withheld. The treatment was then resumed, and by October 30th the circumference of the arm had been diminished by $\frac{3}{4}$ centimetres, and the tumour appeared to be resolving. Dr. Sabah looked upon the return of the catamenia as at once a proof and a guarantee that a cure was being effected. It must, however, be conceded that a sufficient time has not elapsed to speak of this as a case of cure, and it is to be hoped that the history of the case will be further reported at some future date. On many grounds too early publication of such facts is to be deprecated rather than encouraged.

THE MORGUE.

THE demonstrations at the Morgue by M. Brouardel were resumed on November 5th, in the presence of a large auditory of students and practitioners of medicine. In his opening remarks M. Brouardel reminded his hearers of the necessity of keeping secret the revelations made within the building, in order that justice might not be defeated. He pointed out that publicity under these restrictions was a help and safeguard to the expert; and in a few words expounded the method he intends to follow at these meetings. The lectures will take place on Wednesdays and Fridays, at two o'clock; and after reading the commission given him by the Public Prosecutor, he will proceed to the official autopsy. Notes will be taken by the pupils, which will be read at the following meeting. In his opening lecture he discussed, with the aid of experiments, the signs of hanging and infanticide.

HOSPITAL SUNDAY IN DUBLIN.

COLLECTIONS in aid of the Dublin Hospital Sunday Fund were made last Sunday in most of the churches in that city, and although considerable depression exists throughout the country, yet it is hoped that when the total amount is announced it will not be under what was obtained last year. Since the establishment of the institution in 1874, the sums realised for so deserving a purpose have yearly increased, being £3306 in 1874, and £4344 in 1879. Each charity which participates in the funds collected is assisted (1) according to the amount of voluntary contributions received by it, and (2) by the amount of work done.

THE office of Assistant-Librarian to the Royal College of Surgeons in Ireland, vacant by the resignation of Dr. Spencer, will be filled up this week. Although the emoluments of the post are only £100 per annum, yet no fewer than thirty-five applications were received for the appointment. The Council, however, at a recent meeting selected seven of the candidates, and their claims were to be considered on the 18th inst. The person appointed is expected to devote his entire time to the duties of the office.

HENRY PERCY POTTER, F.R.C.S., of St. Thomas's Hospital, has been awarded the Howard medal for 1880 of the Statistical Society, with the sum of £20, for competitive essay "On the Oriental Plague in its Social, Political, Economical, and International Aspects, more especially as regards the labours of John Howard."

THE death is announced of Dr. Edward Seguin of New York. The deceased physician was a voluminous writer, and occupied at his death offices of distinction in connexion with medicine. He was born in 1812, and died on the 28th ult. at his residence in West Twentieth-street, New York.

THE Queen has been pleased to give orders for the appointment of Inspector-General of Hospitals and Fleets William Macleod, M.D., to be an Ordinary Member of the Civil Division of the Third Class, or a Companion of the most honourable Order of the Bath.

THE Academic Council have nominated Dr. Banks to the Regius Professorship of Physic in the University of Dublin, recently held by Dr. Hudson; and Mr. E. H. Bennett to the Professorship of Surgery. These nominations by the Council are tantamount to election.

THE fire which recently destroyed three-fourths of the town of Niigata, Japan, included in its ravages, we regret to hear, the dispensary and hospital in which Dr. Palm has been doing useful work in connexion with the Edinburgh Medical Missionary Society.

AN attempt to dethrone Greek at Cambridge University has proved unsuccessful, a proposition at a late Congregation to substitute a knowledge of French or German for the compulsory study of the classic language having been rejected.

WE understand that Mr. Joseph Lister, F.R.S., has been nominated by the Council of the Clinical Society for the office of President; and that Dr. S. Wilks has been similarly nominated by the Council of the Pathological Society.

WE understand that fresh contributions have been received by Professor Cobbold from Dr. Manson, specially relating to the immigration and emigration of *Filaria*, and their supposed connexion with the febrile state.

THOMAS EVELYN LITTLE, M.D., University Anatomist, has been elected President of the Biological Association, Trinity College, Dublin, for the ensuing session.

DR. F. F. MAITLAND MOIR and Dr. J. G. HALL are stated to be candidates for the vacant surgeoncy of the Aberdeen Royal Infirmary.

MR. REGINALD HARRISON, F.R.C.S., has been appointed one of the Examiners in Surgery at the University of Durham.

M. DUPLAY has been nominated by the Faculty of Medicine of Paris to the Professorship of External Pathology.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Kensington.—Dr. Orme Dudfield's report for the four weeks ending Oct. 9th, in addition to the vital statistics of the locality for the period, contains several matters of general interest. Writing of the "inveterate" tendency to concealment of cases of infectious disease, he remarks on the contracted interpretation given by magistrates to the words "without proper lodging or accommodation," Sec. 124 of the Public Health Act. They read them with reference to the wants of the sufferer, rather than with reference to the safety of the remaining inmates of the same house, the sub-heading of the Act, "Provision against infection," apparently being held as of no significance in guiding as to the interpretation of the sections under that heading. Dr. Dudfield gives also a curious illustration of the difficulties which occasionally arise in the removal of non-pauper sick. We

are glad to learn from this report that a sub-committee was about to proceed to Leeds with a view of inspecting the process in use by the sanitary authority there for destroying refuse matters by heat, and that the question of a periodical removal of refuse from premises is likely to be considered. If Kensington, Paddington, and St. Pancras should adopt rational principles of refuse removal and disposal, we may reasonably hope that the example will spread generally throughout the metropolis.

INFECTED MILK: DIPHTHERIA.

An important case was recently heard before the Kingston County Bench of Magistrates under the Dairies and Cowsheds Order. Dr. Owen Coleman, the medical officer of health, stated in evidence that seven cases of diphtheria had occurred in his practice, and from inquiries made with a view of tracing the disease he heard of other cases, and found that all the families were supplied with milk from the same source. Acting upon this information, in company with Dr. W. Price Jones, the inspector under the Dairies and Cowsheds Order, he visited the premises from which the milk was obtained, and found there a child dying from malignant diphtheria. No complaint had to be made of the general condition of the premises, but there was reason to believe that the case of diphtheria he saw was not the first and the only one which had occurred there. No special precautions had been taken to prevent contamination of the milk, and no information had been communicated to him of the existence of the disease. The magistrates held the case proved, and inflicted a fine.

The case presented several curious features in its course, which require a brief notice from us. It appears that neither before nor after examining the case of diphtheria did Dr. Coleman and Dr. Jones communicate with Dr. Robert Collum, the medical gentleman in attendance upon the case, and of this Dr. Collum complained in the witness-box. Moreover, Dr. Coleman and Dr. Jones are represented as "rigorously cross-examining" Dr. Collum in the witness-box. No explanation is given of the circumstances under which the ordinary rule of professional courtesy was set aside in this instance, or as to medical men assuming the anomalous position of cross-examiners of a brother practitioner in a court of justice. A statement of Dr. Collum's in the course of his evidence, that he was unaware of the regulations made for the government of dairies is noteworthy. Has the Surbiton Sanitary Authority been sufficiently careful to make the medical practitioners in its district aware of the relations they would have with them in reference to infectious diseases?

INSANITARY SUBURBAN LONDON.—WILLESDEN.

The Sanitary Authority of Willesden, the Local Board, has been seriously discomposured by the action of one of the inspectors of the Local Government Board. Willesden has an unsavoury reputation, and its Local Board has for some time appeared to think it a point of honour to maintain this reputation. Lately, however (and not before it was needed), a Ratepayers' Association has been formed, and, in the interest of the ratepayers, appears to be looking after the operations of the Board, very much to the disgust of the latter. This Association has recently sprung a mine upon the Local Board which bids fair to bring sanitary matters to a crisis in the place. The Board, not unmindful of its own convenience if careless about the comfort and health of the ratepayers whom it presumably represents, asked the Local Government Board for permission to borrow money to purchase a site for offices and a store-yard. Whereupon Mr. Thornhill Harrison, C.E., was directed to make inquiry on the spot as to the circumstances under which the loan was needed. This gave occasion for a deputation of the Ratepayers' Association to appear before the inspector, and state their grievances as to drainage. The Board, not anticipating anything besides a formal inquiry, were taken wholly by surprise, and protested against the intrusion of any subject into the inquiry other than the question of site for offices and store-yards, when they found to their dismay that Mr. Harrison was empowered to make inquiry as to the doings of the Board with respect to previous correspondences with, and projects submitted to, the Local Government Board, and which in some way appeared to be at a standstill. The end was, that Mr. Harrison, as reported in the local press, expressed the opinion that the Local Board had "grossly neglected its duty in the sewerage matter," and

he gave the Board to understand that unless the Board quickly mended their ways it would presently, in all probability, be called upon to experience the somewhat awkward pains and penalties provided by law for the control of recalcitrant local authorities. In other words, the Local Board had asked for a loan to promote the comforts of the members and its officers, and found itself landed within a very measurable distance of a writ of mandamus.

COMPULSORY NOTIFICATION OF INFECTIOUS DISEASES.

An influential deputation, which included the Presidents of the Colleges of Surgeons and Physicians in Ireland, waited on the Lord Mayor of Dublin on Wednesday last, the 17th inst., for the purpose of obtaining the co-operation of the Corporation of Dublin in reference to the introduction of a Bill in Parliament by the city members, for the compulsory notification of infectious diseases in Dublin. Dr. MacDonnell, President of the Dublin Branch of the British Medical Association, introduced the subject, and stated that both the Colleges of Physicians and Surgeons approved of the proposed measure, and had passed resolutions in reference to the matter. It was suggested that the notifying of an infectious disease occurring in any household should be carried out by the proprietor or head of the house where the disease existed, and not by the medical attendant, the majority of the deputation believing that if the latter procedure was adopted, it would lead to a breach of confidence on the part of the practitioner. It was also intended that the head of the house in which the disorder existed should receive a printed notification from the physician in attendance to that effect, and should then be compelled, under a penalty, to communicate the same to the sanitary authority. It was pointed out that notification of infectious diseases existed in several parts of England, in Edinburgh, the United States, &c.; and that although objections had been made at its introduction in those places, yet the arrangement had worked satisfactorily. The Lord Mayor promised every assistance in his power, and ultimately proposed that a deputation should wait on the Chief Secretary for Ireland, to induce him to introduce a Bill, or, if not, to promise his support to any private member taking the initiative in the matter. He also thought that the Bill should not be confined to Dublin, but should extend to the whole of Ireland.

THE LOWER THAMES VALLEY SEWERAGE.

It is reported that the Local Government Board has refused to assent to the Molesey scheme for the drainage of the districts placed under the Lower Thames Valley Main Sewerage Board, and which formed the subject of a protracted public inquiry by one of the engineering inspectors of the Board not long ago, and has recommended that a more general scheme, known as the West Kent scheme, suggested by Sir Joseph Bazalgette, should be adopted. This latter scheme, however, was, we understand, reported against by the late Colonel Cox, R.E., then one of the engineering inspectors of the Local Government Board, about five years ago.

The "little bill" for the Lower Thames Valley sewerage inquiry, held not long ago by one of the engineering inspectors of the Local Government Board, is reported to amount to £19,804.

DISSEMINATION OF SCARLET FEVER BY MILK.

Dundee appears to be the scene of a somewhat extended outbreak of scarlet fever, caused by the dissemination of the infection in the milk supplied from two dairies. The disease, it was found, followed the distribution of the milk from the two dairies in question, and scarlet fever was discovered to exist among inmates of both dairies.

A large and important deputation, headed by the Duke of Bedford and Mr. Brand, the Speaker of the House of Commons, waited upon Mr. Dodson, the President of the Local Government Board, on the 12th inst., to urge upon his attention the mischief to property and to the public health caused by the increasing liability to the flooding of our rivers, and the necessity for legislation on the subject, with a view of regulating the course of streams and limiting their overflow. The deputation assumed that the report of the Lords' Committee upon River Conservancy generally supplied a basis upon which legislation might proceed. Mr. Dodson undertook to submit the views of the deputation to

his colleagues in the Government, and assured the members that they would receive the consideration that the gravity of the subject demanded.

The Local Government Board for Ireland have recently had under consideration the observations made in the House of Commons by Mr. Moore, M.P. for Clonmel, as to certain alleged abuses and irregularities in the Belfast Workhouse; and as the Chief Secretary for Ireland undertook that the charges made by Mr. Moore should be thoroughly sifted, a searching inquiry will shortly be instituted as to the general management of the institution by the guardians, and its present condition, having reference specially to the discipline and classification of the inmates. Also as to the state of health and the rate of infant mortality, and the accommodation for the destitute poor, having regard to the recent order of the Local Government Board limiting the number of inmates. The inquiry will be conducted by two inspectors, Mr. Burke and Dr. MacCabe.

A member of the Vestry of Lambeth was on the 12th inst. fined by the police magistrate of that district £5, to which were added costs amounting to £1 11s., for having neglected to comply with the regulations of the Lambeth Water Company in regard to the constant supply of water to certain houses belonging to him. On a first hearing of the case the defendant had promised to carry out the regulations, but yesterday it was shown that he had complied only in part, and had actually cut off the supply of water to the closets of the houses.

Dr. Tatham, the medical officer of health for Salford, observes in his last weekly report: "I cannot too strongly impress upon the teachers of elementary schools the necessity of preventing the attendance at school of children coming from infected homes, and I desire to caution parents against sending their children to school as long as infectious disease exists at home. The proceeding is illegal, and offenders, if discovered, will be severely dealt with by the Corporation."

At the meeting of the Metropolitan Asylums Board on the 13th a complaint made by a local sanitary authority in Hampshire that the box of clothes of a patient who had died in the Homerton Fever Hospital had been sent without disinfection from the hospital to his friends, and thus caused an outbreak of fever in the locality where they lived, proved to be unfounded. The box of clothes in question had at no time been at the hospital.

It is currently reported that public vaccination in Leicester is so seriously in arrear that the parents of not less than 1200 children are liable to be summoned for neglect, this number being added to at the rate of 400 per quarter. The Local Government Board is endeavouring to induce the board of guardians (the local vaccination authority) to take the necessary measures for amending this serious state of things.

It was stated at a recent meeting of the Hawarden petty sessions, in a case in which the Hawarden Sanitary Authority had taken proceedings against an individual for permitting a house to be occupied which was unprovided with a proper supply of water, that the law did not allow the provision of rain-water to be held as a sufficient supply.

An unusual prevalence of enteric fever at Totnes has been brought to the notice of the Local Government Board, and Dr. Parsons, one of the medical inspectors of the Board, has been instructed to investigate the sources of the prevalence, and, generally, the sanitary condition of the town.

The Lancashire and Cheshire Branch of the Association of Municipal and Sanitary Engineers was held at Salford on the 5th inst. The members inspected the concrete sewage-tanks now in course of construction by Mr. Arthur Jacob, the borough engineer.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

The rate of English urban mortality has shown scarcely any variation during the past four weeks, although under the influence of unseasonably low temperature it has somewhat exceeded the average for the period. In twenty of the largest English towns, estimated to contain in the middle of this year a population of seven and a half millions of persons, or nearly one-third of the entire population of England and Wales, 5112 births and 3279 deaths were

registered last week. The births were 73 below, while the deaths exceeded by 4, the average weekly numbers during 1879. The deaths showed a further slight increase of 21 upon recent weekly numbers, and were equal to an annual rate of 22·8 per 1000, against 22·6 and 22·7 in the two preceding weeks. The lowest death-rates in the twenty towns last week were 17·1 in Bristol, 18·7 in Sheffield, 18·8 in Plymouth, and 19·4 both in Portsmouth and Oldham. The rates in the other towns ranged upwards to 25·3 in Liverpool, 26·1 in Salford, 27·2 in Newcastle-upon-Tyne, 28·0 in Norwich, and 29·1 in Sunderland. During the first six weeks of the current quarter the death-rate in these twenty towns averaged 22·3 per 1000, against 21·3 in the corresponding periods of the four years 1876-9.

The deaths referred to the seven principal zymotic diseases, which had been 473 and 428 in the two preceding weeks, rose again to 474 last week; they included 163 from scarlet fever, 71 from measles, 69 from fever (principally enteric), and 62 from whooping-cough. The annual death-rate from these seven diseases averaged 3·3 per 1000 in the twenty towns, and ranged from 1·4 both in Plymouth and Wolverhampton, to 7·3 and 8·9 in Salford and Sunderland. The fatal cases of scarlet fever, which had been 167 and 150 in the two previous weeks, rose again to 160 last week, and showed the largest proportional fatality in Sunderland, Norwich, and Brighton. The greatest fatality from measles occurred in Salford and Newcastle-upon-Tyne. The highest death-rates from enteric fever were returned in Norwich, Salford, Leicester, and Nottingham. Diphtheria caused 16 deaths in London, 4 in Liverpool, 3 in Portsmouth, and 2 in Birmingham. The fatal cases of small-pox in London, which had been 2 and 7 in the two previous weeks, further rose to 17 last week, and exceeded any weekly number since the end of April last. The number of small-pox patients in the Metropolitan Asylum Hospitals, which had been 77, 105, and 114 at the end of the three preceding weeks, further rose to 118 on Saturday last; the number of new cases of small-pox admitted to these hospitals during the week was 31, against 38 and 24 in the two previous weeks. The Highgate Small-pox Hospital contained 9 patients on Saturday last.

The deaths referred to diseases of the respiratory organs in London, which had steadily increased from 124 to 355 in the nine preceding weeks, further rose to 421 last week, and exceeded the corrected average number in the corresponding week of the last ten years by 9; 271 resulted from bronchitis and 99 from pneumonia. The annual death-rate from lung diseases was equal to 6·0 per 1000 in London, and to 6·7 in Liverpool.

In the twenty towns last week 79 deaths were registered without the production of a medical certificate or the holding of an inquest; these were equal to 2·4 per cent. of the total deaths. The proportion of uncertified causes of death did not exceed 1·1 per cent. in London, while it averaged 3·7 per cent. in the nineteen provincial towns. The largest proportion of uncertified deaths occurred in Bradford, Sunderland, Brighton, and Liverpool.

HEALTH OF SCOTCH TOWNS.

In eight of the largest Scotch towns, having an estimated population of rather more than a million and a quarter persons, the annual death-rate last week was equal to 23·8 per 1000, against 24·2 in each of the two preceding weeks, and was one per 1000 above the average rate in the twenty large English towns. The rates in the eight Scotch towns ranged last week from 19·5 and 20·1 in Dundee and Paisley, to 25·6 and 30·1 in Aberdeen and Greenock. The deaths referred to the seven principal zymotic diseases in the eight towns, which had been 149 and 115 in the two previous weeks, rose again to 125 last week; they included 53 from scarlet fever, 20 from diarrhoea, 15 from measles, 15 from whooping-cough, 14 from fever, 8 from diphtheria, and not one from small-pox. The annual death-rate from these seven diseases averaged 5·0 per 1000 in the eight towns, and exceeded by 1·7 the average rate from the same diseases in the twenty English towns. In the eight Scotch towns the zymotic death-rate ranged from 0·3 and 3·2 in Dundee and Paisley, to 7·1 and 7·2 in Leith and Edinburgh. The high zymotic death-rate in the two last-mentioned towns was due to the excessive mortality of scarlet fever; the deaths referred to this disease in the eight towns, which had been 52 and 47 in the two preceding weeks, rose again to 53, of which 27 occurred in Edinburgh, 20 in Glasgow, and 5 in Leith. The 15

deaths from measles included 12 in Glasgow, where but 4 and 2 deaths respectively were recorded from this disease in the two preceding weeks. The 15 fatal cases of whooping-cough were 7 more than those returned in the previous week, and included 7 in Glasgow and 3 in Greenock. The deaths referred to fever, principally enteric, which had been 13 and 20 in the two preceding weeks, declined again to 14 last week; 9 occurred in Glasgow and 3 in Aberdeen. The fatal cases of diphtheria, which had been 28 and 15 in the two previous weeks, further declined last week to 8, of which 7 were returned in Glasgow. The deaths referred to acute diseases of the respiratory organs (bronchitis, pneumonia, and pleurisy) in the eight towns, which had been 120, 121, and 127 in the three preceding weeks, further rose to 154 last week; the annual death-rate from these diseases last week was equal to 6·2 per 1000 in the eight Scotch towns, against 5·4 in London.

HEALTH OF DUBLIN.

The death-rate in Dublin showed a considerable increase last week upon the high rates that have recently prevailed. The annual rate of mortality from all causes in the city, which had been equal to 34·8 and 34·4 per 1000 in the two preceding weeks, rose last week to 39·6, a higher rate than has prevailed in any week since the middle of April last. During the past six weeks of the current quarter the death-rate in the city has averaged 34·6 per 1000, against 21·4 in London, and 22·4 in Edinburgh. The 239 deaths in Dublin last week exceeded those in the previous week by 32, and included 28, or 12 per cent., which were referred to the seven principal zymotic diseases, showing a decline of 8 from the number returned in each of the three preceding weeks; 7 resulted from fever (including typhus, enteric, and simple), 7 from whooping-cough, 6 from scarlet fever, 6 from diarrhoea, one from small-pox, one from measles, and not one from diphtheria. The annual death-rate from these zymotic diseases was equal to 4·6 per 1000 in Dublin last week against 3·2 in London, and 7·2 in Edinburgh. The deaths referred to fever and scarlet fever showed a decline of 2 and 7 respectively from the numbers in the previous week, whereas the fatal cases of whooping-cough were rather more numerous. The death-rate from fever in the city during the past six weeks has considerably exceeded that which prevailed in the preceding three months. Infant mortality showed a further increase last week, and the deaths of persons over sixty years exceeded the number in the previous week by 10.

PRESTON MORTALITY STATISTICS.

Preston is one of those towns which are mainly responsible for the unfavourable position in the sanitary scale which Lancashire takes among the English counties. Preston is included among the fifty large town districts for which the Registrar-General in his quarterly and annual reports publishes certain mortality statistics. It appears from these reports of the Registrar-General that during the eight years 1872-9 the annual death-rate in Preston ranged from 27·9 in 1872 to 36·1 in 1874, while the average annual rate in the eight years was no less than 31·0 per 1000. The annual rate of mortality from the seven principal zymotic diseases during the same period also showed a marked excess, and averaged 6·2 per 1000. The excess of infant mortality affords further evidence of the unsatisfactory condition of the town. The Registrar-General's annual summaries show that the proportion of deaths under one year to births was equal to 214 and 225 per 1000 in Preston in 1877 and 1878; and that even in 1879, when the cold wet summer caused an unusually small fatality of diarrhoea, the proportion of infant mortality was so high as 194 per 1000. These figures sufficiently prove that the recent high death-rate in Preston, to which the medical officer of health has called the attention of the Local Sanitary Authority, is no unusual event. It is true that the fatality of diarrhoea showed a marked excess in Preston during July, August, and September, and so raised the death-rate above its normal condition. The annual death-rate from all causes in Preston averaged 25·1 per 1000 in July and 37·8 in August; it appears too, from a report recently presented by the medical officer of health to the Sanitary Authority, that the death-rate during September was equal to 36·3 per 1000. This was almost entirely due to the exceptional fatality of diarrhoea, to which 50 deaths were referred in July, 98 in August, and 129 in September. The deaths referred to other zymotic dis-

eases, if we except the fatal prevalence of measles during the spring, have not till recently shown a large excess; but the high death-rate from zymotic diseases prevailing in recent years has been maintained, and the rate of infant mortality during the first nine months of the year averaged 239 per 1000 births. It may be hoped that this long-continued excess in the rate of mortality in Preston, which has recently attracted considerable attention, will impress upon the Town Council the urgent necessity for vigorous sanitary action, under the advice of their medical officer of health.

Since the above was in type we learn from the medical officer of health's report for October that a fatal epidemic of typhoid fever prevailed during that month.

VITAL STATISTICS IN ALGERIA.

Dr. René Ricoux of Philippeville has recently published some interesting statistical studies on the colony of Algeria. The increased facilities of communication will render this portion of the Mediterranean coast more and more accessible to invalids, and there are already a good number of English patients who spend the winter in Algeria. Unfortunately here, as elsewhere in the south, the sanitary condition of the towns is so neglected that the good effects of the climate are counteracted by the bad drainage, &c. Nevertheless, the number of persons who attain remarkably old age in Algeria is more considerable than in France, Italy, Austria, Belgium, and even Sweden. Thus we find that among the deaths registered at Algiers from 1864 to 1877 there were 1390 persons who died at ages varying from 80 to 118 (as asserted) years. This figure is subdivided in the following manner:—845 persons died between their 80th and 90th year; 283 from 90 to 100. As many as 88 persons lived to be 100 years old; 9 died at 103 years; 15 at 104; 8 at 110; 4 at 115; and 2 at 117 and 118 years of age. The remaining 36 centenarians died at an undefined period between the ages mentioned. Of these 1390 aged individuals 530 were men and 859 women, showing that in Algeria, as elsewhere, it is the women who live the longest. The proportion of persons who in Algeria die between 80 and 90 years is as 60 to 1000 deaths; from the years of 90 to 100 the proportion is as 26 per 1000; and 9 persons in 1000 are centenarians.

More important than these statistics of old age is the general death-rate, and this, according to Dr. Ricoux's calculations, shows a marked improvement. The mortality among the French colonists from 1853 to 1856 reached the very high figure of 46·3 per 1000; but in 1872 this death-rate had fallen to 33 per 1000, and in 1876 it had reached the proportion of 24·7. The augmentation in the number of births during the same period is also very remarkable. The actual increase of the French population in the metropolis of France is equivalent to 3·16 per 1000 per annum, whereas among the French in Algeria the proportion is set down at 8·89 per 1000.

SCARLET FEVER IN SUNDERLAND.

During last week no less than sixteen more fatal cases of scarlet fever were recorded in Sunderland—a higher weekly number than has been previously recorded this year. The deaths from this disease within the borough, which had been 72 and 41 in the first two quarters of the year, rose again to 65 in the three months ending September last, and in the past six weeks of the current quarter no less than 64 more cases have been recorded. During the ten years 1870-79 the annual death-rate from scarlet fever in Sunderland averaged 1·19 per thousand of the estimated population, and considerably exceeded the average rate in most other large towns. Among the twenty large English towns dealt with in the Registrar-General's Weekly Return the annual death-rate from scarlet fever during those ten years averaged 0·89 per 1000, and ranged from 0·32 in Plymouth to 1·50 and 1·53 in Sheffield and Oldham. In England and Wales generally, and in most of the large towns, the fatality of scarlet fever in the five years 1875-9 showed a considerable decline from that recorded in the five preceding years, 1870-4. In Sunderland, however, the fatality of scarlet fever in the last five years has considerably exceeded that which prevailed in the preceding quinquenniad; the annual rate, which did not exceed 1·02 in the five years 1870-4, rose to 1·79 in the following five years, 1875-9. The disease in Sunderland showed constant and increasing fatality during the four years 1876-9, and the recorded fatality in the first 45 weeks of this year has shown a still higher death-rate.

This fatal prevalence of scarlet fever in Sunderland during nearly five years deserves the earnest attention of the Town Council and their medical officer of health. It would be interesting to know to what extent the hospital accommodation of the sanitary authority has been turned to account for isolating scarlet fever patients during the long epidemic.

PUERPERAL MORTALITY IN PARIS.

The long-continued epidemic prevalence of small-pox and enteric fever in Paris affords the strongest evidence of the unsatisfactory sanitary condition of that city, which is corroborated by a variety of indications in the carefully compiled mortality statistics issued under the superintendence of Dr. Bertillon. It appears that during the first nine months of this year no less than 315 deaths were referred to puerperal diseases, including 2 under the age of fifteen, 247 between the ages of fifteen and thirty-five, and 66 over the age of thirty-five years. These deaths were equal to 7·3 per 1000 of the births registered, whereas in England and Wales the proportion of deaths from puerperal causes to births averages about 5 per 1000. In London, indeed, during the corresponding nine months the recorded deaths due to childbirth did not exceed the proportion of 3·8 per 1000. Thus Paris mortality from these causes has been nearly twice as fatal as that in London. We know that the registered causes of death in England understate the actual puerperal mortality, but it is unlikely that these causes of death are more correctly returned in Paris, and the marked excess of puerperal mortality in that city must be due to other causes.

HEALTH MATTERS GENERALLY AT HOME AND ABROAD.

DIPHTHERIA IN RUSSIA.

A medical conference was held in Poltava on the 22nd ult., with a view to consider what further measures could be taken to arrest the progress of diphtheria in the government. The medical men throughout the province were invited, and there were present delegates from Kharkow (including Professor Jacobi), Catherinoslaw, and Kherson, and Dr. Hubner from St. Petersburg also attended. The conference was opened by an address from M. Joukow, the Vice-governor of the province, and afterwards M. Pétrow, a member of the zemstvo, submitted the following questions for the consideration of the conference. What are the means best for adoption in order to place in force the measures recommended against diphtheria? What have we learned from experience as to the most efficacious method of medical treatment? What are the most practical means of disinfection? Is it not possible to adopt more energetic measures for arresting the spread of the disease in the localities where it now prevails? Is there evidence to show that the disease has appeared in any place where it has not been imported? What data exist concerning the progress and mode of propagation of diphtheria? What is the mean duration of the disease? What is the best mode of proceeding in order to collect precise data regarding the progress of this epidemic? Is the assembling together of the medical men necessary for the collection of these data? What can the zemstvo do to assist in arresting the progress of the disease?

The conference lasted three days, but within that period it had been found possible to consider two subjects only—namely, the distribution of the malady in the different districts of the province, and the means of disinfecting dwellings. As to distribution, it was found that the central districts had suffered most from the disease; and with regard to disinfection an irreconcilable difference of opinion was manifested, which separated the conference into two opposing parties. On the one side it was held that disinfection was a necessary measure of protection; on the other it was regarded as futile.

A sanitary detachment, consisting of two physicians, MM. Nikotine and Norbutt, four assistant-surgeons, and eight sisters of charity, has been sent by the medical department of the Imperial Government to the province of Samara to assist in combating diphtheria there.

SANITARY WORK IN AMERICA: ST. LOUIS.

We have of late been subjected to reproof by more than one of our Transatlantic brethren for expressing ourselves as if the principles of sanitary work applicable to England and Europe would apply also to the United States of America.

We pleaded in our excuse that if we had fallen into error we had erred in good company, and instanced Buck's recent book as an example of a whole body of American writers who had been equally led astray. We are reminded of the subject by receiving the Annual Report of the Health Commissioner of the city of St. Louis for the fiscal year 1879-1880, and by observing how the methods and phraseology of sanitary reasoning and practice familiarly in use here are employed also in the great city on the banks of the Mississippi. In what follows, quoted almost at random from Dr. Laedeking's report, we might be quoting from the report of one of our own medical officers of health. Writing of the use made of the mortality statistics of the city for detecting the distribution of the deaths from different diseases therein, Dr. Laedeking observes: "Closer examination revealed that these fatal cases occurred within circumscribed boundaries in the wards in question. It needed but an investigation of the places most affected to reveal the existence of glaring faults. To be more explicit, there were found wells containing impure water, from which the houses in which repeated deaths from the above stated causes had occurred were supplied; there were found privies of faulty construction, permitting a percolation of their contents into cisterns, from which water for drinking was drawn; there was found, in one instance, a badly-trapped sewer pipe that allowed obnoxious vapours to escape into the habitations occupied by numerous persons, old and young," and so forth. The evils being similar, who can doubt that the principles of relief applicable here are applicable there also? Dr. Homan, the chief sanitary officer, gives us, indeed, a very home-like report of his proceedings for the year, and we observe that the municipality of St. Louis has issued an ordinance for regulating the construction of house-drains in the city, which proves that house-drains there are liable to the same evils as here, and that the remedies deemed best for those evils, including the proper ventilation of the drains, are in principle similar to those incorporated in the Model Bye-laws as regards New Buildings, issued by the Local Government Board.

YELLOW FEVER AND DENGUE.

In its monthly review of mortality for September, 1880, the last received number of the *National Board of Health Bulletin*, U.S. (vol. ii. No. 1), observes: "The statement made in the number for August, that no yellow fever had appeared at any of the exposed points on the coast, must now be modified in view of the acceptance by the National Board of Health of the report of Dr. George M. Steinberg, U.S.A., as published in No. 15 of the *Bulletin*. The report declares the fever which has prevailed since August on the Lower Mississippi, but which is now rapidly subsiding, to have been yellow fever of mild type, and causing in most places but a small mortality. No special measures of isolation or quarantine were adopted, but the disease did not spread beyond the district first affected.

"The epidemic of dengue fever in the South, extending from Louisiana to South Carolina, which is fast disappearing, has affected a large number of people, but caused comparatively few deaths."

Scarlet fever is reported to be prevalent at Hill Fields, Coventry. On the recommendation of the Sanitary Committee of the City Council, the largest public elementary school has been closed.

Scarlatina is prevailing in Winchester, principally in the College. All the cases seem to be of a mild type, and no fatality from the disease has as yet been recorded.

THE SERVICES.

As will be seen by an advertisement in our present issue, the next examination of candidates for commissions in the Medical Department of the Army will be held at the London University, Burlington-gardens, on the 14th of February next and two following days.

INDIA OFFICE, Nov. 15th.—The Queen has approved the resignation of the service of Surgeon Arthur Hemsted of the Bengal Army.

MILITIA MEDICAL DEPARTMENT.—Surgeon-Major Temple Chevallier Paley, 2nd West York Militia, resigns.

his commission; also is permitted to retain his rank, and to continue to wear his uniform on his retirement.

ADMIRALTY.—Fleet-Surgeon W. H. Lloyd has been appointed to the *President* (additional), for temporary service.

Correspondence.

"Audi alteram partem."

GUY'S HOSPITAL.

To the Editor of THE LANCET.

SIR,—I think my friend Mr. Lucas has not correctly gauged the moral support the profession was ready to accord the Guy's staff, nor fully realised the strong and widespread sympathy felt for its members by the staffs of other hospitals.

In his letter which appeared in THE LANCET of November 13th he asks, "Of the dozen medical schools in London which has moved to our assistance?" But, Sir, neither the medical schools nor the profession generally have had an opportunity of moving to their assistance. Throughout the greater part of this prolonged struggle the Guy's staff were naturally credited with knowing their own case best, and of having calculated the cost of the warfare into which they had entered. Then came the capitulation, and with such precipitancy that outside assistance was no more than a dead letter.

Mr. Lucas further complains, "Of the hundreds of teachers, two only have taken up our cause." But I have good reason to believe that others, like myself, have attempted to lift up their voices, and have not been heard. I feel convinced that Mr. Lucas is under a mistaken impression if he supposes that the profession has had no further thought about the Guy's conflict than to "look on amused;" and I feel assured that there are very many who deplore a struggle that has, amongst other results, led to the self-imposed resignation of the esteemed Senior Physician and Surgeon of the Hospital.

I am, Sir, your obedient servant,

HENRY MORRIS,

Surgeon to the Middlesex Hospital.

Mansfield-street, Portland-place, W., Nov. 15th, 1880.

To the Editor of THE LANCET.

SIR,—The Senior Physician and Senior Surgeon of Guy's have, I see, resigned their appointments, a step which the profession at large have been expecting, and have encouraged them to take. So far as one can understand the question at issue between them and the governors, no other honourable course was open to them, and we wait impatiently—for the time is fully come—to hear that their colleagues have followed their example. Let this be done, and let the *esprit de corps* of the profession rule us to a man, and the governors will be fittingly discomfited. The course to pursue then is plain. The staff of Guy's having resigned, we presume the governors will desire to fill up the vacancies thus caused, and to this end will advertise. Let them advertise and advertise, and let us—we are in honour and loyalty bound to do it—hold aloof from them and their hospital and nursery hobby, until they reinstate our brethren, giving them full control over the nursing department, as common sense dictates; or let Guy's Hospital be closed, and that for all time, as a standing proof and illustration of the folly which is not seldom found in boards and corporations. Only let us be true to each other, and we may read a lesson to the governors of hospitals and other institutions with which we have to do, which I believe is much needed, and which, it is to be hoped, they will not very soon forget.

Your bold defence of the staff of Guy's, in their righteous opposition to the governors, does you credit; it contrasts favourably with the shilly-shally vapouring of some of your contemporaries.

I remain, Sir, yours respectfully,

WILLIAM DALE, M.D. Lond.

King's Lynn, Nov. 16th, 1880.

ANTISEPTIC MIDWIFERY.

To the Editor of THE LANCET.

SIR,—There is, I think, no doubt that a very large proportion of deaths resulting from confinement are due to puerperal fever. To general practitioners the subject is of the greatest practical importance, since cases of midwifery, scarlet fever, erysipelas, and foul wounds, are not unfrequently under their care at the same time. A case of puerperal fever is one of burning anxiety to the attendant, both at the time and for weeks afterwards, as well as of pecuniary loss. The sacrifice of a life under such circumstances is peculiarly distressing, and the subject has for years engaged my attention.

The precautions I now adopt are the following, which, I am happy to say, have thus far proved effectual. After seeing erysipelas, &c., I change my clothes, and always carry with me a collapsable tube, made for me by Messrs. Richardson of Leicester, containing a solution of thymol in firm vaseline. It should be rubbed well on to the hands when quite dry, and will then last a long time, as it is very difficult to wash off, much more so than lard or oil.

These tubes are very portable and convenient, and I believe their habitual use protects both surgeon and patient from possible contagion.

I am, Sir, yours faithfully,

W. PAULSON, L.R.C.P. LOND.

Mount Sorrel, Loughborough, Nov. 1st, 1880.

PARIS.

(From our own Correspondent.)

THE illness of one of the most popular English physicians of Paris, the Hon. Dr. Alan Herbert, who has been suffering from typhoid fever, has caused a considerable amount of uneasiness amongst the English residents here. A London journal (*Truth*) attributes our *confrère's* malady to drinking contaminated Eau de Seltz, and quotes a formidable analysis which was recently presented to the Academy of Sciences by M. Boutney, in support of this theory. On the other hand, the *Dix-neuvième Siècle* of the 14th inst. contains a letter signed by M. Mondoff, president of the syndical chamber of effervescing water manufacturers, protesting against an article which appeared on the subject in that journal, and claiming that the public should suspend judgment until further and more impartial analyses can be made. According to M. Mondoff, the preparation of seltzer water is supervised by medical inspectors appointed by the Comité d'Hygiène et de Salubrité, and for the last fifty years no ill effect has ever been known to follow its use. The Paris hospitals alone consume 150,000 bottles annually, which are ordered to the patients by the highest authorities in the medical profession, and this in itself is not only proof of its innocuity, but also strong evidence in favour of its usefulness. There are, of course, two sides to every question. Considered from a medical point of view, lead-contaminated effervescing waters may be useful in some cases, such as advanced phthisical patients; this may perhaps account for the reputation which Eau de Seltz enjoys in many of the hospitals, where, moreover, the concentrated typhoid atmosphere within is a perfect guarantee against any importation of typhoid from without. But the same thing does not apply to the general public. Lead as an article of food gives unsatisfactory results, and notwithstanding the protective influence which M. Pasteur has shown to reside in long-cultivated and sufficiently oxygenated virus, most of us would prefer to take our typhoid attenuated in the form of Paris smells, rather than drink it in the shape of an effervescing water, which may be shown by analysis to contain an uncomfortable amount of "dry residue."

The most important event of last week was the "strike" of the medical experts of the metropolitan courts of law. The professor of legal medicine having considered that a certain sentence in the procureur-général's opening speech was "injurious" to himself and colleagues, called a meeting of forensic practitioners, which was attended by seventeen leading members of the profession. It was there decided that until the honour of legal medicine had been satisfied by a proper explanation, no new "*expertises*" should be under-

taken, and the decision of the meeting was notified to the keeper of the seals. Fortunately for public business the procureur-général has made an *amende honorable*, which has enabled M. Brouardel and his susceptible associates to return to their duties.

PYRMONT AND OEYNHAUSEN.

(From our Roving Correspondent.)

PYRMONT has been so almost absolutely forgotten by the profession and the public in England that it is perhaps necessary to state that it lies about fifty miles south-west of Hanover, and is one of the most important places in the Principality of Waldeck-Pyrmont, a petty German State which still retains a semi-independence. The situation of Pyrmont is decidedly advantageous. It lies along the northern side of a spacious valley, enclosed by hills rising from 200 to 400 feet above the level of the plain. The valley is triangular in shape, nearly equilateral, each side being between two and three miles in length. The town is therefore well protected to the north by hills, and is itself slightly raised above the level of the beautiful tract of well-timbered pasture land, watered by the river Emmer (a tributary of the Weser), which forms its southern outlook and occupies almost the entire area of the valley. At the southern extremity of the valley, wedged as it were into the very apex of the triangle, is the quaint old fortified village of Lügde, the towers of which peeping out between the clusters of fine trees in the foreground are a very great addition to the landscape. The soil is a light loam which drains easily, and the rapid running off of the rain-water is secured by the natural slope of the ground from north to south. Owing to the protection to the north the heat in summer is (for the latitude) considerable, but, the valley being wide, there is never any tendency to stagnation of the air and to that baking, stifling heat which is so common in narrow, pent-up localities.

Every spring has a history, but few have such a long or such a magnificent history as Pyrmont. It was certainly known to the Romans, and when in 1863 extensive alterations were made in the basins of the springs, there were found, some twelve or sixteen feet below the level of the ground, a great number of Roman ornaments and two coins, one of the time of Domitian and another bearing the name of Marcus Aurelius. That Charlemagne quartered in the neighbourhood of Pyrmont in the year 784 seems also to be well established. The springs are mentioned in the manuscripts of Henricus de Herfordia, a monk who lived in a cloister at Minden, and who died in 1370. In the middle of the sixteenth century (about the year 1556) the reputation of the holy well at Pyrmont was at its zenith, and the sick, lame, and halt made pilgrimages to it from far and near, and took away large quantities of the water to distant places. It is recorded that the reputation of Pyrmont towards the close of the seventeenth century was so great that in 1681 there were no less than thirty-four persons of Royal blood present during the season. The year 1716 is remarkable for the sojourn in Pyrmont of Peter the Great and Leibnitz, as well as of George I. of England. In 1744 and 1746 Frederick the Great came to Pyrmont to recruit his health, and since that time a very great number of Royal and distinguished personages have followed his example. Of late years the number of visitors to Pyrmont has shown a tendency to increase, and in the last decade the total has risen from about 5000 to nearly double that number. Its popularity is no matter for surprise, for it possesses some most attractive features. Its modern prosperity dates from the time when no landscape was considered complete without an avenue and a "prospect." When William of Orange was planting the Long Walk at Windsor, when the Grand Monarque was showing to the world to what an extent Dutch symmetry might be carried in his new palace of Versailles, the good people of Pyrmont were engaged in planting avenues of elm, limes, chestnuts, and beeches in the neighbourhood of their precious chalybeate springs. These avenues have now reached a grand maturity, and such an array of stately trees is, probably, scarcely to be found anywhere unless it be in Windsor Forest. The chief chalybeate spring, the Stahl-Quelle, forms

the very centre of the town; around it, in the Brunnen Platz, are grouped the chief hotels and lodging houses, and two stately avenues radiate from it. One of these, the Grand Allee, is composed of four rows of trees, and is nearly a quarter of a mile long, with a slight slope from its northern to its southern extremity, where a pretty fountain sends up a never-ceasing spray to glisten in the sunlight, and where a glimpse is got of the green open pastures, which form a dazzling contrast to the somewhat subdued tints of the umbrageous avenue. The Grand Allee is the chief promenade. Here the band plays, and here takes place that morning and evening parade of female costume, which is an essential feature of every bath, and the sole attraction to many of the visitors. This avenue is flanked on either side by the kursaal, reading-room (containing the previous day's *Times*), theatre, caffee-haus (where formerly were the gaming tables), and the inevitable booths, where it is almost impossible to buy anything which is really needful to anybody. Another charm of Pyrmont will be found in its slightly old-world appearance. The houses are of a style which takes one unconsciously back to the time of cocked hats and pig-tails, and the spick and span new nineteenth-century house is only to be seen on the road to the railway station. The performances at the Schauspiel Haus begin at 6.30, and end at 8, so that it is quite possible to go to the play overnight and to be "on parade" at 6.30 in the morning. Every house in the place has its verandah and its balcony, and it would almost seem as if the rooms themselves are never in actual use, one main object in coming to Pyrmont being to live in the open air. Of one hotel (*Hôtel des Bains*) I can speak from actual knowledge in terms of high commendation, for it has large, airy rooms, and a most excellent cook; and it is right to state that many other hotels have a good reputation. It is one of the advantages of Pyrmont that it is not very close to any big cities. Hanover, which, after all, is but a provincial town, is two hours distant, and Pyrmont is thus not used as a recreation ground by persons who come for the day, and who often prove a great annoyance to the residential visitors. The woods round Pyrmont afford a number of splendid walks, and the views from the summits of some of them well repay the slight trouble of the ascent. There are two natural curiosities within a short distance of the town, which give to the mind's eye a glimpse, as it were, of its subterranean conditions. One is the Erdfalle, two funnel-shaped pits, containing deep water, which are said to have been caused by a collapse of the ground—in one instance so sudden as to have engulfed a countryman who was engaged in ploughing. This accident is said to have occurred in the middle of the seventeenth century; and mention is made of it in the writings of Dr. Bollmann, who in 1661 produced a monograph on Pyrmont. The other natural curiosity is the Dunsthöhle, a cave, from the mouth of which considerable quantities of carbonic acid constantly issue. The approach to this cave is crateriform, and the bottom of the crater, to a height of about eighteen inches, is always filled with carbonic acid, whose deadly effects are shown by the number of birds which are daily killed by attempting to feed in the bottom of the crater, and by the fact that some fifty suicides are recorded to have taken place at this gloomy spot.

Pyrmont owes its reputation to its iron-waters, and it possesses three principal springs—the *Stahl-brunnen*, the *Helenen-Quelle*, and the *Brodel-brunnen*. The first two are used for drinking, and the latter exclusively for supplying the baths in the great bathing-house. The composition of each of these springs is similar. The *Stahl-brunnen* contains 2.71308 parts of solids in every 1000 parts of water, and of these carbonate of lime, sulphate of lime, and sulphate of magnesia form more than two-thirds (the quantity of the latter being 0.45329 in 1000). Bicarbonate of iron is present to the extent of 0.07707 in 1000 parts of water—amply sufficient to give a distinct chalybeate taste. That which gives a distinctive character to the Pyrmont water and constitutes its most pleasant quality is the large amount of free carbonic acid, amounting to between 1200 and 1300 cubic centimetres in the 1000 grammes of water. The temperature is 12° C. (50° F.); and the water as it bubbles into its basin is cool, brilliant, sparkling, and very pleasant to taste. Pyrmont, considered with regard to its iron strength, ranks high among the chalybeate springs of Europe. It is very much stronger than Tunbridge Wells, and takes rank with Schwalbach, and before Spa and Rippoldsau. It contains more carbonic acid than Spa, but much less than Schwal-

bach. Pyrmont has also a brine spring, containing from 1 to 3 per cent. of salt, with ample bathing arrangements. Pyrmont is 400 feet above the sea-level, and the air is fresh and invigorating. The visitors are mainly of the female sex, and, as is the case at all iron springs, anæmic girls form the greater proportion of the cure-guests. There is a fashion in all things, and baths and health-resorts all have their day. Some say that Pyrmont's day is past, and that St. Moritz and other mountain chalybeates have effectually superseded it. I doubt this. Pyrmont has claims which are incontestable, and charms which age alone can give; and I believe that ere long, like Rip van Winkle, it will awake from its sleep of fifty years, renew its youth, and again become a fashionable resort.

(To be concluded.)

Obituary.

EDWARD MERYON, M.D., F.R.C.P.

By the sudden death, on the 8th inst., of Dr. Edward Meryon, at his residence, Clarges-street, Mayfair, the profession has sustained the loss of an accomplished and practical physician, and those who knew him a trusty and sincere friend. In the practice of his profession he not only brought his great professional experience to bear thoughtfully and conscientiously in every case in which he was consulted, but his kind and friendly sympathy was ever called into exercise as an auxiliary to his skill. He was single-minded, liberal, and accomplished, and his well-stored mind rendered his society at once entertaining and instructive.

Dr. Meryon was the author of several works, amongst the more important of which may be mentioned "The History of Medicine," "The Physical and Intellectual Constitution of Man," "Practical and Pathological Researches on the Various Forms of Paralysis," "The Functions of the Sympathetic System," &c.

In the memory of a large number of old acquaintances, especially many members of the Athenæum Club, he will long live as the type of a good, noble, and true-hearted gentleman.

JAMES SMITH WALTERS, Esq., F.R.C.S.

THIS gentleman died at his residence in Matlock-street Bakewell, on Saturday, Nov. 6th, after rather a short illness, of heart disease. Mr. Walters came of a respectable family at Cheadle, Staffordshire, and was educated at Repton grammarschool, and was afterwards pupil of the late Mr. Shaw, of Wirksworth. Mr. Walters had spent a long and useful life (over fifty years) in Bakewell. He held the appointment of surgeon to the Duke of Rutland and his household when at the Woodhouse and Longshaw Lodge; he was medical officer of the workhouse and district of the Bakewell Union, under the board of guardians, from its commencement in 1838 until the last few years; surgeon to the Volunteer Corps, which appointment he held with great pride and pleasure; also surgeon to the Odd Fellows and other societies in the town and neighbourhood, and was much and deservedly respected by a numerous circle of acquaintance.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—

The following gentlemen, having passed the required examination for the diploma, were duly admitted Members of the College at a meeting of the Court of Examiners on Tuesday last:—

Bayes, Frederick Thomas, Walsingham, Norfolk.
Blakesley, Henry John, Birmingham.
Burrows, Henry Chambers, L.R.C.P. Edin., Harrowby.
Cotterell, Edward, Rochester.
Cuffe, R. E. Gilhurst, Horncastle.
Fuller, Herbert Knowles, Basingstoke.
Gosse, Hope Wilkes, Hastings.
Gutierrez, Ponce Ignacio, M.D. Paris, Paris.
Haslam, Geo. James, M.D. Queen's Univ. Irel., Manchester.
Hoare, Alfred, Chapel-street, Park-lane.
Lyle, Samuel Henry, Liverpool.
Mackenzie, J. F. Edward, Newcastle-upon-Tyne.

Pryn, William Wenmoth, L.S.A., Saltash, Cornwall.
Sanders, Charles, Cheshunt, Herts.
Saunders, John Charles, Sheffield.
Strickland, Charles Edward, Warwick.
Waldron, John, Moulsoford, Berks.
Wasse, Gervas Miles, L.S.A., North Taunton, Devon.

The following were admitted Members on Wednesday last:

Bevor, W. Calverley, M.B. Edin., Workop.
Coffin, Arthur Blount, Holford-square.
Cutfield, Arthur, L.S.A., Lee, Kent.
Dummere, Howard Howse, Victoria Dock-road.
Fuller, Henry Roxburgh, Granville-place, W.
Griffiths, Philip Rhys, Aberdare.
Hall, Ben, Huddersfield.
Horsley, V. A. Haden, Kensington.
Jenkins, Thomas Griffiths, L.R.C.P. Edin., Ruthin, N. Wales.
Locker, Edward Hawke, Highgate.
McDonnell, James O'Malley, M.D. Queen's Univ. Irel., Duke-street, S.W.
Owen, Charles Richard, Fulham.
Roper, Arthur Charles, Exeter.
Smith, John, L.S.A., Commercial-road.
Trott, Dudley Cox, Ledbury-road.
Tweedy, Charles, Northallerton.
Willey, Charles Henry, M.B. Edin., Leicester.

The following gentlemen passed the Primary Examination in Anatomy and Physiology at a meeting of the Board of Examiners on the 11th inst.:—

John H. Jones, Howard L. Smith, Henry Roberts, and Charles A. Morris, St. Bartholomew's Hospital; William F. Webster, St. Mary's Hospital; James Merces, Bengal and Cambridge; Edward N. Sheldrake, University College; and George B. Hicks, London Hospital.

Of the 61 candidates examined on the 9th, 10th, and 11th instant 20 failed to satisfy the Board, and were referred for three and one candidate for six months' further anatomical and physiological study.

UNIVERSITY OF LONDON.—The following is a list of the candidates who have passed the recent Second M.B. Examination:—

FIRST DIVISION.

Banks, William, University College.
Barnes, George Frederick, St. Bartholomew's Hospital.
Berry, Frederic Haycraft, Guy's Hospital.
Buckley, Samuel, Manchester Royal School of Medicine.
Castle, Hutton, St. Thomas's Hospital.
Day, Donald Douglas, St. Bartholomew's Hospital.
Hartley, Robert Nightingale, Leeds Medical School.
Harvey, Alfred, Queen's College, Birmingham.
Hayward, John Davey, University College.
Herschell, George Arie, St. Thomas's Hospital.
Jones, Robert, St. Bartholomew's Hospital.
Meek, John William, Guy's Hospital.
Money, Angel, University College.
Newsholme, Arthur, St. Thomas's Hospital.
Paddle, James Isaac, B.A., B.Sc. University College.
Parkes, Louis Colman, University College.
Penny, Edward, Guy's Hospital.
Permewan, Arthur Edward, University College.
Pollard, Bilton, University College.
Rice, Edward, St. Bartholomew's Hospital.
Rich, Arthur Creswell, St. Thomas's Hospital.
Saunders, Arthur Rich, University College.
Sellers, William, Edinburgh University and London Hospital.
Shaw, John, St. Thomas's Hospital.
Suckling, Cornelius William, Queen's College, Birmingham.
Wainwright, Robert Spencer, Guy's Hospital.

SECOND DIVISION.

Baddeley, Charles Edward, King's College.
Bowe, Francis, St. Bartholomew's Hospital.
Brooke, Henry Ambrose Grundy, B.A., Owens College and Guy's Hospital.
Claremont, Claude Clarke, University College.
Colborne, William Wriothley, University College.
Cuffe, Edward Meade, St. Bartholomew's Hospital.
Daiton, Norman, King's College.
Faulkner, John Thomas, Owens College.
Hurst, George, B.A. Sydney, University of Edinburgh and London Hospital.
Noddy, William John, B.A., University of Edinburgh.
Pickup, William James, University College.
Sayer, Mark Feetham, University College.
Walton, Robert Spence, University College.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Nov. 11th:—

Hunt, Edgar Atlee, Montague-street, Russell-square.
Sturge, Henry Havelock, Highfield-road, Dartford.

The following gentleman also on the same day passed his Primary Professional Examination:—

Dadaboy Sorabji Schroff, Grant Medical College, Bombay.

THE H Division of the Metropolitan Police have initiated a grand entertainment to be given on the 2nd prox. in aid of the funds of the East London Hospital for Children. A similar festival held last year proved, we believe, a conspicuous success.

DR. TEMPLE CHEVALIER PALEY, of Cartmel, has been placed on the Commission of the Peace for the County of Lancaster.

MR. J. E. MITCHELL WILLIAMS, late medical officer in the Blean Union, has been granted a superannuation allowance of £50 a year.

It is now estimated that the number of lives lost in the fire at the lunatic asylum at St. Peter, Minnesota, does not exceed ten to fifteen.

TOWARDS the erection of a new fever hospital at Ayr about £5000 has been subscribed. In addition, the sale of the old building is expected to realise £2000.

THE storm which passed over Buxton on Monday appears, amongst other disastrous effects, to have done considerable damage to the new portion of the Devonshire Hospital in course of erection.

HOSPITAL SUNDAY was held on the 14th inst. in St. Helens and in Bootle, Lancashire. Collections in aid of the respective local medical charities were made in nearly all the churches and chapels of the towns.

THE "Globe" of Thursday states:—A burglary was committed yesterday morning at the private lunatic asylum of Mr. Harrington Tuke, at Chiswick. In order to gain admission to the premises the thieves must have first scaled a very high garden wall which surrounds the premises, and then got in through a back window. The premises were ransacked, and a large amount of valuable property taken away.

BEQUESTS AND DONATIONS TO MEDICAL CHARITIES. Mr. J. Pateshall Jones, late of Fenchurch-street, bequeathed £300 to St. Bartholomew's Hospital (of which he was a governor) for the purposes of the Samaritan Fund. The late Mr. Thomas Blake of Cutsey has, it is stated, bequeathed £1000 to the Taunton and Somerset Hospital. St. Thomas's Hospital, Middlesex Hospital, and Westminster Hospital, each receive £19 19s. under the will of Mrs. A. M. Dobson, late of Pall Mall.

SOCIETY OF APOTHECARIES.—An important movement has been made by this Society. Hitherto the capital for the sale of drugs at the hall has been provided by members of the Society. Henceforth, however, the trading will be carried on by the Court of Assistants on behalf of the Society generally, the rights of the former proprietors having been purchased by the Court. This change has been made at the instigation of important bodies who had dealt with the Society. The reputation which Apothecaries' Hall has always had for the purity of the drugs to be obtained there will not be diminished one iota by the change, but will, if that be possible, be added to. The Society of Apothecaries is one of the City companies which have retained to the present day their ancient functions, to the advantage of the community, and the Society has devoted the funds at its disposal by giving prizes for competition in botany for registered medical students, prizes in botany also for young women, pharmaceutical chemistry, &c. The Society has also a fund for widows, and one for distressed members, &c. —*City Press.*

Medical Appointments.

Intimations for this column must be sent DIRECT to the Office of THE LANCET before 9 o'clock on Thursday Morning, at the latest.

BUTLER-SMYTHE, A. C., M.R.C.S.E., L.R.C.S.Ed., L.R.C.P.Ed., L.S.A.L., L.M., has been appointed Hon. Surgeon-Accoucheur to the Brighton and Hove Lying-in Institution and Hospital for the Diseases of Women and Children, vice T. F. Blaker, resigned.

CANNING, P. W. G., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Honorary Physician and Surgeon to the Charlottetown Hospital.

DAVIDSON, J., M.R.C.S.E., L.S.A.L., has been appointed Resident Accoucheur to King's College Hospital.

DILLON, J. T., M.D., M.Ch., has been appointed Medical Officer for the Ballyhorgan Dispensary District, vice Kenny, deceased.

EVANS, W. G., M.R.C.S.E., has been appointed Assistant House-Surgeon to King's College Hospital.

FARMER, S., M.R.C.S.E., has been appointed House-Surgeon to King's College Hospital.

FLIGG, W., M.B., has been appointed Resident Physician to the Sick Children's Hospital, Edinburgh, vice Brodie, whose term of office has expired.

GREEN, C., M.B., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer of Health to the Gateshead Urban Sanitary Authority, at a salary of £120 per annum.

GUTTERIDGE, E. P., M.R.C.S.E., L.S.A.L., has been reappointed Port Sanitary Officer for Maldon, until March 25th. £10 10s.

LAWFORD, J. B., M.D., L.R.C.P., M.R.C.S.E., has been appointed Ophthalmic Assistant to St. Thomas's Hospital.

MACARTNEY, T. L., L.R.C.P.Ed., L.R.C.S.Ed., L.M., has been appointed Medical Officer and Public Vaccinator to the Northern District of the Forde Union, vice Jones, resigned.

MASTER, H. H., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer to the First District of the Thingoe Union.

MORGAN, J. H., F.R.C.S., Assistant-Surgeon to the Hospital for Sick Children, has been appointed Assistant-Surgeon to the Charing-cross Hospital.

MURRAY, G. S., M.D., M.Ch., has been appointed on the Honorary Staff of the Bollingbroke House Hospital, Wandsworth-common.

O'MEARA, T. P., M.B., L.R.C.S.I., has been appointed Resident Medical Superintendent of the Carlow District Lunatic Asylum.

PENNY, W. J., M.R.C.S.E., has been appointed House-Surgeon to King's College Hospital.

PHILLIPS, J., M.R.C.S.E., has been appointed Assistant House-Accoucheur to King's College Hospital.

POTTS, J. A., M.B., M.R.C.S.E., has been appointed House-Surgeon to the Royal Maternity and Simpson Memorial Hospital, Edinburgh, vice W. Bassett, M.B., resigned.

POWELL, S., L.S.A.L., has been appointed Assistant House-Physician to King's College Hospital.

RANKING, J. E., M.A., M.D., has been appointed Physician to Tunbridge Wells Infirmary, vice J. R. Wardell, M.D., F.R.C.P., resigned.

RICHARDSON, C. B., L.R.C.P., M.R.C.S.E., has been appointed Assistant House-Physician to St. Thomas's Hospital.

RYAN, J. M., M.B., L.R.C.S.I., has been appointed Medical Officer to the Third Ward District of the Colchester Union.

SAER, Dr. P., L.R.C.P.Ed., L.R.C.S.Ed., L.S.A.L., has been reappointed Medical Officer of Health for Pembroke.

SHAW, J., M.B., M.R.C.S.E., L.S.A.L., has been appointed Resident Accoucheur to St. Thomas's Hospital.

SILK, J. F. W., M.R.C.S.E., L.S.A.L., has been appointed House-Physician to King's College Hospital.

STEEFOX, J. B., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer to the First District of the Oldham Union.

STODDART, Mr. F. W., has been appointed Public Analyst for the Borough of Chard, vice Stoddart, deceased.

STURGE, W. A., M.D., has been appointed Physician to the Royal Free Hospital, vice O'Connor, deceased.

SWALE, H., L.R.C.P., M.R.C.S.E., L.S.A.L., has been appointed Assistant House-Surgeon to St. Thomas's Hospital.

WALL, E., M.D., has been appointed Medical Officer to the Courcy's Dispensary District of the Klusale Union, vice Magner, resigned.

WALLACE, R. S., L.F.P.S.G., L.S.A.L., has been appointed Medical Officer to the Arnold District of the Basford Union.

Births, Marriages, and Deaths.

BIRTHS.

DALY.—On the 17th inst., at 101, Queen's-road, Dalston, the wife of Frederick H. Daly, M.D., of a son.

GODSON.—On the 15th inst., at Grosvenor-street, W., the wife of Clement Godson, M.D., M.R.C.P.L., of a son.

GOODING.—On the 11th inst., at Heath Lodge, The Grove, Blackheath, the wife of Ralph Gooding, Esq., B.A., M.D., F.R.S., of a son.

GRANT.—On the 11th inst., at York, the wife of Surgeon-Major R. A. P. Grant, M.A., M.R.C.S.E., Army Medical Department, late 43rd Light Infantry, of a daughter.

RAVEN.—On the 13th inst., at Barfield House, Broadstairs, the wife of Thos. F. Raven, L.R.C.P., of a daughter.

SEAMAN.—On the 10th inst., at Ledbury-road, the wife of Dr. W. C. Seaman, Deputy Inspector-General, Army Medical Department, of a son.

STOCKS.—On the 14th inst., at Courland, Wandsworth-road, S.W., the wife of Frederick Stocks, M.R.C.S.E., of a daughter.

WILLS.—On the 12th ult., at Julfa, Isfahan, Persia, the wife of Charles James Wills, M.D., of a daughter.

MARRIAGES.

HOFFMEISTER—ROBY.—On the 16th inst., at Holy Trinity, Paddington, by the Rev. J. C. Hose, assisted by the Rev. C. W. Whitfield, Dr. John B. Hoffmeister, of Brighton, second son of Dr. Hoffmeister, Surgeon to the Queen, of West Cowes, Isle of Wight, to Fanny Georgiana, youngest daughter of C. J. Roby, Esq., of 50, Gloucester-gardens, Hyde park. No cards.

WILLIAMS—HIGHMORE.—On the 27th ult., at the Abbey Church, Sherborne, Dorset, by the Rev. F. E. Williams, D.D., of Reading (uncle of the bridegroom), assisted by the Rev. G. C. Hilbers, Rector of St. Thomas's, Haverfordwest (cousin of the bride), and the Rev. W. H. Lyon, Vicar of Sherborne, William Henry Williams, jun., M.R.C.S.E., L.M.C.P.L., of Sherborne, to Louisa Blanche, daughter of William Highmore, Esq., M.D., of Sherborne, Dorset.

DEATHS.

DREW.—On the 1st inst., at Cathart House, Broadstairs, Henry Pye Lewis Drew, M.R.C.S.E., late of Gower-street, London, aged 69.

GARDNER.—On the 14th inst., at Lansdowne-crescent, John Gardner, M.D., in his 77th year.

HART.—On the 14th inst., at Stone's End House, Southwark, S.E., Walter Hart, M.R.C.S.E., L.S.A.L., &c., in his 57th year.

PERKS.—On the 12th inst., at Burton-upon-Trent, Sarah Elizabeth, the wife of Charles Perks, L.R.C.P., M.R.C.S.E., &c.

ROSS.—On the 11th inst., at Stockport-road, Donald Ross, M.D., in his 36th year.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET OFFICE, November 18th, 1880.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radiation in Vacuo	Max. Temp Shade	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Nov. 12.	29.98	W.	52	51	..	57	48	0.13	Raining
" 13.	29.77	W.	56	54	..	59	49	..	Cloudy
" 14.	29.61	SSW	57	55	..	59	54	..	Raining
" 15.	29.70	W.	43	41	..	53	41	0.20	Bright
" 16.	28.87	W.	51	44	80	55	40	0.43	Cloudy
" 17.	29.17	W.	40	38	53	47	36	..	Foggy
" 18.	29.27	S.E.	35	33	..	39	29	..	Foggy

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Local papers containing reports or news-paragraphs should be marked.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

Lectures, original articles, and reports should be written on one side only of the paper.

We cannot prescribe, or recommend practitioners.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET to be addressed "To the Publisher."

ECONOMICAL VALUE OF GOOD COOKING.

THE importance, from a health point of view, of good cooking is universally acknowledged. The economical aspect of the skilful preparation of food is not, perhaps, quite so obvious. This point, however, has been strikingly illustrated in the Lambeth Union, the guardians of which have been informed by Dr. Sloper that by proper cooking the waste in meat has been reduced from 57 per cent. to 40 per cent.: a result which will effect a saving to the parish of £356 per annum.

Mr. Henry Sugden.—The underselling in the matter of the club appointment is very bad. The other case is not stated with sufficient clearness for us to be able to express an opinion.

Professor G. Buchanan, (Glasgow.)—A short account of the case will be acceptable.

Young Practitioner has not enclosed his card.

TREATMENT OF HÆMORRHOIDS BY CRUSHING.

To the Editor of THE LANCET.

SIR,—Permit me to offer a few remarks in reply to the letter of Mr. Clarke, which appeared in your issue of the 30th ult. It is in the nature of things that every new invention, however successful, should receive a certain amount of adverse criticism, and perhaps my addressing you on the present occasion would be "better honoured in the breach than in the observance."

Doubtless when your correspondent penned his letter he had not read mine inserted in your issue of July 24th, p. 158. I gave as a reason for supplementing Mr. Pollock's remarks the fact that he had not given his theory as much credit as it deserved, and I quoted four cases in which the operation by crushing was most successful. Since then its superiority over other operations has been demonstrated again and again. Mr. Clarke speaks of a clean wound being left by my clamp, while in point of fact it leaves only a thin shred or fringed remnant no thicker than a stout piece of paper, and which soon separates, and from first to last there is an entire absence of sensation. I may further add that the use of ligatures is the exception rather than the rule, and even occasionally if a small one is applied to any oozing point, it is unaccompanied with pain.

I may add, in aid of Mr. Pollock's theory, the fact that gentlemen of considerable experience and eminence in the profession would not abandon all other methods in favour of his, unless they were fully convinced of its superiority in every way.

In conclusion, I would ask your readers, in the cause of humanity, to give the operation by crushing a fair trial, as the convalescence of the patient is speedy, and unattended with any pain or inconvenience.

I am, Sir, yours faithfully,

St. George's Hospital, Nov. 1880.

R. F. BENHAM.

EXAMINATIONS AT THE ROYAL COLLEGE OF SURGEONS.

THE following were the questions on Anatomy and Physiology submitted to the candidates at the primary examination for the diploma of Membership on the 5th inst., when 61 candidates presented themselves (Anatomy from one to three P.M.), when they were required to answer any four out of the six questions, and no more:—

1. Describe the fibula, with its muscular and ligamentous attachments.
2. Describe the deep cervical fascia.
3. Describe the masseter; its relations, attachments, and uses.
4. Give the dissection necessary to expose the superior profunda artery. Describe its course and anastomoses.
5. The abdomen being opened, give the steps to be followed for removal of the liver, and describe its under surface when dissected.
6. Give the cutaneous distribution of the nerves of the lower extremity below the level of the crest of the ilium and Poupart's ligament.

The following were the questions on Physiology:—

1. Describe the minute structure of bone. What is its chemical composition?
2. Describe the mucous membrane of the duodenum. What changes does the food undergo in this part of the alimentary canal?
3. Describe the phenomena of the coagulation of the blood, and the circumstances by which it is modified.
4. Describe the movements of respiration. How are they performed, and in what way are they modified by age and sex?
5. What is meant by the term "common sensation"? How is the degree of tactile sensibility estimated? and to what extent does the acuteness of sensibility vary in different parts of the body?
6. Describe the minute structure of nerve-fibres. Classify nerves according to their functions. Give examples of each class.

Mr. G. R. Gilruth.—We cannot insert our correspondent's letter. His views are most impracticable.

"THE CHLOROFORM DEATH-BILL FOR TWELVE MONTHS."

To the Editor of THE LANCET.

SIR,—Those who still believe that chloroform is the most safe and efficient anæsthetic have considerable reason to complain of Dr. Jacob's paper in your issue of Nov. 6th. They are branded with the imputation of an unfair suppression of the true mortality bill, from which charge the advocates of ether assume that they are free. A chloroformist's irresponsibility for an accidental death is called in question, and the way is prepared to prefer a serious legal charge against him. How far such a charge might be sustained against a country surgeon it is impossible to say; but surely a metropolitan coroner would dismiss Dr. Jacob's opinion if advanced against a metropolitan surgeon. Is it fair to assume that the statistics as to the comparative frequency of the use of chloroform and ether compiled in 1876, during the last ether frenzy, are applicable now? Or is it not more in accordance with fact to say that ether has been a second time weighed, and found wanting? Before any such dogmatic denunciation as Dr. Jacob's can be accepted, it must be backed up by recent statistics drawn from hospital practice, and fairly detailed. Only such statistics could embody the results of the recent trial of ether. I say from hospital practice, because a country surgeon has often to operate and administer an anæsthetic without any assistance whatever, and it is obviously unfair to place a death under such circumstances in the same category as one occurring in hospital. I have never seen a death from chloroform, and I have seen most serious symptoms from ether, though not actually fatal. I would not condemn ether on a small experience; but I will not forsake chloroform while my own experience tends in its favour until I see more reason than is contained in your contributor's paper.

I am, Sir, your obedient servant,

Guernsey, Nov. 8th, 1880.

J. AIKMAN.

To the Editor of THE LANCET.

SIR,—In your impression of the 6th instant the following passage occurs in a paper by Dr. Jacob, on the mortality from use of chloroform: "As regards locality, two deaths took place in the Edinburgh Infirmary, where, I believe, ether is not in use," &c. I have just returned from Edinburgh, and beg to intimate that in a series of Mr. Walker's and Dr. Argyll Robertson's operations, which I witnessed there (ophthalmic department), ether, or a mixture of equal parts of chloroform and ether, was the anæsthetic employed. In no instance did I see the pure chloroform given. By employing this mixture, so strongly recommended and so much used by the late Dr. Tanner, there can be no doubt that the sedative action of the chloroform is greatly lessened, and it is thus safer, with the advantage of being much more speedy in producing the required condition than is simple ether.

Yours faithfully,

JAS. DENHAM BRADBURN, F.R.C.S. Edin.

Golden Cross Hotel, W., Nov. 8th, 1880.

Mr. J. H. Drummond.—The advertisement is very objectionable, and demands the protest of the profession in Australia.

Mr. Arthur Pearce.—Messrs. Cornish, Publishers.

STIMULANTS IN WORKHOUSES.

THE subject of stimulants in workhouses has recently attracted the attention of boards of guardians in various parts of Ireland, more particularly in Cork, Wexford, Waterford, and Dublin, and petitions have been adopted in many unions, requesting the Local Government Board for Ireland to include stimulants under the head of medicines. The real object of this suggestion is to classify stimulants under the head of drugs; and should this concession be obtained, half their cost would necessarily be paid under the Medical Charities Act.

DIPHTHERIA AND ITS TREATMENT.

To the Editor of THE LANCET.

SIR,—Most of your readers must have been struck with the singular fatality attendant on the five recorded cases of diphtheria in St. George's Hospital. Dr. Whiphram, in his concluding remarks, admits that the results of the treatment in the above cases were most unsatisfactory. I confess I was not surprised at the results from the treatment adopted. I am aware that there is a large section of the profession who treat diphtheria with tonics and stimulants *ab initio*, which I never did, neither could I understand the *rationale* of such treatment, as the secretions are invariably in a disordered condition, and the blood contaminated with a *materies morbi*—*ergo*, the *methodus medendi* is manifestly to start with alterative aperients, salines, and diaphoretics, and thus aid nature in eliminating the effete material under which she is so distressed. Under this plan of treatment my practice and experience of over thirty years have been most successful, having only witnessed two deaths, and these two happened in delicate children, whom I was called to attend after they had been ill two or three days with the disease, and which I discovered had travelled into the larynx on my first inspection. I have consequently looked upon diphtheria as a curable malady, especially if called in to treat it in seasonable time. I have generally commenced by washing off the fungus deposit with a strong solution of nitrate of silver (one drachm to the ounce) with a camel-hair brush, and in many instances have been successful in removing the whole or major portion of the deposit before leaving the patient. I continue daily to use the same application so long as any of the fungus is to be observed upon the membrane. I have sometimes used in like manner equal parts of carbolic acid and glycerine (locally nitrate of silver solution), but I prefer the nitrate of silver application.

The internal remedies with which I have started have been a small dose of calomel, with senna or scammony powder in children, or with the compound colocyth pill for adults; a saline mixture, with chlorate of potash, solution of acetate of ammonia, and spirit of nitric ether every three or four hours; the diet, beef-tea, milk, barley-water, and cocoatina. At the end of two or three days, the secretions having improved, and the febrile symptoms having subsided, I then give a dose, two or three times a day, of a combination of bark, with chlorate of potash, dilute hydrochloric acid, and spirit of chloric ether, and in some cases a little brandy or port wine, with their mutton chop, &c., complete their convalescence.

Upon referring to the powerful tonic and stimulating treatment in Dr. Whiphram's first case, it would appear from the report that the symptoms indicated high action with power; "pulse 125, fairly strong and regular"; nevertheless, the child at the age of six years had ten minims of the tincture of perchloride of iron, with two minims of dilute nitro-hydrochloric acid, in only two drachms of water every two hours, with ten ounces of port wine daily, strong beef-tea and milk, of each two pints! This little patient was admitted on April 21st, and died at 9 P.M. on the day following. At the post-mortem examination no membrane was found; but the mucous membrane of the fauces, larynx, and trachea was intensely congested, &c.

Passing over the others, who had similar treatment with the same results, I cannot help making special notice of Case 4, a probationer, aged thirty-three, who had been in her usual good health, but had been in attendance for two days upon the two fatal cases of diphtheria. She was taken ill with sore-throat on the evening of the 23rd April, and in three days she succumbed under similar tonic and stimulating treatment, aided by most assiduous attention from Dr. Whiphram and the house-physician!

It is a pity the profession cannot agree upon the pathology and treatment of diphtheria.

Yours truly,
Earl's-court-road, W., Nov. 11th, 1880.

E. MAY, M.R.C.P.

CALF LYMPH.

To the Editor of THE LANCET.

SIR,—As Dr. Cook has kindly undertaken the work, which, from its importance, I regret the Government did not see fit to take into its own hands, and in which I wish him every success, I would venture to suggest that instead of supplying tubes, he should take his lymph on points. I myself for several years have hardly ever vaccinated except with calf lymph obtained from Brussels, with which at first I was very unsuccessful. This Dr. Warlomont attributed to my use of lymph preserved in tubes, and I think I am right in stating on his authority that calf lymph, unlike human lymph, is best preserved on points. At any rate, by using points, I now rarely fail, more especially since I have used Hilliard's vaccinator.

Clapham-common, Nov. 1880.

Yours truly,

BEN. DUKE.

INTUSSUSCEPTION IN A PIGEON.

At a recent meeting of the Société de Biologie in Paris, M. Magnin showed a specimen of intestinal invagination from a pigeon, which died a few hours after seizure. The invagination was apparently provoked by the presence in the intestines of a large number of ascarides.

Locum Tenens.—The question is legal, not medical. In the absence of a definite contract, our correspondent must make the best terms he can without going to law.

"DENTAL-SURGEONS," "SURGEON-DENTISTS."

To the Editor of THE LANCET.

SIR,—I was surprised to find on reading Mr. H. Sewill's letter on the above subject that he had so misconstrued Mr. Napier's words as to convey a false impression of their literal meaning, and to lead one to the conclusion that he (Mr. Napier) was under the belief that "the Dental Act had for the first time conferred upon unqualified dentists the right to adopt the title surgeon-dentist or dental-surgeon." Permit me to say that it was chiefly through the instrumentality of the Association of Surgeons practising Dental Surgery (of which Mr. Napier is a Fellow) that the Dental Practitioners Bill was so altered as to preclude that right, which it otherwise would have conferred on the unqualified—an Association, moreover, numbering amongst its Fellows some of the most honoured and scientific members of this branch of the medical profession.

Yours faithfully,

Portland-place, W., Nov. 15th, 1880.

J. HAMILTON CRAIGIE.

To the Editor of THE LANCET.

SIR,—In the interest of medical reform, Mr. Henry Sewill's statement in your last issue ought not to be allowed to pass unrefuted. Mr. Sewill asserts that unqualified dentists possessed "a right" to adopt the title of "surgeon-dentist" before the passing of the Dental Act of 1878, which is wholly and absolutely incorrect. He asserts also that a "test case" was taken into the Appeal Court, presided over by the Lord Chief Justice; but I maintain that no such case was at any time whatever taken either into that Court or any other Court. I maintain, moreover, that neither magistrates nor judges have on any occasion been called upon to decide whether it was lawful or not for unqualified persons to assume the title of "surgeon-dentist"; and I now, in the interest of future—I hope I may with accuracy say impending,—medical legislation, call upon Mr. Sewill to state publicly the details of the case which he tells us was "pooh-poohed" out of Court by the Lord Chief Justice. The assertion that unqualified persons should have a "right," for the purpose of gain, to commit a fraud upon the public by representing themselves to be qualified persons is, or ought to be, revolting nonsense to the common sense of the profession, and especially so to the common sense of those who are aware of the fact that we have in existence a "Statute of Fraud."

I am, Sir, your obedient servant,

Stockwell-road, S.W., Nov. 15th, 1880.

R. H. S. CARPENTER.

To the Editor of THE LANCET.

SIR,—Permit me to respectfully offer a few brief observations, in justice called for by Mr. W. F. Donald Napier's letter on the above subject, which appears in your issue of the 6th inst.

It must be admitted on all hands that it is scarcely fair to include in the same category with unqualified pretenders skilled dental licentiates, who (in their speciality) are as fairly educated as "surgeons practising dentistry."

The Council of the Royal College of Surgeons in Ireland, having diligently considered the propriety and expediency of conferring their "Dental Licence" as a "supplementary diploma," have, in the end, adhered in principle to the system which has produced such good results in the case of the English College of Surgeons. Few dentists, owing to their (almost incessant) practical work, and to the demands which it makes on their energies, can ill spare the time necessary to master the "domain of general surgery"—a task which in the end would be productive of little fruit in after-life. A not over-generous public would badly repay for the sacrifice of so much time and trouble.

In conclusion, I would ask all "surgeons practising dentistry" to "let by-gones be by-gones," and to unite with dental licentiates in their joint efforts to expurge the "Dentists' Register" from the ignoble throng who degrade its pages.

Yours truly,

Dublin, Nov. 11th, 1880.

FRANK T. PORTER, F.R.C.S.I.

APPLICATION OF CALOMEL DUST IN THE TREATMENT OF PTERYGIUM.

To the Editor of THE LANCET.

SIR,—I desire to call the attention of ophthalmic surgeons to a new and, I believe, most effective treatment of pterygium. It consists in the daily application of calomel dust. This disease is very prevalent in Tokio, and for several years in a considerable ophthalmic practice I have used this application with marked benefit in all cases, and in many the cure has been so complete that no trace remains of the affection. I have long tried the old methods with the usual disgusting want of success; but, so far as my own practice here goes, I have now confidence in being able to cure the disease with hardly any risk of failure. Old and fibrous growths are stubborn, but even these have sometimes yielded.

Your obedient servant,

HENRY FAULDS, L.F.P. & S.

Tsukiji Hospital, Tokio (Yeddo), Japan, Sept. 1st, 1880.

M.R.C.S., L.S.A.—The following hospitals are represented at the Court of Examiners of the College:—St. Bartholomew's, by Messrs. Holden (the late President) and Savory; Guy's, by Messrs. Birkett (the Chairman) and Cooper Forster; St. George's, by Mr. Holmes; Middlesex, by Mr. Hulke; Cambridge, by Dr. Humphry; King's College, by Mr. Wood; University College, by Mr. Marshall; and the London, by the recently elected member, Mr. Jonathan Hutchinson, who took his seat on Tuesday last.

Mr. Julius Caesar.—The papers, if forwarded, shall have due attention.
Dr. A. Downes is thanked.

"A NOTE ON INTENTION IN THE DETERMINATION OF SEX AND OF THE MENTAL AND PHYSICAL INHERITANCE OF CHILDREN."

To the Editor of THE LANCET.

SIR,—It may interest your readers to learn that the Hebrews were of the same opinion as Dr. Mortimer Granville as regards the influence of the relative arduity of the parents in the determination of sex. In a recent translation by Dr. Rabinowicz of all the passages of the Talmud concerning medicine will be found the following extract from the treatise entitled "Nidah": "On lit dans une beraïtha: si la femme donne sa semence (le sang) avant l'homme, le fœtus sera un garçon; si c'est le mari qui donne d'abord sa semence (le sperme), le fœtus sera une fille. On peut donc si on veut avoir des garçons; l'homme peut pour cet effet retarder son émission de sperme pour laisser la femme donner sa semence avant lui. Rabba dit qu'on obtient des garçons en répétant le coït; car, dit Raschi, la femme excitée par le premier coït émettra son sperme avant l'homme pendant le second." Yours faithfully,
Paris, Nov. 1880. W. O. J.

To the Editor of THE LANCET.

SIR,—On June 22nd, 1880, I attended a woman in her third confinement, who was delivered of twins of different sex, followed by a single placenta. The children were both about the ordinary size of single children. There was only five minutes' interval between the two births, and the placenta followed the second child in two minutes. They were both head presentations.

I merely mention this case as an answer to the query in last week's LANCET. Still, I look upon evidence against (as well as for) any theory as being of value in arriving at a just conclusion. Of course one case goes for very little, but there may be others to place with it; although a number of such cases would not necessarily upset the hypothesis laid down by Dr. Mortimer Granville last week.

There is another point I would mention. The mother in the above case said her female relatives had had twin births; and on other occasions I have heard the same remark.

I am, Sir, yours faithfully,

Leeds, Nov. 15th, 1880.

G. HODGSON HIGGINS.

* * * THE question seems to be whether the so-called "placenta" in these cases is anatomically single, or really composed of two placentæ, perhaps closely united.—ED. L.

C. P. M.—The question should not be unnecessarily raised. We are not prepared to say what legal complications might arise.

M.B.—Yes.

L.R.C.P. Lond. had better apply to the Secretary of the Order, St. John's-gate, Clerkenwell.

THE USE OF IMPURE MATERIALS IN ERECTING BUILDINGS.

To the Editor of THE LANCET.

SIR,—I may say, with reference to Dr. W. H. Murray's letter on this subject in your issue of Nov. 6th, that the Chinese builders bind their mortar together by means of a *pure white paper* made from the dried fibres of the bamboo. Their builders' specifications always regulate the proportions of this and every other article of the mortar used. They also finish off their walls with an exceedingly pure lime-mortar (sometimes made from shells of various molluscs), which leaves a perfectly smooth surface. No colouring matter is ever added, except in the case of temples, where oxide of iron is used. Yours truly,

Shepton Mallet, Nov. 8th, 1880.

F. PORTER SMITH, F.R.G.S.

Mr. Stanley Churton.—The article and advertisement referred to appear in THE LANCET of June 12th last.

Dr. Reed.—The request will be attended to.

SCHOOL-BOARD CERTIFICATES.

To the Editor of THE LANCET.

SIR,—I would feel much obliged if you could give me information on the following points:—

I am the house-surgeon of a provincial hospital, and in the out-patient department am daily applied to for School-Board certificates for sick children. 1. Am I compelled to give such certificates? 2. Am I entitled to remuneration for the same, and, if so, from whom can I claim it—from the School Board or from the parents?

Yours obediently,

Nov. 11th, 1880.

S. B. C.

A "FORLORN HOPE."

THE Newcastle Homœopathic Dispensary was entered by burglars some time since. It is needless to say the thieves "went empty away."

INFANTILE DIARRHŒA.

To the Editor of THE LANCET.

SIR,—In August last I took charge of a gentleman's practice in one of the smokiest and most densely populated manufacturing towns in the north. Whilst I was there infantile diarrhœa was epidemic, and on the very day my friend inducted me three babies died; but from that day to the end of my term, a period of exactly three weeks, I was so fortunate as not to lose a single case, although I must have attended close upon a hundred. In every instance I found the usual errors in dieting being committed—viz., starch feeding in one form or another (farinaceous), or else the using of boiled milk. I simply urged and insisted upon a return to strictly natural food—suckling where practicable, and milk-and-water where not. The only medicine, so to call it, I employed was a little weak lime and dill water, and in two or three apparently desperate cases I added a small quantity of brandy to the milk-and-water, and fed the poor little sufferers myself when they were passed the capacity to suck, and when the mothers were inclined to abandon hope and to relax their efforts, and, as I said before, I had the happiness not to lose one single case. I mention this fact in order to show that absolute success may be attained in this most fatal of diseases without having recourse to the perilous expedient of giving opium to very young children, as recommended by a correspondent from Middlesborough recently in your journal. Yours obediently,

Oct. 1880.

LOCUM TENENS.

FISH-EATING AND LEPROSY.

To the Editor of THE LANCET.

SIR,—In reply to Mr. Hutchinson's critical remarks (which are always worthy of attention) on my case of leprosy and my views on the fish hypothesis, I can only remind Mr. Hutchinson what I stated with reference to the small amount of good fish that the patient had taken during his thirteen years' residence in India, reported in your journal of the 30th ult., as a deduction from many and stringent inquiries at repeated intervals during some hundred visits whilst the patient was under my care at the hospital.

If the authorities—one a much-respected medical man, long resident in India, the other a gentleman of high social position, eighteen years resident in India—are willing to permit me to use their names and information publicly, with reference to the fish-eating and non-fish-eating districts of India and Africa, and their relation to true leprosy, I will do so at a future period, with other additional information on the subject. Meanwhile it would be a matter of great interest to hear the present opinion of Sir Joseph Fayrer and Dr. Vandyke Carter. Is true leprosy entirely due to the eating of fish (unwholesome) in large or small quantities? I am, Sir, yours &c.,

Sackville-street, Nov. 10th, 1880.

JAMES STARTIN.

SCHOOL HYGIENE.

To the Editor of THE LANCET.

SIR,—At a recent meeting of a provincial school-management committee, the question was discussed whether or not it is objectionable on sanitary grounds to employ as resident keeper of the premises a young man who has a young wife and two very young children. The minority opposed it, on the ground that if these children were attacked by any infectious disease incidental to childhood, the health of the pupils would thereby be threatened; but the majority, who saw no particular danger in this, carried the day. Your correspondent begs that you will give your opinion, and state also if any cases are known where schools have suffered in consequence of infectious children's diseases having occurred on school premises. Yours faithfully,

Nov. 8th, 1880.

S.

WANTED, A DIAGNOSIS.

To the Editor of THE LANCET.

SIR,—I am anxious to get some hints for the successful treatment of the following case:—

The patient is a stout man, aged thirty-eight, and strictly temperate. About twelve years ago he had a fit. The medical man in attendance treated him for epilepsy. He had no return of the fits until four years ago, when he had another in bed. I examined his urine. Specific gravity 1020 (which has always remained at that), acid, and contained about one-sixth of albumen. He complains of a headache occasionally, after which an eruption of acne pimples comes out on his nose, also a warm feeling across the lumbar region. Sometimes he has severe pruritis of the skin of the legs. He has no swelling of the limbs or puffiness below the eyes; eats and sleeps well, and gains in weight. He said he had an attack of syphilis some years ago. I put him upon iodide of potassium. The albumen still appeared. After that a course of each of the following:—Bromide, iron, gallic acid, iodide of iron, buchu, uva ursi. No matter what he takes, it is all the same; albumen appears. His heart, lungs, and liver are healthy. I should like to know if this is a case of incipient Bright's disease, or is it a peculiarity in the patient?

If any of your readers would kindly give me their opinion on the case it would be much valued.

Yours faithfully,

November, 1880.

L.R.C.P.

ERRATUM.—In the description of Messrs. Millikin and Down's Spray given in our last week's issue, the bottle is mentioned as of "four" instead of *forty* ounces' capacity.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. G. Harley, London; Mr. R. C. Lucas, London; Mr. H. Lee; Mr. Clay, Birmingham; Dr. Boyd; Dr. Saundby, Birmingham; Mr. Higgins, Leeds; Dr. Dale, Lynn; Mr. Collins, London; Mr. Holt, Ferryhill; Mr. Barry, Settle; Mr. B. Duke, London; Mr. Bredin, Chart Sutton; Mr. Horder, Cardiff; Mr. Woodcock, Wigan; Mr. Davis, Chippenham; Mr. Laing, Truro; Mr. Maples, Newington; Mr. Bellamy, London; Mr. Evans, Bakewell; Mr. Morris, London; Dr. Curran, Warrington; Mr. Craigie, London; Dr. Dods, Florence; Dr. Pullin, Sidmouth; Dr. T. Hughes, Llanberis; Mr. Melladew, Altona; Dr. G. H. Mackenzie, Edinburgh; Mr. H. T. Butlin, London; Dr. Brailey, London; Dr. Duncan, Croydon; Dr. Nuttall, Leicester; Mr. Julius Caesar, London; Mr. Godlee, London; Dr. Cameron, Dublin; Dr. Eastace Smith, London; Messrs. Young and Postans; Dr. Rabagliati, Bradford; Mr. Bernard, London; Dr. Russell, Lincoln; Dr. R. Smith, Cheltenham; Dr. Somerville; Dr. Kirkpatrick, Edinburgh; Dr. Purcell, London; Dr. Reed, Upwell; Mr. Cant, Lincoln; Mr. F. S. Porter, London; Dr. Griffin, Weymouth; Dr. Haughton, Norwood; Dr. Sugden, Maryborough; Mr. H. Jordan, Brisbane; Mr. Eddows, Loughborough; Mr. G. Meadows, Hastings; Mr. Carpenter, London; Mr. Drummond, Springrove, Queensland; Messrs. Eddis and Cooper, Huntingdon; Mr. Peacocke, Bombay; Mr. Naidier, Madeira; Mr. Rowe, Stratton; Messrs. Letts and Co., London; Miss Hodgson, London; Mr. Walker, Crick; Mr. Spon, Coventry; Dr. Jeffries, Boston, U.S.A.; Surgeon-Major, I.M.D.; Post-mortem; Enquirer; S. B. C.; Temperance; M.D.; M.B.; M.D., M.R.C.P. Ed.; G. P.; Fairplay; E. D. M.; Indicus; J. B. W., Worcester; X. M. X.; K. O. T.; &c. &c.

LETTERS, each with enclosure, are also acknowledged from—Mr. Thomas, Pontypool; Mr. Tanner, Wimborne; Mr. Ensor, Melbourne; Dr. Craig, Bedford; Mr. Munday, Sherborne; Mr. Owen, Burnley; Mr. Faulkner, St. Leonards; Messrs. Douglas and Ormerod; Dr. Fenwick, Raphoe; Mr. Richardson, Burton-on-Trent; Dr. Pinder, Bow; Mr. Kenyon, Accrington; Mr. Kasser, Hull; Mr. Sydenham, Bournemouth; Messrs. Sheppard and Co., Faversham; Mr. Lewis, Cardiff; Dr. Thomas, London; Rev. C. W. Arnold, Woking; Mr. Churchill, Chesham; Mr. Sawyer, Darlington; Dr. Wigg, Litchurch; Col. Hodson, Cheltenham; Dr. Gibbon, London; Mr. McConnell, Liverpool; Mr. Kennett, London; Messrs. Symes and Co., Liverpool; Mr. Merryweather, Guisborough; Mr. Maclellan, Glasgow; Mr. Ireton, Yoxley; Mr. Sawyer, Sheffield; Dr. Moore, Clones; Dr. Philpot, Poole; Messrs. Lumley and Co., London; Mr. Daniels, Burton; Messrs. Clarke and Co., York; Messrs. Byles and Co.; Mr. Taberner, Wigan; Mr. Furlong, Ennis-corthy; Mr. Hawkins, London; Mr. Knott, Worcester; Messrs. W. H. Smith and Son, Dublin; Dr. Willis, Upper Tooting; Mr. Ling, Saxmundham; Mr. Davis, Hereford; Mr. Moore, Bristol; S. W. M.; A. A., Balham; M. B., Preston; B. A. C.; Surgeon, Sheffield; Dr. B. Bramwell, Edinburgh; R. H., Chelsea; M. N. B.; Medicus, Preston; Medicus, Talgarth; X. Y. Z., Nuneaton; Omega, Sheffield; E. J.; M.D., Clapton; Medicus, Nottingham; E., London; E. F., South-wark; G. A., London; R. M., London; Nemo, Portsmouth; M.R.C.S., Leicester; A. B., Manchester; B. D. F.; C. L. B., Thetford; M.D., Strand; Undergraduate; &c.

El Observador Medico, Chemists' Journal, Western Daily Mercury, Shield, Scientific Roll, El Album Medico, Specialist and Intelligencer, Church of England Temperance Chronicle, La Cronica Medica, Morningside Mirror, Anglo-American, Le Concours Medical, La Tribune Medical, Cork Examiner, Western Mail, Limited Liability Review, La Escuela de Medicina, Newcastle Chronicle, Evening Express, &c., have been received.

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An original and novel feature of "THE LANCET General Advertiser" is a special Index to Advertisements (on page 2), which not only affords a ready means of finding any notice, but is in itself an additional advertisement. Advertisements (to ensure insertion the same week) should be delivered at the Office not later than Wednesday, accompanied by a remittance. Answers are now received at this Office, by special arrangement, to Advertisements appearing in THE LANCET. Terms for Serial Insertions may be obtained of the Publisher, to whom all letters relating to Advertisements or Subscriptions should be addressed. Advertisements are now received at all Messrs. W. H. Smith and Sons' Railway Bookstalls throughout the United Kingdom. The postal arrangements relating to the distribution of THE LANCET will be considered from time to time in the interests of subscribers. Tables of Contents, with the Index of Advertisements, for each Number can be had on application to the Publisher.

Agent for the Advertising Department in France—J. ASTIER, 66, Rue Caumartin, Paris.

Medical Diary for the ensuing Week.

Monday, Nov. 22.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS. — Operations, 10½ a.m. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ p.m. each day, and at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 p.m.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 p.m.
ST. MARK'S HOSPITAL.—Operations, 2 p.m.; on Tuesday, 9 a.m.
MEDICAL SOCIETY OF LONDON.—8½ p.m. A Clinical Night.—Dr. R. D. Powell, "On a Case of Apoplexy from Embolism in a Woman aged nineteen."—Mr. Thomas Brant, "On a Case of Acute Hip Disease, the result of Inflammation of the Head, Neck, and Shaft of the Femur" (with Specimen).—Dr. Gilbert Smith, "On a Case of Perforation of the Stomach due to Hydrochloric Acid Poisoning."—Mr. Walter Coulson will exhibit an Accident to a Lithotrite (Bigelow's) of an unrecorded kind.

Tuesday, Nov. 23.

GUY'S HOSPITAL.—Operations, 1½ p.m., and on Friday at the same hour.
WESTMINSTER HOSPITAL.—Operations, 2 p.m.
WEST LONDON HOSPITAL.—Operations, 3 p.m.
ANTHROPOLOGICAL INSTITUTE OF GREAT BRITAIN AND IRELAND.—8 p.m.
ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—8½ p.m. Dr. Champneys, "On Artificial Respiration in Still-born Children."—Mr. Henry Lee, "On the Radical Cure of Varicocele."

Wednesday, Nov. 24.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 a.m.
MIDDLESEX HOSPITAL.—Operations, 1 p.m.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ p.m., and on Saturday at the same hour.
ST. THOMAS'S HOSPITAL.—Operations, 1½ p.m., and on Saturday at the same hour.
ST. MARY'S HOSPITAL.—Operations, 1½ p.m.
KING'S COLLEGE HOSPITAL.—Operations, 2 p.m., and on Saturday at 1 p.m.
LONDON HOSPITAL.—Operations, 2 p.m., and on Thursday and Saturday at the same hour.
GREAT NORTHERN HOSPITAL.—Operations, 2 p.m.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 p.m., and on Saturday at the same hour.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ p.m.
SOCIETY FOR THE ENCOURAGEMENT OF ARTS, MANUFACTURES, AND COMMERCE.—8 p.m. Mr. J. Comyns Carr, "The Influence of Barry upon English Art."
HUNTERIAN SOCIETY.—8 p.m. Mr. Walter Rivington, "On Wounds of the Knee-joint."

Thursday, Nov. 25.

ST. GEORGE'S HOSPITAL.—Operations, 1 p.m.
ST. BARTHOLOMEW'S HOSPITAL.—1½ p.m. Surgical Consultations.
CHARING-CROSS HOSPITAL.—Operations, 2 p.m.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 p.m., and on Friday at the same hour.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 p.m.

Friday, Nov. 26.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ p.m.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 p.m.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 p.m.
QUEKETT MICROSCOPICAL CLUB.—8 p.m. Ordinary Meeting.
CLINICAL SOCIETY OF LONDON.—8½ p.m. Dr. Carrington, "On a Case of Hydro-encephalocoele."—Mr. Gould, "On a Case of Varicocele with Atrophy of the Testicle, with Observations on the Nature of Varicocele."—Dr. Goodhart, "On a Case of Chronic Ulceration, with Dilatation and Hypertrophy of the Colon, in a Girl aged seventeen."—Dr. F. Taylor, "On a Case of Right Hemiplegia after Scarlatina; Destruction of Broca's Convolution without Aphasia; Death from Diphtheria."

Saturday, Nov. 27.

ROYAL FREE HOSPITAL.—Operations, 2 p.m.

ADVERTISING.

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The above Scale of Charges is arranged upon the basis of the classification adopted in the Index.

NOTICE.—Advertisers are requested to observe that it is contrary to the Postal Regulations to receive at Post-offices letters addressed to initials only.

Lectures ON

THE RELATIONS OF SARCOMA TO CARCINOMA.

Delivered at the Royal College of Surgeons in June, 1880,

By HENRY TRENTHAM BUTLIN, F.R.C.S.,

ERASMUS WILSON PROFESSOR OF PATHOLOGY TO THE COLLEGE,
ASSISTANT-SURGEON TO ST. BARTHOLOMEW'S HOSPITAL, &c.

LECTURE III.—PART II. CENTRAL TUMOURS OF BONE.

THE two tumours of the FIBULA may be regarded as a kind of appendix to the tumours of the tibia. They occurred during the middle period of life, were of the upper epiphysis, and both displayed a less malignancy than the corresponding subperiosteal tumours. Again, it is unfortunate that no autopsy was permitted of the fatal case.

The malignancy of the spindle-celled sarcoma of the FOOT is so marked and of such a kind that the case must be dealt with at greater length. It is recorded by Virchow in the *Krankhaften Geschwülste*.¹ The patient, a morocco-leather dresser, thirty-one years old, whose health had been always good until the early spring of 1858, suffered at that time from a sharp attack of pleurisy, from which recovery was speedy and apparently complete. At Whitsuntide he noticed a swelling of the dorsum of one foot, and at Michaelmas a second tumour appeared about the external ankle. In the spring of 1859 he began to cough and could no longer breathe with ease. These difficulties increased in severity, and in April caused his death. The second and third metatarsal bones were quite replaced by a soft medullary substance, blotched with old and recent blood, which touched the periosteum and cartilage in all directions, but did not extend beyond them. Several of the smaller tarsal bones contained similar medullary substance, which occupied the centre of each bone and left the cortex free. The osseous system, with these exceptions, is reported to have been sound. Both lungs were the seat of secondary growths, which on the left side projected between the layers of the pleura. But the condition of the glands is to me the most attractive feature of the case. One popliteal gland was diseased and medullary in appearance; the lower inguinal glands the size of walnuts and also medullary; the glands immediately above simply hyperplastic, but here and there exhibiting small medullary nodules; whilst the mediastinal glands formed a row of medullary growths. For my comfort's sake I would willingly have omitted this case or passed it by in silence, for it is the only one in the whole series of central tumours of which the sole explanation I dare offer is that the affection was conveyed through the lymphatic vessels. At present I am at a loss to conceive the reason of what I cannot but perceive is a deviation from the course naturally pursued by these tumours. But since the object, above all others, of this inquiry is to ascertain the truth, this case must be accepted with the others in the hope that so far from exhibiting an arbitrary deviation from a natural law, even its apparent irregularity may help to guide us to a more intimate knowledge of the laws which govern the course pursued by a malignant tumour.

The first case of the following group of tumours of the HUMERUS is also an example of glandular affection, but of a very different kind. The tumour, a round-celled sarcoma of the humerus, grew within the upper epiphysis. Eight months after its first appearance the patient died, apparently killed by the disease, for which no operation had been practised. For in addition to the tumour of the humerus a similar growth existed in the medulla of the other humerus, and a third tumour in the interior of one femur immediately below the trochanters. The mesenteric and retro-peritoneal glands were the seat of similar disease, but in no other organ or tissue of the body

were secondary tumours found. The relation of this gland-affection to the tumours of the bones is not clear, but the disease could scarcely have been conveyed through the lymphatic channels. The complete absence of any secondary affection in the other cases may probably have been due to their death from other causes at an early period of the disease. The same tendency to affect persons of a mature age observable in other central tumours is apparent in these tumours of the humerus.

The tumours of the ULNA and the RADIUS, whatever the variety of the sarcoma, attacked almost always the lower portion of each bone. A very modified malignancy is evident in four of the five cases, as well in the case that died as in those whose good health is recorded long after operation. For the fatal case is marked by the complete absence of secondary tumours.

The number of cases of tumour of the SCAPULA, like those of the pelvis, would be greater but for the difficulty of deciding on their origin.

The central tumours of the JAW are far more numerous than those of subperiosteal origin, but I suspect one of them would be more justly classed among the latter. It is the round-celled sarcoma, No. 47, which occurred in a child five years of age. It grew rapidly, and at the end of two months was resected with the portion of the jaw to which it was attached. In six weeks it was again removed, and after the second operation it speedily recurred again, and in seven months from the day it was first noticed the patient died exhausted. In the record of the case by Mr. Heath, in the *Pathological Transactions*,² the tumour is spoken of as evidently growing from the interior of the bone, but from the description I am unable to convince myself of this. Recurrence after operation, which was so marked a feature of the subperiosteal tumours, is noted only of two of these—that I have this moment mentioned, and a case in which the tumour was simply enucleated from the cavity in which it lay. Recurrence was speedy in both cases, but in the latter the progress of the recurrent tumour was very slow, for it was not removed until seven years after the first operation had elapsed, and even then was hardly larger than a walnut. The cases of myeloid disease are singularly complete. Every one of them was traced through many months, and more than one through several years. The first of the list is stated to have died of myeloid disease; this was not so. Although he suffered from three small tumours, two of the jaw and one of a single rib, his death was from exhaustion connected with mollities ossium. The admixture of earthy salts or bone is a noticeable feature in the tumours of the lower jaw.

The tumour of the STERNUM might fairly be included with the tumours of the skull, or might perhaps more rightly form one of a class to which I shall have occasion presently to refer, the members of which attack several bones almost at the same time.

The PELVIC tumour is of little interest unless it be compared with the subperiosteal pelvic tumours, but is of extreme interest as it bears upon the important question of glandular affection. It did not affect the lymphatic glands, and the reason for this forbearance may probably be discovered in its relation to the cavity of the pelvis, and therefore to the lymphatic glands. Almost the whole of the sacrum and coccyx was replaced by the new growth, which infiltrated the muscles posteriorly, but was limited in front by the periosteum, which separated it from the interior of the pelvis. It may be remembered that the pelvic tumours which affected the lymphatic glands were in each case without a covering of any kind, were of large size and grew directly in contact with the glands.

The tumours of the SKULL differ from the cranial subperiosteal tumours first and most strikingly in the much older patients they attacked, for the youngest of the four was nearly fifty years of age; second, in the fact that although three of them were of the vault only one produced multiple tumours of the skull. This one case too was singular in the affection of the glands which occurred as the disease progressed; and which was probably due to a continuous growth from the tumour of the occiput. As in the subperiosteal round-celled tumours, so in two of these there was widespread generalisation, chiefly in various bones.

This leads me to speak of a class of cases to which I referred when speaking of the tumour of the sternum—cases in which many bones are attacked almost simultaneously by sarcomatous disease. Such I imagine was the nature of a

¹ Bd. ii. s. 338.

² Vol. xix. p. 303.

case recorded by Dr. Moxon in the *Pathological Transactions*.³ It is described as "colloid cancer," the characters of which it undoubtedly presented, for the tumour consisted of large alveoli filled with gelatinous material. With the exception of numerous rounded nuclei in some of the alveoli, no mention is made of cellular elements; unless, therefore, we accept these as round cells, which had escaped destructive or degenerative changes, there is nothing to guide us to a diagnosis of the variety of sarcoma to which this presumably belonged. The patient, who was only twenty-three years of age, had never during life presented any signs from which it could be inferred that he was the subject of extensive osseous disease. He died apparently from hæmorrhage following the removal of some warts from his prepuce, an operation of the most trivial nature. The autopsy, however, discovered sufficient cause for death. The bladder was inflamed; the kidneys suppurating; numerous subperiosteal tumours of small size existed on the inner and outer tables of the skull; many of the vertebrae, from the skull as far down as the sacrum, contained growths of larger and smaller size; seven of the ribs of the right and four of those of the left side were affected in a similar manner. The largest of the tumours appears to have been that of the eighth left rib; it was swollen to the size of a large plum, completely destroyed the bone where it was seated, extended through the periosteum, which was still visible as a circular line in a section of the tumour, and infiltrated the surrounding muscles. None of the organs or other tissues of the body were affected except some of the bronchial glands, probably by continuous infiltration from the tumours of the ribs or spine. It cannot of course be absolutely averred that most of these tumours were not secondary to some one among their number; but their near equality of size, the absence of symptoms indicating long duration of any of them, and the absence of secondary affection of parts usually prone to such affection, all point to another origin than this. Probably several of the cases classed with the tumours of particular bones might more justly be grouped together as instances of general sarcoma of the bones, what has been called by Buch⁴ "multiple primary sarcomatosis of the medulla of bone." The cases in this table which appear to merit this appellation are the last three of those of the skull, that of the sternum, and perhaps the round-celled tumour of the humerus. All the tumours were round-celled, and the bones most frequently affected were the skull, the ribs, and vertebrae. Von Rustizky,⁵ in the short article in which he includes the case I have numbered 62, calls the disease in that particular instance "multiple myeloma," and regards it as a simple or innocent affection, a mere outgrowth of the medulla of the bones. But its rapidly fatal issue, the infiltrating nature of the growths, the vessels with walls composed of a single layer of round cells, are, I think, characters absolutely inconsistent with such a view. The names suggested both by Buch and von Rustizky do not completely cover all the conditions of the disease. For although most of the tumours are of central origin, some of them are superficial, the tumours of the skull especially, which grow, as in Dr. Moxon's case, on the outer and inner aspects of the bone. It may be that the tumour of the femur (No. 2), of whose rapid course and widespread generalisation I spoke yesterday, was an instance of this general sarcomatous disease of bones. Perhaps too, as a lesser affection of the same kind, may be included the disease of the tarsus and metatarsus, which took the form of isolated areas of tumour in the interior of several adjacent bones, but did not affect parts of the skeleton more distant. If this case be admitted, it forms the sole exception to the rule by which thus far all the tumours have been round-celled. So far from regarding this condition as one of simplicity or less malignancy, it should surely be regarded as one of exceeding malignancy, for the disease falls not upon a single structure, but almost simultaneously upon several or even many similar structures, and from any or from all of these may spread, either by continuous infiltration, or through the medium of the blood; this character of multiplicity it is which deprives the unfortunate subject of the sarcomatous disease of the last chance which might otherwise be given by its removal.

Hitherto I have dwelt almost entirely upon the characters of sarcomas of particular bones. Now let me, in conclusion,

point out a few important features, most of which are common to both central and subperiosteal growths.

First: their history and course. Speaking in very general terms, central tumours occur in persons older than those who are the subjects of subperiosteal tumours; for while the latter not uncommonly attack young subjects, or even children, the former are by no means rare in persons advanced in years. Again, the central tumours grow for the most part more slowly than those which originate beneath the periosteum. Injury is not credited with the production of a large proportion of the tumours of bone, nor does previous inflammation appear to exercise the influence which has been attributed to it.

Second: the physical conditions of the tumours previous to their removal, or to death, are interesting, especially in two particulars—first, their situation; second, their occasional pulsation. Let us take the second first, for it is more easily dealt with. A tumour of either origin may pulsate, but the symptom is more common in central than in subperiosteal tumours. It occurred in every variety of the former, only in the round and mixed-celled subperiosteal growths; and in either case only in tumours of certain bones—the femur, tibia, calvaria, and innominate bone. The total number of pulsating tumours of the long bones was much larger than of the other two, but the proportion was greatest in the tumours of the pelvic bone, in which it reached one-half. Where the cause of pulsation could be ascertained it was due in every case to an abundant supply of vessels of moderate calibre, which in some cases of blood-cyst poured their blood directly into the cavity of which the tumour appeared mainly to consist.

No problem has seemed to me so difficult as the unfolding of the laws which determine the situation of sarcomatous tumours. Long bones, short bones, and flat bones are liable to sarcoma, but not all bones equally, or even all the bones of each shape in equal proportion. The long bones of the lower extremity are far more frequently attacked than the bones of the arm and forearm, while the bones of the metacarpus and metatarsus are but rarely affected, the phalanges almost never. The flat bones of the skull, the scapula and the innominate bone, are all subject to sarcoma, but the skull bones most of all. None of the short bones are very liable to the growth of primary disease, and I have found no record of affection of the carpal bones. But this statement only very partially expresses what may be termed the power of selection exhibited by sarcomatous tumours. In the long bones they show a decided preference for the epiphyses or articular ends, and especially the tumours of central origin, for one articular end of each long bone. In the upper extremity it is the upper epiphysis of the humerus, the lower of the radius and ulna; in the lower extremity the lower epiphysis of the femur, the upper of the tibia and fibula. The explanation of this singular phenomenon may be attempted on various hypotheses, but none of them are satisfactory. It is possible the secret exists, not in one condition, but in a combination of conditions, one or the other of which may exercise an influence more prominent than the rest. As a fisherman oftentimes attaches several baited hooks to the end of a single line in the hope that, one failing, another may allure his prey, so let me bait those particular ends of the long bones, which are so frequently the seat of central tumours, with all the conditions I can find common to them, and abide patiently in the hope that the reason which evades us now may be one day found fixed to one or other condition, perhaps by someone more fortunate than myself. All these parts contain cancellous tissue in greater or less abundance; their position renders them liable to squeezes, blows, and injuries of various kinds; in the process of development of the bones they are the parts which are the first to ossify, the last to be united with the shaft; and the direction of the nutrient artery is from them, not towards them.

Third: after removal of the tumour, or death, a peculiarity is observed in the appearance of the subperiosteal tumours which does not exist in the central growths. They present, in the large majority of instances, a structure radiating from the bone, which indeed, I believe, is never absent if the material of which the tumour is composed is of such a nature as to allow it to appear. Rindfleisch⁶ mentions it, and ascribes it to a papillary formation. But it is not a papillary formation in the sense of resembling in structure a papilla of the skin or mucous membrane, but apparently is solely due to the manner in which the tumour grows or is developed.

³ Vol. xxii. p. 206.

⁴ Ein fall von multipler primärer Sarcomatose des Knochenmarks. Inaug. Dissert. Halle, 1873.

⁵ Deutsch. Zeitschrift f. Chirurgie, Bd. iii., s. 162.

⁶ Lehrbuch d. Pathologischen Gewebelehre, 4te Auflage, s. 544. Leipzig.

The chief growth takes place around the tiny vessels passing from the periosteum almost at right angles through the cortex of the bone; each of these becomes the centre of a column resting on the bone; and thus the stamp of radiation is impressed upon the tumour. A radiation of a similar kind may exist in inflammatory new formations originating beneath the periosteum. I have already referred to the rarity of osseous and cartilaginous transformations of the substance of central tumours, so common in subperiosteal growths.

Fourth: the progress and termination of both classes of tumours show that all sarcomata of bone may be malignant, but their malignancy is of widely different degrees, and displayed in various forms. Speaking generally, it may be said that central sarcomas are far less malignant than subperiosteal, and tumours of the bones more distant from the trunk than those of bones more near. The latter of these two statements is illustrated by the relative malignancy of the tumours of the tibia and of the femur, which has been referred to in each of these two lectures. The accuracy of the former statement may be tested as well by the cases which have come under my own observation as by the complete series of these tables. Of eleven patients with subperiosteal tumours of various bones of which I have taken notes, and which are included in the table, I know that nine are dead. The tenth, whose tumour was of the tibia, and for whom amputation was performed at the end of two months, was well when last heard of, fourteen months after operation. The eleventh was subjected to amputation only a few weeks ago. Of ten cases of central tumours here included, I have notes of the death of three, and of slow recurrence in one during seven years after enucleation, while four are known to have been well at periods respectively of one year, three years and a half, four years, and five years and a half after operation.

The least degree of malignancy is infiltration of contiguous structures, much more common in subperiosteal than in central tumours, and, though generally seen in tumours which become generalised in distant parts, not a necessary precursor of this more marked malignancy. Next in order to this continuous infiltration is affection of the lymphatic glands, rarely occurring in conjunction with subperiosteal, still more rarely with central tumours. It may be of the same nature as the affection of other organs where the disease is probably conveyed through the medium of the blood, as when glands having no lymphatic relation with the region primarily diseased become sarcomatous. Examples of this were alluded to in speaking yesterday of the tumours of the skull, and to-day the round-celled tumour of the humerus furnishes us with an instance among the central tumours. Or it may probably originate in continuous infiltration of one or more lymphatic glands by the primary disease, an opinion for which I have delivered reasons in the reports of several cases, but which I have not yet been fortunate enough to prove by actual dissection. For in those cases in which tumours of large size grew in the immediate neighbourhood of lymphatic glands, and in their growth destroyed them, I could not be sure whether the disappearance of the glands was due to their entanglement in the tumour or to transformation of their substance. And, since I am not able to affirm the contrary, it may be due to conveyance of the primary disease through the lymphatic channels, the common path by which most tumours affect the glands, but I venture to think the least common of the sarcomata of bone, if, indeed, it ever occurs; and for these reasons: the infrequency of glandular affection in connexion with tumours of bone, whether central or subperiosteal, the absence of glandular affection in cases of long-standing disease, and the absence of glandular affection when the disease has been permitted to run an uninterrupted course to death, and when one or more of the organs are the seat of the secondary growths. It might be thought that if the primary disease did not obtain access to the lymphatic channels directly from the bone, it yet might find an entrance into them when the soft tissues around the bone became involved. But probable as this appears in theory, it is contrary to the teaching of experience. It will of course be understood that every case of irritative or inflammatory enlargement of the glands has been carefully excluded. The last degree of malignancy is that in which growths appear in organs or tissues more or less remote from the part in which the tumour first was noticed; in most cases undoubtedly conveyed there by the blood, as when the interior of the heart or the lungs become affected; in some cases of less certain origin, as when the subcutaneous tissue

or the skin is the seat of secondary tumours and the lungs are free; and in some cases apparently due to distinct outbreaks of sarcomatous disease, either after a prolonged period of quiescence or in several parts almost simultaneously. Of all organs, the lungs are far more commonly affected than any other, and the tumours which exhibit the most marked tendency to widespread generalisation are the round-celled tumours. But the affection of the lungs and the generalisation of round-celled tumours are, as may be seen by a glance at these tables, both largely influenced by the situation of the tumour. It is the round-celled tumours of certain bones which are thus liable to become widely generalised, and the subperiosteal which are far more likely than the central tumours to affect the lungs.

If in these two lectures I have bestowed what appears to be too little attention on the effect which the structure of a tumour produces on its characters and course, it is because this effect has seemed to me to yield almost entirely to the far more potent influence exercised by the situation of the growth, and my desire to exhibit in its perfection the power of the latter has led me almost to neglect the former.

I cannot now enter at length into the question of operation, but still I cannot refrain from indicating how largely it is influenced by a more intimate acquaintance with the conditions of life of the tumours of different bones. Setting aside cases of multiple sarcoma and of tumours so situated that they cannot be removed, it seems as if no doubt can exist of the propriety of operation where the disease has not advanced too far. Its advantages are obvious. Complete removal of the primary disease arrests its continuous infiltration and terminates the dangers which are incidental to the mere presence of a tumour often of enormous bulk. For local recurrence may be regarded as an accident which may be absolutely prevented by removal, an accident almost unknown when, for example, the thigh is amputated for a tumour of the tibia. Nor does there seem sufficient ground to doubt that if the primary tumour were early enough removed, generalisation by the blood and affection of the glands may be prevented. Against these benefits the only disadvantage which can fairly be alleged is the danger of the operation itself, marvellously less at the present time than it was ten years ago, and not to be gauged by the horrible mortality exhibited in this table of central sarcomas.

The following general rules for operation may, I think, be gathered from a study of the cases in these tables.

For all subperiosteal sarcomas of the limbs amputation at the earliest possible date high up above the tumour. The nearer the tumour to the trunk the less likely is the operation to be successful, not only because the malignancy of these tumours seems generally to increase as they grow from parts more near the trunk, but because of the greater difficulty of allowing an area sufficiently wide above the growth. For subperiosteal sarcomas of the clavicle, the lower jaw and ribs, free resection of the tumour, and of the bone from which it grows. But with a diminished expectation of success depending upon the vastly-increased chance of recurrence after operation. For subperiosteal tumours of the pelvis usually no operation is of use, and for those of the skull none is admissible, partly because the tumours of the vault grow from both aspects, partly because in the majority of cases they are multiple.

For all tumours of central growth occurring in the bones of the extremities the chances afforded by amputation appear to be infinitely greater than for subperiosteal tumours. And for those of the leg, forearm, or even of the arm, when the tumour has not extended beyond the limits of the bone or periosteum, for amputation resection may be substituted. Nay, in some few cases, where growth is slow, and the bone not too widely expanded, the tumour may, with advantage be dislodged, or scooped out from its cavity through an opening in the wall. For central tumours of the lower jaw and clavicle, resection or enucleation may be practised with the best hope of success. But for central tumours of the pelvis and the skull usually no operation should be practised, in both cases because the situation of the tumour often places it beyond the reach of operation; in the second case, because the central, like the subperiosteal, tumours of the skull are often multiple.

THE treasurer of Addenbrooke's Hospital, Cambridge, has received 100 guineas, as a first instalment of the proceeds of Hospital Saturday in the town.

ON "TENDON-REFLEX" AS AN AID TO DIAGNOSIS IN DISEASES OF THE SPINAL CORD.

By THOMAS BUZZARD, M.D., F.R.C.P.,
PHYSICIAN TO THE NATIONAL HOSPITAL FOR THE PARALYSED AND
EPILEPTIC.

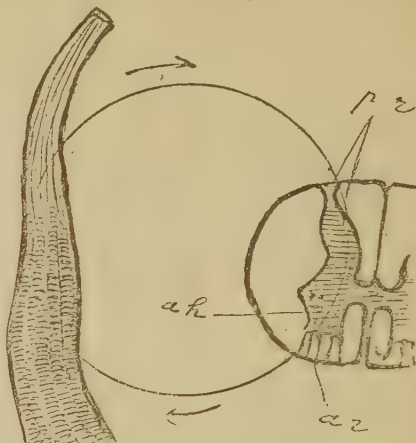
IN the following remarks it is provisionally assumed that the contraction of a muscle which follows a blow upon its tendon is of the nature of a reflex action. The adequacy of such an explanation is, I am well aware, contested by high authorities in physiology. Measurements of the interval of time which elapses between the blow and the contraction are thought to prove that this is too short for the phenomenon to be reflex. I cannot as yet consider this to be a conclusive objection, for whilst, of course, acknowledging the respect which is due to attempts at accurate measurement, experience shows that, even in very careful hands, where the question is one of delicacy—in the present instance it is a matter of a very few hundredths of a second—sources of fallacy are apt to occur in the experiments which vitiate the conclusion. It is quite conceivable, moreover, that a shorter period of time than is commonly needed for a reflex event is requisite for conduction through the centre, where, as in the present instance, the centripetal stimulation is in all probability unusually strong. Nor can we properly compare it with the time required for reflex from the skin, since the fact that in tabes, for example, whilst the skin-reflex is usually preserved intact, the tendon-reflex is always lost, shows that the conduction must, at least in some part of the course, take place through a different path.¹ At any rate, it seems advisable that at the present juncture the clinical facts should have due prominence, and there can be no question, I think, that they make out a strong *prima facie* case in favour of the reflex character of the muscular spasm. With the view of aiding in the consideration of the question from this point of view some rough diagrams are reproduced, which I have been long in the habit of using in order to illustrate the connexion between certain pathological changes in the spinal cord and the absence or exaggeration of "tendon-reflex." For the sake of simplicity, the remarks will be confined as far as possible to "patellar tendon-reflex" and "ankle clonus" as representatives of phenomena which may, as is well known, occur in connexion with other tendons and muscles.

The patellar tendon-reflex may be conveniently tested, in most instances, by the following procedure, which differs from that usually employed. The patient, who is seated, plants his foot firmly down at such a distance that the leg forms a little more than a right angle with the thigh. Whilst the observer rests the palm of his left hand upon the patient's thigh, he strikes with some implement held in the right hand several blows upon the ligamentum patellæ at about an eighth of an inch or so below the knee-cap. I nearly always employ for this purpose an ebony stethoscope, with a very heavy ear-piece and an india-rubber cord-like ring sunk into a groove on its margin. The quadriceps muscle can be felt, and (if the patient is in masculine garments) can be seen to contract more or less vigorously in response. If it be desired to ascertain the mere presence of the "reflex," this is sufficient. If, however, the response is very small, or is doubtful, or does not occur at all, the thigh as well as the leg must be bared, and other measures adopted, before a conclusion is arrived at. The leg should be crossed over the other, or the patient should be made to sit upon a table with his leg dangling. In either of these positions the presence of the "reflex" will be shown by the foot being jerked more or less vigorously forwards when the ligamentum patellæ is struck. In the case of a patient undressed, and lying on a bed, the knee should

be flexed, and the heel held firmly down upon the bedding whilst the blow is given on the ligament. The contraction of the quadriceps is readily seen.

Supposing that careful examination has established the absence of the phenomenon, we should next endeavour to ascertain at what point in the arc of nervous communication the break occurs by which the process is interrupted. Fig. 1 shows the normal condition, as it may be supposed

FIG. 1.



to be if the phenomenon be reflex. Impulses started by a blow on the tendon after traversing the afferent nerve, enter the cord in the posterior root, *pr*, and reach the anterior horn, *a h*, where they give rise to efferent impulses, which arrive by the anterior root, *a r*, at the muscle, and cause it to contract. From the tendon to the anterior horn is the sensory portion of the arc, whilst the motor part includes the anterior horn, anterior root, and intra-muscular nerve. The integrity of this nervous arc ensures the response of the muscle (provided the muscle itself be healthy) to a blow on its tendon. So also the fact that the quadriceps is found to contract freely when the ligamentum patellæ has been struck *almost always* signifies that the nervous arc is nowhere seriously interrupted in that part of the spinal cord which gives origin to the lumbar plexus. It is not, however, quite conclusive on this score, for a reason to which I shall refer later. If, on the other hand, careful testing shows the phenomenon to be absent, it is evident that there is a "fault" (as the miners say) or break at some point or other in the continuity of the nervous arc pictured in the diagram. Should the patient who presents this abnormality be walking freely about, and able to flex and extend his knee-joint with vigour, we may at once absolve the *motor* portion of the nervous arc from the suspicion of being the seat of interruption. Were it otherwise, and the break dependent on lesion in this direction, the "fault" must necessarily be either in the muscle itself (as, for example, from pseudo-hypertrophic paralysis), in which case there would be a very evident enfeeblement, or else either from lesion of the anterior root of the spinal nerve or atrophy of the large ganglion cells in the anterior horn. In each of these latter conditions there would be not only more or less muscular powerlessness, but also a considerable amount of muscular atrophy.

But the patient may have kept his bed for some time, and is weak and more or less emaciated. In this case it becomes necessary to resort to other expedients to ascertain the integrity of the motor part of the arc. If the knee-joint be capable of voluntary flexion and extension with a fair amount of force, it will be sufficient to percuss with some instrument the vastus internus where it projects just above and to the inner side of the knee-joint. This may be done with the thin ear-piece of an ordinary stethoscope.² If this blow, in these circumstances, excites a wave of muscular contraction, it may be taken as corroborative evidence that the muscle, motor nerve, and anterior horn are free from lesion. Should, however, there be a very powerless state of the limb, the occurrence of a wave of contraction in response to a blow

¹ The literature of the subject has rapidly become extensive, and includes, besides the work of Westphal and Erb, to whom is due the credit of inauguration, most important contributions by Tschirjew, Grainger Stewart, Gowers, Hughlings Jackson, Bramwell, Charcot, Brissaud, and Berger, amongst many others. There is an able article by Dr. Augustus Waller in *Brain*, Part X., in which the physiological side of the question is discussed, and the objections to the theory of reflex action are very forcibly put.

² Hawksley has made for me an ebony stethoscope, provided with a thick and also a thin ear-piece, which are interchangeable. The former is for percussing the tendon, the latter being used for the muscular structure.

upon the muscular structure of the vastus internus will not be sufficient to prove the integrity of these structures. I have found—and I do not think this fact is generally known—that a muscle which is cut off from its trophic centre either by lesion of a spinal nerve or atrophy of ganglion cells in the anterior horn of the cord, and which fails to contract to the strongest induced currents, will yet (provided it has not lost also the power of contracting to a slowly interrupted voltaic current—the reaction of degeneration) respond by a very palpable wave of contraction to blows upon it. So that if you strike a muscle and get a wave of contraction, all that you can predicate of it is this, that the muscle will respond to *some form* of electric excitation, not that it will necessarily respond to faradism. A muscle which thus responds to a blow may be perfectly normal, or, on the other hand, it may be far advanced towards a state of irreparable degeneration. In the latter case, however, the necessarily powerless condition of the muscle secures you from error.

It must be remembered that the patellar tendon-reflex is lost somewhat easily, and as the result of a small amount of structural change. It will often be found wanting when there is but a slight lowering of faradaic excitability. It is best therefore, whenever there is the slightest doubt about the matter, to test very carefully by induced currents the reaction of the vastus internus, the rheophore being applied to its motor point. The importance of this is evident. If by any want of care in examination we jump hastily and erroneously to the conclusion that the motor side is not in fault, we are driven to the necessity of ascribing the break to a lesion on the sensory side, and the diagnosis is consequently ruined.

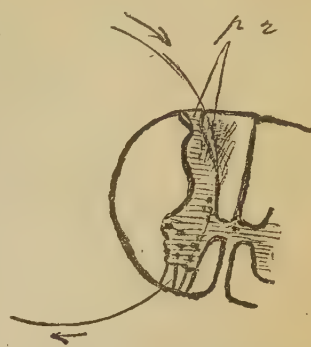
We will consider that no such want of care has been shown, and that the examination excludes the muscle, motor nerve, and anterior horn of grey matter from being the cause of the break in communication. We have now to fall back upon the grey matter of the posterior horn, the posterior root zone, and the posterior root. In one or other of these structures the "fault" must lie. Cases in which the patellar tendon-reflex is absent in health are so extremely rare that this possibility may practically be disregarded—at least until every other explanation has been exhausted.

Through the kindness of my colleague, Dr. Ramskill, I am able to refer to a case of extreme interest bearing upon this point. The patient is a young man who is affected with loss of power in the left lower extremity. There is no loss of sensibility, but very extensive wasting of the muscles of this thigh, and their excitability by induced currents is lowered. The right lower extremity is free from paralysis or wasting; he can flex and extend it vigorously, and the muscles respond normally to faradaic currents. In this limb, however, there is cutaneous anæsthesia to a very marked extent. He presents, therefore, a typical example of Brown-Séquard's hemi-paraplegia. There is a lesion, which circumstances show to be probably syphilitic, occupying more or less definitely the left half of the spinal cord in the lumbar region, and giving rise to motor paralysis on the side of the lesion, and anæsthesia on the opposite side. The occurrence of anæsthesia, in these circumstances, in the limb opposite to the lesion was explained by Dr. Brown-Séquard, it will be remembered, by the fact that the conductors of sensitive impressions from the trunk and limbs decussate in the spinal cord, so that an injury or disease of the left side of the cord—e.g., affects the conductors from the right side of the body below. Now in this patient the patellar tendon-reflex is absent in each leg, not only in the left, which is paralysed and greatly wasted, but in the right also, in which the motor power is intact, but the skin anæsthetic. To explain its absence from the left (paralysed) limb it is evident that the "fault" must be in the anterior horn of the left side of the cord, in the motor portion of the nervous arc. In the right limb, on the other hand, it is lost in connexion with lesion of some part of the sensory tract, the exact situation of which it is not easy to indicate. It seems probable that the lesion of the cord (myelitis), although greatly confined to one segment, is not absolutely so, but, whilst sparing the right anterior horn, encroaches to some extent upon the right posterior horn, and "cuts" the communication at this point. The case is a most interesting example of the fact that the absence of the knee phenomenon may be due to lesion in either the motor or the sensory portion of the nervous arc, both modes being exhibited in one individual. In certain cases—as, e.g., where there is a

diffuse myelitis involving the whole transverse section of the cord—it may be due to both.

The most common and conspicuous illustration of a flaw on the *sensory* side destroying this reflex, is in the case of *tabes dorsalis*. Fig. 2 shows the position of the essential lesion in *tabes dorsalis* in the posterior root zone in that portion—i.e., of the posterior column adjacent to the posterior horn, which is largely composed of posterior (sensory) root-fibres making their way vertically to the grey matter above. Limitation of the lesion to this spot explains at once the almost constant connexion of lost reflex with the occurrence of lightning pains, whilst the integrity of the anterior horn and anterior root explains the fact that the quadriceps muscle is neither diminished in bulk

FIG. 2.



nor materially weakened as well as that it usually responds perfectly to faradaic currents, and also to blows upon its structure. In my earliest published reference to the subject of tendon-reflex, I remarked of a case of *tabes*,³ "The muscle is here, indeed, more than normally ready to contract upon direct local stimulation." Greatly extended experience since then has shown me that a condition of exceptional irritability to percussion is very common, perhaps indeed more frequent than not in *tabes*. Erb has since recorded a similar observation.⁴ He writes, "In striking contrast to the loss of tendon-reflex, the mechanical irritability of the quadriceps is always completely preserved, and is frequently even very pronounced and lively." I showed the other day that in an elderly man with typical *tabes* in whom there remained not a vestige of tendon-reflex, the irritability to direct percussion of the vastus internus far exceeded that exhibited in the ward attendant, a young and healthy man with a powerful muscular system. An explanation of this increased excitability is probably to be found in the irritative lesion of the posterior root-fibres, the cause of the lightning pains. The symptom must be classed indeed, I submit, in the same category with the tendency to cramp in sciatica, and the clonic spasm of facial muscles which is so apt to occur in severe trigeminal neuralgia.

It occurred to me a few days ago to examine in reference to this subject a patient whose supra- and infra-orbital nerves have been recently stretched for severe neuralgia of the two upper divisions of the trigeminus on the right side. The patient was for a time greatly relieved, but is subject to occasional paroxysms of pain, and there yet remains a considerable amount of clonic spasm of the muscles on that side of the face. There is manifestly an abnormally irritable condition of the muscular tissue. This irritability, however, does not extend to the tendons. Repeated testing by percussion showed that the contraction of the zygomaticus major of the *left* (sound) side of the face, which followed a blow upon its tendinous origin on the malar bone, was distinctly much more energetic than that of the corresponding muscle on the *right* (affected) side. My reason for selecting this case for observation on this point was as follows. As is well known, the sensory supply to the face is derived from the trigeminus, the motor influence from the portio dura. Now, the sensory portion of the fifth is acknowledged to represent the posterior root of a spinal nerve. There had therefore been in the operation of stretching a kind of vivisection (with a therapeutical, not a physiological, object, as it happened) performed upon what is practically the posterior root of the nerve supply to the muscles of the face. In no other part of the body could the operation have been so limited to this effect; in the spinal nerves the posterior and anterior roots are united in one trunk. Now, supposing that nerve-fibres from the tendon take their course to the centre in the posterior root, as Tschirjew has stated, I ought to find, it appeared to me, the response to stimulation of tendinous fibres on the side on which the "posterior root" had been stretched, and therefore injured, less active than on the sound side. I had some difficulty in selecting a muscle

³ THE LANCET, July and August, 1878.

⁴ Zur Pathologie der *Tabes dorsalis*, Deutsch. Arch. f. klin. Medicin, Marz, 1879.

upon which the experiment could be tried, but the zygomaticus major showed it very well, although on a necessarily small scale. It is of no small interest to observe that although the muscular tissue was generally over-irritable (like the muscle in tabes) the response to a tap on the tendon was distinctly less vigorous than that on the sound side. I do not wish, however, to draw positive conclusions from a single observation of this kind. It would be well to repeat the examination in a patient affected with a destructive lesion of the fifth nerve, or in whom the infra-orbital trunk had been divided for neuralgia.

(To be concluded.)

ON CHIAN TURPENTINE AND ITS USELESSNESS IN CANCER.

By HENRY MORRIS, M.A., M.B.,

SURGEON, AND SURGEON TO THE CANCER OUT-PATIENT DEPARTMENT, OF THE MIDDLESEX HOSPITAL.

In his second article "On Chian Turpentine and its Use in Cancer" (in THE LANCET, Oct. 2nd, 1880), Prof. Clay says, "Certain results obtained by the use of a remedy almost forgotten by the therapist, were placed by me unreservedly before the profession; and for the benefit of suffering humanity, at least, a fair trial of the remedy ought to be given before condemning it."

With what willingness a fair trial of this drug was entered upon and perseveringly continued at the Middlesex Hospital, and with what gladness we would have welcomed any measure of success with it, will be very readily believed by all who have to follow cases of cancer along their melancholy course to their tragical end. Moreover, the large opportunities for watching cancer of all kinds afforded by a hospital which, besides receiving cases of cancer for operation into its general wards, has a special cancer out-patient department open to all comers, and thirty-two specially endowed beds, which may be retained until the occupants are "relieved by art or released by death"; the tradition which makes it an essential part of the duty of the surgeons of the Middlesex Hospital to do whatever within them lies for the relief or cure of cancer; together with a large share in the universal desire that a remedy for this frightful, and frightfully common, malady may be discovered—naturally incline us to test the value of anything which seems to offer even the faintest ray of hope. Perhaps, however, it must be admitted that past experience of acetic acid, bromine, condurango root, and various other external and internal methods of treatment, deprives us, at the outset, of that enthusiasm of great expectations which some might possibly indulge.

But besides testing remedies, it is also expected that we duly lay before the profession the results, and it is on this account that I publish brief notes of the following cases.

In answer to those who have hitherto questioned the efficacy of Chian turpentine, Professor Clay has replied: (1) That "in a large percentage of cases factitious turpentine only has been used in the treatment of cancer"; (2) that a sufficient time has not been allowed to elapse for the full effects of the remedy to be manifested; and (3) that the full effects of the pure turpentine have not been gained in some instances because, owing to its incomplete compounding, the drug has not been entirely digested.

It is therefore necessary that I should state: (1) That the turpentine used in the following cases was at first some which was in stock at the hospital, and answered thoroughly to the descriptions of the genuine, pure turpentine. When this was exhausted, more was obtained from two well-known houses, and it was a sample of one of these which was publicly condemned by Professor Clay. Owing to the Professor's letter to the *Med. Times and Gazette* (May 15th), the use of these was at once stopped, and another supply was obtained, at his recommendation, from the Apothecaries' Company. Lastly, in the first week of October I commenced to use some placed at my disposal by a

friend, to whom it had been sent by Professor Clay. It is this which I am still using, and have been doing ever since I received it. (2) As regards the length of time the drug has been administered, I can only say that in several of the cases, if the time has been insufficient, it has not been my fault or that of the patient, but is due to the fact that the disease continued to run its course, uninterrupted by the drug, to its fatal end. (3) Both the pills and the mixture have been made in strict accordance with Professor Clay's directions by Mr. Challice, our skilful dispenser, who had, prior to Professor Clay's last article, pointed out the way to avoid any separation of the resin.¹

Professor Clay's confidence in the remedy having increased, he says he is justified "in stating that uterine cancer at least may be removed by the use of Chian turpentine;" and adds: "Most of the cases of cancer which have presented themselves are in an advanced stage of the disease, and more especially is this the case in cancers of the uterus. Yet the treatment continues to be very efficient." He has, too, put on record marvellous benefit accruing to four of his patients in such a very short time as four days, seven days, fourteen days, and sixteen days respectively, and has besides given one admirable result in a woman who, four months before, had been told at the Middlesex Hospital that "her case was incurable and that she had not long to live,"² but who after undertaking the journey to Birmingham became an in-patient at the Queen's Hospital, and was so much improved by the Chian turpentine treatment that in nine weeks she was "about to return to London with every prospect of soon being cured." None of the following cases, therefore, are open to objection on the ground that the disease was too far advanced when the turpentine was commenced; nor can the genuineness of the drug, or its method of administration, be fairly called in question.

CASE 1. Carcinoma of the fundus of the uterus; destruction of the whole organ; death.—Ann H—, aged sixty, a cook, was admitted into Stafford ward on February 2nd, 1880. Single, and had never borne a child. General health always good, except that she had suffered greatly at her menstrual periods. Catamenia commenced before the sixteenth year, had always been scanty, and ceased altogether at fifty. No cancer in family. At the beginning of January, 1879, she began to feel very weak and unequal to her work. In August, 1879, bearing-down pain in the vagina commenced; and intense hæmorrhage, which had occurred once or twice previously, now became worse. Was treated at the Great Northern Hospital in September, 1879; since then the hæmorrhage has ceased; but soon afterwards an offensive whitish discharge commenced.

On admission she was fairly nourished, but pale looking; was cheerful in manner; but said she had lost flesh, as she was at one time very stout. Suffered greatly from dragging pain in the pelvis, and had a thick, offensive leucorrhœal discharge.

Vaginal examination.—There is no ulceration of the vagina or of the os or cervix of the uterus, but an indurated and uneven enlargement of the fundus.

Sedatives, with tonic and laxative medicines, were administered during February, March, and part of April; but on April 16th Chian turpentine, in the form of mixture, was commenced, and taken three times a day without interruption until the beginning of August, when it was omitted for a time on account of sickness.—May 4th: the pain complained of is severe and frequent, more especially after sitting up. Getting out of bed is followed by hours of severe pain. Discharge considerable and blood-stained.—May 11th: The discharge is sometimes quite black; it has increased the last eight or nine days, but is not so offensive.—May 21st: Pain still continues severe; takes opium or morphia twice daily, to relieve the pain over which the Chian turpentine mixture seems to have no influence.—June 25th: Still no ulceration to be felt per vaginam, but there is considerable and painful œdema of the genitals.

During September the Chian turpentine mixture was again taken, but irregularly, and only as it could be tolerated by the stomach. On Oct. 2nd it was again commenced to be taken regularly three times a day, and was so continued

¹ Vide *Pharmaceutical Journal*, June 26th, 1880.

² Professor Clay having courteously informed me of the name of this patient, I asked Mr. Fardon, the resident medical officer, to refer to her case, but though he has searched both the in- and out-door cancer registers for two years, and the obstetric registers for the last year, her name does not appear. As Professor Clay adds, the statements of patients are not always to be relied upon. It seems more than probable that in this instance he was misinformed.

up to the date of death.—Sept. 27th: The posterior portion of the cervix thickened and ulcerated; vagina intact; vaginal examination causes much pain, therefore the condition of the body of the uterus was not ascertained; bowels constipated; from this time the injurious effects of the disease very rapidly progressed, and she died on Nov. 7th.

Necropsy, by Dr. FOWLER, twenty-nine hours after death.—Body emaciated. Abdomen retracted. The uterus, with the exception of the os, and small part of the cervix, had entirely disappeared, and in its place there was a sloughy cavity containing faecal matter. One of the adjacent and adherent coils of intestine had ulcerated through where it had formerly formed an adhesion with the uterus. The vagina was scarcely affected; the mesenteric glands were enlarged from cancerous deposit. On the posterior surface of the lower lobe of the right lung there was a small cancerous nodule the size of a pea. On the surface of the right kidney there was a small spot, probably a commencing secondary deposit of cancer. The kidneys were otherwise healthy.

Remarks.—In this case it will be noticed that the turpentine treatment was continued uninterruptedly for three months and a half, then omitted for about three weeks, and then taken irregularly, but mostly once or twice a day, for another two or three weeks, when it was again administered regularly three times a day for another five weeks. It should be added of this patient that she was very docile and intelligent, and entered readily into the trial of the effects of the drug upon her. She even willingly consented to forego the anodynes (opium, morphia, and belladonna) which were given internally and applied externally to relieve her great sufferings; but after a fair trial of the anodyne effect of the turpentine, I felt that it was cruel, notwithstanding her willingness, any longer to withhold the other drugs, as she suffered so much more severely when not under their influence.

CASE 2. Carcinoma of vagina, clitoris, urethra, and external genitals; death.—Mary H—, aged fifty-five, was admitted into Stafford ward on Feb. 12th, 1880. A married woman, mother of six children, the youngest of whom was twenty-one years, and the eldest thirty-one years; no miscarriages. Her catamenia appeared at twelve; had always been regular and painless till the present time; general health always excellent. No family history of cancer. For the last two or three years has had a "weakness about the womb," with some offensive discharge, but without hæmorrhage or pain. Has lately been treated for a few weeks as an out-patient at two different London hospitals; has not been losing flesh, nor has she felt ill, though she has not been equal to much work of late.

On admission she was a stout woman, with rather relaxed, flabby tissues, somewhat anæmic, but not cachectic.

Vaginal examination.—The posterior wall of the vagina and the os and cervix uteri are normal. Immediately behind the anterior fourchette of the vulva, and extending backwards from this so as to involve the clitoris, urethral orifice, and floor of the urethra, together with the corresponding surface of the vagina, is a nodular, ulcerated, and indurated tract, projecting both into the vagina and forwards towards the bladder, and extending more on the right than on the left side. Above this is an area of healthy vaginal wall. In the left iliac region the glands are enlarged. Has incontinence of urine, but not much discharge.—April 2nd: The lower wall of the urethra is destroyed by ulceration; the base of the bladder bulges against the anterior wall of the vagina immediately beyond the ulcer; complains of much scalding pain. Chian turpentine in pills commenced to-day; all other remedies discontinued. On May 11th there was no relief from the pain; the discharge was profuse, and of a very offensive odour. Morphia was now required twice a day. On May 18th the turpentine pills were replaced by the turpentine mixture. She died rather suddenly on May 20th, suffering greatly to the end.

Necropsy, by Mr. LYELL, twenty-two hours after death.—Body very well nourished. A large quantity of fat subcutaneously, and throughout the body generally. Externally, part of the genitalia had been destroyed by cancerous ulceration; the clitoris, orifice of the urethra, and parts around this having disappeared. On removing the pelvic organs, the knife in front entered the cavity of the bladder, the front wall of which was adherent to the back of the symphysis pubis. The greater part of the front wall of the vagina had disappeared, together with the whole of the urethra, so that

the bladder opened into a cloaca formed by the remainder of the vagina. The mucous membrane of the back of the vagina was in places roughened from deposits of a soft mortuary, phosphatic nature. The base of the bladder and what remained of the anterior wall of the vagina were infiltrated with whitish, firm, cancerous material, which also completely infiltrated the surroundings of the bladder at its lower part. When the bladder was laid open along its anterior surface, it was seen that the mucous membrane around the ulceration was covered with a mortuary, phosphatic deposit about an inch and a quarter wide. Above this the mucous membrane was of a dark-red colour, and speckled all over with small adherent phosphatic deposits. The uterus weighed twelve ounces; the cervix was natural, but the body was much enlarged, and contained four intramural fibromata about the size of walnuts. Rectum normal and partially empty. The kidneys were granular, with adherent capsules and diminished cortex; the right contained a small superficial cyst; the pelvis of neither was altered. The abdomen contained no fluid or evidence of recent inflammation. There was a slight excess of the quantity of fluid generally found in the ventricles of the brain.

Remarks.—It will be noticed that in this case a large vesico-vaginal fistula existed. Though the kidneys were granular, it is specially mentioned in the post-mortem report that the conditions due to obstruction of the ureters were not present. Professor Clay states that when the anterior wall of the vagina is involved the case is not so suitable for the treatment, and the turpentine is not well tolerated; "but when a fistula forms it is better borne."

CASE 3. Cancer of the uterus; death.—Emma T—, aged twenty-eight, was admitted to Stafford ward, March 4th, 1880. Married, and had five children in five years. Catamenia first appeared at fifteen, and continued regular until October, 1879. General health always good till fourteen months before admission. No cancerous history. Has never been well since the birth of her last child in December, 1878, since which she has had a continuous yellow discharge, has never menstruated, and has suffered severe pain in the abdomen. Has never flooded.

On admission the vagina was intact, the uterus movable, fundus enlarged, os and greater portion of cervix disappeared. What remained of the cervix was greatly indurated, much thickened, and very irregular. Above the line of ulceration there were a few shot-like nodules. Discharge offensive.—April 2nd: Complained of great pain in the left side of the abdomen, and for the last three or four days had been losing a little blood. There was the same hard ulcerated condition of the cervix; the edges of the ulcer were everted. Chian turpentine in pills was commenced; to be given twice a day, all other remedies being discontinued.—4th: Feels decidedly better; has much less pain, but still a little hæmorrhage.—6th: The Chian turpentine pills discontinued, and the mixture given three times a day instead. Pain to-day is as bad as ever, and is of a twisting character; has had less hæmorrhage.—13th: Pain varies slightly from time to time, but on the whole is much less. The discharge is not so great, but is more offensive now than formerly.—27th: Is suffering from indigestion and morning sickness. The uterine discharge is less.—May 4th: Chian turpentine discontinued, and a mixture of bismuth and calumba given instead.—11th: Has been taking the turpentine mixture again for the last three days. There is no difference in her condition.—25th: Has been getting gradually worse since last note. The discharge is greater in quantity, offensive in character, and of a browner colour. The uterus is very painful and tender to the touch. Her mouth is parched; she has a great craving for liquids. Subsequently she had a mild attack of pericarditis, from which she rallied.—June 4th: She had very severe hæmorrhage, which was not stopped until the vagina was plugged. The Chian turpentine discontinued to-day, and tincture of ergot given. She died on June 7th from exhaustion. No post-mortem allowed.

CASE 4. Cancer of the uterus and vagina.—Charlotte W—, aged fifty-five, applied to the cancer out-patient department of the Middlesex Hospital on March 4th, 1880, suffering from cancer of the uterus and vagina in an early stage. She was married and the mother of three children. Until April 1st she was treated with quinine and iron mixture, and Condy's fluid as an injection. Chian turpentine in pills was now ordered.—April 8th: She said that she was sure she was better for the pills, having had no

hæmorrhage, less watery discharge, and less pain.—July 1st: Seen again to-day, as she is not so well. She has not attended before since the last note was made, as she had been feeling better; but the pills given her on April 8th could not be retained, as she retched so much after them. She was now ordered to try the mixture, but she would not persevere with it.

Remarks.—This case is purposely included, not because it shows the effects of Chian turpentine, but because it is an example of a class of patients very likely to excite false hopes as to the result of the treatment. After taking a tonic for three weeks, and the turpentine for a week, and using a cleansing injection the whole time, the local symptoms were relieved. As her general health had not yet become affected by the disease she was sufficiently well satisfied with her improvement to leave off all treatment for some months. Had she been taking the turpentine several weeks, one might perhaps have supposed, from her own account and her long absence, that she had been cured by it.

(To be concluded.)

CLINICAL REMARKS TO STUDENTS

ON THE

DIAGNOSIS OF THE VARIOUS FORMS OF CONGENITAL HEART DISEASE.

By SEYMOUR J. SHARKEY, M.B.,
ASSISTANT-PHYSICIAN TO ST. THOMAS'S HOSPITAL.

GENTLEMEN,—You cannot have failed to notice that we have seen in the out-patient room during the last six months an unusually large number of patients suffering from congenital diseases of the heart; and it must also have struck you that the information I gave you regarding them was singularly vague and unsatisfactory. When patients have presented themselves suffering from heart disease which they have acquired since birth, owing to attacks of rheumatism or lesions dependent upon other causes, our diagnosis of the particular valve affected, and of the conditions of the several cavities of the heart, has been given with a considerable degree of confidence. But in cases of congenital disease assertions have given way to suggestions; and I have usually bluntly acknowledged that I could not say what the position or nature of the lesion was. And this I have done, and still do, without the least appearance and actually without the least sense of shame. For the bold confession of ignorance is better than the assumption of a wisdom to which we may aspire, but which we certainly have not yet attained.

The actual pathological condition of the heart, when the seat of congenital disease, is less frequently diagnosed by the bedside than the pathological condition of any other organ, with, perhaps, one exception—the all-but-immaculate pancreas. It is rarely that a physician ventures to breathe so much as a word of suspicion against the integrity of this organ, which, while well known to play a most important part in digestion, seems to enjoy a remarkable immunity from disease. The reputation for innocence which the pancreas has obtained is, however, well earned. For pathology, in spite of its efforts, records but few well-founded accusations against it. In the case of the heart, on the contrary, medical literature abounds in a variety of the most fatal lesions, with which children are afflicted from their very birth; and notwithstanding this, the cases in which a physician is able to state what the disease or malformation is are exceedingly rare. What I wish to explain to you now is, why our endeavours in this direction are so fruitless. Let me refresh your memories by alluding briefly to some points in connexion with the development of the heart, for you will find that a right appreciation of the abnormal conditions which it presents at birth depends altogether on a knowledge of its intra-uterine history. The heart at one time consists of a mere tube, which doubles upon itself, receiving at one extremity two veins—the omphalo-mesenteric veins,—which come from the yolk-sac, and giving origin at the other to a large arterial trunk, the bulbus arteriosus. The latter divides into two

arches, a right and a left, which are the primitive aortæ, and these again unite into a single trunk in the body of the embryo. It is unnecessary for our purpose to follow the development of the pulmonary artery, aorta, and vascular supply of the upper extremities and head from the vessels which run in connexion with the visceral arches, or to trace out in detail the gradual formation of the venous system; but it is necessary to state that the heart, which originally consists of two cavities separated from each other by a constriction, is gradually divided into four. This is effected by the growth of two septa, one dividing that part of the organ which receives the veins into two primitive auricles, and the other dividing that part from which the arterial trunk arises into two ventricles. A partition and valves, which are the auriculo-ventricular valves, also separate the auricular from the ventricular portion of the heart. The auricular and ventricular septa are of gradual growth. The latter grows from below upwards and forwards, and leaves for some time an aperture of communication between the two ventricles. The auricular septum grows from before backwards, but up to the period of birth it is perforated by a valved orifice—the foramen ovale. These defects in the septa, the foramen ovale, or other larger communication between the auricles, on the one hand, and the aperture between the ventricles on the other, are of special importance in pathology; and I wish to call your particular attention to them, as they figure largely in congenital diseases of the heart. The normal condition of the circulation just before birth is roughly this: The blood coming from the body generally, and from the placenta by the great veins, enters the right auricle; part is directed by the Eustachian valve through the foramen ovale into the left auricle, part goes into the right ventricle. A small portion only of the latter is conducted by the pulmonary artery to the still inactive lungs; while the rest is propelled by a short cut, the ductus arteriosus, into the aorta, and reaches the placenta and lower parts of the body. At this period, therefore, the right ventricle carries on the principal part of the systemic circulation. The blood from the lungs returns to the left auricle, and there meeting the stream which has come through the open foramen ovale from the right auricle, passes on into the left ventricle and aorta, and supplies the head and upper extremities, a small portion passing onwards to join the stream from the ductus arteriosus in its journey to the lower parts of the body. The whole mass of blood then returns from the upper and lower parts of the fetus to the right auricle (from which our description started), and commences the circle anew.

It will be seen that the foramen ovale and ductus arteriosus are nothing more than short cuts, by which the blood reaches the general circulation without having to go through the lungs, which are at this time almost impervious. The changes in the heart, which occur at birth, mainly have reference to these two structures; for on the sudden expansion of the lungs with the first inspiration, the blood is drawn into them, and gradually ceases to go through the contracting ductus arteriosus. It then returns in a full stream from the lungs to the left auricle, and closes the valve of the foramen ovale. The closure of the ductus arteriosus and foramen of ovale takes place during the first month of extra-uterine life, and the circulation is then such as we find it in the adult.

Congenital diseases of the heart have their origin either in arrest of development or malformation of some part of the organ, or else in inflammation of its growing structures, or, perhaps, still more commonly in a combination of these two causes. For instance, some cases consist in simple patency of the foramen ovale, without other detectable abnormality. Such an arrest of development may allow the venous blood in the right auricle to mingle with the arterialed blood in the left without passing through the lungs. When students have a case of congenital disease of the heart pointed out to them for the first time, they almost always ask whether it is a case of “patent foramen ovale.” But patency of the foramen ovale, pure and simple, is of extreme rarity. It is true that this orifice very often remains open in congenital diseases, but such a condition is almost always secondary to some disease of the valves or other structures, and so far from adding to the gravity of such cases, it is often absolutely necessary for the continuance of the circulation at all. If, for instance, there is an obstruction which prevents the blood from going in sufficient quantity through the pulmonary artery, some passage such as the foramen ovale must remain open to allow the blood to reach the left side of

the heart; and if no such passage exist, the child cannot live.

Much more frequent than these simple orifices in the septa of the heart are those cases where there is some stenosis of valve or vessel, produced by inflammation or by malformation of the part. All such lesions occur infinitely more frequently on the right side of the fetal heart, while those which arise after birth are almost confined to the left. Consider what must happen if a child is to live, in whom either the pulmonary artery or the right auriculo-ventricular orifice is partially or entirely obliterated. To reach the aorta the blood on the right side must by some means make its way to the left side of the heart; and as it is prevented from flowing onwards through the pulmonary artery, it finds a passage in the direction of least resistance, through the incomplete auricular or ventricular septum, and so—fortunately for the life of the child—prevents these apertures from closing. But while the natural thoroughfare for the venous current to the lungs is thus blocked, and the stream conducted in another channel, it is essential that some device should be found whereby a sufficient quantity of the circulating fluid may be exposed to the air in the respiratory organs. To reach the pulmonary artery the blood sometimes travels along the aorta into the ductus arteriosus—which, as you know, connects these two great vessels,—and so on into the lungs. Hence it is that the ductus arteriosus may be kept open in such cases, and the bronchial or œsophageal arteries may also enlarge and assist in the pulmonary circulation. Sometimes, however, no such collateral circulation being set up, the patient has to carry on the vital processes on the small quantity of oxygen which can be taken up by a feeble stream of blood driven through a contracted orifice.

In those rarer cases where there is some obstruction on the left side of the heart, which prevents a sufficient quantity of blood from passing into the aorta, the pressure of the fluid stagnating on the left causes a stream to flow through some aperture in the septa into the right side, from whence it may be carried by the pulmonary artery not only to the lungs, but also through the ductus arteriosus into the descending aorta, the right ventricle then carrying on, as it does in the fœtus, a great part of the systemic circulation.

The ordinary clinical cases of congenital disease of the heart depend thus on an obstruction of some orifice or vessel and a patency of some of the fetal communications by means of which the blood gets to parts beyond the obstruction. In some of these cases it is possible that the patency of the fetal opening may be due to an arrest of development, and be the primary event, while the contraction of the vessel, owing to diminution of blood-pressure in it, is the secondary; but if so, the clinical result remains the same.

The object of the complete separation of the cavities of the heart in the adult is, that all the blood may go through the lungs and be arterIALIZED before reaching the general circulation. Congenital diseases usually entail a mixture of the venous and arterial blood, which is one factor in the production of the typical cyanosis in these cases. The septum ventriculorum is completed somewhere about the third month of fetal life; and therefore if any disease arise after that time the foramen ovale or some larger defect in the auricular septum must be the passage of communication between the two sides of the heart. If the disease occur earlier than the third month, then the ventricular septum may remain open, either alone or in addition to the foramen ovale. Hence it is that the condition of the heart in the patient will vary according to the time at which the disease or malformation occurred.

(To be concluded.)

ON CATARRH OF THE STOMACH IN CHILDREN.

By EUSTACE SMITH, M.D., F.R.C.P.,

PHYSICIAN TO H.M. THE KING OF THE BELGIANS, PHYSICIAN TO THE EAST LONDON CHILDREN'S HOSPITAL AND TO THE VICTORIA PARK HOSPITAL FOR DISEASES OF THE CHEST.

(Concluded from page 806.)

THE febrile form of gastric catarrh, although far from being rare, is yet much less common than the non-febrile variety. Catarrh of the stomach, unaccompanied by fever, is perhaps the commonest derangement to which children are exposed. It is a constant danger to hand-fed babies, and

forms, indeed, the chief obstacle to the successful rearing of infants. Even in the case of older children, if of frequent occurrence, it may seriously affect nutrition, and interfere with development and growth. Most children suffer at times from what is called "biliousness." For two or three days together they lose their appetite; mope and lie about; have a dull, pasty, or sallow complexion, and look dark under the eyes. At night they sleep badly, and they are restless and irritable in the day. These symptoms are produced by a temporary catarrh of the stomach, which interferes for the time with the digestion of food, but, passing off, leaves no ill consequences behind. When, however, the attacks are frequent, digestion is weak even in the intervals of comparative health, and nutrition becomes seriously impaired. Such children complain often of flatulent pains in the sides, and may be subject to attacks of syncope from pressure upwards of the distended stomach against the heart. Their bowels are usually costive.

These symptoms may be greatly aggravated by an injudicious dietary. If a child who suffers from the condition described be supplied with an excess of fermentable food, such as potatoes, puddings, jams, and sweet cakes, he is kept in a state of chronic acid dyspepsia, which is a source of constant discomfort to himself and anxiety to his friends. The whole system being full of acid, generated by fermenting food, the child is wayward and cross in temper, and excessively fidgety and restless. His speech is often hesitating, and he may stammer in his talk. His muscles are irritable and twitch easily, so that he winks his eyes and distorts in nervous fashion the corners of his mouth. The so-called nervous habits of children often owe their origin to this derangement.

Sickness is not a common symptom in these cases, for gastric catarrh is by no means always accompanied by irritability of stomach. Sometimes, however, the child at rare intervals brings up a large quantity of sour-smelling fluid and mucus. Frontal headache, more or less severe, is rarely absent, and oftentimes the pain is very distressing. The wearing periodical headaches of children are usually owing to this cause. The urine is from time to time noticed to be thick with lithates, and, in rare cases, quantities of fine uric-acid sand are passed, precipitated by the free acid with which the urine is charged. At such times the urine may contain a trace of albumen.

Symptoms such as the above show a high degree of digestive derangement, aggravated by an unsuitable dietary, and are almost invariably the consequence of repeated attacks of catarrh of the stomach. Under such circumstances nutrition is interfered with, the child wastes perceptibly, and the apprehensions of the parents are carried to a high degree. When, on the other hand, the indisposition is only occasional, and the symptoms are not severe, little attention is excited. The child is supposed to be a "bilious" subject, and unless the attacks become so frequent as to cause an evident diminution in bulk, or some new symptom is noticed which excites the alarm of the friends, medical advice is considered unnecessary.

In cases where, owing to the mildness or the infrequency of the attacks of gastric development, general nutrition has not suffered, the occurrence of fainting-fits may induce the parents to apply for medical assistance. Attacks of syncope, more or less complete, are not uncommon in these cases. They, naturally enough, give rise to great anxiety; especially if conjoined with palpitations and flatulent pains about the chest. They are then considered to be symptomatic of heart disease. Thus:—"Miss W—, aged eleven years and a half, fainted for the first time six years ago. She has since fainted on five different occasions. At these times she has always been noticed to be dull and languid, with a poor appetite, but otherwise has seemed to be well. Is subject to sharp pains in the left hypochondrium, under the influence of which her face will become ghastly white. She sleeps badly, talking and moaning, and often lies awake at night. Has never suffered from worms; bowels costive. Has sometimes a sallow complexion." This young lady, who was a well-grown, well-nourished girl, with perfectly sound organs, soon lost all her symptoms under suitable treatment.

Whether the gastric catarrh assume the febrile or the non-febrile form its treatment is the same. Our object is, firstly, to put a stop to the existing derangement, and, secondly, to adopt such measures as will prevent its recurrence.

To cure the existing catarrh we must do our best to remove all sources of irritation which may be keeping up the

disorder. The acrid mucus, a free secretion of which is one of the ordinary phenomena of the catarrhal state, is a constant cause of fermentation and acidity. It very quickly induces an acid change in the more fermentable articles of food. Therefore, if the stomach be oppressed by sour matters, shown by uneasiness at the epigastrium, or sour smell from the breath, and a feeling of nausea, immediate benefit will be derived from an emetic dose of ipecacuanha wine. Afterwards a draught, composed of tincture of nux vomica, with bicarbonate of soda, in water sweetened with spirits of chloroform, taken two or three times in the day, will soon restore the gastric mucous membrane to a healthy condition. Strong purgatives are to be avoided, but as there is usually constipation in these cases, an occasional mild aperient will be required, such as compound liquorice powder or castor oil. If there be fever, which does not subside after the action of the emetic, the child may be allowed to take fluids from time to time in moderate quantities. The best are unsweetened barley-water, flavoured, if desired, with orange-flower; toast-water, or fresh whey.

During the treatment, as long as any signs of acidity of stomach persist, care should be taken to exclude from the diet all matters capable of favouring the tendency to fermentation of food; and even for some time afterwards, readily fermentable substances, such as starches and sweets, should be taken sparingly, lest the derangement be encouraged to return. At first nothing should be allowed but freshly made broths, with dry toast; and when milk is once more permitted, it must be guarded with a fourth part of lime-water, or with saccharated solution of lime, in the proportion of twenty drops to the teacupful. While the derangement continues no fruit, cakes, sweets, light puddings, or potatoes should on any account be permitted to be taken. When the appetite begins to return, a little fish, chicken, or mutton may be allowed, but the child must not be pressed to eat; indeed, until its digestive power be completely restored, the utmost care must be taken not to overload the stomach with food.

The above measures will effect a considerable improvement in the condition of the child, but at this point the treatment may be said only to have begun. The patient is in a weakly state from successive attacks of gastric catarrh. We have, therefore, to adopt means to strengthen the digestive powers, and take such precautions as will ensure him against a relapse.

To give tone to the stomach and strengthen digestive power preparations of iron are required. A common practice in such cases is to administer the preparation of the phosphates of iron and lime known as "Parrish's Chemical Food." This syrup is a very favourite remedy with mothers, who, misled perhaps by the name, give it largely, and with the worst results. Theoretically, no doubt, it is an active tonic, but practically it is highly pernicious. The reason is that the syrup in which the phosphates are dissolved supplies materials for fermentation, and each dose is soon followed by flatulence and acidity; so that the medicine really aggravates the mischief which it is intended to allay. The better plan is to give the dialysed iron, or, if there be any tendency to acidity remaining, the ammonio-citrate, with a few grains of bicarbonate of soda, sweetened with aqua chloroformi. After a time a change may be made to the solution of strychnia, with the perchloride or pernitrate of iron, given directly after food. All this time the quantity of fermentable material taken at meals must be restricted, as already recommended. During the same time a mild aperient should be given every few days, whether it seem to be required or not, to ensure a proper relief to the bowels and prevent the retention of any excess of mucous secretion.

In spite of this treatment, however, the child will not be secure against relapses unless special precautions be taken to guard the body against chills. The catarrhal state, whatever be the organ affected, tends constantly to repeat itself under the influence of slight causes; and there is little doubt that it induces an extreme sensitiveness to changes of temperature. Children who suffer from attacks of catarrh of the stomach or bowels should wear a broad flannel binder applied tightly to the abdomen, so as to reach from the hips upwards to the armpits, and the medical practitioner should look upon it as his first duty in these cases to see that it is properly applied. The binder should be considered as part of the child's ordinary dress, and be cast off at night with the rest of his clothes. In many cases it is necessary, in addition to the above precautions, to fortify the resisting power of the child by cold bathing. Some circumlocution

is, however, often necessary in recommending this step to parents. Mothers are apt to take fright at the very mention of cold water; and it is true that in the case of weak children reaction is difficult to establish, so that a cold bath given in the ordinary way would not be attended with benefit. There is, however, a method by which the most delicate child may take a perfectly cold bath with safety and advantage. The method consists in first stimulating the skin by friction, so as to enable the body to resist the shock of the cold douche, and then in lessening the shock itself by placing the patient in hot water. Thus, if a child on rising from its bed be well shampooed over the whole body, but especially over the back and spine, and be then made to sit in a few inches of quite hot water, a good douche of cold salt water over the shoulders will have a highly invigorating effect, and be followed by immediate reaction. After being dried, the body may be rubbed with flesh gloves, and afterwards, if thought desirable, the child can be returned for a short time to his bed. Before beginning the process the patient should take a little bread-and-butter, or a drink of milk. The continued use of this bath, besides having a remarkably tonic effect upon the system generally, confers great resisting power against changes of temperature, and considerably reduces the child's susceptibility to chills.

By means such as have been indicated, the most obstinate cases of gastric catarrh may be treated with success. But it should be borne in mind that success depends upon equal attention to all the points which have been insisted upon. A flannel binder will be of little value if the tendency to fermentation be encouraged by the immoderate use of starches and sweets; and even cold douching may not be sufficient to neutralise the ill effects of rapid changes of temperature acting upon a body imperfectly protected from the cold. In all cases it is advisable to avoid the use of syrups in making medicines palatable to young children. The Pharmacopœia syrups are not well borne by young subjects, and often do more harm than good. It is far better to sweeten a child's physic with glycerine, or a few drops of spirits of chloroform.

George-street, Hanover-square, W.

CASE OF STRANGULATED FEMORAL HERNIA IN AN INSANE PATIENT.

OPERATION; PERITONITIS WITHOUT DEVIATION FROM
NORMAL PULSE AND TEMPERATURE; RECOVERY.

By S. A. K. STRAHAN, M.D.

W. S—, aged fifty-one years, was admitted into the East Riding Asylum on the 24th June, 1880, suffering from a first attack of insanity—melancholia with strong suicidal tendency. On admission he was found to have a large scrotal hernia (right) of long standing and a hydrocele of the left tunica vaginalis testis. He was very weak bodily—evidently the result of having partaken sparingly of food for some time previous, as he laboured under the delusion that there was no passage for food through his body.

For seven weeks after admission he partook of food in reasonable quantity, under protest; at the end of which time he refused all food, and had consequently to be fed twice or oftener daily by means of the stomach-pump. This feeding was continued up till Sept. 17th (four weeks), with a few intermissions of a day, or in some cases two days, when he ate reluctantly on the pump being ostensibly put in order.

Sept. 18th.—This evening he complained of abdominal pain, which he attributed to eating so largely. His abdomen was at once examined, when, in addition to the scrotal hernia already noticed, there was found a femoral hernia (left), about the size of a walnut, tense, painful, inelastic, and giving a dull note on percussion. Gentle taxis was applied without appreciable effect, and afterwards the following means for facilitating its reduction were tried without success—namely, warm bath, opiate, chloroform, and injection of water per rectum.

19th.—Symptoms of strangulation appeared to-day, six-

teen hours after the discovery of the hernia, and at 4 P.M. the operation for its relief was performed under chloroform by Dr. Whitcombe, medical superintendent. Gimbernat's ligament was the seat of stricture, but after this was divided, it was found necessary to open the sac, because of bands formed in its neck. All constrictions having been removed, the hernia—which consisted of about two inches of small intestine of a dark slate-colour, from strangulation—was returned to the abdominal cavity, the external wound brought together by means of three silk sutures, and a pad of dry lint and a bandage applied. Patient was then placed in bed and had one grain of opium, to be repeated every four hours; milk and brandy to be taken in small quantities.

20th.—Patient passed a good night, and was going on well till 5 o'clock this evening, when symptoms of peritonitis appeared—viz., abdominal tenderness, tympanites, sickness, pinched features, &c., but no rise of temperature or quickening of the pulse. Opium increased to one grain and a half every four hours.

21st.—Patient passed a fair night; sickness absent this morning, but abdominal tenderness, tympanites, dorsal decubitus, and pinched expression remain. Pulse 84; temperature 98°4'; tongue furred; takes small quantities of milk and brandy freely; very slight action of bowels this morning. Opium reduced to one grain every four hours.

22nd.—Patient very restless during the night; symptoms of peritonitis increased this morning; complains of nausea and abdominal pain; tympanites increased. Pulse 84; temperature 98°5'. Opium again increased to one grain and a half every four hours.—3.30 P.M.: Severe exacerbation of peritoneal symptoms; tympanites increased; whole abdomen exquisitely tender; thoracic breathing; frequent vomiting and hiccough. At this time pulse 84, weaker; temperature 98°4'.

23rd.—Patient slept the greater part of the night under the influence of opium; looks better to-day; sickness absent; tympanites and abdominal tenderness greatly diminished; breathing less confined to thorax; tongue furred; pulse 84, stronger; temperature 98°4'. Opium again reduced to one grain every four hours.

24th.—Patient continues to improve; tympanites and abdominal tenderness entirely absent. Pulse 85; temperature 98°4'; opium discontinued; tongue furred; appetite bad. A pint and a half of tepid water was injected per rectum this evening, after which the bowels acted freely.

From this time the patient continued to improve, and on Oct. 1st was quite recovered from the operation and its effects. I may state that our patient was not left alone day or night until completely recovered.

Remarks.—Of the many interesting points in this case, the most important is the remarkable fact that following a wound of the peritoneum we had present every sign and symptom of inflammation of that membrane except increase of temperature and quickening of the heart's action, the two most common—in fact, the two ever-present—attendants on inflammation. And, again, that during strangulation of the herniated portion of intestine—when we had sickness, pain around the tumour, hiccough, vomiting (which was before the operation of that character known as stercoraceous), and the pinched expression of features which is indicative of suffering and collapse—we had the heart insensible to this disordered state of the system, contracting with the utmost regularity, and the temperature of the body maintained at the normal. Nor had we at this time any deficiency in the cutaneous circulation, or in that of the extremities. Is this strange indifference of the heart to serious changes in the surrounding organs, and this unvaried production of heat in the body, to be attributed to disease of the nervous system—to disease confined to some of those nervous centres acting over limited areas which have of late years been mapped out and given “a local habitation and a name”?

I may state that no pulmonary or cardiac disease can be detected, nor have we strabismus, inequality of pupils, loss of motion, or any abnormal increase or decrease of any of the senses, or other physical sign of organic disease of the nervous system.

The case is also of value as a good example of the excellent results often found to follow dry dressing and rare interference with wounds. In this case the primary pad of dry lint was not removed until the fourth day, when it was discovered that the wound had healed by the first intention.

East Riding Asylum, Yorks.

NOTES ON A CASE OF RUPTURE OF THE EYEBALL IN A PATIENT SUFFERING FROM HÆMORRHAGIC DIATHESIS.

By A. EMRYS-JONES, M.D.,

ASSISTANT-SURGEON, ROYAL EYE HOSPITAL, MANCHESTER.

W. R.—, aged fourteen, of Waterfoot, was admitted into the Eye Hospital on Nov. 1st, 1878, under Dr. Little. The boy was a weaver by trade, and on admission, although he looked pale, he was otherwise healthy. On examining his right eye I found that the shuttle from the loom where he was working had struck his eyeball and ruptured it through the entire breadth of the cornea and sclera, and the hæmorrhage was profuse. Pads and a firm flannel compress bandage were at once applied, but in spite of repeated changing the blood kept oozing through them. Astringent applications and compress bandages were next tried, but without improvement.

Next day the mutilated globe was enucleated, and the contents of the orbit to a great extent removed, and then the cavity was carefully packed with cotton-wool dipped in tincture of perchloride of iron, kept in position by a firm compress bandage. It was next packed with cotton-wool, mixed with powdered sulphate of copper and sulphate of iron, but these were of no avail. Cotton-wool steeped in collodion, well packed and allowed to dry, controlled the hæmorrhage for a time. The subcutaneous injection of ergotine, the internal administration of ergot, sulphuric acid, and other astringents was tried. Even the actual cautery, which was thoroughly applied, proved inefficacious. The oozing was persistent for a fortnight, when the boy's father insisted on taking him home, and now, for the first time, admitted that the boy was subject to attacks of bleeding from slight causes. They were both very reticent about giving any information on this point. The pulse kept up fairly the whole time, but he became very weak and blanched. On leaving the hospital his orbit was carefully packed with cotton-wool steeped in collodion. A week later his father wrote to me that the bleeding had continued for a few days, and that ultimately the boy “fell into a faint,” and the hæmorrhage entirely ceased. In January, 1879, I saw the boy again quite in his usual health. The interest of the case seems to me threefold—1st. The extreme rarity of such a coincidence; I do not know of any recorded. 2nd. The failure of all the usually reputed remedies. 3rd. The favourable result through natural processes.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium

ST. THOMAS'S HOSPITAL.

TRACHEOTOMY IN A CHILD UNDER SIX MONTHS OLD; RECOVERY.

(Under the care of Mr. CROFT.)

THE following case, for the notes of which we are indebted to Mr. H. Percy Potter, surgical registrar, is interesting, chiefly on account of the urgency of the symptoms and the relief and subsequent recovery after tracheotomy in so young a child.

The mother stated that during the night previous to admission she noticed swelling on each side of the neck, causing the child to breathe hurriedly and with much difficulty. There was no cough. The patient had suffered from erysipelas of the arm and back following vaccination in August.

The child was first seen in the out-patient department on Sept. 25th, with erysipelatosus inflammation and œdema of

the whole cervical region, extending to the upper part of the chest; considerable dyspnoea and no croupous cough. The case was at once admitted into the hospital and placed under the supervision of Mr. Croft. An attempt was made to examine the fauces for false membrane, but it was impossible to inspect the throat owing to the swelling. A hot bath was given, and ipecacuanha wine, which induced vomiting. Relief was afforded by this treatment, but at midnight, on account of the increased dyspnoea with lividity, Mr. Potter performed tracheotomy under chloroform. The trachea was easily reached, opened by the usual vertical incision, and a silver tube was introduced. Artificial respiration was employed for several minutes. The child was placed in a tent, and steam was diffused in the atmosphere. The mother had suckled her infant throughout.

After the operation the child coughed up several small pieces of cartilage—probably from the rings of the trachea; the swelling and inflammation of the neck subsided, and an india-rubber tube was inserted, and the child did well.

WESTMINSTER HOSPITAL.

GALACTOCELE; INCISION; CURE.

(Under the care of Mr. PEARCE GOULD.)

MRS. T—, aged eighteen, first came under Mr. Gould's care in the out-patient room on Aug. 19th, 1878. She was a robust, healthy-looking young woman, who stated that two years before she struck her right breast against a chair, and three months afterwards noticed a small lump in the breast close to the nipple. She had been married fifteen months, and was confined of her first child in February. "Just a little milk came" in the right breast, but not enough to enable her to suckle with it. There was no pain in it, but as it felt different from the other, and did not secrete milk, she sought advice.

The left breast was well developed, with a good nipple, and secreted freely. The right gland was almost the same size as the left, but was almost completely occupied by a tense, rounded, fluctuating swelling, a little involuted mammary tissue being felt at the lower part; the nipple was flattened out by the swelling; the skin was not reddened, and there was no enlargement of the axillary glands. She was seen again on Aug. 23rd, when the swelling was distinctly larger and "pointing," the contained milk being visible as a white spot in the centre of a red area. A small incision, radiating from the nipple, evacuated about half a pint of creamy fluid, and the sac completely collapsed; a horsehair drain was inserted, and the breast supported by a bandage of cotton-wool. A thick, milky discharge continued to flow from the wound for several weeks, and then gradually became thinner and less, and finally ceased in March, 1879. Extract of belladonna was applied over the breast at first, and later on pressure was employed. The fluid was examined microscopically, and found to be a clear liquid containing colostrum corpuscles, oil globules, and fine granules.

Remarks.—Lactæal cysts are not common. The history and appearance of this case left no room for doubt as to its nature. These cysts have been stated to arise from dilatation of the sinuses or large ducts, or from rupture of a duct and extravasation of milk, in which case they have been found to increase "rapidly and distinctly every time the infant sucks." Here this feature was not noticed, and the history of a previous injury and inability to suckle with the breast render it probable that there was obstruction to one, or perhaps more, of the lactæal ducts. Out of seventeen cases of galactocèle recorded by Gross there had been a previous blow in two. It has been stated that such cysts never burst; this one "pointed" most distinctly, and at least threatened to burst.

FULHAM SMALL-POX HOSPITAL.

TWO FATAL CASES OF HÆMORRHAGIC VARIOLA;
NECROPSIES.

(Under the care of Mr. R. D. R. SWEETING.)

CASE 1.—Elijah B—, aged twenty-one, a compositor, was admitted on September 18th, at 3.30 P.M. He was then in a weak and exhausted state. He was rational, and stated that he had been attacked with headache and vomiting on Sept. 9th, which ceased on the appearance of the eruption on

Sept. 11th. His case was at first pronounced to be "blood-poisoning;" hence the delay in admission.

On examination the surface of the body was found to be covered with a deep-seated confluent eruption, pale and vesicular over the face, but consisting of dark hæmorrhagic pocks over the shoulders, trunk, and extremities. In the latter parts the eruption ran in patches, more or less symmetrical. The tongue was dry and brownish-black; the lips and fauces were black. The conjunctivæ of both eyes were extremely injected. The hands and lips were tremulous; the pulse was soft, highly compressible, 120. Temperature on admission, 103°. During the evening the patient vomited blood several times, which was almost black in colour. Urine also deeply tinged with blood.

On the following morning he was still conscious; answered questions rationally; had slept fairly well. Temperature 101°. There was harsh breathing, especially at the back; deep percussion was impossible. In the evening he was observed to be much more prostrate; pulse 120, feeble and flickering, temperature 103°, respiration hurried, 46. He gradually sank, in spite of stimulating treatment, and died Sept. 20th, at 4.30 A.M.

Necropsy, thirty-two hours after death.—Body badly nourished, covered with petechiæ and pocks, most abundant on inner and back aspect of arms. The left lung was emphysematous at the edges, the right was emphysematous anteriorly, and presented areas of basic consolidation. The right side of the heart was empty and flaccid, the left side semi-contracted; the valves were normal. The liver was large (weight sixty-eight ounces), and presented greenish-blue discolorations at edges. Spleen normal in size, but engorged. Stomach intensely congested, and presenting numerous small hæmorrhages in the mucous membrane, and large rugæ extending through its length. Kidneys: Pelves of both organs the sites of extensive hæmorrhages, being blocked up with dark clots. Ureters: Mucous membrane dark purple in colour, most marked at the upper and lower thirds, the middle portion being fairly normal. Bladder: Mucous membrane slightly congested, presenting a purple arborescent appearance in several parts.

CASE 2.—Grace D—, aged twenty-six, a domestic servant, was admitted Sept. 27th, at 5 P.M. She stated that she had been seized with shivering and headache on Sept. 20th, and felt languid and "out of sorts." On Sept. 24th the eruption appeared, being noticed first on the hands, and on the morning of admission she suffered from vomiting and diarrhœa.

On examination she was found to be the subject of an extensive and varying eruption. Numerous red raised and rough papules were noticed on the arms, wrists, and soles of feet, but none on face or forehead. The regions of these papules were red, indurated, and hot. Besides these there were several reddish-blue spots on forehead, and similar large symmetrical patches covering both sides of lower half of abdomen, and extending down to groins and upper third of thighs. There were also a few dark-purple spots on anterior aspect of legs. This rash was at first thought to be purpura, but from the analogy of the further development of the eruption in other parts, and the fact that it was exceedingly sparse on the legs, the usual site of purpura, the idea was dismissed.

During the evening the patient retched a great deal and vomited once, the egesta being dark and viscid. Temperature 104°; pulse 120. Port wine (four ounces) and iced soda-water and milk ordered.

On the following day the tongue was moist and dark, and there were small blebs of serum on the lips. Pulse quick, soft, and compressible, 120; temperature 102.6°. There had been some slight vaginal hæmorrhage, which patient ascribed to the premature appearance of the menses. There was still occasional retching. Evening temperature 104°. Five-grain doses of sulphate of quinine were ordered.

On the 29th the temperature in the morning was 101°; pulse 110. The vaginal hæmorrhage continued, and was more copious. Some hæmaturia was also noticed. The urine was albuminous (one-sixth). Fifteen grains of gallic acid were given every four hours.

The papules on the arms and wrists were becoming hæmorrhagic pocks. A few pocks filled with dark blood were also visible on the forehead and shoulders. The symmetrical patches on the abdomen and thighs remained the same. Evening temperature 100°; pulse 100. Patient felt sick, but had not vomited. As the hæmorrhage continued, the vagina and uterus were well syringed, first, with luke-

warm water, and then with a warm solution of perchloride of iron. The woman became restless and sleepless at midnight. A scruple of chloral hydrate was given. She slept four hours after the draught of chloral, but next morning seemed greatly prostrated and inclined to coma, and swallowing was difficult. The vaginal hæmorrhage had ceased, but there was still slight hæmaturia. The eruption on the forehead now consisted of a large blended extravasation rather than a collection of pocks, and the papules at first observed on the arms and wrists had all become vesicles, containing blood of a colour almost black. The patches on the abdomen and thighs remained as such, being, however, darker, as also were the few spots on the legs. Temperature 99°; pulse 100, very soft. A pint of champagne was given with the hope of rousing the patient, but she rapidly succumbed, and died at 6.30 P.M.

Necropsy forty-six hours after death.—Body well nourished; surface discoloured, and presenting numerous hæmorrhagic pocks and petechiæ, the latter abundant over abdomen. The edges and upper lobes of both lungs were emphysematous, the lower lobes engorged with blood; no consolidation. The pericardial sac contained half an ounce of bloody serum. The heart-substance was pale in colour; valves healthy; the right cavities were flaccid and empty; the left side was semi-contracted, and contained soft diffuent clot. The spleen was soft and congested; liver normal; stomach greatly dilated; mucous membrane congested; lower part and pyloric region intersected with thick and wavy rugæ. The pelves of both kidneys occupied by large extravasations, consisting of firm dark clots; exterior and cortex of each greatly congested; capsules readily separable, and presenting hæmorrhages in their substance. The commencement of each ureter was blocked up for an inch with a large firm thrombus, greatly increasing the lumen of the tube; the upper half of the mucous membrane of ureter was congested. In addition, there was observed laceration and partial rupture of kidney-substance at the lower part of the hilum below the ureter, with accompanying extravasation into the tissues around the organ. The bladder presented points of congested mucous membrane most marked at the neck. Mucous membrane of the vagina was of a dark purple colour. The cavity of the uterus was occupied by a reddish-brown clot; mucous membrane of fundus presented several points of hæmorrhage. The left ovary was deeply congested; right also congested and filled with corpora lutea; ovarian veins were distended and prominent. The broad ligament and mucous membrane of Fallopian tubes were of a port-wine colour.

Remarks.—Neither of the above patients possessed thoroughly protective vaccination marks, those of Case 1 being "third class," and those of Case 2 "second class." In order to explain this terminology, which is in use under the Metropolitan Asylums Board, "third class" will be held to comprise those cases in which there are one or several cicatrices, making up less than a third of a square inch of badly-foveated surface, or of surface without foveation; and "second class" will include cases in which is found less than a third of a square inch of well-foveated surface, or one-third of a square inch of badly-foveated surface. Thus, the cicatrices in Case 2 were noted as being large, but *puckered* and not truly foveated.

GENERAL INFIRMARY, LEEDS.

CASE OF APHASIA FOLLOWING INJURY TO THE HEAD.

(Under the care of Mr. WHEELHOUSE.)

For the following notes we are indebted to Mr. W. H. Brown, house-surgeon.

W. D—, aged twenty-five, a groom, was admitted on October 29th, 1879. The history of the case being that whilst he was engaged in removing a stone from a horse's foot the horse struck out and kicked him on the left side of the head. On admission he was absolutely unconscious, the pulse was slow (56), and the pupils were contracted, and respiration about 24. There was a soft elastic swelling over the left parietal bone just in front of the ear, and through this swelling the bone appeared to be depressed. There was also considerable effusion beneath the frontal portion of the occipito-frontalis muscle. About one hour after admission he became very restless, but remained quiet on being ordered to do so. He then appeared to have regained possession of all his faculties save that of speech, for

he was able to move his arms and legs according to directions and to count figures which were held up to him by holding up a corresponding number on his own hand. About twelve hours after his admission he, for the first time, made an effort to speak, but only succeeded in uttering some incoherent sounds. All symptoms of compression now passed off. In this condition he continued for twenty-four hours, sleeping somewhat heavily at intervals, when suddenly, in answer to a question put to him, he answered "Yes," and to a query put to him as to pain, "No." From this time (thirty-six hours after the accident) he gradually improved, and was able to name objects (such as a watch, keys, &c.), which were shown to him, at first indistinctly, but becoming more correct after one or two attempts. Three weeks after the accident he could converse freely and had fully regained his power of speech. He stated that when he attempted to speak rapidly he at times got confused, but this confusion passed off if he paused for a minute or two.

Rest in bed, low diet, and free purgation was the only treatment.

Remarks.—There appear to be several points of interest in this case. First, its rarity. A similar case is mentioned in Bryant's Surgery, vol. i., page 211. In this case the aphasia lasted once two months, so that the injury was probably much more severe than in the present instance. Secondly, it shows that it is possible to have complete aphasia without any other paralysis. Thirdly, the rapid manner in which the symptoms passed off, leaving the patient practically well. Fourthly, as to prognosis. The case on admission appeared to be most grave, but the manner in which it terminated bears out the late Mr. Callender's opinion that injuries to the right side of the head are more rapidly and more surely fatal than are equal injuries on the left. The aphasia was in all probability due to a concussion of the third left frontal convolution, and may have consisted of minute hæmorrhages which rapidly became absorbed.

Medical Societies.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

Artificial Respiration in New-born Children.

THE ordinary meeting of this Society was held on the 23rd inst., J. E. Erichsen, Esq., F.R.S., President, in the chair. The evening was occupied by the reading of a paper contributed by Dr. Champneys, detailing the results of comparative experiments upon methods of inducing artificial respiration in new-born children, and by the discussion arising out of the paper. Drs. Matthews Duncan, Roper, Powell, and Silvester took part in the debate.

The following is an abstract of the paper, entitled "On Artificial Respiration in New-born Children; the amount of ventilation secured by different methods: an experimental inquiry;" by FRANCIS HENRY CHAMPNEYS, M.B. Oxon., M.R.C.P. The number of bodies experimented on was twenty-six, of which twenty were utilised for this part of the subject; only such as had never breathed being used. Tracheotomy having been performed, a cannula was tied into the trachea, the cannula being connected by an india-rubber tube, with a V tube filled with water, which thus registered inspiration and expiration by the rise and fall of the water, the results in the same body only being compared, and the highest effect being the standard of comparison. The methods used were nine—viz., that of Marshall Hall, Howard, Silvester, Pacini, Bain, Schücking, Schüller, Schroeder, Schultze. The conclusions were the following:—(1) Since the position of equilibrium of a stillborn child's chest is one of absolute expiration, airlessness, or collapse, no method which depends on elastic recoil of the chest-walls will introduce air into its lungs. The methods of Marshall Hall and Howard are useless as means of directly ventilating the lungs of stillborn children. (2) Silvester's method, and its modifications by Pacini and Bain, introduce more air into the lungs than any other method.

(3) In using Silvester's method the arms should be held above the elbows and everted. (4) In using Pacini's or Bain's method the legs should be fixed, the second half of Pacini's method and Bain's second method should not be employed, as the weight of a new-born child's body is insufficient counterpoise to the necessary traction. (5) In using these two latter methods the operator may face the subject, and lift the shoulders from below; by this means he is able to watch the child's countenance; and is able to introduce an equal quantity of air. (6) Schücker's method is no improvement on Silvester's. (7) Schüller's method is useless, and not free from risk. (8) Schroeder's method is useless. (9) Schultze's plan, although its power of ventilation is less than that of Silvester and its modifications, yet acts efficiently. (10) In Schultze's method the diaphragm does descend, though but slightly; its principal action, however, is on the thoracic walls, as in the Silvester group. (11) In Schultze's method it is important that the whole weight should rest (at the end of the inspiratory movement) on the index-fingers in the axillæ, and should not be distributed to the other fingers. (12) The violence of the action of the method of Schultze is not in its favour. (13) Opisthotonos always produced expiration by tension of the anterior body walls, and should be avoided. Behm's experiments, six in number, dealt with children truly stillborn in two cases only (one other having failed). His general conclusions speak highly of Marshall Hall's and Howard's methods, which, however, in the above two cases, were nearly or quite failures. His error is in not appreciating the collapsed state of the thorax in truly stillborn children.—The PRESIDENT invited discussion from those who had had practical experience of these methods. He asked how long after birth was a stillborn child recoverable; and also whether evils do not often attend the more violent measures, such as succussion or slapping, so often adopted.—Dr. MATTHEWS DUNCANS said the paper was one of great value, which would lead to results of cardinal importance in the treatment of the stillborn. Schultze's method appeared too violent, and he felt that it was desirable to induce respiration by as gentle means as possible. The author's remarks upon Howard's and M. Hall's methods showed these methods to be without practical importance or utility. His own experience was that the older methods, which he was taught were of great value, were conducted with objectionable haste and hurry, as well as violence. He remembered a case where the spleen and liver were ruptured by the over-active treatment employed in resuscitation. The method of direct inflation was unsatisfactory, the air being as often passed into the œsophagus and stomach as into the lungs. He was of opinion that Silvester's method was the best. He pointed out that recovery was possible even if the heart had ceased beating for more than a minute. In such cases the heart was often temporarily arrested; so also in stillbirths.—Dr. ROPER urged that the child frequently commenced to breathe spontaneously, even when artificial methods were being employed; e.g., he had seen a child inspire whilst the movement of expiration was being made by Silvester's method. The cessation of the cardiac beat was difficult to make out in breech cases, and he related three cases in which the child was left for dead. One of these occurred in the practice of the late Mr. Brown, of St. Mary Axe; the child was born still in the absence of the medical man; it was taken to the surgery and thence to the late Mr. Solly, who, next day, in dissecting the body, found that the heart was still beating. A second instance was of a fetus of five months and a half, which was set aside for dead, Dr. Roper attending to the mother, who was suffering from hæmorrhage. He was astonished next day to find that this immature child, which had lain on the floor for eleven hours through a cold night, was breathing, and its heart beating. Again, he once delivered a monster by the forceps; it seemed dead, and was not further attended to, but as he was leaving the room two hours later the child, which had been left aside, began to cry. Such examples showed that the new-born have greater tenacity of life than is supposed.—The PRESIDENT asked whether in the case examined by Mr. Solly the auricles or ventricles were beating.—Dr. ROPER did not know.—The PRESIDENT remarked that in some experiments he had made long ago upon animals he had found the auricles to continue beating long after the ventricular systole had ceased.—Dr. DOUGLAS POWELL asked Mr. Champneys how it happened that in his

manometer experiments the mercury often fell to zero or even below it in expiration, seeing that in new-born children the lungs are absolutely collapsed, and once inspiration has taken place they can never be completely emptied again of air. There was no doubt as to the superiority of Silvester's method on theoretical grounds. That the diaphragm was not moved was not of importance; for the condition of the infant, so far as the diaphragm was concerned and the action of Silvester's method, might be compared to the condition of extreme emphysema with a flattened diaphragm, where inspiration is wholly effected by the raising of the thorax. The diaphragm in the infant could not be much drawn up, being fixed somewhat by the remains of the umbilical cord and its peritoneal reflexions. Schultze's method seemed to consist chiefly in force applied to the axillary regions; and he related a case where Silvester's method was being tried to restore breathing in sudden death from inhalation of methylene, and where additional force employed by Mr. Nunn (whose patient it was) in the axilla aided considerably in the entrance of air, as evidenced by the greater force of the inspiratory whiff. He could not see how any elastic recoil of the ribs can be established in young infants. As soon as the lungs become the least aerated, it is impossible for them again to become completely collapsed. There could hardly be any elastic recoil until the ribs had grown, for there must be very slight resiliency in the young infant.—Dr. SILVESTER was much indebted to the author for this contribution to the literature of resuscitation. He concurred in Dr. Powell's remark as to the amount of air expired being less than that taken in at the first inspiration. He had drawn up his rules for the sake of the public, giving directions which could be applicable in all circumstances, and to meet the needs of all classes of people. Had he not done so the efforts at resuscitation might, in the hands of the rough and unskilled, have led to injury to the chest, axillary vessels, nerves, &c. Hence his directions that the operator should stand behind the subject, and should raise the arms from the elbows. He preferred himself to take hold of the hands and press the arms on the chest. Before introducing his plan he had tried thirty or forty different ways. He did not think the method used above so applicable to the still-born as to adults, as the lungs in them do not follow the raising of the ribs. He preferred in their case to directly inflate the lungs by blowing into the mouth, whilst pressing the larynx backwards against the pharynx, and to combine with this procedure that of drawing up the ribs. The readiness with which the infantile muscles and ribs can be injured must be borne in mind. The heart may continue beating as long as artificial respiration is continued, ceasing when this is stopped, and so on for many times, and yet the child not live. So that in many cases of stillbirth he believed that injury to the brain might be present, thus preventing the continuance of respiration after it had been artificially induced.—Dr. CHAMPNEYS said, of course, these experiments were far from settling the question as to which was the best method. Although quite admitting the possibility of spontaneous recovery after stillbirth, yet such instances as Dr. Roper had named were exceptional, and he did not think those who recovered after artificial respiration were to be classed with them. The reason why it was stated in some of his experiments that the mercury fell below zero in the manometer was that after the first inspiration and expiration he had altered the reading of the manometer and started afresh, so that if some of the residual air was expired subsequently the reading would be necessarily below this second starting-point. Schultze's method caused a marked descent of the diaphragm; but there was no evident rise of it in Silvester's method. The elastic recoil of the ribs is remarkable. In a very few hours after birth a new state of equilibrium is established, and the rib-cartilages have grown to the state of inspiration from that of collapse. He thought it would be of advantage if Dr. Silvester would publish a second set of rules for skilled persons, so that the best system might be carried out by medical men and others. He had made experiments which showed that it was not possible to blow air through the mouth into the trachea without some also passing into the œsophagus; and when the larynx is pressed against the pharynx to prevent the latter occurrence neither trachea nor gullet received air. But the subject of mouth to mouth inflation did not enter into the present paper, which had dealt with only one portion of the subject of artificial respiration.

The Society then adjourned.

MEDICAL SOCIETY OF LONDON.

Hydrocele.—Apoplexy from Embolism.—Acute Hip Disease following Osteitis of Femur.—Accident to a Lithotrite.

AT the meeting on the 22nd inst., Mr. F. J. Gant, President, in the chair—

Mr. FRANCIS MASON exhibited a man, aged forty-nine, now under his care at St. Thomas's Hospital, who had been sent to him by Dr. Price of Margate, with an unusually large hydrocele of the tunica vaginalis. The patient first noticed the swelling fifteen years ago. The hydrocele had been tapped twice—viz., eleven years and again seven years ago. The swelling now measured in the transverse circumference thirty-one inches, and in the antero-posterior direction twenty-six inches.

Dr. DOUGLAS POWELL exhibited the Brain removed from a girl, aged nineteen, who had been under his care at the Brompton Hospital suffering from symptoms of blood contamination from endocarditis, and who died on Sept. 27th, within two hours of an attack of epilepsy. She had suffered from joint pains, but never from an ordinary attack of rheumatic fever; and eighteen months before admission had an attack of inflammation of the right lung. Her health and strength had gradually failed during the past three months, since an attack of severe pain in the left mammary region, which confined her to bed for a few days. On admission on Aug. 2nd she was very anæmic and breathless; there were pain, swelling, and redness of the right ankle; the temperature was 102° 8', and pulse 130. The heart's apex was in the nipple line; action quick, but regular, with increased force. The first sound was prolonged by a high-pitched murmur from the apex round towards the scapula. The disease ran the course of subacute intermitting rheumatism, with a constantly high pulse range (100–120–130), and very trivial joint-trouble. There was no albumen or blood in the urine, but on September 6th the spleen was found to be enlarged, presumably from embolism. The evening temperature was rarely below 100°, at intervals mounting to 101° and 102°, and rarely 103°; the morning temperature being mostly about 99°. For four days previous to the fatal attack on October 27th the temperature had daily ranged between 99° and 103°. She had occasional headache, particularly for a few hours before her apoplectic seizure, but no paralytic symptoms had before this presented themselves. The post-mortem examination revealed vegetation on the mitral valve and recent granulations in the auricle; an appearance as if some vegetation had been detached from the valves, and softening of the chordæ tendineæ. There was embolism of the posterior cerebral artery and red softening of the lobe it supplied, whilst behind the plug the vessel was dilated and ruptured, blood-clot covering the base of the brain and filling the ventricles. The spleen was enlarged, and the seat of two yellowish infarcts; and an old infarct also occurred in the kidney. Dr. Powell remarked that the case illustrated the commonest cause of cerebral hæmorrhage in young people. The possibility of cerebral and other embolism hardly yet entered sufficiently into calculation in estimating the prognosis of valvular heart affections. It was most apt to occur in mitral stenosis. In mitral and aortic regurgitation of rheumatic origin it occurred, he believed, with equal frequency, allowance being made for the relative prevalence of the two diseases. Multiple embolism was, however, a necessary feature of ulcerative endocarditis, of which the present case was an example. Blood contamination shared with the more palpable results of embolism in producing the characteristic febrile symptoms of this disease, and an enlarged spleen was one of the chief confirmatory signs of the affection. He referred to the observations of Mr. Bryant and Dr. Goodhart, in the 28th volume of the Pathological Transactions, as to the effect of embolism in causing aneurismal dilatation of arteries. The difficulty in his case was the rapidity with which the dilatation and softening of vessels must have occurred. The brain symptoms might have been latent, but, on the other hand, it was not known with what rapidity brain matter could soften down.

Mr. BRYANT read a case of Acute Necrosis of the Head, Neck, and upper two-thirds of the Femur, associated with, as a consequence, acute destruction of the hip-joint. It

occurred in a female child aged six, who had been admitted into Guy's Hospital under his care with an acute abscess of the part. The abscess had rapidly formed after a fall upon the limb, three months before admission. The child, when admitted, was in a state of high fever and great emaciation. The thigh was much swollen, and the seat of obscure fluctuation. The case was diagnosed as one of acute periostitis or osteitis. A free incision was at once made in the outer part of the limb to relieve tension, and a quantity of dark-coloured blood mixed with pus evacuated. The bone was then found to be fully exposed, and the joint entirely disorganised. The head of the bone was in the acetabulum. Great relief followed the operation. The temperature at once fell, and the child gradually revived. Some months after the limb was again examined and explored. The shaft of the femur, which was found to be dead, was divided below the minor trochanter, and the necrosed head and neck of the bone removed, together with the necrosed epiphysis, which was lying bare in the acetabulum. The lower part of the dead shaft, which formed a sequestrum two and a half inches long, was likewise drawn out of an ensheathing periosteal formation of new bone. The case has gone on well since the operation.—The PRESIDENT agreed that the case was one of primary acute osteitis. He mentioned a case resembling acute hip disease, in which eventually the epiphysis was shed, and the patient recovered with a movable ankylosis. In one case he had excised four inches and a half of the upper end of the femur, being the largest extent of bone ever removed as a consequence of disease proceeding from above downwards.—Mr. OWEN thought there was no doubt the case was one of acute osteitis, and asked what was the condition of the joint at the first examination. Great benefit often followed incisions down to the bone. As to incision or amputation of the hip, he thought that in sickly children life was not long enough for nature to do the work of repair.—Dr. D. POWELL asked as to the frequency of amyloid disease in these cases, which he supposed would influence the question of amputation as against excision.—Mr. WM. ADAMS thought excision of the joint afforded the only chance in these cases, of which pyæmia was a common termination. In the case related the disease clearly extended from the shaft to the joint.—Mr. ROYES BELL mentioned a case of necrosis of tibia followed by abscess in the knee-joint, and implication of the ankle. The knee-joint was opened, and complete recovery followed on it; but in the ankle the result was not so fortunate. Had Mr. Bryant performed his operation antiseptically? If the antiseptic treatment be employed, recovery might occur without the drain of pus, and consequent amyloid degeneration.—Mr. PEARCE GOULD pointed out that in the hip-joint a considerable quantity of the diaphysis enters into the joint, unlike the knee, which is only formed by the epiphysis; so that if osteitis occur in the upper end of the femur the joint becomes affected. What was the effect on the bone of separation of the periosteum? He cited a case in which a large proportion of the femur was bared and only a small scale of bone came away.—Mr. BRYANT, in reply, said that after free incision he had passed his finger into the joint, which, together with the adjacent soft parts, had become disorganised. It was not known how long suppuration might last without giving rise to amyloid degeneration, which should not be regarded as contra-indicating surgical interference, as it was known that the amyloid change will disappear, when the cause is removed. He used antiseptic precautions, although he did not employ the spray and gauze, and even though these be used yet in some cases suppuration must occur.

Mr. COULSON read notes of a case of Lithotripsy (Bigelow's operation), in which an accident of an unrecorded kind occurred to the lithotrite. The patient was sixty-eight years of age and had suffered from symptoms of calculus for about seven years. The operation was performed on the 11th inst. The meatus urethræ having been previously incised, a large stone about two inches in diameter was caught and crushed with Bigelow's lithotrite. The stone offered much resistance to the instrument, and the fragments separated with a loud crack. Three or four fragments had been successively crushed when it was found that the screw and two pins by which the lithotrite is fastened to the shaft had given way, so that the two portions of the instrument became separated. No means for connecting the handle with the shaft could be extemporised. By percussion, however, upon the handle the blades were freed as much as possible from the debris, and the instrument removed from the bladder, some injury

being inflicted on the neck of the bladder and urethra in its withdrawal. The operation was completed by the fenestrated lithotrite, and fragments weighing 500 grains removed by the tube and aspirator. The operation occupied two hours and ten minutes, a delay of twenty minutes being caused by the accident. No bad symptoms followed, and this was attributed to the complete removal of the fragments having been effected. Mr. Coulson remarked on the enormous power of the blades of the instrument, and the inadequate resistance to the force applied by the screw, due to the imperfect manner in which the handle is connected with the shaft.—Mr. WORDSWORTH asked if it was the custom to crush such large uric acid stones?—Mr. COULSON would employ crushing in preference to lithotomy for any stone that could be grasped by a lithotrite, provided no fragments are left behind.

OBSTETRICAL SOCIETY OF LONDON.

Pyometra.—*Hydrocephalus.*—*Anencephalous Monster.*—*Maternal Impressions.*—*Chorea in Pregnancy.*—*Absence of the Vagina.*—*Congenital Abnormality of the Uterus.*

At the meeting of this Society, on November 3rd, 1880, Dr. W. S. Playfair, President, in the chair—

Dr. GALABIN showed Microscopic Sections from a case of *Pyometra* in a woman, aged seventy, who died after an operation for hernia. The uterus was distended into a cavity three inches in diameter, full of pus, the cervical canal being free. The naked-eye appearance was that of inflammation only, but the microscopic sections revealed the presence of carcinoma. In the specimen of *pyometra* shown last year by Dr. Matthews Duncan, where the case had run an apparently malignant course, and the wall of the uterus had ulcerated through, but in which Dr. Thin had reported only infiltration by pus-cells, he had been permitted to make a microscopic examination. He believed that in that case also there was new growth, and not inflammation only.

Dr. MATTHEWS DUNCAN showed a Child, born *Hydrocephalic*, with only stumps of arms, and with deformity of both lower limbs. The right stump of arm was one inch and three-quarters, the left two inches and three-quarters long. The femora were short, flexed, rotated outwards, and adducted, so that the knees were within half an inch of the anterior superior iliac spines. The mother attributed the condition of the child to a fright in seeing a dog run over, three months before delivery, and to her seeing the dog afterwards frequently in a deformed state. Four months before delivery she had a fall on the back.

Dr. CULVER JAMES showed an *Anencephalous Monster*, in which the upper part, sides, front, and back of the cranium were wanting, as well as the arches of the vertebral column, as low down as the angles of the scapula. The mother was twenty-six years old, and had had four children. There was no history of any fright during pregnancy.

Dr. HEYWOOD SMITH showed, as an instance of *Maternal Impressions*, photographs of a young woman, aged twenty-eight, whose profile showed a remarkable concavity of the face, ending in a prominent under-jaw. The mother had been frightened by a monkey about the fourth month of gestation. He remarked that among animals it was at the moment of conception that the mother was supposed to receive an impression, while in women a maternal impression was often referred to the third or fourth month.—Dr. BRAITHWAITE said that he had seen a puppy having a bifid and flattened forefoot, the owner of which said that during the mother's pregnancy a stone had fallen upon the foot and crushed it similarly to the flattened foot described.

Dr. JOHN WILLIAMS and Dr. GALABIN brought forward their report on Dr. Godson's specimens of Ruptured Tubal Foetation. Chorionic villi were discovered. The clot lay in close contact with the muscular wall of the tube, without any layer of decidua cells. The apparent amnial cavity was only three-eighths of an inch in length, and it was thought that the embryo could not have reached more than about three weeks' development. There was no corpus luteum, but only a cyst three-eighths of an inch long, containing a shrunken clot, in the ovary.

Dr. WADE related a case of *Chorea in Pregnancy*, treated by Dilatation of the Cervix Uteri. An unmarried primipara, aged nineteen, nearly seven months pregnant, suffered from

very severe chorea, which had commenced in a very slight form three weeks before admission. A faint apex systolic bruit, probably due to rheumatic fever two years previously, existed. An attempt was made to dilate the os with the finger, but owing to the incessant and violent movements of the patient the success was very partial, and there was, if anything, an exacerbation of the symptoms. Three days after, under chloroform, the dilatation was completely effected; this was followed during the day by very marked amendment, and a sound night's sleep—the first she had had since admission, and every succeeding night was equally good. On the third day after, the movements became worse than they had been on the two preceding days, dilatation was again effected on the fourth day, under chloroform. From this time steady, rapid, and uninterrupted recovery took place. A very slight occasional twitching of the fingers of the right hand continued until delivery at term of a healthy child, when they entirely ceased.—Dr. ROUTH asked to what extent the os had been forcibly dilated. Was it in any way lacerated?

—Dr. MATTHEWS DUNCAN also complained of the want of exact information as to what was meant by full dilatation. He regarded thorough dilatation, as he understood it, as a very sure cause of miscarriage.—Dr. AVELING had seen reflex vomiting from abrasion of the cervix uteri cured by the application of a solution of nitrate of silver, and thought medication should be first tried before dilatation.—Dr. FRANCIS TAYLER related the case of a boy suffering from severe chorea, who was taken to Guy's, where he remained in the taking-in room for some time. He was not admitted, but on his return home the choreic movements were found to have ceased, and did not recur. So sudden a recovery seemed inconsistent with so coarse a lesion as embolism, and the case also showed the need of caution in drawing conclusions as to therapeutics.

Dr. C. H. CARTER related a case of "Absence of the Vagina; uterus distended by retained menstrual fluid; operation; recovery." The patient, aged sixteen, had never menstruated. Pain had begun two years previously, and recurred almost daily. The urethral orifice was found large, the vagina absent. By rectal examination the finger felt the sound in the bladder with only a thin layer of tissue intervening. About one and a half to two inches up the rectum a rounded elastic mass was felt, reaching up half way to the umbilicus, about the size of the uterus at the third or fourth month of pregnancy. On July 25th the operation was performed for making an artificial vagina. After slight longitudinal and lateral incisions, the passage was chiefly torn by finger and director. Nothing like os or cervix uteri could be detected. The uterus was first punctured with the aspirator, and the opening then enlarged with a bistoury. About ten ounces of treacly matter escaped; several ounces of treacly fluid were afterwards expelled, and the same evening the dressings were soaked with fresh blood. The next day syringing out the uterus with carbolic lotion (1 in 80) was commenced. For about ten days there was some elevation of temperature, and a rapid pulse, 112 to 130, but the disturbance then passed off. When the patient went out on Oct. 11th the new vagina had narrowed a good deal, and only admitted the finger for about three-quarters of an inch. Thick sounds were passed occasionally to keep open the passage into the uterus, and menstruation took place regularly after the operation. In October of the following year an examination was made, and it was found that the ordinary sound could not be passed into the uterus, but a small-pointed sound could be passed into it three inches and a half. The author expressed to the mother his opinion that marriage was inadmissible, since delivery could not take place *per vias naturales*.—Dr. GALABIN's experience was, that the difficulty of keeping an artificial vagina in a condition fit for married life and parturition was considerable. He had had a similar case, in which also no trace of os or cervix could be detected. An artificial vagina was successfully made, and the patient afterwards menstruated naturally; but the attempt to keep the passage of full size was defeated by the fact that the pressure of the dilator repeatedly caused an opening into the bladder, though without producing any continued incontinence of urine.—Dr. ROUTH said that in his own case the patient had not died from the operation, but from the rupture of another cyst. He believed that in most of these cases the vagina had originally existed, but became subsequently adherent. He thought so in his own case, from the ease with which he tore it open. He thought that the passage could be kept dilated by using

sponge-tents, and subsequently Sim's dilators. The dilators should not be too large, and should not be worn more than a few hours at a time; they then would not cause inflammation. He mentioned a case in which Mr. Baker Brown had made a good artificial vagina, and the girl subsequently went upon the town, and consorted with Life Guardsmen.—Dr. BRAITHWAITE said there were two classes of cases of atresia, one being incomplete, a fistulous track existing. From the presence of mucous membrane in this contraction was less likely. When the atresia was complete he thought that mucous membrane might be transplanted from the vulva or from an animal, to prevent the tendency to contraction. In a difficult case, the urethra might be dilated and the finger kept in the bladder, and the thumb in the rectum, during the operation.—Dr. GODSON said that he had that morning seen a young woman for whom he had reluctantly made an artificial vagina two months since. There was no retention of menses, but she had married in ignorance of her deformity. Though a fortnight ago there was a capacious canal, it would now barely admit a penholder. He believed that such failure was inevitable, and would not again operate unless there were retained menstrual discharge.—Dr. AVELING thought that Dr. Carter was quite right in dissuading his patient from marriage. He did not agree with Dr. Routh that the majority of cases of absence of vagina were due to inflammatory adhesion. In the three cases he had seen it was evidently congenital, as the uterus was also absent, though the ovaries were present.—Dr. CARTER, in reply, said that Dr. Emmet stated that the tendency to close depended upon the passage being made by cutting rather than by tearing. He did not think that the tendency to contract depended altogether upon the absence of mucous membrane, but rather upon the contractility of the tissues, since in his case a mucous membrane like that of the labia minora was noted in the new passage. He agreed with Dr. Galabin that it was better to defer washing out the uterine cavity a short time. He did not recommend marriage in his case, because the end of the new vagina was closely attached to the margins of the opening into the uterus. No natural dilatation of this opening could occur in labour, and Cæsarean section would probably be necessary.

Dr. BRAXTON HICKS related a case of Congenital Abnormality of Uterus simulating Retention of Menses. The patient, aged twenty-four, had never menstruated. About twelve weeks ago she had severe pain in the right hypochondrium, lasting about six weeks. About the same time she noticed an increasing swelling in the lower abdomen, and recently tension had become severe. On admission a tumour was felt reaching above the umbilicus, tense and semi-fluctuating, causing distress and oedema of the legs. She had not distinctly suffered from monthly increase of distress. The vagina was nearly of normal length, ending in a kind of transverse depression, beyond which was felt the tumour, exactly resembling the uterus distended with menses. The author had had such a case, apparently exactly similar, the very extremity of the vagina and os uteri being closed. The patient was therefore placed under chloroform and a trocar plunged in, where a depression like a dilated os beyond the closure could be felt. Nothing but a little bloody serum flowed. The sound was then passed up into the centre of what seemed to be the uterus, but still no sign of menstrual fluid. Further interference was then abandoned, the tapping having been done antiseptically. In the night she became feverish, and died about thirty hours after the tapping. Post-mortem examination showed that there were neither uterus nor ovaries, but a large cyst attached to the upper end of the vagina; walls very irregular within, smooth without. It was half filled with a cheesy white matter, and the rest with dark grumous material. The wall above was thinned and perforated in two or three places, where the contents, in a fetid condition, had escaped into the peritoneal cavity. The trocar had passed through two layers of peritoneum. Probably the operation had only hastened the rupture.—A report by Dr. GALABIN on the Microscopic Structure of the Cyst was appended. The outer wall of fibrous tissue was only about one-twelfth of an inch thick. The soft material within was made up of round cells, longer than leucocytes, having a fibrillar reticulum amongst them. It was to be regarded as a soft sarcomatous growth.—Dr. ROUTH said that the practical point which came out was, that in another case the aspirator should be used to see the nature of the fluid, if any, before a trocar was employed.

MEDICAL OFFICERS OF HEALTH SOCIETY.

AT a meeting of this Society, held at 1, Adam-street, Adelphi, on Friday, November 19th (the President, Dr. John Syer Bristowe, in the chair), a paper was read "On the Action of Disinfectants on Sewage and the Living Organisms contained therein," by JOHN TRIPE, M.D. Dr. Tripe began by explaining that in this paper he used the term disinfectant in the popular sense, and that the object of the paper was to enable health officers and others to judge of the relative powers of the popular disinfectants. The first set of experiments were made in the spring of the present year by adding 2 per cent. of the disinfectant employed to 4000 grains of offensive sewage teeming with bacteriod and infusorial life. In the second set, which were not commenced until nearly the latter end of October, the same quantity was employed, but one drachm of fresh beef, finely shred, was put into each 4000 grains of sewage, and taken out at the end of three days. In the third set, which was begun about three weeks since, unmixed sewage only was employed. The disinfectants used were those ordinarily sold, as by that means they could be more fairly compared than if the same weight or volume of the solid or other substances from which they were made had been taken. The second set of experiments were made by the addition at first of 1-400th part of the disinfectant, and when it was found that this amount did not remove the offensive smell or destroy the living organisms, additional quantities were added until the proportion of one of the disinfectants to 100 of sewage was reached, this being the strongest mixture likely to be found in drains or sewers when disinfected. As a result of the effect of heat on sewage, infusoria became more lively as the sewage warmed, but at 90° F. their movements became slower, at 95° several ceased to move, at 110° all had died. The bacteria were not affected until 115° F. was reached, when the bacilli and vibrios became sluggish. At 125° all these had ceased to move; at 130° the smaller bacteria were sluggish, and at 140° had ceased to move. On the fourth day a very few of the smaller bacteria were seen to be active, but none of the bacilli, vibrios, or spirilla. The chemical disinfectants used were carbolic acid (No. 5), Burnett's fluid chlorine water (P.B.), solution of chlorinated lime (P.B.), euclorine, sporokton, hydrochloric acid, chloralum, sanitas, Condy's fluid; sanitas and carbolic acid powder were also experimented on. The first seven were used in the first set of experiments, whilst chloralum, sanitas, and Condy's fluid were selected instead of chlorine and chlorinated lime solutions. The experiments were made at different times, but each set carried out simultaneously, and therefore comparable. Carbolic acid No. 5: When mixed in the proportion of 2 per cent. all smell was removed and all living organisms destroyed. As long as twenty-one days afterwards there was no return of smell or bacterial life. When ten parts of carbolic acid were added to a mixture of sewage and beef, the infusoria but not the bacteria were destroyed and the smell removed. With Burnett's fluid, mixed in the proportion of 2 per cent., the same result followed as in carbolic acid. In the other proportion the effect was less marked. Euclorine, when added to sewage in the proportion of 2 per cent., removed offensive smell and destroyed infusoria. In the second set of experiments with the sewage and beef solution a mixture of 10 parts to 4000 had but little effect. With sporokton, added in the proportion of 2 per cent., no living organism was detected. In the second experiment the smell was but little altered by a strength of 10 parts in 4000 of the sewage and beef mixture; but when the sporokton was increased in strength to one in 300 the infusoria died, but the bacteria were as active as ever. Solution of chlorine (P.B.) and solution of chlorinated lime (P.B.) did not appear to have much action. Chloralum, when added in the proportion of 10 to 4000, did not immediately affect the smell; but on the second day there were fewer living organisms than in any other solution, except in those of carbolic and hydrochloric acid, and Burnett's fluid. Condy's fluid, when added in the proportion of twenty parts in 4000 completely failed to remove smell or destroy infusoria. In the proportion of one in 50 the offensive smell was removed, and the movement of the bacteria termo was stopped. Sanitas: The addition of

ten to 2000 of sewage and beef produced but little alteration in the smell. With one per cent. of sanitas the smell was much abated, but the living organisms were more abundant than even in the Condyl's fluid of the same strength. Sanitas powder was more energetic in its action than sanitas fluid.

In the discussion which followed, Dr. Buchanan Baxter, Dr. Buchanan, Dr. Alfred Carpenter, and Mr. Wynter Blyth took part.

Reviews and Notices of Books.

The Practitioner's Handbook of Treatment. By J. MILNER FOTHERGILL, M.D. Second Edition. London: Macmillan and Co. 1880.

It is not so very long since Dr. Fothergill published the results of many years' thought in a book which he rightly conjectured was much needed at the present day. The attempt to write a treatise upon therapeutics, not in the stereotyped fashion of taking drug by drug and retailing its properties, with an occasional hint at the value of combinations, but in a manner which should deal, firstly, with the conditions to which treatment is to be directed, and which should endeavour to give a rational and scientific explanation of measures often empirical and traditional, was one which deserved success. The speedy appearance of the second edition of this handbook is also to be accounted for by the fact of the clearness of the writer's style, the confidence with which he states his facts, and the general need felt nowadays for some sure basis of therapeutics. It would be impossible, of course, even for the author of this book to attempt to explain the *modus operandi* of all our therapeutic measures. Our knowledge of the physiological action of drugs is yet far from complete; and it is not always possible to predicate their action in diseased conditions from their known properties on the healthy subject. It is satisfactory, however, to be enabled to follow, so far as we can, a line of treatment which is based upon rational grounds; and, in aiding the practitioner to feel this additional satisfaction, Dr. Fothergill is to be commended.

There is no need for us to take our readers through this book. On its first appearance we indicated its scope, and the manner in which the various subjects were treated. The author has submitted it to careful revision, and made some necessary additions, availing himself frequently of the written experience of others on certain special points. The chapter upon "Medical Men at the Bedside," which closes the work, contains the thoughtful remarks of Dr. Austin Flint in his "Clinical Medicine"; upon hygiene in India Sir James Fyfe contributes a few pages, and so on. But the volume contains much that is original and suggestive, and beyond a few eccentricities in styles, is readable and interesting. We could have wished, however, that such eminently rational drugs as salicylic acid and jaborandi had received a little more attention than is devoted to them in the brief note appended to the chapter on "Body-heat and Fever"; and a more detailed account of the cold-bath treatment of pyrexia—scientific hydropathy—might have been given. The author also in more than one place cannot conceal his contempt for modern medical education. In fact, there runs through the book a tendency to disparage the prevalent methods, whereby he thinks that too much attention is given to accuracy in diagnosis, and too little to therapeutics and the ordinary details of medical practice. It is an echo of Trousseau's cry—for less science and more art in medicine. We venture to think, however, that the present writer confutes his own argument, for his whole book is an endeavour to raise therapeutics to the position of a science. There are, it may frankly be conceded, many directions in which the present system of

medical education might be improved; but that the modern methods of teaching have really resulted in an increased confidence in the measures adopted for the treatment of disease there can be no question; and it is a pity that Dr. Fothergill should have lessened the value of his work by a too partial preference for the old-fashioned methods of education in vogue when he was young.

A Practical Treatise on Tumours of the Mammary Gland, embracing their Histology, Pathology, Diagnosis, and Treatment. By SAMUEL W. GROSS, A.M., M.D., Surgeon to the Philadelphia Hospital, &c. London: H. K. Lewis. 1880.

THE naked-eye characters of the common variety of scirrhus are so distinguishing that its separation from other tumours of the mamma was early and easily made, and its clinical history written before its minute anatomy was known. Many of the other mammary tumours, however, are to the naked eye so closely alike that a rough examination affords no clue to their precise variety and structure, and they have been classified by different authors in various ways, and not with that histological accuracy that is now possible. The pernicious effect of an inappropriate nomenclature has been well exemplified in the confusion that the terms "adenoid," "adenoma," "glandular," and so on, have wrought in the study of non-cancerous growths, and the presence of gland elements has been commonly held sufficient to prove the essential nature of the entire neoplasm. A more illogical conclusion can hardly be arrived at, and in other situations the error would not be made. It is certainly strange that the old terms and classification have continued to be used so long, in spite of the great progress of histological knowledge and the improved classification of tumours in general. Dr. Gross has approached the subject from the modern standpoint, investigated it afresh, and classified mammary tumours according to their minute anatomy, and in harmony with the general classification of neoplasms. We cannot here notice *seriatim* the many interesting facts brought out by Dr. Gross, but must content ourselves with indicating some of the main points in which his views differ from those commonly held in this country. He, first of all, divides solid tumours into those derived from the periglandular connective tissue, which may be either mature—fibroma, lipoma, myxoma, chondroma—or immature, embryonic—sarcoma; and those derived from the secreting elements, and composed of epithelium, which may be typical—adenoma; or atypical—carcinoma. Angeliomata and neuromata form another separate class, and primary cysts form another group by themselves. The mere presence of gland structure in a neoplasm is rightly held not to constitute a glandular tumour, as it is obvious that a growth springing from the periglandular tissue must, at any rate at some period of its life-history, surround and include many acini and ducts. But the term adenoma is applied solely to tumours composed of new developments of gland acini, and, more rarely, ducts, having a likeness more or less close to the mamma of a female advanced in gestation. Thus defined these adenomata are found to be very rare. The changes excited in the acini and ducts of the glands by periglandular growths are fully described; they are irritative hyperplasia of the lining epithelium, dilatation by centrifugal growth of the tumour into slits, fissures, or cysts, into which the true tumour tissue fungates. The intra-cystic growths of these formations, then, although found within dilated ducts or acini, are not accurately described as papillary, or other outgrowths from them, but are masses of the periacinous tissue bulging into and dilating the gland spaces. These views, we think, will meet with general adoption, as more in accord with our present knowledge than others for-

merly promulgated. Investigation of cancers has led Dr. Gross to hold that they spring from the pre-existing glandular epithelium, and that their extension is not by any spermatic influence, but by the multiplication of already cancerous cells. We are unable to follow Dr. Gross in one of the distinctions he draws between adenoma and carcinoma; he states that in adenomata the epithelial collections are contained in cavities lined by a membrana propria of endothelium, while the cell masses of a cancer are in connective tissue spaces without any such lining. Even were it certain that there is such an "endothelium" beneath the glandular epithelium, it is undoubted that cancer spreads along lymph channels, and that its masses of cells are thus liable to be surrounded by a true lymphatic endothelium. The part of the work that deals with the clinical features of the different classes of tumours is well done and very valuable, although a little too much importance is given to the percentage frequency of various occurrences. The work opportunely supplies a real want, and is the result of accurate work, and we heartily recommend it to our readers as well worthy of careful study.

NAVAL MEDICAL SERVICE.

NEARLY a year has gone by since higher rates of pay were secured to the Army Medical Service, and more than half a year ago the Admiralty Committee closed its doors, being replete with such evidence as it required; but as yet its labours have yielded no fruit, the utmost secrecy being maintained. It is safe to say that discontent pervades the Service, from the lower stratum, where men of some standing find themselves associated with those whose competitive marks are too low for publication, up to those who have reached inspectorial rank, the general question being, When is an end to be put to this state of uncertainty? Credulity is put to the test on being semi-officially told that it rests solely with the Treasury, which, it is thereby intimated, is unwilling to pay the medical officers of the navy on the same scale as that enjoyed by the army.

Deeming that as experts in professional matters we may strengthen the position of the Admiralty *in re nautica medicæ*, we offer with respect what we assume to be just and due requirements. We know well that our naval brethren regard as their right the shorter periods—in ratio of four to five—for increase of full pay, &c., given to them over the army service, by Order in Council of July 6th, 1866, to compensate their compulsory loss of time on half-pay; and we conceive that to be justly their due until half-pay is abolished. The difference thus established, existing till the issue of the last Army Warrant, was over 7 per cent. of full-pay in favour of the navy, taking the whole career of medical service in executive rank, if unpromoted, to cover thirty years. We claim the renewal of this principle of action in the forthcoming Warrant, and offer for consideration a scheme by which this may be effected.

Adhering to the same amount of increase as in the army, of 2s. 6d. a day, but shifting the period for that increase in accordance with the principle of 4 years in the navy against five in the army service, it necessarily follows that the army maximum of 27s. 6d. will be attained with fewer years of full-pay service in the navy than in the army, necessitating a further advance of pay to 30s. On the other hand, the age of the naval officer will be co-equal, and thus it will always be easier to complete 30 years' service earlier in the army than in the navy. In fact, in the latter few will exceed 25 years in executive ranks, but the inducement of higher rate of pay will stand good. The War Office is actuated by the idea of facilitating early retirement, while the Admiralty is not thus inclined, and its views may find

support in an increase of pay at ten years' service—the earliest retiring point with gratuity for the army. At 20 years there lies the point long sought for voluntary retirement by naval surgeons, whom the Admiralty do not wish to lose, but can only retain by inducements. We

Proposal for full-pay of executive ranks.

Navy, full-pay.						Averages for 10 year term, in round numbers.	
Years of service.	Term.	Per diem.	Per annum.	Totals for term.	Totals for 10 years.	Navy.	Army.
						Proposed.	Actual.
1st term	{ - to 4	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£	£
	{ 4 „ 8	4 0 11 0	200 15 0	803 0 0			
	{ 8 „ 10	4 0 12 6	228 12 6	912 10 0			
2nd term		2 0 15 0	273 15 0	547 10 0	2262 0 0	226	225
	{ 10 „ 12	2 0 17 6	319 7 6	638 15 0			
	{ 12 „ 14	2 1 0 0	365 0 0	730 0 0			
	{ 14 „ 18	4 1 2 6	410 12 6	1642 10 0			
	{ 18 „ 20	2 1 5 0	456 5 0	912 10 0			
3rd term		2 1 5 0	456 5 0	912 10 0	3923 15 0	392	369
	{ 20 „ 22	3 1 7 6	501 17 6	1505 12 6			
	{ 22 „ 25	5 1 10 0	547 10 0	2737 10 0			
Total full-pay, 30 years					5155 12 6	515	479
					11341 7 6	378	357

N.B.—Under the Order in Council, July 6th, 1866, the difference of full-pay of the executive ranks stood at 7½ per cent. in favour of the navy. By this proposed scale the same would be below 7 per cent. for the full period of service.

submit as such the fixture of terms for increase of full and retired pay not at, but beyond, that period, after 22 years' service; but the right to retire after 20 years must be assured.

Our advocacy herein is limited to the rank and file of the Service. The question of raising an equivalent to the rank and immunities of brigade surgeons in the army, and the social question of cabin accommodation, are matters which, though important, we do not discuss in this article.

BRITISH MEDICAL ASSOCIATION.—The meeting of the British Medical Association for the year 1881 will be held at Ryde, in the Isle of Wight, to which locality the Association has received a cordial invitation from nearly the whole of the medical profession in the island. Mr. Benjamin Barrow has been appointed president-elect. The council of the town of Ryde have passed a resolution that the whole of the corporation buildings, which are numerous and spacious, shall be placed at the disposal of the reception committee. The address in Medicine will be given by Dr. John Syer Bristowe, London, of St. Thomas's Hospital; the address in Surgery by Mr. William Dalla Husband, of Bournemouth, consulting surgeon to the York County Hospital; and an address in Obstetric Medicine by Dr. John G. Sinclair Coghill, of Ventnor. The following grants in aid of scientific investigation for the year were made, viz., Dr. McKendrick and Committee, Glasgow, for a continued investigation on anaesthetics, £25; Dr. Gerald Yeo, London, on the efficacy of the antiseptic method in injuries of the brain, £50; Dr. Thin, London, for a continued investigation on parasitic skin diseases, £25; Mr. W. North, London, for a continued investigation on the relations which exist between nitrogenous egesta and muscular work, £50; Dr. J. Hamilton, Edinburgh, an investigation on the pathology of the brain, £30; Mr. Watson Cheyne, London, an investigation on the relation of organisms to septic diseases, £25; Dr. Augustus Waller, London, an investigation on the time and relations of muscular contractions in the human body in health and disease, £20; Dr. Alexander Ogston, Aberdeen, a continued investigation on the relation between bacteria and surgical disease, £10; Dr. Newman, Glasgow, a renewed grant in aid of an investigation on the functions of the kidney, £10; Drs. Braidwood and Vacher, Birkenhead, to illustrate the third and final report on the life history of contagium, £20.

THE LANCET.

LONDON: SATURDAY, NOVEMBER 27, 1880.

THE relation between medicine and pharmacy formed the subject of a joint discussion between chemists and doctors in some meetings which have been held in the Philadelphia College of Pharmacy, with the object of improving the relations between the two classes. The discussions, which have been summarised in an article in the *Pharmaceutical Journal*, deal with many points which are of equal interest on this side of the Atlantic. If we are to judge from the tone of the speakers, they have a better chance of settlement in America than in this country, although it is always difficult to know how far statements made on such an occasion are really representative. The subject of patent medicines was first discussed. Dr. SWAYZE deprecated their use, and urged pharmacists to abandon and discourage their sale, and a resolution was passed to ascertain how far the proposal would be agreeable to the dealers in drugs who are directly concerned. We fear, however, that the proposal is impracticable. The public requires educating as much as the chemists; as long as patent medicines are demanded patent medicines will be prepared, and pharmacists will have no choice but either to lose custom or to act as distributors. The *American Journal of Pharmacy*, however, approves the movement, and suggests the desirability of discarding all signs and circulars recommending patent medicines, and in this we thoroughly concur. Druggists, by the way in which they lend themselves to the advertisement of quack medicines, aid considerably in their diffusion. In order to save a few pence in paper, many of them will distribute advertisements of patent medicines by using them as wrappers, a practice which is strongly to be deprecated. The American journal goes farther, and urges medical men to discard the use of "specialities" which are not patent medicines, and the constituents of which are known. Here, however, we are on different ground. There is no doubt that of late years such specialities have been prescribed by physicians much more than formerly. These preparations have come to us largely from the other side of the Atlantic, and it is difficult to class them all together, and, with our contemporary, to draw no distinction between them and patent medicines. It is not surprising that they are looked upon with some disfavour by pharmacists, since the profits derived from their sale must be very much less than those obtained upon medicines dispensed from an ordinary prescription.

An occasional relation between medical men and chemists, which was passed over by the Conference as "an evil difficult to reach," should certainly be condemned in the strongest terms. We refer to the arrangement for "mutual advantage sometimes made between physicians and pharmacists," by which we understand an allusion to the system of a percentage return to the prescriber on the price of medicines dispensed. It is idle to affect to ignore that such an arrangement is occasionally made even in this country,

but to one of the parties to the compact, the physician, it is simply disgraceful. To obtain out of the pockets of his patients an addition to his fees unknown to them is a dishonest procedure. Unfortunately the practice is not confined to chemists. Not long ago we saw a circular sent out to the profession by a manufacturer of apparatus used in sickness, openly offering to return to the recommender a percentage on the price charged for apparatus supplied to his patients. It is rumoured that there are surgeons who are not ashamed to accept a similar percentage from the makers of orthopædic and other instruments. Such procedures are discreditable enough to the tradesmen concerned (if they do not indeed deserve a less honourable name). What is it, then, to those who profess to belong to a "liberal profession"? In the case of dispensing chemists, it is notorious that to facilitate such an arrangement is the real object of the private lists of formulæ, to be prescribed by the numbers they bear, which have been issued by some firms of chemists reputed to be respectable. Against everything which indicates such a system, medical men who value the reputation of their profession for honesty, much less for honour, should resolutely set their faces, by refusing to give any countenance to the tradesmen who are willing to adopt the system, and they should take care that the tradesmen implicated are aware of the fact.

Another topic which was considered at the Conference is a sore subject with our profession in all countries—that of counter-prescribing. The practice has been often condemned in these columns, and we need say little more in deprecation of a custom which, under legal toleration, has flooded the country with practitioners destitute of any medical education, unqualified, and practically irresponsible, who for the sake of a small profit, in every town in England, deprive the medical practitioners of one-half the work which should legitimately come to them, and occasionally furnish the practitioner with some of his most difficult tasks. The discussion was not conducted without bitterness, and ended in the passage of a resolution which was probably intended rather as a salve to the medical men present than as having any practical value:—"That as the diagnosis and treatment of disease belong to the province of a distinct profession, and as a pharmaceutical education does not qualify the pharmacist for these responsible offices, he should, where it is practicable, refer applicants for medical aid to a regular physician." The chemists who took part in the discussion denied that the strictures expressed applied to them, and quibbled over the difficulty of defining exactly what is to be understood by "prescribing over the counter," and of deciding how far the pharmacist is justified in expressing an opinion as to the choice of simple remedies. A definition could readily be obtained from the Council of the Pharmaceutical Society, or if any member of the Conference were to spend half an hour one Saturday evening in almost any chemist's shop, in London or out of it, he would scarcely fail to be able to frame a definition of counter-prescribing at least twenty times over. A trade journal positively has a section—the "Counter Prescriber"—to put the druggists "up to" the drugs to give for such and such symptoms. Counter-prescribing is not only a system which is injurious alike to patients and medical men, but it is one that bears

the impress of ingratitude to the medical profession. The changes in the mode of medical practice, the extensive adoption of the system of prescriptions, instead of supplying physic, have put an enormous amount of business into the hands of Pharmacy. We would suggest that medical men should resolve to discountenance all chemists who are known to cultivate counter-prescribing, and to encourage by their help those (if any such are to be found) who avoid it altogether.

Much discussion was devoted to the subject of the unauthorised repetition of prescriptions. It was maintained that a physician does not sell his prescription, but merely his advice, and that he suffers a pecuniary loss by the unauthorised and unlimited repetition of the medicine. The question is one of great difficulty. It may be held that the prescription is really part of the advice, to which the patient has a permanent claim, and however inconvenient such a claim may sometimes be, its practical disputation is scarcely possible. It has been proposed to mark on all prescriptions that they are not to be repeated without authority, but the public would certainly rebel, and successfully, for they would find not unwilling allies in the dispensers. This and the other subjects have been often before discussed, but not often in verbal conference. We wish that we could see in the attempt which has been made at Philadelphia more promise of ultimate benefit from such joint consideration of questions of mutual importance.

THE attack on the position held by anatomy in the education of the medical student, which was made by Professor MICHAEL FOSTER in his address to the British Medical Association at Cambridge in August last, could scarcely be expected to be passed over by anatomists without protest or reply. The conclusions which the Cambridge Professor put before his audience have called forth a spirited answer from Professor TURNER in the address at the opening of the new Anatomical Buildings of the University of Edinburgh which we have recently published. The attack and the defence are alike worthy of the writers and of the cause at issue, and will be earnestly and carefully studied by those who have the direction of medical education [in this country. The ideas thus brought into contrast will also have great interest for both students and practitioners, for the predominance of the one or the other view will determine the education of the medical man of the near future. Professor FOSTER, in urging that anatomy is mainly of benefit as a discipline, seriously undervalues its practical utility by appealing to the ease with which anatomical minutiae are forgotten as soon as the examination ordeal has been passed. Topographical details undoubtedly quickly fade from the memory, but anatomy is not alone among the sciences in this respect. Details of most sciences do not linger long, and physiology assuredly can claim no superiority here. A minute knowledge of the electrical phenomena of muscle and nerve, or of the statistics of nutrition, will scarcely be remembered any longer than the relations of an artery or the exact attachments of a muscle. From this point of view, therefore, little can be advanced on one side of the question that cannot be similarly urged on the other; for just as the larger and more important physiological conclusions are likely to be prominently retained, so the anatomical facts which have a

direct bearing on medicine and surgery are rarely forgotten, especially if the study of this science is not abandoned in the early years of the curriculum, but is carried on for some time after the student has familiarised himself with cases of disease in the hospital wards. We are disposed to think that the study of anatomy is often given up at too early a period, for it is when the practitioner is brought face to face with disease that he begins to appreciate the real practical utility of a knowledge of topographical anatomy, and it is then that he begins to regret his premature exit from the dissecting-room. The value in surgical operations of careful manipulation and ready discrimination of tissues, and the advantage of a correct knowledge of the topography of the viscera to the physician, are so very obvious, that they might have been mentioned by Professor FOSTER as a set-off when he objected to the amount of time which the student spent on topographical anatomy. Every surgeon who has secured a reputation as an operator in modern times has, as far as we can recall, been a most diligent and painstaking dissector. Moreover, if the mere manual dexterity which every good surgeon must possess be not acquired during his stay in the dissecting-room, it is but rarely obtained in later years. The question at issue, however, is much broader than that of mere practical utility, so very important as this is. Is the disciplinary power of anatomy on the mind so great as to justify the amount of time which the medical student devotes to it? Is physiology the equal of, or even superior to, anatomy in this respect? These are the questions which must be decided, and on their decision the relative place of these sciences in the medical curriculum must be determined. The advantages of the study of anatomy in disciplining the mind, as laid down by Professor TURNER, are, that it is specially adapted for cultivating habits of observation, accuracy, and patience, and for strengthening the memory and reasoning powers; and these are surely sufficient to give it a foremost place in all medical educational schemes. In this estimate of its value Professor FOSTER in the main agrees. "In past years it has served as the chief culture of the medical student—as the chief means by which the rough materials coming up to our great medical schools were trained to habits of accuracy, of exactness, of patient, careful observation, and their memories strengthened by exercise for the subsequent strain which would have to be put upon them by more strictly professional learning." The only point claimed by Professor TURNER which is not admitted by Professor FOSTER is the important one of its effect in developing the reasoning powers. This difference of opinion is dependent on the standpoint from which the science is looked on. Professor FOSTER says that anatomy is a sterile subject, whose separate details hang loosely isolated in space, held together by no theory and no ideas; whilst for Professor TURNER the science embraces not only morphology but something more—viz., ideas of structure and construction, as well as conceptions of form, position, and relations. Thus anatomy, in respect to the reasoning faculty, is mainly regarded by the one in the light which it presents itself to the professional crammer; whilst in the mind of the other it is surrounded by all the traditions engrafted on it by a succession of eminently philosophical teachers. Indeed, to the latter it is the true preliminary, not only to medicine and surgery, but

to physiology and pathology also; and we most cordially agree with this estimate of the position of anatomy, if it be considered in its wider relations, and as every real teacher should encourage his students to study it. Even if physics and chemistry exercise a discipline on the mind similar to anatomy—and this we are not inclined to admit,—it is but rare that a medical student enters on his studies with the advantages of a thorough training in these sciences, and it is only by a *thorough* training that their educational effects are secured. Moreover, such students have obtained a discipline which might relieve them, as far as mental influences are concerned, from a study of a great deal of physiological as well as of anatomical details. The power of continuous application and of the mastery of facts is already theirs. But the untrained student is still the rule, and not the exception, as Professor FOSTER'S experience seems to imply, and that he can be as easily trained to habits of accuracy, precision, and patient observation by the study of physiology as of anatomy, chemistry, or physics, is a proposition which we doubt very much, and is by no means in accord with our experience. When we are told on physiological authority that the average length of life of new physiological facts—a very curious use of the word *fact* to us—may be reckoned at about three years, we can understand its influence in training the mind to reason on data of mixed and uncertain value, and of strengthening the faculty of struggling to a conclusion out of the confusion of conflicting facts and views. In many cases unfortunately the conclusions are afterwards found to be untrue, and the reasoning faulty, owing to defective data rather than to any illogical course of reasoning, so that the student too often halts hesitatingly at a conclusion, or carries an erroneous theory with him throughout his subsequent career, and bases his medical practice thereon. Of course such disastrous results can only happen when the student does not appreciate the true methods and value of physiology and fails to disentangle theories from facts; but how large a proportion of men fail in a just discrimination of these essentials? Physiology at present is far from being an exact science, and in this lies both its strength and its weakness as a discipline for the mind. As it gains in exactitude and precision—in fact, the nearer it approaches the physical sciences—the greater will its influence be in inducing habits of accuracy and observation, but these cannot be gained without the sacrifice of its present efficiency in developing the power of inference from approximate data only. Cultivation of this faculty is of the utmost importance during the period of studentship, and too much stress cannot be laid thereon, for it is ever in demand in the daily life and work of our profession. Whilst we therefore entertain a high regard for the disciplinary power of physiology in this special respect, we cannot agree with Professor FOSTER that the present relations of the two sciences should be reversed, but must firmly urge that physiology can only at present be permitted to supplement anatomy in medical education, whether we regard its practical utility or its value as a mental discipline. Indeed, we are inclined to regret that the time at the disposal of the medical student does not permit him to spend a winter session in gaining an insight into the details of anatomy, before he is brought face to face with the less obvious and more abstruse deductions of the science of

physiology. If this could be done, not only would both sciences, but the arts of medicine and surgery also, be immeasurably improved.

THE vacancy in the Crown appointment for Ireland in the General Medical Council, by the resignation of Dr. ALFRED HUDSON, gives the Government an opportunity of reverting to the original design of these Crown nominations. A study of the nature of the case and of the state of feeling at the time of the passing of the Bill, both among statesmen and members of the profession, goes to show that the Crown nominations were intended as a means of supplying members of Council who should be familiar with general practice and with the defects of medical education and examination, as shown by the experience of general practitioners. The overwhelming representation otherwise secured to universities and corporations makes it quite unnecessary to give them further representation. On the contrary, to make the Council effective and less considerate of the mere pecuniary interest of corporations, it is in the highest degree desirable to select as Crown nominees men who will really take a public and practical view of questions affecting medical education and registration.

The Government will very soon be asked to complete the Medical Acts by amending them. But pending this action on their part, it cannot do a more liberal or a more proper thing than by using its powers as Crown vacancies occur so as to make the Council really representative of the experience and the intelligence of the great body of general practitioners. The great physician whom Dr. HUDSON succeeded—Dr. STOKES—was so unfamiliar with the case of the general practitioner that he confessed, with his unfailing truthfulness, that he had never been in the chamber of a lying-in woman. It is not to be wondered at, with so many practitioners in the Council in the fashionable ranks of practice, that great branches of practical medicine and great lines of practical medical education are overlooked. We commend to the Lord Lieutenant of Ireland, and to Mr. FORSTER, so familiar with both Ireland and the question of medical reform, the views that we have set forth. The courtiers and the corporations will give them other advice, and urge them to pile up representation on the over-represented medical authorities, many of them, like the University of Oxford, having no claim to be so considered. We venture to believe that, as the late Government gave the last Crown appointment to a general practitioner, the present will do likewise.

IN 1877 Dr. TAPPEINER published an important series of observations on the production of tubercular disease in the dog by the inhalation of the sputa of persons suffering from phthisis. He has lately extended his investigation by an attempt to ascertain whether the inhalation of material from scrofulous glands is capable of producing the same effect, and the results have been published in VIRCHOW'S *Archiv*. If scrofulous diseases are indeed identical with tubercular processes, as it is fashionable now to assert, the effect of inhalation of gland-pus ought to be the same as that of phthisical pus. The material for the experiments was pus from a scrofulous boy, five years of age, with suppurating glands. Half a gramme of pus was obtained daily, mixed

with 100 grammes of water, and the dogs were made to inhale the atomised mixture for a quarter of an hour during about ten days. For purposes of comparison, two dogs were similarly treated with phthysical sputa. These two, and one of the dogs treated with the gland-pus, were killed and examined twenty-three days later. The organs of the latter were found to be perfectly normal, although the animal had presented a cough and loss of weight. In the two dogs treated with phthysical sputa, tubercular nodules were found in both lungs and spleen; their nature, from the microscopical characters, was beyond doubt. The two other dogs treated with gland-pus were killed and examined thirty-three days after the commencement of the inhalation, and the organs were also found free from tubercle. The same negative result was obtained in the case of two dogs killed on the twenty-ninth day after the inhalation of gland-pus.

Further investigations were made as to the period of incubation from the commencement of the inhalation of phthysical sputa until the tubercles are distinct in the lungs. One dog was killed on the thirteenth day after the commencement of the inhalation; it had coughed for eight days, and had lost three-quarters of a pound in weight; no tubercle was found in the organs. In another dog, killed on the nineteenth day, also, no tubercle was found. It thus appears that the period of incubation is more than nineteen days. Another dog, treated at the same time and in the same way with phthysical sputa, was killed three months after the commencement of the inhalation, and abundant tubercles were found in the lungs and pleure.

By the suggestion of Professor WALDENBURG, two other dogs were treated with sputa from simple chronic bronchitis, fifteen grammes daily for ten days; and they were killed on the twenty-eighth day after the commencement of the inhalation. The post-mortem examination showed both lungs to be perfectly normal, without a trace of tubercle. The experiments were made at Berlin, and the pathological results ascertained by GRAWITZ, ISRAEL, and FRIEDLANDER, under the supervision of VIRCHOW, so that the facts appear to be beyond question.

The conclusions drawn by TAPPEINER from these experiments are: (1) The inhalation of phthysical sputa by dogs, even in small quantities, produces with certainty tuberculosis of the lungs, with or without general tuberculosis, especially of the spleen. (2) The stage of incubation is, in dogs, longer than nineteen days, but shorter than twenty-three days. (3) The inhalation of scrofulous caseous pus from glands produces no infection—a fact which indicates an essential difference between scrofulosis and tuberculosis. (4) The inhalation of the sputa from chronic bronchitis is equally ineffective.

The facts ascertained in these experiments are certainly of a very important nature. The period of incubation, however, can hardly be fixed from so small a number of experiments, since it may not improbably be subject to considerable variation. But these observations constitute experimental confirmation of the infection of phthisis, to which many clinical facts point, and they indicate the probable mode, by which the infection is produced. The difference in the effect of scrofulous pus and phthysical sputa, if not entirely conclusive as to the difference between tubercular and scrofulous affections, indicates that we must

still pause before we abandon the older view. That view rests, we must remember, on clinical facts, which were so well described long ago by Sir WILLIAM JENNER; and these facts must be explained away if we are to accept, as Dr. HILTON FAGGE would have the members of the Pathological Society accept, the results of inoculation experiments as conclusive evidence of the identity of the two conditions.

WE publish elsewhere a copy of the instructions issued by the Government of India, defining the relative authority of the Surgeon-General with the Government of India and the Surgeon-General, Her MAJESTY'S Forces, over the officers of the Indian Medical Service. These instructions appear to be made in accordance with the General Orders issued in January and March last. They place all medical officers in civil employ and medical store-keepers under the orders of the Surgeon-General with the Government of India, and all those employed on military duty under those of the Surgeon-General of the British Forces. All medical officers are to be available for military service when required, and none are eligible for civil service until they have completed two years' actual military duty. Rules are also laid down for the mode of proceeding in applications for medical officers for civil employment, and with regard to the keeping of records of services, confidential reports, and other documents relating to the officers. These instructions appear to be merely such orders as might naturally be required for the clearing up of difficulties connected with the working of a new system, and do not seem to make any alteration in the principles laid down in the previous General Orders. They evidently are not in any way the result of the inquiry which the Governor-General intimated his intention of making into the principle on which the recent reorganisation was based, and the changes which may be deemed necessary to remove the grievances of which the Indian medical officers now complain. The Marquis of RIPON has not yet had time to make a full investigation of the subject, but it appears to us probable that ere long he will effect considerable modifications in the service, and not improbably recommend a separation of the military from the civil branch, and an amalgamation of the Indian with the British Army Medical Service.

Annotations.

"Ne quid nimis."

THE DEATH OF SIR ALEXANDER COCKBURN.

THE lamented death of Sir Alexander Cockburn has cast a genuine feeling of bereavement over the legal profession, and awakened the regretful sympathy of the community as a whole. He was a man who not only tried to do his duty, but in an exemplary manner succeeded. He served his country well, and few patriotic public servants have done as good work with so little demonstrative claim for acknowledgment or with better tact. The death of this much respected gentleman should be a warning to the "hale and hearty" of advanced age. It is not only expedient but indispensable to husband the residue of vital force when the stock is getting low. Sir Alexander Cockburn was not the man to spare himself, and up to the day of his death he, with very few intervals, worked as hardly and intensely as he had done in the prime of his life and vigour. We do not say that this

was bad policy in itself, but it was not so wisely carried out as it might have been, considering the exceptional sagacity of the man of whom we are speaking. The judges are compelled to take muscular exercise when they can, and if they did not walk more than other men of their class, they would suffer the effects of sitting long hours in densely-crowded and ill-ventilated courts. There cannot, however, be any question that a long walk on an excessively cold day, after a sitting, was not the least exacting form of exercise which a man so advanced in years as the late Lord Chief Justice could have taken. The lesson of the event may be a timely warning to the aged and energetic who "feel well" to avoid throwing too much work on organisms, which must, in the nature of things, be weakly even when they seem strong. It is better to take the "constitutional" before the day's work than after it. The exercise a sedentary man takes immediately before his dinner should be comparatively gentle, and certainly moderate. When the mental and nervous parts of the frame are weary, or even exhausted, is not a time for work. Much harm results from the ill-founded hypothesis that we can rest one part of the body by working another. The organism is more closely knit together, and healthy work is more dependent on harmony of activity, than many seem to suppose. General sleep is made up of many minor forms of sleep, and healthful and safe exercise is scarcely possible when any part of the system is severely fatigued.

EDUCATION IN WALES.

IN an interesting pamphlet entitled "Higher Education in Wales," the Rev. D. J. Davies, Fellow of Emmanuel College, Cambridge, has set forth some remarkable facts concerning the ability of Welsh children. Taking statistics as given in the two last reports of the Committee of Council on Education, he finds that the chief sources of income of Board Schools are the rates and the Government grant which varies with the proficiency of the children. Now the average English child earned, in 1875, 15·4 per cent. of the total maintenance at school, while the average Welsh child earned 22·6 per cent. of the cost of its maintenance. In the following year the percentages were 16·0 for England and 24·4 for Wales; in 1877, 18·3 for England, and 29·0 for Wales; and 1878, 19·6 for England and 31·1 for Wales. Or, as Mr. Davies forcibly puts it, "an English ratepayer who pays £5 towards his school would have to pay only £4 17s. 6d. if all his geese were swans—if all his children were Welsh children." A scheme is now on foot to improve and increase the educational resources in the Principality, and it is to be hoped that the State will be as liberal in this point as it has been to Scotland and Ireland. Two proposals are under consideration—one the foundation and endowment of a Welsh University; the other the establishment of training schools and colleges where lads of promise could receive special training in order to compete for scholarships at the established universities in England. Certainly the latter scheme promises to be more generally useful, though, from sentiment, there are some who favour the former. A Welsh university, however, would soon sink into a mere training college for clergy, since the lads destined for the bar or the medical profession would, if they wished to escape hopeless isolation, continue to seek their education either at London, Manchester, or some other populous centre. Indeed, if a lad had to leave home at all he would probably live as cheaply in England as at Cardiff, Swansea, or Bangor; whilst the railway fare would be only a trifling consideration. So many Welshmen have earned distinction in our profession, and conferred honour on it, that we should regret the success of any scheme that would limit many of them to a sphere of merely local usefulness or celebrity. Although, according to Mr. Davies, the Welsh child beats

us in the blue book statistics, we should be sorry to miss him as a competitor in our mature years. We hope the establishment of training-schools on a liberal scale throughout the Principality will enable an ever-increasing number of Welsh lads to come forward and compete on equal terms with English, Scotch, and Irish students at our already existing universities. In such a race every British-born subject should start on equal terms; and as the Welsh only ask for what has been already conceded to the Irish and Scotch, it is but just that their request should be allowed.

THE EXTINCTION OF THE QUEEN'S UNIVERSITY IN IRELAND.

THE Queen's University has resolved not to die quietly or without a protest against its extinction. For this purpose Convocation have asked the Prime Minister to receive a deputation. The chief force of their case is in two propositions: first, that the late Lord Chancellor grievously misapprehended the nature of the university, describing it simply as an examining board, whereas it is a university of the strictest academical type that has yet been realised in the British Isles, and, by his own misapprehension, misled Parliament; secondly, that the systems of teaching and of examination, adapted to each other in accordance with an experience of thirty years, have worked well, and are increasingly appreciated every year. As regards the Faculty of medicine and the Degrees in medicine, we think there can be no doubt that the Queen's University was doing a very valuable work, the interruption of which will be a misfortune.

COLD FEET.

IT is, as we have often laboured to show, a mistake to suppose there is any warmth in clothes. Animal heat is the direct result of changes going on within the body itself. Nutrition by food, and the discharge of energy by exercise, are the efficient causes of heat. Clothes "seem" to warm because they prevent the cold air and objects with a capacity for heat which surround the body from attracting the heat generated within its organism. The clothing is simply an insulator. It follows that it should be light in weight, and above all things that it should permit the free and full circulation of blood through every part of the system—to the end of every finger and toe—and that the muscular apparatus of the extremities should be in perfect working order. If we will wear foot-coverings, whether boots or stockings, which compress the feet and render the separate action of each toe impossible, it is simply absurd to expect to be warm-footed. Heat is the complement of work and nutrition; and if a part of the organism is so bound that it cannot work and its supply of blood is limited, it must be cold. The resort to stouter and heavier clothing under such circumstances is simply ridiculous. Generally it is the stockings that compress the feet. The garter acts as a ligature, and diminishes the blood-supply, while the stocking itself acts as a bandage, and impedes the circulation through the extremity. Let anyone who doubts this try the effect of wearing what is called a "well-fitting"—that is, a tight kid-glove in cold weather. Hard unyielding foot-cases, such as stout boots with no space for the toes to play and no spring for the natural action of the arch of the foot, increase the evil. The first conditions of warmth are, therefore, free action and a full blood-supply. These remarks apply chiefly to the day. At night the wearer of tight and rigid foot-coverings reaps the recompense of his imprudence by sufferings which are wholly needless. When the body is placed in the recumbent posture the force of the blood-pump—the heart—is economised, and the current grows both weaker and slower. The necessary result of this change is, that there seems to be a tendency to coldness in the state of sleep,

and those who suffer from cold feet seek to remedy this discomfort by heaping clothes on their extremities. They forget that the way to maintain animal heat is to incite the system to work. By judiciously and *rapidly* bathing the feet in cold or cool water before going to bed, and then rubbing them so as to promote the circulation, the blood-supply of the extremities may be augmented; and by the avoidance of heavy and, what is called, warm bedclothes on the feet the force of the circulation in the organs will be maintained far more effectually, and with incomparably greater comfort, than when the coverings are doubled and trebled, and even supplemented by artificial heat because the feet are cold! There are, of course, cases in which a different method of procedure must be adopted; but when the seemingly healthy resort to heavy and hard foot-coverings by day and artificial foot-warmers by night, it should be under express medical advice. The normal ways of procuring warmth are the best—namely, nutrition and work.

NEUROSAL PALPITATION.

At the November meeting of the Medical Society of the College of Physicians in Ireland, Dr. Bernard made a communication on a case of Neurosal Palpitation which he had brought before the members of the Society last session. The patient was exhibited in the early part of the present year, and suffered from protrusion of the eyeballs, extreme palpitation, and some enlargement of the middle lobe of the thyroid body. Indeed, were it not that the latter sign was not well marked, the case might have been regarded as an example of exophthalmic goitre. The patient took a voyage to America, and returned quite free from all his former troubles, and with a pulse of 74 beats per minute. At the same meeting a case of Pericarditis was detailed by Dr. Walter Smith, Vice-President of the College, in which the "paradoxical pulse" had occurred.

STIMULANTS IN WORKHOUSES.

WE have another contribution to the elucidation of the difficult question of the therapeutical use of alcohol in workhouses in a report by Mr. Anderson, to the guardians of West Derby, Liverpool, in reference to the patients in Walton workhouse. At the urgent request of many guardians, supported by statistical representations from other unions, Mr. Anderson resolved in the treatment of hospital cases to give stimulants only in the most urgent and severe cases. During eight weeks ending November sixty-three patients died, with an outlay for stimulants of £31 17s. 7d., whereas in 1879, only twenty-three died with a consumption of alcohol represented by £122 7s. 8½d., and in 1878, twenty-two died with an outlay of £85 19s. 0d. Mr. Anderson thinks these figures show the impolicy of the treatment, and, in particular, expresses his opinion that to withhold stimulants from the sick poor in Liverpool in illness is to prolong their convalescence, owing to the impoverished state in which the majority come into the workhouse. Undoubtedly they must require sustaining and feeding treatment. And Mr. Anderson's figures may have some interest. But we cannot attach much importance to them, in the absence of many more details than are covered by a mere statement of the number of deaths and the bill for alcohol. This is obviously so bare a statement as to be without scientific value. What were the cases? and how far do the cases of one year bear comparison with those of another? what was the state of the weather? what of the employment of the people? what was the prevalent character of disease in Liverpool generally at each period? what food was given in the place of stimulants? &c. &c. These questions and others must be answered before any comparison can be trusted. Mr. Anderson's own figures show that he is hanging too much on this

one peg of stimulants. For example, between the years 1878-79 there was a difference of only one death, but there was a difference of £37 in the bill for alcohol. There was one death less in the year 1878, with an expenditure of £85 19s., than in the year 1879, with an expenditure of £122! Clearly we have something more to learn about the mortality in the Walton workhouse than is told us by the bill for stimulants.

A SPINAL ROOT OF THE OPTIC NERVE.

STILLING of Strasburg showed preparations to the International Ophthalmological Congress at Mailand, in September last, which he believes demonstrate the existence of a spinal root of the optic nerve, which brings the retina into direct connexion with the medulla. This root passes from the external corpus geniculatum, in a winding course, deep between the bundles of the crus cerebri, and can be traced into the pons; and it appears to course down in the direction of the medulla, although its further progress cannot be demonstrated. The existence of this branch is interesting on account of the light it throws on certain physiological relations between the medulla and the retina, and may constitute the hitherto undiscovered link between certain diseases of the spinal cord and of the optic nerve.

DEATHS IN POLICE STATIONS.—HOSPITAL-CELLS.

THE subject of deaths in police stations needs to be discussed in a new fashion from a fresh standpoint. While these occurrences are all made the ground of graceless imputations on the humanity of the Force, they cannot be expected to command the attention the subject demands. Everybody knows that, with rare exceptions, the officers of justice in this country are full of feeling, and the authorities under whom they serve would incomparably rather do right than wrong, and save life than squander it, if only the system extant rendered the best modes of procedure possible. As it is, the cells at the most favourably constructed stations are placed in communication with the inspector's office, so that any prisoner can call for the assistance he or she feels to be necessary, and each cell is visited every hour; moreover, there is no reluctance to summon the surgeon in cases of doubt. What more can be desired? It might, indeed, be possible to build station-cells like the oakum-cages in prisons, open to view on one side, and to keep a patrol walking up and down, but he would probably have so much to do under circumstances which formed a standing invitation to malingers that the system does not look promising. Might it not be worth while to consider the suggestion we have repeatedly made in these columns, hitherto without, so far as we are aware, attracting the slightest attention? It is this: Set apart a strong room at each of the stations for use as an infirmary. Fit and furnish this apartment judiciously and place it in charge of proper attendants. Let every case of real or supposed drunkenness, insensibility, or any sort of illness be placed therein. Let a medical man be called in at once to each of such cases, and whatever may be necessary done for the safety of the prisoner. Then let the charges for medicine, advice, and attendance be added to the amount of "costs" in every conviction or committal, or recovered, by a summary proceeding before the magistrate, from the prisoner or his friends. If the case proved to be one of simple drunkenness the expense incurred would be justly added to the fine. If it turned out to be one of illness the sufferer or his friends would willingly defray the cost of prompt assistance. The hospital-ward of a police-station might thus be a place where prisoners were under perpetual observation and where they received proper treatment, and the department might be easily made, in part if not wholly, self-supporting. Taking one police-station with another throughout the metropolis, or any large and popular district

where some provision of the kind is most urgently needed, we believe the arrangement would be found to work without burden to the ratepayers, and prove entirely satisfactory. It would be something to know that the scheme, which we have often urged on the consideration of the authorities, had at last been seriously entertained.

ARMY MEDICAL DEPARTMENT.

THE Secretary of State for War has decided to abolish the appointment of Head of the Statistical Branch, Whitehall-yard, vacant by the death of Deputy Surgeon-General B. Tydd. For the future the Sanitary and Statistical Branches of the War Office will be amalgamated and presided over by Deputy Surgeon-General J. Irvine, the present Head of the Sanitary Department. This arrangement is certainly an economical one for the State, but a loss to medical officers of the army of a Deputy Surgeon-General's appointment. It will remain to be seen whether the statistics and sanitary work in connexion with the army suffer in consequence of the reduced staff at head-quarters.

ANOTHER PAY HOSPITAL.

OUR advertising columns give particulars of a praiseworthy experiment to provide a hospital where middle-class people and well-to-do artisans may be supplied with the advantages of hospital treatment, with the comfort and privacy of home on comparatively independent terms. The institution, Bolingbroke House Pay Hospital, is situated in Wandsworth Common, has a committee of management, and a medical staff of six gentlemen, from which patients may select their own adviser. Such experiments deserve to succeed. It is considered that such hospitals can only be made to pay by an average payment per week per patient of two guineas.

CHIANTURPENTINE IN CANCER.

At the meeting of the Medical Committee of the Middlesex Hospital on Nov. 20th, 1880, it was resolved that no more Chianturpentine should be ordered for the treatment of cancer, as, after a prolonged and careful trial, it had been found that its results were perfectly negative.

By the coolness and courage of his coachman, Dr. Rawdon Macnamara, of Dublin, was last week saved from an accident which might have been attended with very serious consequences. It appears that on the 20th instant Dr. Macnamara was returning home after paying his professional visits, and his horses, eager to reach their comfortable stable, got into a pace which required checking with a vigorous hand. The reins at length parted under the strain, and the animals, thus freed from control, dashed along Stephen's-green at a furious rate, to the imminent danger of the occupants of the carriage. In this emergency the coachman bravely and adroitly balanced himself upon the pole of the vehicle and managed to seize the broken ends of the reins, and thus prevent an otherwise inevitable catastrophe.

A SERIES of lectures is to be delivered at the National Hospital for the Paralyzed and Epileptic, Queen-square, during the present winter by the members of the medical staff. The names of the lecturers will be announced in the usual way. The first three lectures of the series will be given on Thursdays, Dec. 2nd, 9th, and 16th, at 5 P.M.

THE Lord Mayor, at the request of a deputation from the committee of the St. John Ambulance Association which waited upon him on Monday last, has consented to convene a meeting at the Mansion House after Christmas, with the view of promoting the objects of the Association.

IN reference to the spread of farcy and glanders among horses in London, Dr. Brewer, chairman of the Special Purposes and Sanitary Committee of the Metropolitan Board of Works, has called attention to faults in the construction of the drinking troughs erected about the streets of the metropolis. Not only are horses and cattle allowed to drink indiscriminately at these troughs, but children have been seen to quench their thirst at them. Hence an obvious source of danger, which it would be well to have removed by a flushing system or some other practicable measure.

THE formation of a Provident Dispensary in connexion with the Halifax Infirmary has been decided upon, and a committee has been nominated to carry out the proposition. We understand that the medical staff of the infirmary are not favourable to the project.

AT a meeting convened at Colchester to support the repeal of the Contagious Diseases Acts, a counter-proposition approving of the measures was carried almost unanimously. The meeting, however, appears to have broken up in disorder.

THE successor to Professor Wilms in the post of chief surgeon at Bethany Hospital in Berlin is stated to be Professor Rose of Zurich, who for some years acted as assistant to the deceased surgeon.

SURGEON-GENERAL FREDERICK FREEMAN ALLEN, M.D., C.B., has been appointed Honorary Physician to Her Majesty, rendered vacant by the death of Deputy Inspector-General Goodeve.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF THE MEDICAL INSPECTORS OF THE LOCAL GOVERNMENT BOARD.

Pontardawe (Rural Sanitary District).—The Pontardawe rural sanitary district is situated at the upper part of the Swansea valley, and is drained by the river Tawe and its tributaries. Early in the present year the Local Government Board held it desirable to direct an inquiry to be made into the prevalence of enteric fever in and general sanitary condition of the district, and Dr. Parsons was instructed to undertake the duty. His account of the district shows that although in the inhabited localities the slovenly and unwholesome characteristics of the older Welsh mining districts still preponderate, a gradual amendment of the sanitary condition of the villages has been taking place in recent years, and may be anticipated to continue under existing arrangements for their sanitary administration.

As to the prevalence of enteric fever in the district, Dr. Parsons shows that two sets of conditions combine to bring about this prevalence. First, there are the local and still unamended conditions causing fouling of air, soil, and water with excremental matters, and which are known to favour the existence of enteric fever; and, second, there is the liability of the district to infection with the disease from the neighbouring town of Swansea. Of the operation of both these sets of conditions Dr. Parsons furnishes most interesting illustrations, and particularly he gives an instructive account, illustrated by maps, of an outbreak of enteric fever at Ystalyfera in 1879, which had been carefully worked out by the medical officer of health, Dr. Thomas, and which, originating from an imported case from Swansea, was determined by the pollution of a source of water-supply to which the excremental discharges of this patient had accidentally got access.

Stourbridge (Registration District).—This report, also from the pen of Dr. Parsons, is one of a class which there seems an increasing tendency on the part of the Medical Department to favour. It refers to the sanitary condition of a whole

registration district, which contains, in addition to three urban sanitary districts, a large rural sanitary district. The entire district has an area of 16,116 acres, a population (1871) of 73,386, and houses to the number (1871) of 15,460. The attention of the Local Government Board has been directed to it (not for the first time) by the recent great prevalence of scarlet fever in the district, its undue general mortality, and the excessive mortality of certain infectious diseases, particularly small-pox and scarlet fever, within it. The following passage from the report shows the apparent relation between the fatality of scarlet fever and the general death-rate of the Stourbridge registration district:—"There appears to be some relation between the degree of fatality of scarlet fever and those sanitary and social conditions upon which the amount of the general death-rate depends. With the exception of the Quarry Bank district, the death-rate from scarlet fever follows pretty closely that from all causes; the Worcestershire division of the rural district, the sanitary condition of the principal places in which will be described in this report, figuring high both in regard of total death-rate and of death-rate from scarlet fever. It can hardly be doubted that the pollution with filth of the water which people drink, and of the air which they breathe, must tend to increase the virulence of an outbreak of scarlet fever, both by affording opportunities for the conveyance of the infective matter from person to person, and by placing those who are attacked under circumstances less favourable to recovery. One condition especially would seem eminently favourable to the conveyance of the infection from case to case—viz., that in most parts of the Registration District the liquid refuse of houses, so far as it is conveyed away at all, runs down open channels, often of very rough construction, very frequently for a considerable distance, passing in its way other houses, and trickling down the gutters, or stagnating upon the surface, of the public streets. It is known that the poison of scarlet fever is given off copiously from the patient's body in the scales thrown off from the skin and in the liquid excretions; it would therefore necessarily be largely present in the washing water and other foul liquids which find their way down these channels, giving off emanations which the passers-by cannot avoid inhaling."

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Birmingham.—The report of the medical officer of health (Dr. Alfred Hill), for the summer quarter ending October 2nd, shows that the birth-rate of the town during the quarter was 36·2 per 1000 population, as compared with 40·2 and 38·3 in the third quarters of 1878 and 1879; and the death-rate 21·65, as compared with 22·25, 25·90, and 16·35 in the third quarters of 1877, 1878, and 1879 respectively. The increase on the summer quarter of 1879 is entirely accounted for by the much greater fatality of diarrhoea during the quarter of the present year, and on this Dr. Hill observes: "There can be no doubt that the higher temperature was the grand predisposing cause of the increase of infantile diarrhoea, while there can be scarcely less doubt that improper food and feeding constituted the principal exciting cause."

Bristol.—Mr. Davies in his report for the third quarter of the year states that the rate of mortality in the city was 17·9 per 1000 population, as compared with 16·5 during the corresponding period of 1879. The birth-rate was 33·4 per 1000 population, as compared with 35·4 in the third quarter of 1879—a falling off which he attributes to the long-continued commercial depression, and possibly an increasing emigration of the working classes to more promising fields of employment. 2·4 per cent. of the deaths which occurred during the quarter were registered without a medical certificate or a legal inquiry regarding the cause of death. "Such a fact," he observes, "is a disgrace to a civilised community, as it leaves an open door for crimes at which humanity shudders."

THE NOTIFICATION OF INFECTIOUS DISEASES.

The chance-medley sort of private legislation which is going on in the matter of notification of infectious diseases is aptly illustrated by the provisions in this respect which received the assent of Parliament last session, in the Huddersfield Improvement Act, 1880. In an Act of 1876, Huddersfield obtained powers to require the notification of certain infectious diseases from medical men residing in the borough; but the provisions of the Act had been so imperfectly considered, that from the first they proved unworkable. If we mistake not, a fee of 2s. 6d. was to be given to

the medical man for each notification, and the duty was imposed upon the medical man to report each case. The Corporation had not counted the cost, and were aghast at what they had brought upon themselves, and so they proceeded forthwith to explain away the literal meaning of the Act by stating that they meant (the phraseology of the Act notwithstanding) only the *first* case of infectious disease occurring in a house to be notified, not subsequent cases, should a series of cases follow. Hence arose difficulties with the medical practitioners which ought to have been foreseen and provided against. But the Corporation in its new Act appears to have gone out of its way to make the provisions for the notification of disease as insulting to the medical profession as they could well be, and the insult is not the less from the slovenliness and want of foresight with which the provisions have been drafted. The medical practitioner called in to a case of infectious disease *must*, it is provided, *forthwith* notify this to the Corporation either at their Sanitary Office, or if the same be closed, at their police station; for doing this he is to receive a fee of *one shilling* (!), and such fee is to apply only to *one* certificate by the same practitioner in regard to the same disease, from the same building, for a period of thirty days; ("but only one such certificate need be given, and only one such fee is payable within an interval of thirty days, to the same medical practitioner, in respect of the same disease occurring in the same building.") Nor is this all: the Corporation, which has provided for such magnificent remuneration (*under a penalty of £10 for neglect*), in a circular issued to medical men, express a hope that they will loyally assist the Corporation in carrying out the new provisions, and state that it will be esteemed a favour if, "in addition to the particulars required by the section, the medical practitioner would also give such information as he is able to give upon other points on which queries are appended in the printed forms." The queries referred to are six in number, and the object of the form as it stands appears to be to induce medical men to relieve the medical officer of health as much as possible of his duties, and enable the Corporation to obtain the services of that officer at a cheaper rate! It might be thought that the Corporation of an important town could not well descend to greater depths of meanness and narrow-mindedness in the performance of their public duties than is here shown. But there is a greater depth still. *The medical man is expected to pay the cost of sending, whether by the post or otherwise, the notification to the Corporation offices!* Add that while the provisions contemplate that notifications of infectious disease will be sent at all hours day and night, it does not contemplate that the sanitary officers, for whose immediate information they are sent, shall be available to make use of them for more than a few hours during the day, and it proposes to devolve part of its duties of sanitary administration upon the police. In other words, the provisions betray as little knowledge of what is required to give due practical effect to notifications of disease as they do of the courtesy which is due to a learned profession.

Surely it is time that this chance-medley private legislation in regard to the notification of diseases should cease, and that a general measure should be promoted on the subject by the Government.

THE METROPOLITAN WATER-SUPPLY.

The delegates of the Vestries and District Boards of Works of the Metropolis, at a recent meeting, agreed to a memorial to the Home Secretary, of which the following are the principal points:—"The memorialists are anxious that the recommendations by the Committee of the House of Commons, Session 2, 1880, should be carried out with the least possible delay, and agree that it is expedient that the supply of water to the metropolis should be placed under the control of some public body which shall represent the interests and command the confidence of the water consumers. That, in the absence of any single municipal body to which these functions could be committed, and until the same is created, they concur in the desire that a water authority of a representative character should be constituted on a basis no less representative than that of the London School Board, and that a Bill having that object should be introduced at the earliest possible moment. They do not concur that such body should be filtrated from the Metropolitan Board and the City Corporation, but should be absolutely representative of the ratepayers direct, including representatives of the districts supplied by the water com-

panies. They desire to represent that such body or trust should be authorised to acquire the undertakings of the existing companies, if the same or any of them can be acquired upon fair and reasonable terms; but, failing such arrangement, their powers should extend to the introduction of an independent water-supply, with the requisite authority to raise capital, to impose rates, and to control, in the interest of the ratepayers, this essential necessary of life." At the meeting of the Metropolitan Board of Works on the 12th inst. it was stated that at the first conference of delegates from Vestries and District Boards of Works in the Metropolitan (over thirty in number) on the metropolitan water-supply, not more than ten or eleven of those bodies were represented.

COMPULSORY NOTIFICATION OF INFECTIOUS DISEASES IN DUBLIN.

At a meeting of the Corporation of Dublin held last Monday, the Lord Mayor referred to the deputation of medical gentlemen who had waited on him the previous week for the purpose of showing the necessity of introducing an Act of Parliament making it compulsory to notify to the sanitary authority in Dublin the presence of any infectious disease in any house. The principal difficulty, he thought, would be met with amongst the poorer classes; but it was also most necessary that such notification should be made when infectious disease existed in any house of the wealthier classes. He considered it would be advisable to introduce a Permissive Act, applicable to the whole of Ireland, giving the Local Government Board power to direct the clauses to be carried out in those districts when it appeared desirable. As regarded the details there was some difference of opinion. Some considered that the notification should be made by the medical attendant, while others were of opinion that the duty should be thrown on the householder; but a middle course was suggested—namely, that the medical practitioner should hand a printed form to the inmates of the house, informing them of the infectious disease and of the requirements of the law; but throwing the responsibility of making the notification on the householder. His lordship suggested that a deputation of the Council should wait on the Chief Secretary for Ireland, and ask him to introduce a Permissive Bill applicable to all Ireland, or whether the Government would support a Bill introduced by a private member. A resolution to this effect was adopted, and it was determined that various suggestions should be prepared to lay before the Chief Secretary, as to the mode of carrying out the proposal; with power to consult with the medical deputation which waited on the Lord Mayor, with a view to joint action, and if considered desirable a joint deputation.

SCARLET FEVER IN DUNDEE.

We are favoured with the following particulars respecting the recent outbreak of scarlet fever in Dundee. Between the 5th October and the 9th November 72 cases were reported to, or ascertained to exist in the town by, the Sanitary Authority. About the 22nd October a number of cases occurred simultaneously in a limited area at the south end of the town, and it was discovered that the families in which these cases occurred obtained their milk from the same dairy. Inquiry at this dairy elicited the following facts. About the 10th October a maid employed in the dairy visited her father's home, where scarlet fever had recently been, and removed therefrom some articles of clothing for her own use. A week after she again visited the same house, and on the 22nd October the dairyman's daughter was seized with an attack of scarlet fever. By the 31st October a number of the dairyman's customers were ill of scarlet fever, 15 cases having occurred in eight different homes. The Sanitary Authority at once adopted proper measures, and now the dairy in question is entirely free from infection.

The more attention is given to the limitation of infectious diseases the more difficulties seem to multiply. At a recent meeting of the London School Board attention was directed to the fact that a care-taker of a school in Lambeth, having a family of seven children, and occupying a house containing two rooms (!) only, communicating with the school, had scarlet fever among the family. Two courses to be followed here suggest themselves (neither satisfactory)—namely, to appoint care-takers without families of young children, or to detach the care-taker's house from the school.

Great Baddow, in Essex, has been suffering from both scarlet fever and diphtheria. The scarlet fever cases have not been numerous, nor has the disease been fatal. The diphtheria cases have been more numerous, and there have been several deaths among them. In one instance, we understand that a man who lost two children (by a former wife) from diphtheria in 1859, lost in this later outbreak of the disease three children—affording an interesting illustration of family predisposition to fatality from this disease. We trust that the Sanitary Authority will soon give to the public the report of their medical officer of health (Dr. Arthur Downes) on this concurrence of two infective diseases. Both diseases, according to our latest information, have now ceased in the village.

The Axbridge Urban Sanitary Authority having been recently asked by the Board of Guardians if they would receive patients sent by the Guardians into their statutory hospital, replied that they would be prepared to do so if the Guardians made arrangements for and provided all necessary medicine, medical attendance, beer, wine, spirits, and other requisites, and the cost of internment of any patient sent by the Guardians who might die in the hospital. We infer from this that the hospital in question is merely a building in which patients can be placed, and having none of the appliances proper for a hospital. The Guardians naturally decline to accede to terms so preposterous.

Dr. Hughes, the medical officer of health for Cardigan, has presented a special report to the Urban Sanitary Authority on a recent outbreak of scarlet fever in his district. It refers to 199 patients, of whom 101 were under five years of age. He found it impracticable to induce the parents of young children to isolate their children in hospital, and his efforts were checkmated by the popular belief that everyone must have the fever at one time or other, and the earlier the disease was "had over" the better.

The rains must, indeed, have been heavy of late, since a dealer in milk, summoned before the magistrates for diluting the commodity he sold with 20 per cent. of water, explained that rain must have found its way into the fluid during delivery, and so prejudiced his character. Sad to say, the magistrates refused to accept this explanation of the matter, and inflicted a fine of 40s. and costs.

Typhoid fever has broken out at Beer (Somerset), and it has been found necessary to take immediate steps to improve the sanitary condition of the village—in other words, to lock the stable door after the horse has been stolen.

Dr. Partridge, the medical officer of health for Stroud, was recently a petitioner to the Sanitary Authority of which he is the medical officer against a nuisance from smoke caused by a factory.

No. 7 of the Charity Reform Papers deals with the "Dwellings of the Poor and Present Legislation respecting them." It is a most useful and instructive paper.

Mr. Ashenden, the medical officer of health for Hastings, reports a death-rate of 14·37 per thousand in that town during the third quarter of the year.

The Limehouse Vestry is seriously considering the question of erecting a mortuary.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

The rate of English urban mortality, which had [been unusually stationary during the four preceding weeks, showed a decline last week. In twenty of the largest English towns, estimated to contain in the middle of this year a population of seven and a half millions of persons, or nearly one-third of the entire population of England and Wales, 4828 births and 3044 deaths were registered last week. The births were 357, and the deaths 231 below the average weekly numbers during 1879. The deaths showed a decline of 235 from the number returned in the previous week; and the annual death-rate per 1000, which had only varied from 22·6 to 22·8 in the four preceding weeks, declined last week to 21·2, a lower rate than has prevailed in any week since the middle of July. The lowest death-rates in the twenty towns last week were 16·1 in Birmingham, 16·4 in Hull, 18·8 in Sheffield, and 19·0 in Leeds. The rates in the other towns ranged upwards to 23·9 in Bristol, 24·0 in Oldham, 24·3 in Norwich, and 25·0 in Liver-

pool. During the first seven weeks of the current quarter the death-rate in these twenty towns averaged 22.1 per 1000, against 21.8 in the corresponding periods of the four years 1876-9.

The deaths referred to the seven principal zymotic diseases in the twenty towns, which had been 428 and 474 in the two preceding weeks, declined to 367 last week, a lower number than has been returned in any previous week of this year; they included 138 from scarlet fever, 58 from measles, and 55 from fever, principally enteric. The annual death-rate from these seven diseases averaged 2.6 per 1000 in the twenty towns, and ranged from 0.7 and 1.0 in Plymouth and Hull, to 4.3 and 6.3 in Norwich and Sunderland. The fatal cases of scarlet fever, which had been 150 and 163 in the two previous weeks, declined to 138 last week, and showed the largest proportional fatality in Sunderland, Oldham, Norwich, and Salford. Whooping-cough was most fatal in Sunderland. The highest death-rates from enteric fever occurred in Portsmouth, Norwich, and Newcastle-upon-Tyne. The 19 deaths from diphtheria in the twenty towns included 12 in London, and 2 both in Liverpool and Portsmouth. Small-pox caused 10 more deaths in London, against 7 and 17 in the two previous weeks; but no death from this disease was recorded in any of the nineteen provincial towns.

The deaths referred to diseases of the respiratory organs in London, which had steadily increased from 124 to 421 in the ten preceding weeks, fell to 332 last week, and were no less than 112 below the corrected average number in the corresponding week of the last ten years; 195 resulted from bronchitis, and 97 from pneumonia. The annual death-rate from lung diseases was equal to 4.7 per 1000 in London, 7.5 in Liverpool, and 7.3 in Salford.

In the twenty towns last week 82 deaths were registered without the production of the certificate of a registered medical practitioner or the holding of an inquest; these were equal to 2.7 per cent. of the total deaths. The proportion of uncertified causes of death did not exceed 1.3 per cent. in London, whereas it averaged 4.1 per cent. in the nineteen provincial towns. No uncertified deaths were registered in Leeds, Portsmouth, Brighton, or Plymouth, while the largest proportions occurred in Norwich, Oldham, Hull, and Sheffield.

HEALTH OF SCOTCH TOWNS.

In eight of the largest Scotch towns, having an estimated population of rather more than a million and a quarter persons, the annual death-rate last week was equal to 20.9 per 1000, against 24.2 and 23.8 in the two preceding weeks, and was 0.3 below the average rate in the twenty large English towns. The rates in the eight Scotch towns ranged last week from 13.6 and 19.4 in Perth and Glasgow, to 23.4 and 29.5 in Paisley and Greenock. The deaths referred to the seven principal zymotic diseases in the eight towns, which had been 115 and 125 in the two previous weeks, declined to 93 last week; they included 45 from scarlet fever, 13 from whooping-cough, 12 from fever, 10 from diarrhoea, 7 from diphtheria, 6 from measles, and not one from small-pox. The annual death-rate from these seven diseases averaged 3.7 per 1000 in the eight towns, and exceeded by 1.1 the average rate from the same diseases in the twenty English towns. In the eight Scotch towns the zymotic death-rate ranged from 0.5 and 1.7 in Aberdeen and Dundee, to 5.7 and 5.8 in Edinburgh and Perth. The high zymotic death-rate in Edinburgh was again due to the epidemic prevalence of scarlet fever. The fatal cases of this disease, which had been 47 and 53 in the two preceding weeks, declined last week to 45, of which 21 occurred in Edinburgh, 16 in Glasgow, and 6 in Leith. The deaths from whooping-cough, fever, diarrhoea, and measles also showed a decline from recent weekly numbers. Of the 12 deaths referred to fever (mainly enteric), 7 were recorded in Glasgow, 2 in Paisley, and one each in Edinburgh, Dundee, and Greenock. The 7 from diphtheria included 4 in Glasgow, 2 in Greenock, and one in Edinburgh. The deaths referred to acute diseases of the respiratory organs (bronchitis, pneumonia, and pleurisy) in the eight towns, which had steadily increased from 120 to 154 in the four preceding weeks, declined to 137 last week. The annual death-rate from these lung diseases last week was equal to 5.5 per 1000 in the eight Scotch towns, against 4.8 in London; the highest death-rates last week from these diseases in the Scotch towns occurred in Greenock and Dundee.

HEALTH OF DUBLIN.

The death-rate in Dublin showed a slight decline from the high rates that have recently prevailed. The annual rate of mortality from all causes in the city, which had been equal to 34.4 and 39.6 in the two preceding weeks, declined to 33.3 last week. During the past seven weeks of the current quarter, however, the death-rate in the city has averaged 34.4 per 1000, against 21.3 in London, and 22.4 in Edinburgh. The 201 deaths in Dublin last week were 38 less than the exceptionally high number in the previous week, and included 25, or 12 per cent., which were referred to the seven principal zymotic diseases, showing a further decline from recent weekly numbers; 10 resulted from fever (including typhus, enteric, and simple), 5 from scarlet fever, 4 from whooping-cough, 3 from diarrhoea, and one each from small-pox, measles, and diphtheria. The annual death-rate from these zymotic diseases was equal to 4.1 per 1000 in Dublin last week, against 2.6 in London, and 5.7 in Edinburgh. The deaths referred to fever, which had been 9 and 7 in the two previous weeks, rose to 10 last week; whereas the fatal cases of scarlet fever declined to 5 from numbers which decreased from 16 to 6 in the four preceding weeks. The deaths from whooping-cough and diarrhoea also showed a decline from recent weekly numbers. The excessive death-rate from fever (mainly enteric) is the most unsatisfactory feature in last week's zymotic fatality. The deaths of infants in the city last week were fewer than in any week since the beginning of August, but still showed an excessive rate. The deaths of elderly persons were but 7 less than those returned in the previous week.

VACCINATION AND SMALL-POX IN PARIS, DUBLIN, AND LONDON.

Small-pox was fatally epidemic in Paris and in Dublin during the first nine months of this year; and London during this period was never quite free from the fatal prevalence of this disease. The annual death-rate from small-pox during the nine months ending September last was equal to 1.35 per 1000 persons living in Paris and to 1.07 in Dublin, while the rate in London did not exceed 0.12 per 1000. Unfortunately the mortality statistics for these three cities are not uniform, but the published facts in the several official returns afford a means for estimating the amount and quality of infant vaccination. One of the most indubitable effects of vaccination upon small-pox mortality is the marked decline in the proportion of fatal cases occurring among children under five years of age. In the year 1847 no less than 73.7 per cent. of the total deaths from small-pox in England and Wales were of children under five years of age; whereas, since that date, under the influence of compulsory vaccination, the proportion of fatal cases occurring among children of these ages has steadily declined, and in 1878 it did not exceed 25.5 per cent. During these thirty-two years the proportion of fatal cases occurring under one year of age has declined from 25.4 to 12.0 per cent.; between one and two years of age, from 19.1 to 3.4 per cent.; and between two and five years, from 29.2 to 10.1 per cent. It is impossible to attribute this change in the proportional age distribution of fatal cases of small-pox to any other cause than the effect of more general vaccination. We may therefore approximately estimate the proportional extent and efficiency of vaccination in Paris, Dublin, and London, by comparing the relative amounts of infant mortality from small-pox in these three cities. In Paris during the first nine months of this year 26.4 per cent. of the total deaths from small-pox were of children under five years of age; in Dublin the proportion was no less than 34.5 per cent., and in London to 29.2 per cent. Judged by these figures, the amount and quality of infant vaccination differs little in London and Paris, whereas considerably greater neglect of vaccination appears to prevail in Dublin.

HEALTH MATTERS GENERALLY AT HOME AND ABROAD.

FATALITY OF SMALL-POX IN LONDON.

The prevalence and fatality of small-pox in London have shown a marked increase during the past few weeks, threatening a revival of the epidemic which commenced in 1876, and has never since died out. The deaths from this disease within registration London, which were but 56 and

75 in 1874 and 1875, rose to 735 and 2544 in 1876 and 1877, and declined again to 1416 and 458 in 1878 and 1879. In the first three-quarters of this year the fatal cases were respectively 122, 144, and 49; while 54 were recorded during the first seven weeks of the current quarter. They averaged 4 per week in September, 5 in October, and were 7, 17, and 10 respectively in the first three weeks of November. Since the end of September there has been a distinct and severe outbreak of small-pox in East London, notably in Bethnal-green; indeed, of the 54 fatal cases recorded during the past seven weeks no less than 31 were of residents of East London. The immunity from fatal small-pox which the nineteen large provincial towns have enjoyed since the beginning of 1878 forms a striking contrast to the continued prevalence of the disease in London; the recorded deaths from small-pox in the nineteen provincial towns, which have an aggregate population rather larger than that of London, have been but 28 since 1st January, 1878, while in London they have numbered no less than 2243.

The returns furnished by the Metropolitan Asylums Board Hospitals afford evidence strongly corroborative of the recent serious outbreak in East London. The number of small-pox patients in these hospitals, which had almost steadily declined from 237 in the middle June to 77 on Oct. 23rd, rose successively to 105, 114, and 118 at the end of the three succeeding weeks. During the week ending last Saturday they further rose to 182, a higher number than have been under treatment at one time since the middle of July. The number of new cases of small-pox admitted to these hospitals, which had been 38, 24, and 31 in the last three preceding weeks, jumped up to 99 last week. So large a number of admissions has not occurred in any week since February, 1879. Of 135 new cases admitted to these hospitals during the ten days ending 21st, 27 came from Bethnal-green, 20 from St. George's-in-the-East, 20 from Hackney, 13 from Stepney, 10 from Mile-end Old-town, 8 from St. Saviour's, Southwark, 5 from Shoreditch, and 4 from Whitechapel. The outbreak, therefore, is distinctly one in East London, and it is evident that it has already assumed large proportions; its control must now mainly depend upon the successful efforts of the local sanitary authorities to utilise the hospitals of the Metropolitan Asylums Board for isolation purposes, as they have provided no hospitals of their own. It would be interesting to know what steps are being taken to secure the vaccination of the considerable proportion of unvaccinated, or imperfectly vaccinated, children in these Eastern metropolitan districts.

INFANT MORTALITY IN AUSTRALIA.

The Registrar-General of New South Wales has recently issued the twenty-fourth annual report on the Vital Statistics of the Colony, which bears evidence of the continued growth of its population, estimated at the end of 1879 at 734,282 persons. The increase of population during the year was rather more than 40,000, and nearly equal to 6 percent. upon the population of the preceding year. The report before us does credit to the printer as well as the compiler, and is full of interest as a record of the rapid progress of the colony. Viewed, however, as a contribution to vital statistics, it is in some respects open to criticism, and contains some faulty conclusions which have to be guarded against. Infant mortality in the Australian colonies is an interesting subject, and we were disappointed to find it treated in an unscientific manner. The report commits the fault of attempting to measure infant mortality by the proportion of deaths under five years of age to total deaths, with the inevitable result of leading to fallacious conclusions. We are told: "It will be seen that the rate of infant mortality is lower in Sydney than in the suburbs or country districts." Such a fact would be without a parallel in vital statistics, and should have suggested some source of error. The proportion of deaths of children to total deaths in populations differently constituted as to age distribution can never be usefully compared as evidence of infant mortality; and this source of error is most marked in new colonies, where populations are abnormally constituted as to age distribution. The true state of the matter as to infant mortality in New South Wales is exactly the reverse of what the Registrar-General has stated it to be. We have been at the pains to calculate the rate of infant mortality in the different subdivisions of the colony, measured by the proportion of deaths under one year of age to births registered. These facts are to be found in the report, but no use has

been made of them for calculating a true rate of infant mortality. The proportion of deaths under one year to births averaged 107 per 1000 in the entire colony, while it was equal to 165 in Sydney, and 143 in its suburbs; it did not, however, exceed 88 in the country districts. Infant mortality in Sydney in 1879, therefore, instead of being lower was nearly twice as high as that which prevailed in the country districts. We venture to hope that in future reports this subject will be handled in a more scientific manner. True infant mortality is most satisfactorily measured by the proportion of deaths under one year to births, and the death-rate of children under five years by the proportion of deaths to children living at these ages. It is worthy of comment that the rates of marriages and of births in the colony have pretty steadily declined during recent years. This ought not to be the case in a population which is increasing rapidly by the immigration of young adults, and suggests defective registration; but it seems improbable that registration can be more defective than it was ten years ago.

SANITARY INSPECTION OF SCHOOLS: RUSSIA.

At a meeting of the Society of Medicine, St. Petersburg, on the 12th instant, Professor Andrievsky maintained the necessity for a sanitary inspection of primary schools. He supported his position by the practice followed in Germany and Austria, but especially in Austria. There a medical council is attached to the Ministry of Interior, having the special duty of advising upon the sanitary requirements of schools and school-life, while provincial councils had special inspecting medical officers appointed, for the same purposes, in every city in the empire. The hygienic requirements of the school are prescribed by the Minister—its locality, the disposition of the classes, its lighting, arrangement of the benches, &c. Moreover, the school regulations include a series of provisions for the physical development of the children. At the conclusion of Professor Andrievsky's communication the Society of Medicine resolved to approve the examination of the health of children at their entry into the primary schools and during the course of instruction there, and the advisability of medical opinion being consulted in the formation of educational programmes and the plans of schools.

HEALTH OF CALCUTTA.

Surgeon-Major D. K. McLeod's report on the health of Calcutta for the third quarter of 1880 shows that the temperature of the quarter had been moderate, the rainfall somewhat above the average, the humidity high, and the atmospheric pressure normal. In short, the quarter had been, on the whole, "agreeable and healthy," with "none of those rainless and 'steamy' intervals so unpleasant to sensation, and trying to health." The mortality of the town was below the decennial average, sickness was moderate, and no epidemic of any kind prevailed in the quarter. The deaths from cholera were less than in any of the corresponding quarters during the decade; the deaths from fever were almost unprecedentedly low, and the mortality from bowel-complaints was also at a very low level. Small-pox continued to exhibit few deaths, the deaths from "other causes" alone showing an increase above the decennial mean. Dr. McLeod remarks that arrangements are in good progress for carrying into effect the Vaccination Act of 1880.

DIPHTHERIA IN RUSSIA.

The Red Cross Society of Russia undertook to contribute within a period of six months, in aid of the measures being put in force for the arrest of diphtheria in the province of Poltava, 1,100,000 roubles in money; also to furnish several sanitary detachments. When the six months were expired any further expenditure needed, the epidemic still continuing, was to be borne by the government of the province. The period fixed by the Red Cross Society ended on July 12th, but the epidemic continues, and they have not withdrawn either their representative in the province nor the sanitary detachments they have organised there. Presumably the expense of the further work will fall upon the government of the province.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—

At a meeting of the Council held on the 18th inst., Mr. G. F. Blake was appointed Assistant Librarian in the vacancy caused by the resignation of Mr. J. Alex. Spencer, F.R.C.S.

THE SERVICES.

THE CANDAHAR DESPATCHES.

THE despatches recently published in the *Gazette of India* from Lieutenant-General Sir F. Roberts, V.C., K.C.B., Major-General Primrose, C.S.I., and the late Brigadier-General Brooke, C.B., from Candahar, bring prominently to notice the valuable aid rendered by medical officers on the field. General Roberts reports "Deputy Surgeon-General J. Hanbury, M.B., proved himself to be an efficient administrative officer, and carried on the duties of his responsible office to my entire satisfaction"; and he also brings forward among the names of the officers serving on his personal staff "who have at all times been unremitting in the performance of their duties" that of Surgeon J. F. Williamson, M.B. "General Ross speaks in high terms of officiating Deputy Surgeon-General J. Ekin, M.B." "Brigadier-General Macpherson records that the devotion of the medical officers of the brigade in attending to the wounded under fire was most admirable. He mentions Surgeon-Major S. B. Roe, 92nd Highlanders, Surgeon-Major W. Finden, 2nd Goorkhas, Surgeon E. H. Fenn, R.A., Surgeon H. J. Linton, 24th Punjab Native Infantry, and Surgeon H. Hamilton, M.D., 23rd Pioneers." "Brigadier-General T. D. Baker would wish to mention specially the names of the following officers:—Surgeon-Major G. W. Macnalty, M.D., and Surgeon-Major C. A. Atkins, for the manner in which they attended the wants of the wounded in the fighting line." "Brigadier-General Macgregor brings forward Surgeon-Major G. C. Chesnaye, 4th Goorkhas, and Surgeon-Major E. C. Markey." "Brigadier-General Hugh Gough thanks specially Surgeon-Major R. Lewer." Major-General Primrose mentions "Deputy Surgeon-General J. O'Nial, whose arrangements for the wounded were all that could be desired, and Surgeon-Major B. T. Giraud, A.M.D., whose great attention to the wounded on the field has frequently elicited my admiration; also Surgeon-Major J. Arnott and Surgeon E. W. Kelsall." Brigadier-General Brook, reporting the occurrences of the 20th July, "asks for special consideration of the services of Surgeon J. Macnamara, the medical officer in charge of the column, who was most useful to me."

Surgeon-Majors J. M. Kirkwood, P. J. MacQuaid, and J. M. Beamish are on passage home from India in H.M. troopship *Euphrates*.

The appointment of medical officer to the Royal Military Academy at Woolwich will be vacant in December, Surgeon-Major E. H. Roberts having completed his five years' tour and being under orders to embark for Bengal by one of the next troopships.

ADMIRALTY.—Surgeon Henry B. Guppy to the *Ganges*, for temporary service. Fleet-surgeon Thomas Seccombe, placed upon the retired list.

THE MEDICAL DEPARTMENT.

THE following resolution has been passed by the Government of India. We reprint it from the *Times of India*, received by the last mail:—

It being desirable that the relative authority of the Surgeon-General with the Government of India and the Surgeon-General, Her Majesty's Forces, over the officers of the Indian medical service shall be defined, the Government of India direct—

1. That surgeons of the Indian medical service appointed to Bengal, on arrival at Bombay, shall in accordance with the "instructions" (copy of which will then be furnished to them) send their letters of appointment to the office of the Surgeon-General with the Government of India, by whom they will be at once forwarded to the Military Department. Thereon the officers will be gazetted as having come on a given date on Bengal establishment, and will be formally placed at the disposal of the Commander-in-Chief in India for military duty. Meanwhile, and in anticipation of this formal notification, the officers, in the absence of any order to the contrary, will proceed at once to Allahabad, and on arrival there, will report themselves to the Deputy Surgeon-General of that circle for military duty.

Thenceforward, and until the officer may be withdrawn for other employment, he will be under the authority of the Surgeon-General, Her Majesty's Forces, from whom he will receive all orders of His Excellency the Commander-in-Chief in India for his employment, postings, transfers, &c.

The withdrawal of an officer for civil employment will not be permitted until he has completed two years' actual military duty, and then only provided his services can be spared. Should the interests of the public service, however, very urgently demand his withdrawal before the completion of his two years' course of military duty, an exception may, under the orders of the Governor-General in Council be made, as a very rare and special case, in the above general rule.

2. All officers of the Indian medical service are, subject to the above restriction, eligible for civil duties; yet, however employed, they remain liable at any time to be recalled for military duty. Such recall can only be made by the Government of India in the Military Department. During the whole period of an officer's employment on any other than military duty under the Commander-in-Chief, and until he is formally replaced at His Excellency's disposal, he will be under the authority of the Surgeon-General with the Government of India or of the Local Government under which he may be serving.

3. A minimum establishment for the requirements of the army and for all other sanctioned appointments will always be maintained. This will include the prescribed margin for absentees on furlough or sick leave. Lists of the appointments controlled by the two Surgeon-Generals are annexed; but it will be understood that the army has the first claim on the medical service, and that any officer whose services are required with the army may be placed at the disposal of the Commander-in-Chief.

4. All applications for medical officers required for civil employment should be addressed by local Governments to the Government of India in the Home Department.

5. As the Surgeon-General with the Government of India is the actual administrative head of the Indian medical service, and should, therefore, have the means of keeping an accurate record of the services of all officers belonging to it, such returns and reports, including confidential reports, furlough statements, &c., as are considered necessary for this purpose by the Military Department will, as regards officers under the orders of the Commander-in-Chief, be furnished to the head of the department by the Surgeon-General, Her Majesty's Forces.

Application for furlough of officers under the Commander-in-Chief will be forwarded by the Surgeon-General, Her Majesty's Forces, through the Surgeon-General with the Government of India, so that all such applications may be dealt with for the service as a whole; and all such officers while on furlough or leave will remain on the list of the Surgeon-General, Her Majesty's Forces.

APPENDIX.—Lists of appointments referred to in paragraph 3.—Under Surgeon-General with the Government of India: All medical officers in civil employ; surgeon to His Excellency the Viceroy; principal medical storekeeper; medical storekeepers; medical officer, Lawrence Military Asylum, Sanawur. Under Surgeon-General, Her Majesty's Forces: Deputy Surgeons-General in military employ, 5; secretary to Surgeon-General, 1; surgeon to His Excellency the Commander-in-Chief, 1; garrison surgeons, 3; Sappers and Miners, 1; 19 Bengal Cavalry Regiments, 19; 45 Native Infantry Regiments, 45; 4 Goorkha Regiments, 4; Punjab Frontier Force, 17 (viz., 5 Cavalry—Guides 1, Sikh 4; 6 Infantry—Punjab Infantry 5, Goorkhas 1); Doaba outposts, 1; Central India Horse,¹ 2; Malwa Bheel Corps,¹ 1; Bhopal Battalion,¹ 1; Deolee Irregular Force,² 1; Erinpoora Irregular Force,² 1; Meywar Bheel Corps,² 1; Mhairwarra Battalion,²³ 1.

¹ Civil corps—Administered by Deputy Surgeon-General, Kamptee Circle of Madras Presidency.

² Civil corps—Will be administered by the Superintendent-General of Dispensaries, Rajputana.

³ Under medical charge of the Civil Surgeon, Ajmere.

THE members of the medical profession of Portsmouth have presented a testimonial to Mr. G. Turner, late medical officer of health for the borough, on his leaving to fulfil a like position at Bishop Stortford, Herts. The subscription was limited to one guinea, and there were thirty-seven subscribers.

Correspondence.

"Audi alteram partem."

THE TREATMENT OF GENU VALGUM.

To the Editor of THE LANCET.

SIR,—Mr. Parker objects to your report of his observations at the Royal Medical and Chirurgical Society on November 9th, and having made his corrections he discusses over again my communication to the Society. I must therefore ask you kindly to allow me space for a rejoinder.

Mr. Parker has somewhat misunderstood my paper. I will not, however, discuss it now; but will touch on three points of Mr. Parker's letter. First, as to the length of time required to carry out the treatment. Three casts were shown at the meeting. No. 1 was taken from a girl, sixteen years of age, in whom the inner malleolus was eleven inches away from the median line. In this case the tendon, the fascia, and the ligament were divided exactly seven weeks ago on Friday last; and she left London to return home last week with a straight and useful limb; such as she had never known before. I doubt if Mr. Parker has ever seen a worse case of genu valgum.

No. 3 was taken from a child, five years of age, in whom the inner malleolus was five inches removed from the middle line. This child was not operated on, but a splint was applied. This splint has been worn about a fortnight; and when I saw the child four days since the limb was straight, and it remained nearly straight when taken out of the splint. No force has been used, nor has there been pain. In which of these cases would Mr. Parker consider the treatment "inapplicable?" The former was sent up for osteotomy; and in the second it was suggested. Would either of these cases have been better for osteotomy? I regret that Mr. Parker cannot now see the first mentioned case. I shall be glad to show him the second if he wishes.

No. 2 was taken from a girl, nine years of age, on whom osteotomy had been performed some few months previously. The malleoli are nine inches apart.

Secondly, Mr. Parker seems to think that genu valgum depends on the length of the inner condyle, and that flat-foot follows knock-knee. On neither of these questions can I agree with him. Certainly genu valgum does not depend on the length of the inner condyle, and flat-foot does not, as a rule, follow knock-knee. The inner condyle may be four-tenths of an inch longer than the outer without occasioning knock-knee; and in the young child it is a matter of every-day experience that being flat-footed it gradually becomes knock-kneed.

Thirdly, I was unaware "that the greatest incentive to osteotomy has been the utter insufficiency of the older method." I confess myself unable to believe it, but, if it is true, doubtless more knowledge on the subject of treatment is needed.

It was said at the meeting on Tuesday by one whose surgical knowledge is beyond question, that the frequent application of osteotomy to genu valgum, as is now the fashion, is shameful. My own impression also is that osteotomy, as applied to the treatment of genu valgum, has been shamefully abused, and that it has become somewhat of a disgrace to British surgery.

I am, Sir, your obedient servant,

Grosvenor-street W., Nov. 22nd, 1880.

B. E. BRODHURST.

To the Editor of THE LANCET.

SIR,—In a recent paper on the Treatment of Genu Valgum, read at the Royal Medical and Chirurgical Society, Mr. Brodhurst laid great stress upon the dangers of osteotomy as one of the reasons for discountenancing its employment for the relief of this deformity. Almost in the same lines he stated that the operation was becoming too common; that numbers of surgeons were performing it wholesale, and with some fatal cases; and that he understood that one gentleman had even done it over three hundred times. In the subsequent debate I ventured to express the hope that, in

the interests of scientific accuracy, Mr. Brodhurst would tell us something more as to the experience of the gentleman he referred to; whether out of his 300 cases any bad or fatal results had followed. This request of mine appears to have escaped the memory of Mr. Brodhurst during his reply; and as I am not sanguine as to his answering it in any way hereafter, I will ask you to allow me to answer it myself, circumstances now enabling me to do so.

This morning I received through Dr. Macewen's kindness a presentation of a copy of his book on Osteotomy, just published. Turning to the question of the "mortality" of the operation, I find that he himself has performed it on 330 patients, or 557 limbs, to the extent of 835 osteotomies. Of these 330 patients one died of pneumonia (contracted before operation), one of tubercular meningitis, and one of diphtheria; in one (owing to an accident independent of the operation) amputation had to be performed. In other words, not a single case died of the operation! What other surgical procedure can show such results?—even those we are accustomed to call the "minor operations." For my own part, though no advocate of indiscriminate osteotomy, I will in the face of such facts, and of others collected during an extensive reading of the subject, refuse to regard osteotomy as a dangerous undertaking, even when assured that it is by so distinguished a surgeon as Mr. Brodhurst. If anyone is to be listened to on a question of the kind, surely it should be the surgeon who, having performed hundreds of such operations, lays the results of 835 of them candidly, honestly, and fearlessly before the profession. "These are hard facts, and worth more than all the vague expressions of distrust that have been uttered in any quarter up to the present."

Dr. Macewen's work also answers Mr. Savory's remarks in the same debate, that it was a "shame" and a "disgrace" that no osteotomist had up to the present published his results as to the ultimate benefit to the patient of the operation for genu valgum, as regards progression, &c. There were those present who ventured to think these remarks somewhat premature, and that probably it would be better to wait for observations on this point for some years after operation, than to draw deductions from a patient's powers only a few months after. However, Dr. Macewen answers these remarks, as also, strangely enough, those of his reviewer in your impression received to-night (*vide THE LANCET*, Nov. 20th, p. 817), who says that "the only results given in the book" are "from the point of view of recovery from the operation." His answer is, that afterwards "nine of them had walked from thirteen to sixteen miles at a stretch, six from seven to twelve, and three from three to six miles," &c.; and that "besides their personal appearance having been greatly enhanced, they had been enabled in many instances since their operation to engage in occupations from which their deformity previously excluded them." But this whole chapter is most interesting; what tenotomist could say more?

When we add to these osteotomies on 367 limbs, another 100 practised with "uniformly good result as far as ascertained" by other Scotch surgeons, of which Dr. Macewen speaks, and the other hundreds performed in England and abroad; and when we remember that, though attention has been called to the subject over and over again, those who have given time to the matter have only been able to tabulate some four or five recorded deaths (though I know of two unrecorded) as due to the operation, surely no one need ask us to believe that osteotomy is an essentially dangerous procedure. Apologising for my long letter,

I am, Sir, yours, &c.,

Harley-street, W., Nov. 19th, 1880.

ARTHUR E. BARKER.

THE INFECTION OF PHTHISIS AND ITS BEARINGS UPON TREATMENT.

To the Editor of THE LANCET.

SIR,—In commenting on the important article on Infection in Phthisis, by Dr. Reginald E. Thompson, Dr. Robert Lee remarks on the indications which the germ theory affords for the treatment of tubercular disease, and concludes by stating that "the question of atmospheric conditions takes precedence of others, when considering the subject of the treatment of phthisis pulmonalis." I agree with him in this expression of opinion, and, having for some time been engaged

in the study of the subject, venture to lay before your readers some observations thereon.

That a resemblance exists between the tubercular process and septic poisoning seems to be beyond doubt. This is seen in the clinical study of the thermometry of the two classes of disease. Various authors have recently directed attention to this fact, notably Professor Charcot of Paris and Dr. Waters of Liverpool. In his most recent contribution to the literature of the subject, the former remarks, "the thermic curves are not those of inflammatory action, but of putrid infection," and he goes on to show that "in the pyrexial form of phthisis, the evening exacerbation (of temperature) is due not to a pneumonic process, but to resorption of the softened material." Common phthisis is regarded by Dr. Clifford Allbutt as "cases of pure ulcer, these ulcers constantly being the seats of foul secretions of some kind or other, and producing chronic pyæmia." He also remarks on the peculiar susceptibility in some persons to septic influences in the lung.

Recent research seems to show that this septic poison is eminently contagious. As the result of experimental inquiries, Klebs believes that tuberculosis is an infectious disease of parasitic origin, induced by certain micro-organisms which invade the body and multiply in it, and that the expectation might be entertained of curing it by the employment of means which are calculated to annihilate these organisms. Schüller of Griefswald has proved that animals in which artificial tuberculosis has been induced by injection die, without exception, with the usual phthisical symptoms—viz., emaciation, loss of heat, and afterwards general miliary tuberculosis. Amongst others who have given the weight of their authority to the belief that tuberculosis is contagious are Mr. Simon and Dr. Greenfield; such contagion being frequently spread by the milk of high-class cows, which are very subject to the disease.

The interesting paper by Dr. Thompson, previously referred to, seems to show beyond doubt that pulmonary consumption may be propagated by direct infection from man to man. Dr. Murrell had previously directed attention to this fact, and in THE LANCET of May 22nd of the current year he records a clear case where a wife was infected by her husband. It is important to note that whilst the lower animals may communicate the contagion to man, man may in return infect the lower animals. In proof of this is the case recorded by Dr. Cullimore (*British Medical Journal*, May 22nd, 1880), where a strong, healthy dog, lapped up the sputum of a tuberculous man, and died in a short time of pulmonary phthisis.

With these considerations in view, the practical part of the question—namely, treatment—may be approached. Now the point arises whether all phthisical patients should be treated on the same broad basis, or whether there are varieties of the disease sufficiently distinct to render a method of treatment which might suit one form unavailing or prejudicial in another. The unity of the virus in the different pathological conditions grouped under the name of phthisis appears to have been fairly ascertained by the recent experimental researches of Cohnheim, who claims to have established that the poison of true tuberculosis is identical, not only with that met with in the other forms of phthisis, but also with that present in scrofulous glands. This, however, is scarcely borne out by the state of affairs at Quito, where, according to Domee, phthisis is rare, and yet various forms of scrofulous disease are so common as to impress a peculiar character on our surgery. But be this as it may, it seems to be generally accepted, both as a result of clinical observation and experimental pathology, that in phthisis pulmonalis we have to deal with a disease of a septic parasitic origin, presenting a variety of pathological features, and under certain conditions readily infectious. We have here a clear indication for the employment of antiseptics.

The beneficial results following the use of antiseptics in phthisis have been long noted. At the Social Science Congress held lately in this city, a discussion occurred on the cause of the increasing prevalence of consumption amongst the native Highlanders. The president of the section (Dr. Beddoe) was inclined to attribute it to the changes which had of late years taken place in the domestic arrangements of their homes, and notably to the substitution of modern fireplaces and fuel for the old peat fire in the centre of the apartment. Twenty years ago attention was

directed to this same subject by Dr. Morgan (now physician to the Manchester Royal Infirmary), and in a very interesting communication to the *British and Foreign Medico-Chirurgical Review* he shows that the smoke of peat, by virtue of the antiseptic substances it contained, had a marked beneficial action on the lungs of those breathing it. These and other facts enable us to answer the question, Should the employment of the antiseptic be local or constitutional? My therapeutical experience leads me to believe that, as shown by Matthews Duncan to be the case in some examples of puerperal fever, it is more frequently a condition of sapræmia than pyæmia which obtains in phthisis—that the toxæmia is rather attributable to the chemical factors which putrefaction engenders than to the presence of micrococci in the tissues and blood. I therefore think that it is only by the local application of the antiseptic that good results can be obtained.

In applying this principle to practice, I have for the last year and a half been in the habit of using what might be called a naso-oral antiseptic respirator—i.e., a respirator which covers both the mouth and nose, and contains a volatile antiseptic, which is drawn into the lungs with each inspiration. This respirator is provided with inspiratory and expiratory valves, is not liable to get out of order, and is easily worn. I have treated several cases of phthisis with it with considerable success, and now subjoin brief notes of two cases. I select these as having been seen by other medical men than myself, and the first also as showing that a child may respire an atmosphere of pure creasote not only with impunity but with positive benefit.

CASE 1.—A. G.—, female, aged seven, consulted me on Oct. 20th, 1879. She complained of cough, sputum occasionally tinged with blood, emaciation, and nocturnal sweats. Had been getting worse for months. On physical examination there was rough, jerky respiration, with prolonged expiration at the left apex anteriorly; pulse small and soft, 106 (a few days subsequently it was 140) per minute. As she seemed to become worse under the ordinary treatment, on Dec. 4th she commenced to wear an antiseptic respirator charged with pure creasote. On Dec. 15th the results noted are—(1) increased appetite, (2) quieter nights, (3) less cough and vomiting, (4) slight fall in the pulse-rate, (5) still hot and feverish in the evenings. On Jan. 5th (still continuing to wear the respirator) she had apparently quite recovered. On Jan. 12th she was shown at the clinique of Professor Grainger Stewart in the Royal Infirmary; she then seemed all right. On Jan. 17th she ceased to wear the respirator, and returned to school. On Oct. 4th I met the mother of the patient in the street, when she informed me that her daughter had continued well ever since.

CASE 2.—This case occurred in the practice of the late Dr. Forbes, of West Newington-terrace, in this city, and but for his untimely death would have been recorded by himself. From Dr. Forbes's letter, now before me, regarding the case, I find that the patient, a male, aged twenty-five, sent for him in January last, complaining of general debility, shortness of breath, and loss of weight. On physical examination the right pulmonary apex was found to be affected (consolidated). The ordinary routine treatment was tried for some time, but without the slightest benefit. In February, on the recommendation of Professor Grainger Stewart, who saw the case in consultation, the use of the naso-oral respirator was commenced, charged with equal quantities of pure creasote and carbolic acid. Rapid improvement soon ensued, and, instead of being confined to bed, the patient was shortly able to leave for the Channel Islands. On July 6th, through the courtesy of Dr. Forbes, I was allowed to interview this patient. He was a very intelligent young man, and stated that, before commencing the use of the respirator, he was so ill that at the consultation the doctors told him "there was not much hope." He still (November) continues well.

I have experienced equally good results in similar cases in my own practice; these I purpose submitting to the profession on a future occasion. I have already considerably exceeded my original limits, and shall conclude by expressing my opinion that in the correct application of antiseptics to the treatment of phthisis we are on the proper track towards the solution of a problem which has for long been an *opprobrium medicinarum*.

I may mention that the respirators, as used by me, are made by Mr. Gardner, South Bridge, Edinburgh.

I am, Sir, yours obediently,

G. HUNTER MACKENZIE, M.D.

Edinburgh.

THE CRISIS AT GUY'S HOSPITAL.

To the Editor of THE LANCET.

SIR,—A good deal of surprise has been expressed in many quarters at the fact of the staff of this hospital, notwithstanding the extraordinary treatment which they have received at the hands of the treasurer and the governors, still continue their connexion with the charity, and it is asked why the example set by Dr. Habershon and Mr. Cooper Forster has not been followed by all their late colleagues. Their hesitation to take this step we consider to be due chiefly to two motives, both of them extremely honourable to the members of the medical staff; but we fear there is danger of both of them being carried to excess, and so defeating the very ends they have in view. These motives are: First, a genuine regard for the welfare of the patients under their care; and, second, a fear of injuring the Medical School by hasty action.

There can, of course, be no doubt that if the physicians and surgeons were suddenly to resign in a body the result to the patients in the hospital would be disastrous in the extreme; for, even supposing that the treasurer was able to find qualified medical practitioners willing to take the vacant posts (which we think very improbable), they would certainly not be men of the eminence requisite for such an institution as Guy's Hospital, and it would be quite impossible to obtain substitutes of any kind at a day's notice. Moreover, the interests of the Medical School would suffer most severely from such a course of action, deprived as it would be of its lectures and of its practice in the wards; and much time must necessarily elapse before arrangements could be made for our attendance at other hospitals. We are, then, compelled to admit that anything like a sudden and universal resignation of the staff is out of the question; but it is, at the same time, equally clear that the present state of affairs cannot, in the interests of both patients and students, be allowed to continue. What, then, must be done? How are the difficulties embodied in the above objections to be surmounted? We, with great diffidence, would suggest a procedure somewhat as follows.

Although the medical staff would be wrong if they were suddenly to resign in a body, yet it seems to us that they would be perfectly justified in so doing, provided that they gave the governors due notice of their intention, say, a fortnight or three weeks. This interval would give the treasurer an opportunity for considering his position, and the governors of deliberating as to the course they should pursue. If they persisted in their present attitude, they would have time to make arrangements for the welfare of the patients, and to attempt the organisation of a fresh staff, though we hope the *esprit de corps* of the profession would prevent anyone from coming forward to take the vacated posts. If this were the case, the governors must either yield or close the hospital. If, on the contrary, it should be found possible to collect a new staff, we have already expressed our opinion that they would certainly not be men of the necessary ability and experience. We see then, that the governors would be reduced to three alternatives: either the existing obnoxious regulations must be repealed, or the hospital must be closed, or it must be worked by an inferior class of men. In either of the two latter cases—the appointment of incompetent men, or the cessation of a great medical charity such as Guy's—public opinion, already aroused, would demand a full inquiry into and a thorough sifting of the state of affairs which is at present a scandal to the whole medical profession, and this would undoubtedly result in the vindication of the authority of the medical over the nursing staff. Whether then the governors agree or refuse to yield, the final upshot must be the reinstatement of the original staff and the former *régime*. But the settlement of this point would necessarily occupy some time, during which the interests of the students might be detrimentally affected, and the interval we have mentioned should be employed by the Medical School in taking measures for securing its own safety in case the battle should be prolonged. Again and again we have been told that we have the wishes of all the London hospitals with us; now is the time to put this to the test, and we ask for their co-operation. We would suggest that a meeting should be convened of the authorities of all the London schools, and that they should discuss the possibility of making

some arrangement for the temporary distribution of the Guy's students among the other hospitals, should the necessity for such action arise. Before the three weeks' notice had expired everything should be ready for emigration; and not only must everything be ready, but the emigration must, if matters are allowed to go far enough, really take place in solemn earnest. Surely some agreement could be come to by which we poor persecuted medicals should find a temporary home in the other hospitals of London. The need for it could only be temporary, for however long the strife might be protracted, it cannot be doubted that when the final struggle did take place we should be victorious. Would it not then be wise to precipitate the crisis instead of allowing the reputation of both hospital and school to be ruined by needless delay? We cannot see that anyone would be seriously injured if such a course were adopted; certainly, if any harm came to the patients, the treasurer alone will be responsible for it; the staff would have done all, and more than all, their duty in giving the notice we advocate. The school could not be permanently injured; individuals, no doubt, would suffer some slight inconvenience through giving up appointments for a time, but we apprehend they would be content to do so *pro bono publico*. The very fact that the hospital cannot be satisfactorily worked without the assistance of the school would necessitate its speedy reinstallation.

The plan we have proposed may not be either new or original, and it may not be the best that can be imagined, but we think it to be at any rate worth consideration, and we therefore respectfully ask for a small space in your valuable paper. If it evokes criticism it will have served its purpose.

We are, Sir, your obedient servants,

Guy's Hospital, Nov. 23rd, 1880.

TWO STUDENTS.

RECORD OF A NIGHT WITH THE CHARGE OF A DELIRIUM TREMENS PATIENT.

To the Editor of THE LANCET.

SIR,—Perhaps you may deem the following particulars worthy a place in your columns.

A publican's widow, aged forty-five, had a first attack of delirium tremens in Nov. 1879 (three months after her husband, who had lived for years in the tropics, had died of the same disease). Her second attack happened in August, 1880, on the 24th of which month she had premonitory symptoms and was prescribed essence of beef and milk freely; also one drachm of tincture of opium, in divided doses, with a little quinine and sulphuric ether. Bowels freely open. On the night of the 26th she had two drachms of tincture of opium, in divided doses; and on the 27th, ten minims of solution of opium, every three hours, with quinine and tincture of bark. By this evening she had been sleepless for three days and two nights. The usual delirium was now as high as possible, and she was engaged incessantly gathering up the bedclothes. At 10.15 P.M. she unwillingly took half a drachm of chloral, in seven or eight minutes after which she vomited some curdled milk and watery fluid. A mustard cloth was then put over the region of the stomach, and ten minutes afterwards another half drachm of chloral was given in an ounce of sugar water, with ten drops of ginger-brandy, her favourite cordial, to flavour the dose. At 11 o'clock fifteen grains more in a similar manner. At 11.30 P.M. another fifteen grains, making one drachm or more retained altogether. After this the patient was more quiet, but still excited. The excitement increasing, I injected into the arm nearly one-third of a grain of morphia. Ten minutes after this she stretched out her arms saying, she "felt stiff in the head and sinking;" face drawn, rigid, and having an intensely anxious look (the heart had been intermitting after every second beat; pulse very weak at wrist; heart's beat easily becoming very rapid with the movements of the patient). I then had her head drawn over the bedside, with a foot-bath on the floor beneath, and poured about half a ewerful of water over the forehead. While doing this she once or twice said, "That will do." Presently she uttered a sharp sudden cry, and gave two or three spasmodic movements of the body; the head rotated to the right, and at the same moment I thought she dropped with lightning speed into a catastrophe of sleep, which after a moment seemed to end in the flaccidity of death, one or two gasps preceding this apparent end. Three

women in the room, the sister, a servant, and a nurse, gave a cry and rushed to the door, uttering words relating to the dead or death. The sister came back, and, with clenched hands and body bent over the foot of the bed, besought my opinion. The men came upstairs. For a few seconds I halted between the words "sleep" and "death." I felt no movement of the heart, no pulse at the wrist. The body was motionless, the head resting on my arm. After a few moments of breathless suspense, listening over the præcordia, I heard the flickering heart. Then the wrist-pulse came. I then restored the patient to her old position in bed, and in a few seconds the excited movements recommenced. But in a few more moments she fell suddenly into a quiet, deep slumber, and the wrist pulse became regular, fairly full, and about 70. After watching two or three minutes I left her, and went downstairs to take some bread-and-butter and cocoa. After she had slept for about fifteen minutes I was fetched to her. She had awoke, and was vomiting. Her restlessness and excitement became as bad as before. I had a mustard plaster put over the epigastrium, and in about a quarter of an hour administered fifteen grains of chloral, as before, and in about half an hour after another fifteen grains. Feeling the extreme importance of securing sleep of some duration promptly, I resorted to the water once more, and poured the contents of the full water-ewer three or four times over the forehead, allowing it to flow down her streaming hair into the bath. This time the treatment was most acceptable to the patient, and in the midst of her mutterings about water-pumps, rain, and water-rates, said, "Hold the jug higher, doctor." She was moved into her old position, and I left her quieter, but muttering and talking while she gathered up the bedclothes. I went myself to bed in a room over hers, and lay listening to the humdrum of her talk as it came through the floor. At 5.15 A.M. I went down, and finding she had not slept, gave her thirty grains more chloral, as before, and another jug or two of water fifteen minutes afterwards; after a further fifteen minutes, thirty grains more of chloral. Feeling I should wait awhile before doing more, I went upstairs again to bed, directing that I was to be called if anything happened to give additional uneasiness. She was much quieter, for I could hear now no sounds of her voice. At 6.45 there was a tap at the door to tell me she looked very strange, turning her eyes up; and in another minute, as I was preparing to go down, a message came that she had fallen asleep. I was content, and tried to sleep myself. At 9.30 I looked into the room. She was still asleep. I advanced quietly to the bedside, and moved my hand over the eyes to disturb three or four flies walking over the eyelids, when she at once opened her eyes, and, in answer to my question, told me she was awake by my walking across the room. I directed her to have a cup of tea and a piece of bread-and-butter, which she drank and ate. She slept, on and off, through the day, and was well again.

The catastrophe in the night reminded me of a startling event late one Saturday evening last winter. I was driving home along a country road and had to turn a sharp corner when I came upon a public house which was closing. I suddenly saw in the middle of the road a man and a woman talking. I halloed and drew in my horse, but with the result of just tapping the woman with the end of the shaft a spent blow, the result being that she fell flat on the road like a skittle. I sprang out of the trap and, on bending over her, received a volley of abuse from the tipsy man, and at the same time heard the woman *snoring asleep*—sleep, the work of a moment, and following instantly the shock of her fall produced by only a touch.

I am, Sir, yours truly,

Kenley, Caterham Valley.

E. DIVER, M.D.

PARIS.

(From our own Correspondent.)

A FACT of great importance, and which had been discovered accidentally, was related by Dr. Brown-Séquard at a recent meeting of the Société de Biologie. Intending to kill a guinea-pig, the subject of previous experiment, the animal was placed under a glass globe with a certain quantity of ether. Anæsthesia progressing but slowly, some

chloroform was poured on a sponge, which was inserted in the summit of the globe in such a position that some drops fell between the guinea-pig's neck and shoulder—that is to say, upon the epileptogenic region, when an attack of epilepsy immediately took place. The experiment which had thus been accidentally suggested was repeated a large number of times, and it was found that no longer epilepsy, but a deep anæsthesia, followed the application of chloroform. The same thing was afterwards observed in cats, dogs, and rabbits. As the anæsthesia passes off, the animal gives evidence of returning nervous and muscular sensibility; there are tremors in the four limbs. Then it tries to get up, but presents either hemiplegic or paraplegic symptoms, such as were noticed before anæsthesia took place; occasionally there is delirium, and when consciousness has returned there is a considerable degree of hyperæsthesia, and may be inflammation of the skin if the dose of chloroform has been strong. When the experiment ends fatally, death may occur either suddenly or less quickly.

In this case a series of symptoms—such as convulsions, epileptiform attacks, diminution of reflex action on the side of the application, in the cat myosis, and mydriasis in the dog—precede the slowing of the respiration, which sometimes appears to be superior thoracic, the diaphragm being paralysed, or contracting only on one side. Finally, the temperature falls, and the animal dies suddenly, and without convulsions, from syncope. Electric exploration shows that nervous excitability is strangely modified. A weak galvanic current calls forth a response, and this excitability often lasts four times longer than after other modes of death. In two dogs, and in several guinea-pigs, the phrenic nerve on one side was found to have entirely lost its excitability, and the corresponding half of the diaphragm was less irritable than the other—this on the opposite side to the application of chloroform. Dr. Brown-Séquard explains these phenomena by the theory of inhibition, arrest of function by distant nerve action, and particularly by that inhibition which he has described as the *arrêt des échanges*. The experiments carried on at the Collège de France will give an additional interest to the lectures which commence, as usual, about this time.

INDIA.

(From an occasional Correspondent.)

SOME months since, in a previous letter, I noticed a letter in the *Pioneer*, by "Scrutator," tracing the frequent epidemics of cholera among the Assam coolies to the faulty bathing arrangements and water-supply on board the steamers. Fortunately, the letter attracted the attention of the Lieutenant-Governor, who ordered certain suggested improvements to be adopted. "Scrutator," in a second letter, June 3rd, 1880, now writes: "The water-supply on board the steamers is now nearly perfect. Water is pumped up fresh out of the river into a long closed receptacle, from which the coolies draw it in any quantity they like through strong substantial taps . . . The water-supply of the Calcutta depôts is so radically bad that it will be impossible to make it altogether satisfactory until the principal water-pipes are extended to Sealdah, where the depôts are situated. Still great improvements have been made; the tanks have been fenced off so as to be quite inaccessible to the coolies." A sufficient time has now elapsed to admit of a tolerably correct opinion being formed of the effect of these improvements, which, however, it must still be remembered, are incomplete. Since May 1st, 1879, when the new arrangements on board the steamers got into fair working order, 5124 coolies were carried from Goalundo with 39 deaths, and 4534 from Dhubri, with 17 deaths from all causes. These figures give a percentage mortality for the Goalundo coolies of 0.76, and for the Dhubri coolies of 0.37. The corresponding percentages in 1878 and 1879 for the two classes respectively were 2.70 and 3.78 for Goalundo, and 1.72 and 2.43 for Dhubri coolies. The mean of the previous five years for Goalundo was 2.5, and that of the four years of the existence of the Dhubri depôts 1.56 per cent. It must here be noted that the remarkable reduction shown by these figures was effected in a year of ex-

traordinary cholera mortality in the district bordering on the Brahmaputra. But now the question arises, "What caused the reduction?" I would say that as the conditions of last year were identical in all respects with those of previous years, except in the matter of water-supply, the changes in the water-supply caused the decrease in the mortality from cholera. The testimony of two medical officers who have had many years' experience of coolie emigration is very decidedly to the same effect. Dr. E. G. Russell, the Civil Surgeon, Gauhati, writes: "Since these minute and detailed arrangements for ensuring an untainted supply of water have been introduced, and *de facto* carried out in their entirety, bowel disorders have almost disappeared as a cause of mortality among imported coolies. When it is remembered that previous to the introduction of these water arrangements the short trip of a few days (from twelve to eighteen, according to the port of disembarkation) was, in many instances, attended with decimation or, in certain instances, worse, the remarkable recent diminution, or one may almost say suppression, of the mortality is a very startling fact." Dr. Slane, the Civil Surgeon of Dhubri, writes: "I do not think there can be any doubt to what the freedom from cholera on the steamers is attributable. The only thing in which a radical change has been effected is the water-supply, and by a similar gradation the disease has abated and almost disappeared. In presence of the facts furnished by the great experiment which has been going on for nearly twenty years on the Brahmaputra steamers, I think there can no longer be a doubt that water is the main channel by which cholera is spread. Having studied the water-supply arrangements in many stations and in various parts of the country, my deliberate opinion is, that ninety-nine out of every hundred cases of cholera are due to bad water, and about the same proportion of the deaths caused by the allied disease (typhoid fever) are due to the same cause. There is a great variety in the defects of the water-supply of different stations; but there are very few stations indeed in which the supply is not extremely bad. The *bhisti*,¹ the *guala*,² and the *dhohi*³ are the main channels by which Europeans in India become infected with cholera and typhoid fever."

Obituary.

MR. HENRY BATEMAN, F.R.C.S. ENG.

ON Sunday last Mr. Bateman, of Islington, one of the best-known and most marked practitioners in London, died at the goodly age of seventy-four years. Mr. Bateman's history, as that of one of the most prominent of the older class of practitioners, is of interest. He was born on September 30th, 1806, at Burton-upon-Trent, and educated at the Burton Grammar School. At the age of fourteen years he was apprenticed to Mr. Septimus Allen of Burton for five years. In October, 1825, he came to London, and began the study of medicine at St. Bartholomew's Hospital, an institution for which he always retained a great respect. Amongst his fellow students was Professor Owen, with whom he shared his first dissections. He attended the lectures of Mr. Abernethy. The office of Librarian, an appointment then given to deserving students, was given to Mr. Bateman. From September, 1826, to September, 1828, he acted as assistant to Mr. Jones of Henley-in-Arden. In October of the year 1828 he became a Licentiate of the Society of Apothecaries, and in January, 1829, a member of the Royal College of Surgeons, of which, in 1855, he was made a Fellow. Through 1829 he continued his hospital studies, and specially attended the Eye Infirmary, Moorfields, for three months. In this year he also entered the *Ecole de Médecine*, Paris, and attended at the *Hôtel Dieu* the lectures of the celebrated Dupuytren. In January, 1830, he was made surgeon to the Islington Dispensary, and commenced practice on his own account in the same year. He was fond of reverting to the humble beginnings of his large practice, and the modest but ever-increasing annual receipts. In 1832, during the epidemic of Asiatic cholera, he was appointed surgeon to the Cholera Hospital, River-lane, Islington, and, after wisely making

his will, made post-mortem examinations of every case that died under his care. He remained surgeon to the Islington Dispensary more than three years, and became senior surgeon to the same at twenty-four years of age. He resigned the appointment when he married, and was made consulting surgeon. He then began his well-known practice of seeing patients gratuitously. For eight years he saw them so daily, and subsequently, down to a few years ago, three times weekly, beginning at the early hour of six, and in summer mornings before this, and closing the door of the room for this purpose at the foot of his garden with severe punctuality at nine. It was common for him to see on those mornings from 50 to 100 people, who preserved his prescriptions with a reverence that testified to their utility.

The above mere history implies a good deal of character, thoroughness of study, love of work, and early rising. Before most men had got their breakfast Mr. Bateman had cleared off his gratuitous patients, and was hard at work in his private consulting room, which was seldom empty, till he went on his round of daily medical duties, from which nothing could divert him, unless something he could do for his beloved church. He was a most devoted believer in the doctrines of Swedenborg, and one of the mainstays of the New Church in the metropolis. Until a comparatively recent period he used to preach once every Sunday in the New Church, Devonshire-street, Islington, and as he had to get up at five o'clock on other mornings to see his gratuitous patients, he had often to get up little later, on Sunday mornings to write his sermon. He was a hard-working man, not because he was constitutionally stronger than others, but from a strong love of work and sense of duty, stimulated, perhaps, by a large family, who have deeply to feel his loss. Not the least lesson in Mr. Bateman's history is the fact that he was not constitutionally strong, and temperate almost to teetotalism. In his early practice, in three Augusts running, he had an attack of hæmoptysis, compelling him to the habit of a fortnightly summer holiday, which he took as religiously as Sir Henry Holland took his two months. In middle life his heart became weak, but by slight rest and a daily dose of tincture of acetate of iron at dinner, it regained power enough to enable him to complete fifty years of practice. Few men in general practice in London have been more called into consultation than Mr. Bateman was, no case coming amiss to him, whether surgical, medical, or obstetric. Such readiness to help brought practitioners and patients to him in all emergencies, from parts far remote from the immediate sphere of his own practice. Notwithstanding the strong love of work and sense of duty which dominated Mr. Bateman, he could not have done what he did but for two habits—one, early rising, to which we have already referred; the other the steady refusal to accept social engagements. He declined dining out, even with his own family, and the only exception which he admitted was to dine at the College dinner every second year.

Such briefly, but very imperfectly, is the history of Mr. Bateman's character and work. After fifty years of such work a man may be held to have served his generation well and to have set a splendid example to younger men. But when he disappears he does so conspicuously, and Islington practitioners will long continue to miss his characteristic figure, his bright face, his animated and intellectual conversation, and his hopeful and sanguine views of disease. In his last illness he was attended by his son, Mr. Alfred G. Bateman, and his friend, Dr. Glover, with the kind occasional advice and service of Mr. Gowland, Sir James Paget, and Mr. Christopher Heath. His illness was long and very trying, but his faith was equal to it, and he suffered, as he had laboured, "in cheerful godliness."

DR. ALFRED HUDSON.

It is with great regret that we have to announce the death of Dr. Alfred Hudson, Senior Physician in Ireland to the Queen. Dr. Hudson was born in 1808 at West Bromwich; he was the son of the Rev. John Hudson, a respected minister of the Congregational Church there for forty years. After studying in London for some time, he went to Trinity College in 1828, and became a most ardent pupil of the great Irish School of Physicians. Like his eminent Irish teachers, he studied fevers and wrote on them. He was also the author of an article on Typhoid Pneumonia. Like Graves, Stokes, and Corrigan in Ireland, and like Alison and

¹ Water-carrier. ² Milkman. ³ Washerman.

Christison in Scotland, he distinguished himself by the consideration of the great human and social bearings of the national epidemics of fever—a consideration which has its fruits now in the greatly diminished prevalence of typhus in both these divisions of the kingdom. Dr. Hudson was a good instance of a man attaining character and experience as a country practitioner, and then being called, as it were by general judgment, to a higher and metropolitan position, which he fully sustained by the courtesy of his manners and the accomplishment of his professional mind. When Dr. Stokes died, Dr. Hudson was appointed both to the Physicianship to the Queen and to the Crown appointment for Ireland in the General Medical Council. Here he took no active part. We do not remember his making one speech in the Council from the time of his appointment in 1877. His resignation took place a few days ago.

GUY'S HOSPITAL.

At a well-attended meeting of the Governors of Guy's Hospital, held on Thursday afternoon, the resignations of Dr. Habershon and Mr. Cooper Forster were accepted, and Dr. Hilton Fagge and Mr. Davies-Colley were elected respectively to the posts of physician and surgeon. The junior vacancies were not filled up.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having passed the required examination for the diploma, were duly admitted Members of the College at a meeting of the Court of Examiners on the 18th inst.:—

Appleford, Stephen Herbert, Champion-grove.
Baird, Andrew, Plymouth.
Campbell, Henry William, Claverton-street, S.W.
Chisholm, William, Goulburn, New South Wales.
Cockell, Edward Seaton, Hackney.
Cooper, Richard Gilpin, Southport.
Day, Thomas Montagu, Harlow, Essex.
Fielding, Edward, Rochdale.
Gabriel, Joshua Samuel, Ceylon.
Galpin, George Luck, Graham's Town, Cape of Good Hope.
Griffiths, Ernest Edward, Barnstable.
Lawrence, Joseph Henry, Frome.
McColloch, James, Swansea.
Otway, Alfred Carrol, Kennington-park-road.
Pasteur, William, Stratton-street, Piccadilly.
Pickthorn, Thomas Russel, L.S.A., South Kensington.
Pound, Francis Joseph, L.S.A., Odiham, Hants.
Renner, William, Quittah, Africa.
Stead, Geoffrey, Shrewsbury.
Thistle, Francis Thomas, Ashburton, Devon.
Watkins, Christopher James, Mornington-road.

Of the 82 candidates examined during last week, 52 passed to the satisfaction of the Court, and obtained their diplomas; 6 passed in Surgery, and when qualified in Medicine will be admitted Members; the remaining 24 failed to reach the required standard, and were referred for six months' further professional study. Four candidates who had passed in Surgery at previous examinations, having subsequently obtained a medical degree or licence recognised by the College, were also admitted Members.

The following gentlemen passed the Primary Examination in Anatomy and Physiology for the Fellowship of the College at meetings of the Board of Examiners on Tuesday and Wednesday last:—

Messrs. Edward S. Bishop, Owens College, Manchester; John F. Bullar, Cambridge and St. Bartholomew's Hospital; Percy Warner, Guy's Hospital; Arthur R. Edwards, King's College; Ernest G. Colville, St. Bartholomew's Hospital; Charles Plant, Owens College, Manchester; Francis H. Weekes, St. Thomas's Hospital; James E. Square, St. Bartholomew's Hospital; J. Hutchinson Russell, London Hospital; and William E. Hoyle, Oxford and St. Bartholomew's Hospital.

Of the 22 candidates examined on the above-mentioned days, 12 failed to satisfy the Board, and were referred for six months' further anatomical and physiological study.

COLLEGE OF PHYSICIANS IN IRELAND.—During the November examinations the following obtained the licences in Medicine and Midwifery of the College:—

MEDICINE.—Frederick Wm. Exham, James Barry Gibbons, Clement Hadley, Joseph Patrick Kealy, Wm. Henry Christopher Macartney, William Watson Pike, John Ryan, Herbert Skipworth, Frederick Charles Stevenson, Samuel Malenoir Thompson, Richard Benson Warren.

MIDWIFERY.—James Barry Gibbons, Clement Hadley, Wm. Henry Macartney, William Watson Pike, Herbert Skipworth, Frederick Charles Stevenson, Richard Benson Warren.

The undermentioned Licentiates have been admitted Members:—

John David Hillis, Charles Benjamin Mosse, Arthur Herbert Orpen, Thomas Henry Pickering, Thomas Purcell.

DR. WILLIAM JONES has been re-elected Mayor of Ruthin for the ensuing year.

MR. ROBERT S. HAYES of Oberstown Hill, Naas, has been appointed to the Commission of the Peace for the County Kildare.

THE committee of the Chelmsford Dispensary and Infirmary contemplate the erection of new buildings for the charity. Towards the expenses of the enterprise £1375 has been raised.

At a late meeting of the Stepney Board of Guardians it was resolved that instead of paying their vaccination officer £65 per annum as heretofore, a payment of 1s. for each certificate of successful vaccination should be made.

DR. BURGESS, of Frampton, has been presented by the inhabitants of the town with a purse of fifty guineas, and an address expressive of their regret that the ill-health of the doctor renders necessary his departure from the neighbourhood.

A TESTIMONIAL, consisting of a handsome tea and coffee service and a purse of 105 guineas, has been presented to J. E. M. Williams, M.R.C.S. Eng., of Whitstable. The subscribers, numbering 500, desired in this way to express their appreciation of the worth of the recipient and the esteem in which he and his professional services are held by his fellow citizens.

ON Tuesday evening, Nov. 16th, the members of the Provident Dispensary attached to the works of Messrs. Tangye Brothers, Cornwall Works, Soho, Birmingham, presented their late medical officer, Cordley Bradford, L.R.C.P. Lond., with a beautifully illuminated address and a gold watch of the value of £25, as a token of the respect and esteem in which he is held by them.

THE guardians of the North Dublin Union have recently adopted a resolution to the effect that a dispensary should be erected on the workhouse grounds at a cost of £1200, and that a sum of £2000 be offered to the trustees of the Carmichael School of Medicine for their premises on the north side of the city as being admirably suited for the purposes of an additional dispensary.

THE CASE OF DISTIN.—On the 21st the Mayor of Bristol received a letter from the Home Secretary stating that he had caused a medical inquiry to be made into the former history and present condition of William Joseph Distin. He could find in the report which was made no grounds on which he could advise the Crown to interfere with the execution of the sentence of the law, which has accordingly been carried out.

THE BROWN INSTITUTION.—The annual course of five lectures in connexion with the Brown Institution will be delivered by Dr. W. S. Greenfield, Professor-Superintendent, in the theatre of the University of London, on Dec. 13th, 15th, 17th, 20th, and 22nd, at 5.30 P.M. Subject: "Further Investigations on Anthrax and Allied Diseases in Man and Animals." Microscopic specimens will be exhibited on Dec. 22nd from 4.30 P.M.

BIOLOGICAL ASSOCIATION, TRINITY COLL., DUBLIN. The following officers have been elected for the ensuing session:—President: Thomas E. Little. Vice-Presidents: Samuel Haughton, E. Percival Wright, Edw. H. Bennett, Edw. B. Sinclair, Knt., Henry Macintosh, John M. Purser, B. W. Richardson, James Little, Walter G. Smith, G. Pim, Alexander Macalister, John Barton, Charles B. Ball, G. P. Nugent, W. M'D. Wright.

THE Clerk of the Peace for Lancashire has received from the Privy Council the report of the Special Commissioner sent down to inquire into the cattle plague. It states that many outbreaks are owing to want of early information of the existence of the disease, and of early isolation in cases of suspected and infected animals. Periodical examination of cattle on infected premises, and the isolation of suspected animals, are recommended.

ABERDEEN MEDICO-CHIRURGICAL SOCIETY.—At the annual meeting of the Aberdeen Medico-Chirurgical Society held on the 18th inst., the following office-bearers were elected for the year:—President, Dr. James Marshall; secretary and treasurer, Dr. James Rodger; librarian, William Fraser, Esq., surgeon; Council: Drs. Beveridge, R. Jamieson, H. Jackson, Charles Crombie, and William Fraser; representatives to the North of Scotland Medical Association, the president and secretary (*ex-officio*), Dr. R. J. Garden, and Dr. J. C. O. Will (elected).

BEQUESTS AND DONATIONS TO MEDICAL CHARITIES. Mr. James Seaton, of Manchester, bequeathed £1000 to Owens College. Mr. William Meyerstein, late of Love-lane, Aldermanbury, bequeathed £100 to the German Hospital, Dalston. Mr. John Gould, late of Didsbury, bequeathed to the Manchester Royal Infirmary, Barnes' Convalescent Hospital, and St. Mary's Lying-in Institution, £500 each; to the Salford and Pendleton Royal Hospital and Dispensary, and the Manchester Royal Eye Hospital, £200 each; to the Manchester Institution for Diseases of the Ear and the Stockport Infirmary, £100 each. Mrs. Bushell has left £50 to the Society for Providing Nurses for the Sick Poor, Belfast. Lord Ashtown has bequeathed £100 to the Hospital for Incurables, Dublin.

VACCINATION GRANTS.—The following gentlemen have received the Government grant for the successful vaccination in their respective districts:—Dr. C. E. Ellis, Attleborough, £12 7s. (fourth time). Mr. T. H. B. Rodwell, No. 2 district, Loddon and Clavering Union, £7 4s. (third time). Dr. Hurley, Louth Union, £7 2s. (second time). Mr. Burroughs, Frome Union, £4 15s. 6d. Mr. J. A. Bright, Glastonbury (fourth time). Mr. A. J. Mackintosh, Downham Union, Norfolk, £12 3s. (seventh time). Mr. G. Pound, Odiham district of the Hartley Wintney Union (sixth time). Mr. G. K. Sproul, Rook-lane House, Frome (third time). Dr. J. S. Walker, Bucknall district of Stoke-upon-Trent, has also received a grant for the efficiency of the vaccination in his district.

SEAMEN'S HOSPITAL, GREENWICH.—The following shipowners have substantially testified their determination to encourage the Seamen's Provident Fund of the Dreadnought Hospital, at Greenwich, by giving donations of £100 each, in addition to their usual annual subscriptions:—Messrs. Donald Currie and Co., Carlyle Brothers and Co. (Ducal Line), Henderson Brothers (Anchor Line), Alfred Holt (Ocean Steamship Company), George Smith and Sons (City Line), and Thomas Wilson and Sons. The Committee of the Seamen's Hospital are in need of additional funds to enable them to meet the expenditure of the current year.

Medical Appointments.

Intimations for this column must be sent DIRECT to the Office of THE LANCET before 9 o'clock on Thursday Morning, at the latest.

BARNEY, R. W., L.K.Q.C.P.I., L.M., L.R.C.S.Ed., has been appointed House-Surgeon and Dispenser to the Tiverton Infirmary, Devon.

BENNETT, STORER, L.R.C.P.L., M.R.C.S.E., L.D.S.E., has been appointed Assistant Dental Surgeon to the Dental Hospital of London.

BRAY, F. T., L.K.Q.C.P.I., has been appointed Medical Officer and Medical Officer of Health to the Rathangan Dispensary District, vice Watson, resigned.

BRIGHT, J. A., M.R.C.S.E., L.S.A.L., has been appointed Examiner of Army and Militia Recruits for Glastonbury and its neighbourhood.

COLLINS, Mr. J. H., has been appointed Public Analyst for Falmouth. Remuneration by fees.

COTTER, J., M.D., has been appointed House-Surgeon and Apothecary to the Cork North Infirmary, vice Corby, resigned.

DENHAM, J. S., M.D., L.F.P.S.G., M.R.C.S.E., has been appointed Medical Officer to the Westco District of the South Shields Union.

DUKE, A., M.K.Q.C.P.I., L.R.C.S.I., has been appointed Gynaecologist to Stevens' Hospital, Dublin.

EDMUNDS, W., M.D., F.R.C.S.E., has been appointed Resident Medical Officer to the Paying Patients' Department of St. Thomas's Hospital. £400 per annum, with residence.

FOX, T. C., M.B., M.R.C.S.E., has been appointed a Physician to the Victoria Hospital for Sick Children, vice Irvine, deceased.

FRAZER, D. M., M.B., has been appointed Assistant Medical Officer to the Metropolitan Fever Hospital.

GULLIVER, G., M.D., has been appointed Resident Medical Officer to St. Thomas's Hospital, vice Sharkey, resigned.

HAMMOND, G., L.D.S.R.C.S., has been appointed Dental Surgeon to the Western General Dispensary, Birmingham.

McDERMOTT, P., L.R.C.S.I., has been appointed House-Surgeon to St. Michael's Hospital, Kingstown.

MACGREGOR, D., M.D., has been appointed Medical Officer to the Denby District of the Penistone Union.

MARTIN, J. M. H., M.D., M.R.C.S.E., has been appointed Medical Officer to the Third District of the Fulham Union.

O'MEARA, J. B. J., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer of Health to the Sutton Bridge Urban Sanitary Authority. 10s. 6d. per case.

POPPLEWELL, T. W., M.R.C.S.E., has been appointed Medical Officer to the Wadhurst District of the Ticehurst Union, vice Harland.

REDWOOD, T., Ph.D., has been reappointed Public Analyst for one year for that part of Middlesex beyond the limits of the Metropolis.

SMYTH, A. C. B., L.R.C.P.Ed., has been appointed House-Surgeon to the Brighton and Hove Lying-in Institution, vice Blaker, resigned.

SPENCE, J. B., M.D., Assistant Medical Officer, Earlswood Asylum, has been appointed Medical Superintendent of the Staffordshire Asylum at Burntwood, near Lichfield, vice R. A. Davis, M.D., resigned.

STRICKLAND, A. W., L.R.C.P.Ed., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for the Kids Grove District of the Wolstanton and Burslem Union.

WATT, G., M.D., C.M., has been appointed Medical Officer to the Aberdeen Dispensary, vice Garden, resigned.

WATTS, T. F., M.B., C.M., has been appointed Assistant-Surgeon to Her Majesty's Convict Prison at Dartmoor.

WHITTERTON, J., L.R.C.P.Ed., M.R.C.S.E., has been appointed Medical Officer of Health to the North Bierley Urban Sanitary Authority. £70 per annum.

YOUNG, T. M., jun., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer to the South Shields District of the South Shields Union.

Births, Marriages, and Deaths.

BIRTHS.

BARROW.—On the 19th inst., at Herbert-terrace, Herbert-road, Shooter's-hill, the wife of H. J. Waller Barrow, Surgeon, Army Medical Department, of a daughter.

HOOD.—On the 21st inst., at Green-street, Park-lane, the wife of D. W. Charles Hood, M.D., of a daughter.

LAWTON.—On the 22nd inst., at Poole, the wife of Herbert A. Lawton, L.R.C.P.L., of a son.

O'BRIEN.—On the 19th inst., at Cotehele-terrace, Stoke, Devonport, the wife of Henry J. O'Brien, Surgeon-Major, Army Medical Department, of a son.

WARD.—On the 22nd inst., the wife of J. Bywater Ward, M.D., Warneford Asylum, Oxford, of a son.

MARRIAGES.

CLARK—HALLAM.—On the 16th inst., at St. George's Church, Newcastle-under-Lyme, by the Rev. Richard Ward, B.A., Vicar, John George Clark, M.R.C.S.E., of 18, Colville-road, Notting-hill, W., to Fanny, second surviving daughter of the late John Hallam, J.P., of Newcastle-under-Lyme.

FINEGAN—KELLY.—On the 16th inst., at Curraha Roman Catholic Church, by the Rev. Joseph Wheeler, John S. F. Finegan, L.K.Q.C.P.I., L.R.C.S.I., of Addison Lodge, Glasnevin, to Ellen, daughter of James Kelly, Esq., of Creakenstown, co. Meath.

DEATHS.

BATEMAN.—On the 21st inst., at The Chestnuts, Canonbury-lane, London, after a long and painful illness, Henry Bateman, F.R.C.S.E., aged 74.

BRYDEN.—On the 18th inst., at Upper Norwood, James Lumsdaine Bryden, M.D., Surgeon-Major, H.I.M.S., aged 47.

HUDSON.—On the 19th inst., at his residence, Lowville, Merriem, County Dublin, Alfred Hudson, M.D., aged 72.

MURTAGH.—On the 17th inst., at Kingstown, Ireland, John Murtagh, Esq., M.D. (half-pay), 6th Foot, aged 82.

PHILPS.—On the 1st inst., at Piquetberg, Cape Colony, Vincent Philps, J.P. for Piquetberg, M.R.C.S.E., only son of Mrs. Emma Philps, of Sparrows Herne, Bushey, late of Berkhamsted, aged 28.

QUIN.—On the 24th inst., at his residence, Queen Anne's Mansion, Westminster, S.W., Frederick Hervey Foster Quin, M.D., in his 79th year.

SIMPSON.—On the 18th inst., at Thanet House, Basset, Southampton, Thomas Simpson, M.R.C.S.E., aged 75.

WILSON.—On the 19th inst., suddenly, at Middle-street, Brighton, from heart disease, William John Wilson, L.R.C.P., of Clay Cross, aged 46.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

THE BRADLEY MEMORIAL FUND.

At a meeting held on the 23rd instant, in the Old Town Hall, King-street, Manchester, Mr. EDWARD LUND, F.R.C.S., in the chair, it was resolved—"That this meeting of the friends who had reason to admire the character and public life of the late Mr. SAMUEL MESSENGER BRADLEY, F.R.C.S., desires in some suitable manner to perpetuate his memory; and, in order to secure this object, has decided to establish a Scholarship in Clinical Surgery in connexion with the Manchester Royal Infirmary."

The following gentlemen were appointed an Executive Committee to carry the above resolution into effect:—

CHARLES J. CULLINGWORTH, M.R.C.P.

FRANK GLOVER, Esq.

JOHN M. HETHERINGTON, Esq.

CAMPBELL HULTON, Esq.

DANIEL J. LEECH, M.D.

EDWARD LUND, F.R.C.S.

GEORGE H. MIDWOOD, Esq.

Hon. Secretary: WALTER WHITEHEAD, F.R.C.S.E.,
202, Oxford-road.

Allen, Charles R., Esq.	£2 2 0	Hall, Wm., M.R.C.S.	£1 1 0
Annington, J.W., L.R.C.P.	5 5 0	Hayle, T., M.D.	1 1 0
Atkinson, Rev. J. A.	0 10 6	Heavit, J. H., M.R.C.S.	0 10 6
Alston, J. W., Esq.	1 1 0	Hewitt, J., M.R.C.S.	1 1 0
Appleby, J. T., M.R.C.S.	2 2 0	Johnson, T. M., M.D.	3 3 0
Ansell, T. Esq.	3 3 0	Jones, Thomas, F.R.C.S.	3 3 0
Barnes, J. W., L.R.C.P.	2 2 0	Jones, W. Owen, M.R.C.S.	3 3 0
Blease, Thos., L.S.A.	1 1 0	Jepson, Wm., M.D.	3 3 0
Blease, T. T., M.R.C.S.	3 3 0	Jordan, F. W., L.R.C.P.	1 1 0
Botsford, J. W., Esq.	2 2 0	Kendal, J. Herbert, Esq.	5 0 0
Bott, T., M.D.	0 10 0	Kendal, Thomas, Esq.	5 0 0
Braidwood, P., M.D.	2 2 0	Kessler, William, Esq.	5 0 0
Brooke, H. G., M.R.C.S.	1 1 0	Knoop, H. L., Esq.	1 1 0
Browne, Henry, M.D.	10 10 0	Knowles, James, Esq.	3 3 0
Browne, Lennox, F.R.C.S.	3 3 0	Leech, Daniel J., M.D.	3 3 0
Buckley, S., F.R.C.S.	3 3 0	Lee, Edmund, M.R.C.S.	1 1 0
Bickham, W., jun., Esq.	1 1 0	Leigh, John, Esq.	3 3 0
Ball, J. A., M.B.	1 1 0	Little, David, M.D.	3 3 0
Bradshaw, J. D., M.D.	2 2 0	Lund, Edward, F.R.C.S.	3 3 0
Bury, J. S., M.B.	1 1 0	Lund, Mrs.	2 2 0
Bellhouse, Ernest, Esq.	3 3 0	Lees, Miss	10 0 0
Bellhouse, Robert, Esq.	3 3 0	Langworthy, Mrs.	10 0 0
Bellhouse, Walter, Esq.	3 3 0	Lomax, James, Esq.	5 5 0
Bellhouse, Charles, Esq.	3 3 0	Leeds, Thos., M.R.C.S.	3 3 0
Brierley, Jas. B., M.D.	1 1 0	Louthouse, John, L.R.C.P.	1 1 0
Braddon, C. H., M.D.	2 2 0	Lewis, J. B., Esq.	1 1 0
Cockshott, E., Esq.	3 3 0	MacLaren, James, Esq.	2 2 0
Cook, William, Esq.	1 1 0	MacKenzie, J. O., Esq.	5 5 0
Cope, Rev. Haden	5 0 0	Makin, T. W., Esq.	1 1 0
Cope, Richard, Esq.	10 0 0	McKeand, Charles, Esq.	2 2 0
Cornish, J. E., Esq.	2 2 0	Meacham, Ed., M.R.C.S.	0 10 6
Crosby, W., M.R.C.S.	5 5 0	Mehl, F., Esq.	1 1 0
Cullingworth, C. J., M.R.C.P.	2 2 0	Midwood, A. H., Esq.	5 5 0
Casson, E., Esq.	1 1 0	Midwood, G. H., Esq.	5 5 0
Conry, J. P. C., L.K.Q.C.P.	0 10 6	Moritz, S. M.D.	1 1 0
Daly, Shelton, L.K.Q.C.P.	2 2 0	Mosley, Joseph, Esq.	2 2 0
Dancer, James, Esq.	1 1 0	Mout, James H., Esq.	3 3 0
D'Auquier, T. C., Esq.	1 1 0	Midwood, G. Norris, Esq.	2 2 0
Davidson, James, Esq.	2 2 0	Madeley, G. S., M.R.C.S.	1 1 0
Davies, Benjamin, Esq.	5 0 0	Mason, Henry, Esq.	3 3 0
Dreschfeld, J., M.D.	3 3 0	Morris, Cameron, M.B.	1 1 0
Dudley, Charles W., Esq.	2 2 0	Massiah, B. J., M.D.	0 10 6
Day, T. J., Esq.	1 1 0	Mark, John, Esq.	5 5 0
Daws, W., Esq.	1 1 0	Morgan, E., M.D.	5 5 0
Dickens, Alfred, Esq.	2 2 0	Matthews, W. C., M.R.C.S.	1 1 0
Eckersley, James, Esq.	5 0 0	Nestfield, S. M.D.	1 1 0
Edge, A. M., M.D.	5 5 0	Norris, W. C., M.R.C.S.	1 1 0
Ewart, J. H., M.R.C.S.	2 2 0	O'Grady, W. F., L.R.C.P.	1 1 0
Fleming, W. B., Esq.	3 3 0	Peatson, J. C., M.D.	3 3 0
Fox, Dacre, F.R.C.S.	1 1 0	Patrick, Robert, L.R.C.P.	2 2 0
Fryer, J. H., Esq.	2 2 0	Platt, Thos., M.R.C.S.	1 1 0
French, F. N., M.R.C.S.	1 1 0	Puge	1 1 0
Gale, H. S., M.B.	2 2 0	Pooley, R.C.M., L.K.Q.C.P.	1 1 0
Gallimore, T., M.R.C.S.	2 2 0	Radcliffe, Samuel, Esq.	3 3 0
Gibson, Rev. Canon.	5 0 0	Renshaw, Chas. J., M.D.	2 2 0
Glover, Frank, Esq.	3 3 0	Renshaw, H. S., M.D.	1 1 0
Gorton, Richard, Esq.	2 2 0	Reston, Hy., L.R.C.P.	2 2 0
Goldsmith, P., Esq.	5 5 0	Roberts, John, M.D.	1 1 0
Greenwood, Professor	2 2 0	Roberts, John, Esq.	3 3 0
Graham, W., M.D.	1 1 0	Roberts, Lloyd, M.D.	3 3 0
Gumpert, E., M.D.	2 2 0	Roberts, Thomas, Esq.	3 0 0
Hardie, James, M.D.	3 3 0	Roberts, W. M.D., F.R.S.	10 10 0
Hardman, Wm., M.D.	1 1 0	Robinson, J., Esq.	1 1 0
Harrison, R., F.R.C.S.	2 2 0	Roe, Edwin, M.R.C.S.	1 1 0
Harrison, T., Esq. F.C.S.	2 2 0	Roe, Leyland, L.R.C.P.	1 1 0
Heath, F. A., M.R.C.S.	3 3 0	Rose, Thomas, Esq.	3 3 0
Hecht, Ed., Esq.	1 1 0	Ross, Donald, M.D.	2 2 0
Heckscher, M., M.D.	2 2 0	Ross, James, M.D.	3 3 0
Hetherington, J. M., Esq.	5 5 0	Rothwell, Chas., Esq.	2 2 0
Hetherington, T. R., Esq.	5 5 0	Royds, Clement, Esq.	5 5 0
Heywood, John, Esq.	3 3 0	Ransome, A., M.D.	2 2 0
Heywood, G. W., Esq.	5 5 0	Samsel, A., M.D.	2 2 0
Hoare, W. P., F.R.C.S.	5 5 0	Saunders, W. L., Esq.	1 1 0
Hodgson, Hy., Esq.	2 2 0	Schofield, C. J., Esq.	5 5 0
Hulton, Campbell, Esq.	5 0 0	Schorlemmer, C., Esq.	3 3 0
Hulton, Campbell, Mrs.	5 0 0	F.R.S.	3 3 0
Hunt, T. H., M.R.C.S.	5 0 0	Schuster, Charles, Esq.	5 5 0
Holliday, Charles, Esq.	3 3 0	Schuster, Fred. Leo, Esq.	3 3 0
Heywood, Abel, sen., Esq.	3 3 0	Schwabe, Leopold, Esq.	2 2 0
Holmes, Charles, M.D.	1 1 0	Scott, Walter, Esq.	1 1 0
		Scowcroft, J. E., F.R.C.S.	2 2 0

Sharp, Wm. P., Esq.	£3 3 0	Thorburn, John, M.D.	£3 3 0
Shaw, J., Esq.	1 1 0	Tomkins, H., M.D.	1 1 0
Shearman, W. M., L.R.C.P.	5 5 0	Warden, Henry, Esq.	1 1 0
Simpson, Henry, M.D.	2 2 0	Wartenberg, Victor, A., M.R.C.S.	1 1 0
Smart, R. B., M.R.C.S.	1 1 0	Whitehead, Henry, Esq.	3 3 0
Smith, G. W., F.R.C.S.	5 5 0	Whitehead, James, M.D.	5 5 0
Southam, F. A., F.R.C.S.	2 2 0	Whitehead, W., F.R.C.S.	3 3 0
Steel, Grahame, M.D.	1 1 0	Wilkinson, J. R., Esq.	4 4 0
Sutcliffe, A. E., M.R.C.S.	3 3 0	Woodcock, J. S., F.R.C.S.	3 3 0
Smith, C. E., L.R.C.P.	1 1 0	Woodcock, Sam., M.D.	2 2 0
Strandring, Thos., Esq.	3 3 0	Wright, G. A., F.R.C.S.	1 1 0
Stone, Joseph, M.D.	2 2 0	Williamson, H. M., M.R.C.S.	2 2 0
Smith, T. Starkie, M.B.	3 3 0	Wimpenny, A. B., Esq.	1 1 0
Scowcroft, W., M.R.C.S.	1 1 0	Wood, F. M., Esq.	2 2 0
Symonds, Arthur G., Esq.	1 1 0	Watson, John, M.D.	1 1 0
Slagg, J., Esq., M.P.	1 1 0	Walsley, F. H., M.R.C.S.	5 0 0
Sullivan, James, Esq.	1 1 0	Watson, W., Capt.	1 1 0
Tarbetton, G. S., Esq.	2 2 0		
Tatham, Garnett G., M.D.	1 1 0		
Thomson, William, Esq.	3 3 0		

£525 4 6

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET OFFICE, November 25th, 1880.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radiation in Vacuo.	Max. Temp. Shade.	Min. Temp.	Rain fall.	Remarks at 8.30 A.M.
Nov. 19	29.29	N.	38	37	..	44	31	0.42	Overcast
" 20	30.15	N.N.E.	35	33	..	41	31	..	Bright
" 21	30.46	N.	38	34	..	38	28	..	Foggy
" 22	29.91	W.	28	..	..	37	25	..	Foggy
" 23	29.91	W.	36	33	..	50	26	..	Overcast
" 24	29.93	S.W.	50	43	..	53	33	..	Cloudy
" 25	29.62	W.	55	53	..	57	47	0.03	Fine

Notes, Short Comments, and Answers to Correspondents.

PROLONGED ENFORCED FASTING.

In the *Canada Lancet* for November, Mr. H. K. Kerr, of the Trinity Medical School, Toronto, narrates a case of esophageal stricture, which seems to afford a striking example of the length of time life may be prolonged without food. The stricture was induced by the patient swallowing, by mistake, a mouthful of weak lye. In the course of a fortnight symptoms of dysphagia began to appear, and, in spite of treatment, deglutition became more and more difficult until milk was the only nourishment that could reach the stomach. The patient became greatly emaciated, presenting the usual symptoms of starvation. In ten months his weight decreased from 120 lb. to 60 lb. During the remaining seven months previous to death he frequently attempted to partake of food, both solid and liquid, but could swallow no appreciable quantity of either, the only nourishment supplied to the system during this time being by means of enemata of milk-and-egg administered twice daily. The intellectual faculties and special senses seemed unimpaired. The power of locomotion was retained up to three days previous to his death, at which time his weight was not above 40 lb. Prostration set in, followed by dyspnoea, syncope, and death.

Dr. George Budd.—The paper will be inserted in an early number.

"A NOTE ON INTENTION IN THE DETERMINATION OF SEX AND OF THE MENTAL AND PHYSICAL INHERITANCE OF CHILDREN."

To the Editor of THE LANCET.

SIR,—Kindly permit me to convey my thanks to Dr. Granville for his courteous reply to my query, which, however, he has left unanswered.

At different times I have made experiments with birds and animals with the view of determining this very question, and the result has been adverse to the opinion expressed by the Doctor, which was also at one time my own. I have been, on the contrary, compelled to admit that if there be a governing principle in the matter, it yet remains to be discovered.

With regard to a unity of placenta in the case of twins of different sex, I have met with four cases in my practice where such a phenomenon existed. On this latter point I would refer Dr. Granville to a discussion at a meeting of the Obstetrical Society, recorded in vol. xix. of their Transactions, p. 276.

I am, Sir, yours truly,

A. G. P.

M.D., M.R.C.P.E.—We recommend our correspondent to call on Mayer and Meltzer, Great Portland-street, who would demonstrate the use of the instrument to him in five minutes. He may also look into Cyon's little work, entitled "Electro-therapie," and Niaudet's "Traité Élémentaire de la Pile Electrique," 1878.

Mr. P. K. Cree, (Tahiti.) Thanks. The matter is scarcely worth notice.

PROPER COVERING FOR THE FEET.

At the Aberdeen Philosophical Society a few days ago Professor Struthers introduced a subject upon which, it would seem, the public, and especially the female part of it, require more than ever to be informed. The title of the paper read by the professor was "The Proper Form of Shoe considered in relation to the Anatomy of the Foot." After a short notice of the bones of the human foot and the characteristics adapting it to the erect position, and of the muscles by which the various movements of the toes are produced, Dr. Struthers said it was evident that the toes were meant to have freedom for individual action. The whole of the muscles of the great toe are separate from those of the other toes, except the slip from its long flexor muscle, which goes to the next two toes, and moves them at the same time, and the slip it receives from the short extensor of the toes; but the great toe has powerful separate muscles for moving up and down and sideways. The foot is capable of being trained to perform many actions usually performed by the hand. But irrespective of this capability, the toes are evidently naturally adapted for a freedom of motion which is denied them by the form of shoe usually worn. The distortion produced by the fashionable pointed shoes is the dislocation of the great toe, by which it is slanted towards the middle toe, the whole of the toes being pressed together to a point. This is apt to produce bunion over the inner prominence of the toe, and ingrowing toe nail, both very troublesome conditions. The inner edge of the shoe ought to be straight along nearly the front half of the foot. This implies what seems a very curved-in shoe, but it is the only form in which the great toe can be naturally lodged.

Dr. Cummings Air.—The paper is marked for insertion.

FISH-EATING AND LEPROSY.

To the Editor of THE LANCET.

SIR,—Mr. Hutchinson, in his letter on the above subject in your issue of the 6th instant, remarks "that he has not seen a single instance of leprosy in which the fish hypothesis was impossible; nor does he know of a single district where the facts, when sifted, are strongly opposed to it." The hypothesis will, I take it, be possible until it can be shown either that a leper has never eaten fish once in his lifetime, nor that any of his ancestors have done so, or that some other cause of leprosy has been definitely established as the true one. Neither of these conditions has as yet been fulfilled, and I, for one, cannot consider the fish theory impossible.

My object in addressing you is, however, to cite an instance (and I presume it would not be difficult to refer to others) of a district in which the facts are strongly opposed to the fish theory.

My friend, Dr. Arthur Reid, who is at present in this country, has brought with him copious notes of cases of leprosy observed at a native hospital at Hankow, China, over a period of fifteen years, special attention having been directed by him in his inquiries to the collection of evidence bearing on the etiology of the disease. Dr. Reid informs me "that the leper cases came from country districts within a radius of 100 miles from Hankow, being generally residents in hamlets composed of from five to twenty families. The leper applicant was often the solitary example of the disease in his family and township. The diet of these poor country people consisted of rice, millet, bean-curd, and a little oil, with pork two or three times a month, and fish at longer intervals. Many of the lepers stated that, owing to the extreme poverty of their families, they had only been able to procure pork once in two or three months, and fish only at the new year. In the large centres of Hankow and Wuchang, where river and lake fish can be purchased throughout the year, leprosy combined with a town ancestry of two generations is rare. I never met with a town case where either the patient or one of his parents had not migrated from a country leper district. Fish-eating is essentially in Central China the privilege of the well-to-do, while leprosy is usually found among the poor vegetable-feeders."

The observations of Hansen (Virchow's Archiv, vol. lxxix., 1880) on the *Bacillus lepræ* cannot fail to direct inquirers into a new field of study in reference to this disease. Through the kindness of Mr. Watson Cheyne I have had an opportunity of examining sections through lepra-nodules sent him by Dr. Koch. The presence in large numbers of the minute organisms described by Hansen, distinct when observed under favourable circumstances, but not so easy of observation as many of the forms of bacteria, whatever their precise relation to the primary cause of the disease may be, can hardly fail to have an important influence on its development.

I am, Sir, yours &c.,

Queen Anne-street, W., Nov. 8th, 1880.

G. THIN, M.D.

To the Editor of THE LANCET.

SIR.—As one who has studied attentively the etiology of leprosy, I beg to be allowed to give Mr. Hutchinson some references such as he asks for. The main argument, in short, for the causation of leprosy by a fish diet lies in the marked concurrence of the disease with the distribution of water on the earth's surface, and the use of putrid fish as an article of diet in islands, on sea-boards, and to a less extent inland. Virchow, indeed, looking to the illustration afforded by Norway, the shores of the Mediterranean, and many islands, thought leprosy "was limited to the borders of seas and large rivers." Hansen (as quoted by Carter), from a

more extended survey, which has not led him to adopt the fish theory, has expressed himself thus: "So far as I know, the sole condition which can with any tolerable certainty be regarded as universally prevalent in all these several localities (both at home and abroad)—i.e., where leprosy is known to prevail—is the vicinity of water, either salt or fresh." In the light of still more recent observations, which are well summarised by Dr. Munro (Leprosy, 1879), we must considerably modify even this statement; for leprosy is found in many inland and elevated districts and mountainous regions and far from rivers.

The College of Physicians' Report, p. 189, after stating that no castes are exempt, adds that the Brahmins and some of the higher castes of Hindoos in Mysore eat no kind of flesh, and though the lower castes do when they can get it, fish, fresh or salt, is very rare in Mysore (see also p. 185, Nagpore). At page 181 it states that "the majority of the people being Hindoos, they are strict vegetarians"; and again it repeats that leprosy is largely present amongst the vegetable-eating Hindoos, and (p. 134) it records that the inhabitants of the notorious leprosy district of Beerbhoom are exclusively vegetable-eaters (see also Macnamara on Leprosy, 1866, and Espinet's Reports from Trinidad, 1873-4). Vandeyke Carter, in his Reports of Leprosy, 1876, speaking of Western India, says that "many lepers have never tasted animal food," and, as regards the Crujerathi population, "by a majority of the people it may be said that animal food is scrupulously avoided." Again, in his Modern Indian Leprosy, 1876, Carter says of the diet in the Bhamagar district of Katiawar "animal food is very rarely used, only Mussulmans, a few Rajputs, and Kolis of lower grade will touch either flesh or fish." The same great authority on leprosy writes (Report on the Prevalence and Characters of Leprosy in the Bombay Presidency, 1872), at p. 14, that "there is no clear evidence that any special article of diet either excites or predisposes to leprosy," and "a very large proportion of the population of Western India are either solely vegetarians or partake only occasionally of animal food"; and again, at p. 37, "true leprosy has absolutely no apparent connexion with such diet"—i.e., fish; "and in Western India all castes, except most Brahmins, the Tains, and Lingaets, may partake of fish" (see also the interesting information collected in the list of castes). Turning to China, I would refer Mr. Hutchinson to the several articles in the Chinese *Customs Gazette* by Drs. Reid and Wong in support of the latter's statement that "it does not appear that fish-eating plays any part in the causation of the disease."

I am, Sir, yours faithfully,

Harley-street, Nov. 15th, 1880.

T. COLCOTT FOX.

"DENTAL-SURGEONS," "SURGEON-DENTISTS."

To the Editor of THE LANCET.

SIR,—Mr. Carpenter, in to-day's LANCET, calls upon me to give the details of the case alluded to in my last letter. It is the well-known case of Ladd v. Gould, with the particulars of which Mr. Carpenter is well acquainted. My statement of the issue raised in this case, and of its treatment by the Judge, is, I believe, substantially accurate.

Mr. Carpenter says: "The assertion that unqualified persons should have a 'right,' for the purpose of gain, to commit a fraud upon the public, by representing themselves to be qualified persons, is revolting nonsense to the common sense of the profession." With this I cordially agree; but I have never made such an assertion, and I deny that Mr. Carpenter's remarks fairly apply to the circumstances under discussion. Prior to the institution of a Dental diploma in 1858, there were a considerable number of well-instructed and accomplished dentists who possessed no diploma. They had received their professional education by pupillage with dentists, and had not obtained a surgical qualification such as at that time was held by some very few dentists. Most of these practitioners took the diploma in Dental Surgery shortly after it was instituted; but not being under compulsion, and not having the inclination, some did not present themselves for examination. There are still some totally "unqualified" dentists of this class, who are known both to the profession and the public as highly educated and skilful practitioners. At the time when these gentlemen received their professional education, and for generations before, it had been usual for such practitioners to style themselves surgeon-dentists, and they had established their right to do so by custom. Had the Legislature in framing the law, or the Judges in administering it, deprived all unqualified dentists whatever of the right to style themselves surgeon-dentist, an injury would have been inflicted upon a number of innocent individuals. No doubt somewhat on this account the penal clauses of the Medical Act of 1858 were interpreted as not interfering with unqualified practitioners acting *bona fide* as surgeon-dentists, and not fraudulently acting as medical practitioners, and hence the judgment in the case of Ladd v. Gould. A like judgment in a somewhat parallel, well-known case of an unqualified "surgeon"-chiroprapist may be cited as illustrating further the spirit influencing the Courts. It is somewhat astonishing to learn from Mr. Carpenter that "the Statute of Fraud" has any bearing upon these cases.

Your obedient servant,

Wimpole-street, Nov. 20th, 1880.

HENRY SEWILL.

Sanitarian.—"Portuguese" is a word suggested by Dr. Gibbs, Medical Inspector of the United States Navy, to express the infection-bearing quality of the "germs" of certain diseases.

Argus.—We do not gather from our correspondent's note that any steps have been taken to abate the nuisance from the works under section 114 of the Public Health Act, 1875.

Mr. T. H. A. Roskrugers.—We are glad to know the profession share our view of the Guy's Crisis.

NURSES FOR THE SICK POOR.

THE Northern Home, in Holloway-road, is an institution founded for the purpose of providing trained nurses for the sick poor. We have reason to know that much good work has been done by this institution, and that our brethren in the north of London have often realised the advantages of the home in affording a ready means of supply of attendants on the sick at once careful and skilled. A meeting was held this week to avert a threatened curtailment of the usefulness of the institution owing to the falling off in subscriptions. It would be matter of regret if a movement inaugurated to meet a recognised and urgent want should be allowed to collapse for lack of funds.

W. T. R.—Under the circumstances we cannot think there is any claim. The terms of the call seem to have been conditional.

Enquires.—The case is evidently one of severe gastralgia, and we should recommend the use of sedatives.

"INFECTED MILK: DIPHTHERIA."

To the Editor of THE LANCET.

SIR,—I hope you will excuse my offering a few remarks on your article—"Infected Milk: Diphtheria"—which appeared in THE LANCET of the 20th inst., page 827.

Every precaution was taken to isolate the patient, and prevent contamination of the milk. Not only was I not informed of the regulations made for the government of the dairies, but one of the largest dairymen in this district was also ignorant of them until this case was brought forward. Surely all medical men and dairymen should be officially informed of any rules that may be instituted with which they are bound to comply!

Holding a public office should be no excuse for a medical man intruding upon the patients of another. Such visits can seldom do otherwise than alarm, and may be very injurious. The dairyman's niece was in her fourteenth year, a delicate and very nervous, sensitive girl; and I was astonished to learn in court that the two doctors had "found her dying from malignant diphtheria." I have no hesitation in contradicting this; but the mother informed me that her daughter was greatly alarmed at the unexpected visit of the doctors and at their remarks, and no doubt she consequently presented a scared appearance. I had ordered her to be kept very quiet, which order was completely upset by this proceeding. The morning after the doctors' visit the diphtheritic membrane had completely cleared away, and it was not till the day subsequent that the girl died from suppression of urine.

I should be glad to know whether sanitary officers are justified in intruding upon the private patients of other practitioners and catechising them, as has been the practice at Surbiton, much to the annoyance of ladies and gentlemen. Also whether, in reporting to the sanitary authorities, with a view of publicity in the local papers, particulars of cases in which other medical men are concerned, they should not first satisfy themselves as to the correctness of such particulars from the medical men in attendance, and also from the other parties affected by their reports?

I am, Sir, your obedient servant,

Surbiton, S.W., Nov. 23rd, 1880.

R. COLLUM, M.D.

To the Editor of THE LANCET.

SIR,—I am the inspector and prosecutor in this case, and am solely responsible for the summary inspection as well as the cross-examination which you consider require explanation, Dr. Coleman being a witness only to testify that he had not received notice of the illness. Had the proceedings been more fully reported the explanation which I am now happy to give would not have been necessary.

On Monday, Nov. 1st, I received information from three sources of several cases of diphtheria arising presumably from one dairy, and I at once made an inspection in accordance with Section 50 of the Act.

On inquiry I was informed by the dairyman that a few weeks ago there had been illness in his house, and that there was a child ill at the time of my visit; that the former case was alleged by the medical attendant to have been croup, while the latter was stated to be an obstruction of the bowels. But having reasons for believing that there was infectious disease in the house, and seeing that the afternoon milk was about to be sent out, I considered that I could not delay my inspection without neglecting my duty and endangering the public safety.

Accordingly I requested Dr. Coleman to accompany me into the sick chamber. We found the child pulseless at the wrist, the lymphatic glands of the neck enormously enlarged, and the palate and fauces diphtheritic. Apart, however, from the urgency of the circumstances, I declined to meet the medical attendant.

I am, Sir, yours obediently,

Surbiton, Nov. 22nd, 1880.

WM. PRICE JONES.

To the Editor of THE LANCET.

SIR,—In THE LANCET of Nov. 20th, in your notice of a case that was heard at the Kingston County Board of Magistrates, under the Dairies and Cowshed Order, I am held up as having largely offended against the unwritten law of professional etiquette in my conduct in the above case as medical officer of health for the district. My only object in writing is to deny these charges brought against me, and to say that I regret they should have been made, for I am certain, Sir, that were you in full possession of the true facts of this, in many ways, painful case, you would not have allowed these statements to have appeared to the prejudice of Dr. Jones and myself.

I saw the child without previously communicating with Dr. Collum

because I noticed preparations for sending out that afternoon's supply of milk, which it was my duty to stop if the case were one of diphtheria, as I had every reason to suspect, and as it proved to be. As health officer, I had a duty to perform, and urgency was my reason for acting as I did; but I afterwards went direct to Dr. Collum's house to give an explanation, but finding him not at home, left my card, and wrote that same evening to him what I had done. I had nothing to do with "rigorously cross-examining" Dr. Collum, but, with the full permission of the Bench, asked him a couple of questions relative to a personal matter, which I need not here enter into.

I am, Sir, yours faithfully,

OWEN COLEMAN, M.D.,

Medical Officer of Health.

Surbiton, Nov. 23rd, 1880.]

Mr. H. Nuttall.—We do not see that there would be any great harm in a number of medical men agreeing to have their dispensing done at one place by a registered chemist; but we think differently of the proposal for them to form a Joint Stock Company for the sale of drugs and compounding the prescriptions of other medical men. This is to erect another, if a small, Apothecaries' Company, and to bring medical men into trade relations with drugs, which is exceedingly undesirable.

Mr. George Holt.—The subject is a large one. Our correspondent should study "Morbid Craving for Morphia," by Edward Levinstein, M.D., published by Smith, Elder, and Co.

"THE CHLOROFORM DEATH-BILL FOR TWELVE MONTHS."

To the Editor of THE LANCET.

SIR,—In my paper on this subject in your issue of Nov. 6th I distinctly guarded myself against making any charge on users of chloroform. No blame has ever been attached to a medical man by a coroner for using this substance, and there is no danger and need be no hesitation in publishing the case. But the difference between the accounts of the past ten years and those of a previous decade, shows how many cases may escape notice. My object in writing was to urge that there now exists an opportunity of forming a better opinion on the comparative merits of the two anaesthetics than ever was the case before, either having been in extensive use for the past five years. It is quite possible that all the deaths from ether have not been published. A few days ago a friend told me he believed he had lost a case from bronchitis after its use. With his permission I hope to publish the case in a forthcoming list of deaths from anaesthetics, but I have yet to learn that the "ether frenzy" has been followed by a "chloroform reaction." Ether remains the favourite anaesthetic at most of our large English surgical centres, both in London and in the provinces, its use is extending in private practice, is the most generally used agent with our professional anaesthetists, and the rising generation of medical men are being trained to give ether rather than chloroform. I repeat that the argument "I never saw a death from chloroform" is only worth anything if the experience has been exceptionally large, say of 5000 or 6000 cases. At the most, chloroform is fatal only once in 3000 cases. Still even this mortality is serious if by any means it can be reduced.

I am glad to hear ether is used in the Edinburgh Infirmary; but with regard to a mixture with chloroform, I may remind your readers that if the death which occurred in the ophthalmic practice at the Edinburgh Infirmary at the close of last year is to be ascribed to this, it makes the fourth death in the past four years from the mixed anaesthetics.

Lastly, may I say a word against the practice of giving ether from a sponge or towel. I cannot but think that, from the patient's point of view, this must be most unpleasant. Dr. Saundby recommends that the inhaler should be held down tight in case of struggling. With Clover's inhaler struggling hardly ever occurs.

I remain, Sir, yours &c.,

Leeds, Nov. 1880.

ERNEST H. JACOB, M.D.

Indicus.—Hart's Army List is in no respect an official publication, and may be fairly conducted in the way that seems best to the editor; but we feel sure that if our correspondent called the editor's attention to the omission, the information would immediately be supplied.

Dr. A. M. Anderson, (Dundee).—Thanks.

THE BRITISH MEDICAL TEMPERANCE ASSOCIATION AT BRISTOL.

To the Editor of THE LANCET.

SIR,—In reply to the letter of Dr. Ridge contained in your impression of Nov. 13th, I will, with your permission, say that I cannot see any connexion between drunken soldiers in the Madras army in 1847, and the sons of temperance in England in the present day. At the same time I must admit that my "imperfect knowledge" will not allow me to take in the statement that a total abstainer or any other man can live for a hundred and sixty years, more or less, without at least a lengthened explanation of the circumstances; and, in conclusion, I would assure Dr. Ridge that my sympathy goes with him heartily in the cause he has taken up, if he will only leave off statistics, and confine himself to the advocacy of temperance purely on scientific and moral grounds.

I am, Sir, yours &c.,

Bristol, Nov. 13th, 1880.

TEMPERANCE.

* * * This discussion must now close.—ED. L.

HYPODERMIC INJECTION OF MORPHIA IN CHOLERA.

Mr. Chas. MacDowall wishes to correct an error in his letter published in our columns on the 16th ult. The word "cases" should, he says, have been put in the singular number.

Mr. D. A. Gresswell.—Our correspondent, by referring to THE LANCET of Nov. 13th, page 795, will find that his request has been already complied with.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Bristowe, London; Mr. Brodhurst, London; Dr. Godson, London; Dr. Coleman, London; Dr. Barton, Fulbeck; Dr. Burton, Liverpool; Mr. E. May, London; Messrs. H. S. King and Co., London; Mr. Turnbull, Dunbar; Mr. J. H. Craigie, London; Mr. S. Osborn; Dr. Collum, Surbiton; Dr. Steventon, Sheldon; Mr. McGill, Leeds; Dr. R. Lawson, Edinburgh; Mr. Peter White, Shetland; Mr. J. Beal, London; Dr. Batty, London; Mr. A. W. M. Robson; Messrs. Evans and Co.; Mr. Powkes, London; Dr. Gramshaw; Major Minto, London; Dr. G. Budd, jun., Clifton; Mr. A. E. Barker, London; Mr. Cree, Tahiti; Mr. Rawson, Taranaki; Dr. Eddowes, Loughborough; Captain Hobson, London; Dr. Forchhammer, Davos; Mr. Kesteven, London; Mr. W. Whitehead, Manchester; Mr. C. MacDowall; Dr. C. Hood, London; Mr. Nuttall, Leicester; Mr. H. Sewill, London; Dr. Gordon, Portland, U.S.A.; Mr. Morris, London; Dr. Duffield, London; Dr. Temple, Newcross; Mr. G. Barnard; Dr. Murray, Putney; Dr. T. S. Roskrige, Brighton; Mr. Melland; Mr. S. Murphy, London; Dr. Tatham, Salford; Mr. J. E. Jones, Abersoch; Dr. J. H. Clarke, London; Dr. T. Gurney, London; Mr. Reckitt, Newark; Mr. R. C. Lucas, London; Mr. Gyles, Dublin; Mr. Tuxford; Dr. McKelvie, Cromer; Mr. Fieldson, Norwich; Mr. C. Roberts, London; Dr. Hollis, Ipswich; Mr. Walker, Middlesbrough; Mr. Hanbury, Orchardside; Dr. Archer Farr, London; Dr. Philipson, Newcastle-on-Tyne; Miss Haslam; Dr. Eustace Smith, London; Mr. De la Motte, Staines; Dr. Emrys-Jones; Dr. Strahan; Mr. Story, Linslade; Mr. W. Bund; Dr. Newth, Hayward's Heath; Mr. Flynn, Lichfield; Mr. Denham, Southsea; Mr. Phillips, Leeds; Mr. Birkett, Weston-super-Mare; Mr. Grenfield, Chipping Sodbury; Mr. Brown, Dorchester; Mr. Bridgerman, Barnstable; Mrs. Rumball, Harpenden; Dr. Ruck, Ohio, U.S.A.; Messrs. Keith and Co., Edinburgh; Dr. Wilkinson; Mr. Custance, London; Fairplay; T.; M.D.; Læsus; M.; Justitia; The Registrar-General of Scotland; A. G. P.; H. B. F.; H. C. A.; G.; Two Students; Medicus; Doctor, Sheffield; G. P., York; Scrutator; A. B., Peterborough; Moderation; W. T. R.; J. D.; Enquirens; An Englishman; Ne Sutor ultra Crepidam; &c. &c.

LETTERS, each with enclosure, are also acknowledged from—Mr. Thomas, Egerton, Victoria; Mr. Campbell, Islay; Mrs. Jolliffe, Pembroke; Mrs. M. Brown, London; Mr. Maycock, Leamington; Mr. Westley, Stoneham; Mr. Elliott, Manchester; Mr. Emmett, Nottingham; Mr. White, Deltig; Mr. Eberle, Easingwold; Messrs. Cuff Brothers, Dover; Mr. Leaver, Stratford-on-Avon; Dr. Kendall; Dr. Ward, Oxford; Mr. Rowe, Stratton; Messrs. Harvey and Reynolds, Leeds; Mr. Newton, Mudge, S. Wales; Mr. Field, London; Mr. Eccles, Newcastle; Mr. Warman, Ramsgate; Medicus, Swindon; Z., Bath; Spes, Dawley; X. Y. Z., Brighton; M.D., Fairley; Negotium; Endymion; F.R.C.S., Barnsley; Physician; X.; P. R. S.; M. A. R.; S. E. R.; M. S., Carnarvon; J. G. C.; Omega, Manchester; Assistant, Sheffield; B. D. F.; Permannens; Medicus, Sheffield; Undergraduate; Surgeon, Meesham; Medicus, Liverpool; A. E. D.; Ilion; M.D.; &c.

Norwich Argus, Chard and Ullminster News, Gravesend Argus, Chemists' Journal, Il Morgagni Giornale, Anglo-American, Public Opinion, Rangitikei Advocate, Bradford Daily Telegraph, Colonies and India, Daily Picayune, Irish Times, Lincolnshire Chronicle, Our Boys' Paper, Bradford Observer, Voice, Hampshire Telegraph, Daily Bristol Times, Bridlington Free Press, Sunderland Daily Echo, Colchester Gazette, La Independencia Médica, &c., have been received.

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Agent for the Advertising Department in France—J. ASTIER, 66, Rue Caumartin, Paris.

Medical Diary for the ensuing Week.

Monday, Nov. 29.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS. — Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; on Tuesday, 9 A.M.
MEDICAL SOCIETY OF LONDON. — 8½ P.M. Dr. T. Gilbert Smith, "On a Case of Perforation of the Stomach due to Hydrochloric-acid Poisoning." — Mr. Richard Davy, "On the Advantages of Ogston's Operation in the Treatment of Genu Valgum." — Mr. Samuel Benton will show a Case of Recovery from severe Knock-knee, treated by Tenotomy and Instrumental means.

Tuesday, Nov. 30.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 3 P.M.

Wednesday, Dec. 1.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
ST. THOMAS'S HOSPITAL. — Operations, 1½ P.M., and on Saturday at the same hour.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
KING'S COLLEGE HOSPITAL. — Operations, 2 P.M., and on Saturday at 1 P.M.
LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL. — Operations, 2 P.M., and on Saturday at the same hour.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN. — Operations, 2½ P.M.
SOCIETY FOR THE ENCOURAGEMENT OF ARTS, MANUFACTURES, AND COMMERCE.—8 P.M. Mr. W. H. Preece: "The Photophone."
EPIDEMIOLOGICAL SOCIETY. — 8 P.M. Dr. E. Dickson, British Delegate to the Ottoman General Board of Health, "On the Outbreak of Plague in the Province of Astrakhan, 1878-79."
OBSTETRICAL SOCIETY OF LONDON.—8 P.M. Specimen: The Pygopagi Twins will be shown by the President.—Paper: Dr. Priestley, "On the Induction of Abortion as a Therapeutic means.—And other communications.

Thursday, Dec. 2.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL. — Operations, 2 P.M., and on Friday at the same hour.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M.
HARVEIAN SOCIETY.—8½ P.M. First Harveian Lecture, by Dr. James E. Pollock, "On the Prognosis and Treatment of Chronic Diseases of the Chest in relation to Modern Pathology."

Friday, Dec. 3.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, Dec. 4.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

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Clinical Lecture

ON THE

INTERDIAGNOSIS OF INSENSIBILITY
FROM VARIOUS CAUSES.By REGINALD SOUTHEY, M.D. OXON., F.R.C.P.,
PHYSICIAN AND LECTURER AT ST. BARTHOLOMEW'S HOSPITAL.

GENTLEMEN,—Questions somewhat of the following kind are likely to be put to you one day, and are full alike of clinical interest and medico-legal importance:—What is the matter with an individual who has been picked up on the road insensible, irrational, or inarticulate, and about whom no antecedents whatever are known? Is he ill, drunk, drugged, suffering from brain concussion, or from coma after an apoplectic or epileptic fit?

Syncope, trance, catalepsy, and coma are names severally used by medical writers to designate states of insensibility which the lay public group vaguely under fits.

Syncope is fainting; it may be otherwise described as a condition of body in which there is a death-like pallor, with loss of muscular power and of consciousness. Trance is a state of death-like faintness in which, however, some consciousness is retained, although the person is unable to move or speak. A faint is ordinarily (when an individual has not lost a very large amount of blood) an exceedingly transitory affair. A person collapses rather than falls to the ground in a faint; his knees bend under him, he subsides into the sitting posture, his head drops forward, and by the time the head has thus sunk to the level of the heart, or below it, the circulation through the brain becomes sufficiently restored for consciousness to return. In a faint a person seldom bruises his face. Upon waking up he may feel sick or giddy, or alarmed, but his brain resumes its thinking function usually at once and entirely.

In states of trance—of which I possess no personal experience, but may refer you to accounts to be read in Smith's "Forensic Medicine," pp. 540-542, and Forsyth's "Medical Jurisprudence," pp. 125-130, 155, and pp. 165-188—it appears that the body is to all appearance inanimate, and there is no power to move a muscle, the limbs meanwhile remaining perfectly flexible. The peculiarity attached to this condition is that the individual may hear, see, and remember all that goes on about him. There is no perceptible pulse or respiration, and hence trance has been mistaken for death, but we possess no recent or philosophical observations upon this form of faint. The recorded cases do not tell us of the temperature, or whether or not the muscles react to galvanic stimulus. Burial alive in this condition, except at sea, is highly improbable, but in no case would you be justified in making a post-mortem or consigning a body to burial unless you were satisfied from the presence of rigor mortis or appearances of putrefaction that death was actual. Catalepsy, again, is a rare inanimate condition; still I once had a case under my care which accorded well with the descriptions that have been given of it.

A young man of nineteen was picked up in Fleet-street insensible, not fallen, but standing stiffly, unable to move or to articulate. Here are the features that distinguish this state, all which he presented in other similar seizures which he had for several days afterwards while in the hospital. Thus while carrying something about, or sitting up in bed, or attempting to poke the fire, his eyes would suddenly acquire a fixed gaze, and he would remain arrested as it were in his act. We could set his limbs in any posture we pleased, and there he remained like a mesmerised cock, to the amusement of the nurses and other patients. I watched him on several occasions. There was not the slightest twitching or spasm of any of his muscles. His pulse was slow, and so were his respirations, his extremities cold and flabby, the axillary temperature remained natural. He would bear pinching or pricking without flinching, and took no account of our bawling his name close by his ear. There was no reason to think that he was feigning, and it

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would be difficult, I fancy, to feign and act a disease so well as he did. To quote from Dr. Copland's Dictionary, vol. i., p. 292: "The statue-like appearance and muteness of the cataleptic alone suffice to distinguish this disease. There is neither the lividity of asphyxia, the pallor and general flexibility of syncope, the stertor of coma, the paralysis of apoplexy, nor the movement and dreamy mental automatism of somnambulism."

Coma, however, because arising from very various causes, is the single one of the several states mentioned by them as likely to offer much difficulty in diagnosis. Coma may be due—1st. To pressure exercised on the brain, arising (a) from within the ventricles, effusion therein; (b) from depressed fracture; (c) from effusions outside the brain between hair and membranes. 2nd. To alteration in molecular state of brain from some concussion, contusion, bruising, œdema, apoplectic extravasation. 3rd. To brain poisoning by insufficiently oxidised blood, uræmic blood, narcotics, anæsthetics, inebriants.

I cannot give you certain symptoms for diagnosing each of these causes of coma, but I may aid you in excluding some of them, and thus help you to arrive at a correct diagnosis in particular instances. The profound coma produced by serous effusion into the ventricles of the brain, to judge from what I have seen in dropsy, renal or cardiac, and by what happens in tubercular meningitis, is gradually reached through a stage of sopor. The individual at first is sleepy, then dreamy and slow of apprehension, difficult to awake, and finally incapable of being roused at all. Reflex movements may be excited for a while, later the face is pale, the temperature falls. The breath is either Cheyne-Stokes or principally diaphragmatic and stertorous. At first there is power to swallow, afterwards acts of deglutition fail to be coördinated. The pupils are non-characteristic, but more often dilated than contracted. (a) The coma due to depressed fractures, or to effusion of blood or pus or fluid between the brain and the membranes, is as sudden in its advent as its cause may have been. Usually the breath is stertorous, the pupils are contracted, and the temperature is normal or above normal, the skin perspires profusely. No or only slight reflex response is made to galvanic or cutaneous stimulation.

You will be guided to the diagnosis of fractured skull by bleeding or oozing of bloody serum from the ear or nose, or by ecchymosis of the eye, and towards large apoplectic effusion of blood upon the surface of the brain by the stertor of the breathing and complete absence of reflex irritability. (b) When the coma is due to alteration in the molecular state of the brain, local contusion, or apoplectic extravasations, the face is usually pale, the temperature fallen below normal; the reflex irritability, although variable, is apt to be greater on one side of the body than on the other; the pupils may be unequal, and evidence of some hemiplegia is generally discoverable in muscles of the face or eye.

It seems like hair-splitting in diagnosis to dwell upon what may aid you to distinguish between coma due to general compression of the brain substance and coma due to more localised brain injury, with general circulatory and nutritional disturbance, but I give you the best clues I can, such as have served me sometimes well; the evidence of any hemiplegia in a case of profound coma is always in favour of localised injury of brain rather than of general pressure.

The coma may, however, be due to some brain-poisoning, the sources of which I have grouped under heading 3. Now, deficiency of oxygen and excess of carbonic acid in blood produces coma, as, for example, in the inhalation of laughing-gas or nitrous oxide, when the face is black, the veins turgid, the skin hot, the muscles irritable, and reflex spinal irritability is heightened.

Again, the blood-poisoning may be due to the action of some gas inhaled which interferes with or arrests the oxygen-carrying properties of the blood-cells. Sulphuretted hydrogen and carbonic oxide both appear to act in this way. The circumstances of the accident, the conditions under which the person was found, as well as some significant clinical appearances, already discussed by me, should facilitate the recognition of this source of coma. This blood change, if profound, is not recovered from.

Brain-poisoning and coma by anæsthetics and inebriants are usually detectable by the odour of the breath of the comatose person.

You may occasionally feel a little uncertain as between

apoplexy and dead drunkenness. We had an illustrative case the other day in our wards. A man who had been intoxicated by rum was admitted, and very profoundly comatose he was. No reflex movements were excitable; his face was cyanotic; there were gurgling râles in his throat, and I believe he might have died suffocated if I had left him in the position in which the nurse had placed him in bed, for he had a large tongue and uvula, with somewhat swollen and oedematous fauces; and as he lay on a flat bolster, with his head back, his tongue slipped back in his mouth, and nearly closed the opening of the glottis. Propping him up with a bed rest, and pulling his tongue forwards, his breathing quickly improved, and his face assumed a less blue colour. Still for some ten minutes I was unable to get any movement of either leg by tickling the soles of the feet, and the pupils were unequal, one rather smaller than the other, and both quite irresponsive to the stimulus of light. It was true he smelt of liquor, but he was quite properly admitted by the house-physician, since treatment and lapse of time alone could decide whether his coma was due to alcohol alone, or to disease *plus* alcohol. You may remember what I ordered in that case, as a piece of practice which is prompt, rational, and attended by no possible risks—the throwing up the rectum of a pint and a half of cold water, with a tablespoonful of common salt dissolved in it. It brought him out of his profound coma at once, for he asked for a night-stool almost directly afterwards. The stomach-pumping and belabouring with a galvanic battery of a comatose person, who may be the subject of gravescent apoplexy, belong to the surgery of the past, when active practice corresponded too closely with lynch-law-like punishment.

In every case of coma count the respiration, observe the quality of the breathing, and its ordinary effect upon the blood by the colour of the lips. Examine the pulse carefully for quality, frequency, regularity. Touch the eyeballs, examine the pupils for reaction to light, their condition—dilated, contracted, unequal, irregular; tickle the soles of the feet, to test what amount of reflex muscular action can be coördinated. The breathing in most states of coma is heavy and slow; notice if it be stertorous, Cheyne-Stokes-like, wholly diaphragmatic, or if the intercostals act. Next take temperature in the axilla or rectum. A remarkably low temperature, four degrees or more below normal, betokens usually uræmic coma, acetonæmia, or grave concussion of the brain. After epilepsy, apoplexy, intoxication, the temperature is more often normal, or even slightly above normal.

Uræmic coma will again be separately distinguished most often by some slight oedema of eyelids or extremities, wax-like pallor, bronchitic sounds, very foul breath, smelling of beef-tea; a brown furred tongue, pearly conjunctivæ, and dilated pupils bespeak urea poisoning. Diabetic coma is indicated by oppressed noisy breathing, effected by abundant muscular effort, but attended by some lividity in evidence of impaired oxidising changes at the pulmonary capillaries, of which we do not at present understand the exact cause.

In the coma that has succeeded an epileptic fit you may expect to find bruises, torn or dirtied clothes, indications of the tongue having been bitten.

Finally, the mode of recovering consciousness after intoxication differs much from what is observed in persons recovering from the coma that succeeds an epileptic fit. After intoxication I have noticed that while the sense of hearing is recovered soon, the lower attributes of mind, the sensorial instincts, reappear early, the individual who was comatously drunk hears correctly before he sees correctly, and sometimes before he can stand. It is curious to notice the manner in which he repeats a word of your question over and over again, like a parrot, and perceive how some grotesque idea grows out of the jingle or jangle of a phrase mumbled over more or less thickly.

How differently do the mental faculties recover after brain concussion and commotion as after epilepsy. How the intellectually reduced “*égomet*” is in a dreamy state and staggers in his gait, hears questions put to him correctly, answers them articulately, apparently rationally, but having done so straightway forgets what he has said, cannot tell where he is or what he is or was doing. He is conscious of some confusion in his own memory, and shows often some high measure of judgment in his distrust of himself, and says: “I cannot recollect where I was going.”

Intellectual wholeness or sanity lies outside to-day’s

lecture, and I mention this merely as a clue to past coma, whether from drink or cerebral commotion.

It remains for me to point out the distinctive features of opium coma. There is profound stupor, with closed eyelids, contracted pupils, upturned eyeballs; the face is pale, the skin cool, clammy; the forehead beaded with heavy perspiration; the limbs are lax, but, for a while, reflex motions are readily excited. The respiration now slackens, falls in frequency, perhaps, as I have seen it do, to as low an ebb as 6 per minute, the pulse remaining fair at 80. The coma now is very profound; you may prick, stimulate by galvanism, call, flick, stimulate by what means you please, little or no further purposive response is returned by coördinated muscular movements. The body will not walk; it is only dragged about, if the advice given has been to walk the man about. Next the lips get livid; the surface of the body colder; the breath is sobbing, and at long irregular intervals; the pulse hardly to be felt at the wrist, and death is imminent by asthenia or sudden failure of the heart’s action. Now for what may you mistake this coma, and what may be most easily confounded with it? Apoplexy into the pons Varolii, since, as was pointed out long since by Dr. Wilks, who illustrated the fact by several examples of cases that had fallen under his observation, apoplexy into the pons is attended by great contraction of the pupils.

If, then, in any case of profound coma, with extremely contracted pupils, you suspect opium to be its cause, but have no corroborative fact, no laudanum bottle, no opium-smelling substance, or mark of subcutaneous morphia syringing upon the body, or soot of opium-smoking inside the nostril to aid you, remember that the case may still be apoplexy into the pons, a source of coma not likely to be benefited either by bastinado, beating with towels, walking about, or all the extracts of coffee which can be pumped into the body at either extremity.

Clinical Lecture

ON A

CASE OF STRANGULATED HERNIA.

Delivered at Westminster Hospital

By GEORGE COWELL, F.R.C.S.,

SENIOR SURGEON TO THE WESTMINSTER HOSPITAL, AND LECTURER ON SURGERY.

GENTLEMEN,—The patient, Richard M—, whose case I bring before you to-day, was admitted into Northumberland ward on Wednesday, May 5th, with urgent symptoms of a strangulated left oblique inguinal hernia. He is a spare, thin, nervous-looking man, forty-two years of age, and by occupation a groom. The history that he gave was this. The hernia first appeared in the left groin about twenty years ago, coming down suddenly whilst he was jumping a fence. The size of the rupture was described as that of a pigeon’s egg, and the patient succeeded in reducing it himself about four hours after it had appeared. He was very properly advised to get a truss, and he seems to have worn it for about six months, when he left it off, supposing that his rupture was cured. The fact that the hernia did not return for nine years shows the immense importance and advantage in such cases of the immediate application of a properly-fitting truss. On its recurrence after this interval the patient states that he again succeeded in returning it, and that he resumed his truss. About two years ago the breaking of his truss led to his discarding it, and shortly afterwards the hernia came down whilst the patient was riding, and this time he failed to reduce it. He was admitted into the Great Northern Hospital, where he remained for three days. All attempts to reduce the hernia failed, and symptoms of pain and vomiting rapidly ensued. However, on the third day, when in a warm bath, the patient succeeded in reducing the hernia himself, and the symptoms ceased. His truss was repaired and resumed.

About the same time a small, easily-reducible hernia, appeared in the right groin.

On the morning of the 5th of May the left hernia came down, the patient says, without any straining or exertion, and a few hours before midnight he presented himself at the Westminster Hospital with a large inguinal hernia of the left side, with some symptoms of strangulation, considerable abdominal pain, and vomiting. The house-physician, who was acting for the house-surgeon, placed the patient in a warm bath, and reported that whilst applying the taxis he felt something go up, but found it impossible to reduce the bulk of the rupture. The patient was put to bed, an ice-bag was applied to the tumour, and two grains of opium administered. The pain, however, continued during the night, there were great restlessness and continual retching and vomiting, and at 7 o'clock the next morning (June 6th) I was called to the case.

The face of the patient then presented an expression of extreme anxiety; the pain appeared to be intense in the neighbourhood of the inguinal canal and about the umbilicus. The rupture itself was soft and doughy, and evidently the greater part of its contents was composed of omentum. This fact was made out more fully when the patient had been placed under the influence of ether, and as it was found impossible to reduce the size of the tumour by the taxis the operation was proceeded with. The incision was made over the neck of the sac; the coverings of the hernia, which were very thin, were opened in the usual way, and the seat of stricture was divided. Still no return of any of the contents of the hernia could be effected, and it was found necessary to open the sac. There was no fluid in the sac, and no intestine to be seen. At the neck of the sac, however, was a very small portion of intestine, which at once slipped through the constriction on the pressure of the finger introduced into the sac. All the rest of the contents was omentum, a small portion of which was adherent to the interior of the sac. It was found impossible to return more than a very small part of this omentum, and it was removed, with the exception of a small portion that was adherent. This was left in the hope that it might form a plug for the sac. The plan adopted for the removal was the application of a number of catgut ligatures (six) to the various portions of the omentum; the mass was then cut off, and the stump of the omentum gently passed in detail within the abdominal cavity. The wound was closed with three sutures, and dressed with lint dipped in carbolic oil, and the usual pad and bandage were applied. The patient was then placed in bed, and was ordered to take fifteen minims of tincture of opium every four hours. He had ice to suck, and later, beef-tea was administered, a teaspoonful at a time. Throughout the day he was free from his previous symptoms.

May 7th.—The patient had passed a somewhat restless night, and this morning there had been some return of the retching. There is slight tympanites. The temperature is normal. Effervescing mixture with dilute hydrocyanic acid was given in addition to the opium.

The retching, with occasional vomiting, continued for several days. On the 10th a small hernia was discovered at the umbilicus, the patient having called attention to pain which had come on during the night whilst vomiting. He stated that he had previously had a similar hernia at the same spot. It was not strangulated, as it could be emptied, but it could not be reduced until two days later. Meanwhile the restlessness and vomiting increased, delirium came on, and it was with great difficulty that the patient could be kept in bed. There was no increase of the tympanites. Hypodermic injections of morphia were substituted for the opium, and on the 11th a turpentine enema was administered. This was followed by a moderate evacuation from the bowels, the first since the operation. The symptoms did not cease until about six hours after the reduction of the umbilical hernia on the 12th. From the cessation of the vomiting the patient made an uninterrupted recovery. He was not allowed to take solid food until the 21st, the fifteenth day after the operation, by which time the wound was almost healed. He has now been furnished with a well-fitting double truss, and leaves the hospital to-day (June 10th).

There are several points about this case which are both interesting and instructive. The rapidity with which the symptoms of strangulation showed themselves on more than one occasion, and the extreme severity which these symptoms assumed within less than twenty hours of the reputed descent of the bulk of the hernia, are fortunately not very

frequent, and would seem to depend upon the existence of a temperament of extreme nervous irritability; but when severe symptoms do rapidly occur, they must be met with a similar promptness on the part of the surgeon. Many more lives are lost by postponing the operation too long than by an undue haste to perform it. When once the surgeon is convinced that a hernia is strangulated, and that he cannot reduce it by ordinary means, every hour that the operation is postponed increases the risk of the patient. There is one class of cases, however, where great care is required lest an operation be too readily and needlessly undertaken; I mean in cases of inflamed herniæ. It must not be forgotten that all or most of the symptoms of strangulation may be produced by the presence of inflammation in a hernia, and even by enteritis. In the former case the hernia would be tense, painful to the touch, and irreducible; and the latter condition might coexist with an irreducible hernia. The symptoms in both cases might, without care, be taken for symptoms of strangulation, and operative interference would almost certainly be attended by a fatal result. In the present case inflammation was certainly not the cause of the symptoms; the hernia had been down too short a time, and showed neither tension nor tenderness.

Although the bulk of the hernia was omentum, still the severity of the symptoms rendered it probable that some portion of intestine was strangulated. I remember a case that was under my care in Queen Anne ward ten years ago, and which is reported by Mr. Hothouse in his book on "Hernial and other Tumours," where the patient, aged seventy, had an old irreducible femoral hernia, composed chiefly of omentum, but who died (she refused to be operated upon) with a strangulation of an exceedingly small knuckle of intestine which had found its way into the neck of the sac. This proved to be the case in the present instance, and it is probable that the shape of the omental mass rendered all attempts to reduce the strangulated intestine nugatory until the sac was opened and the finger could be passed within it to its neck.

The manner of dealing with the omentum was perhaps novel. The usual plan is to apply a ligature round the mass, and by means of it retaining the stump in the neighbourhood of the inguinal canal when it has been reduced, in order that the discharge from it may escape by the wound, and that it may form a permanent plug. Instead of this, I tied the omentum piece by piece with several ligatures of carbolic catgut, cut them off short, and trusted to the portion which was adherent to the sac, and which I did not interfere with, to retain the stump of omentum, or at all events one end of it, in the neighbourhood of the inguinal canal. This plan appeared to be more suitable in the present case, and certainly the omental vessels were more effectually secured separately. It is too soon to say if the result will be the obliteration of the sac by inflammatory adhesion, but at present there seems to be a firm cord occupying the position of the sac.

The remaining point of interest to which I will allude was the presence of three herniæ in this patient, and the complication which the occurrence and difficulty of the umbilical hernia produced during the progress of the case. It is difficult to say in what proportions the inflammation of the portion of intestine which had been strangulated, the subacute peritonitis, and the umbilical hernia severally contributed to maintain the retching and vomiting that recurred twenty-three hours after the operation, and persisted for so many days. The first two conditions probably were the primary cause of that recurrence, but there is no doubt that the delay in reducing the small umbilical hernia was a very material element in the persistence of those disagreeable and dangerous symptoms.

BEQUESTS ETC. TO MEDICAL CHARITIES.—Miss Jessie Landseer, late of Kensington Park Gardens, bequeathed £100 each to St. Mary's Hospital, the Brompton Consumption Hospital, the Middlesex Hospital, the Metropolitan Free Hospital, the Hospital for Sick Children, Great Ormond-street, the West London Hospital, the Westminster Hospital, the London Fever Hospital, the National Hospital for the Paralysed and Epileptic, the British Home for Incurables, and the Royal Hospital for Incurables. The Goldsmiths' Company have given £50 in aid of the funds of the Royal Hospital for Children and Women, Waterloo-road. The Mater Misericordiæ Hospital, Dublin, becomes entitled to a sum of £375, and £175 yearly, by the will of the late Very Rev. Anthony Magee, of the Priory, Clifden, Co. Galway.

ON "TENDON-REFLEX" AS AN AID TO DIAGNOSIS IN DISEASES OF THE SPINAL CORD.¹

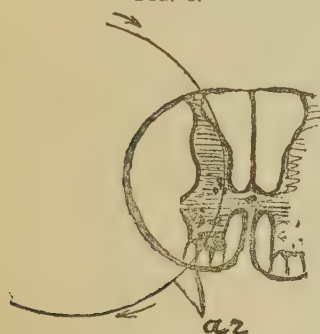
By THOMAS BUZZARD, M.D., F.R.C.P.,

PHYSICIAN TO THE NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC.

(Concluded from p. 844.)

WE have now to suppose the case of the patellar tendon-reflex being absent in a patient who is either entirely confined to his bed or only able to walk with some difficulty. The quadriceps extensor is found more or less wasted, we will say, its response to induced currents being either below the normal standard of excitability or lost altogether. In the latter case there will be inability to contract the muscle by voluntary effort. Such a condition necessarily indicates that the muscle is cut off to some extent by some means or other from the trophic influence of the spinal cord. The seat of this influence is known to be in the large ganglion-cells which lie in the anterior horn. Now, it will be seen, if we look at the diagram (Fig. 3), that the interruption in this

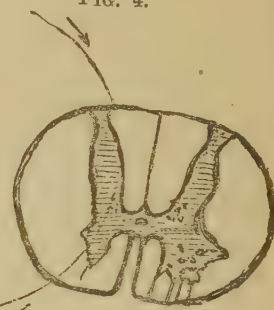
FIG. 3.



case may exist either in the anterior root outside the cord, the short portion of it within the cord, or in the anterior horn of grey matter itself. As regards the second of these possibilities, nothing is known for certain that will enable us to localise lesion in that particular portion of the anterior root. For the rest, absence or marked decrease of reflex, along with muscular wasting and loss of faradaic excitability, may be caused by neuritis of a mixed spinal nerve, or it may result from spinal meningitis, involving the anterior roots either alone or in conjunction with the posterior roots. The precise cause for the interruption in such a case can only be determined by the consideration of collateral circumstances, into which I need not enter at length. It may be remarked, however, that if the symptoms described are accompanied by pain and tenderness in the nerve trunk, and some cutaneous insensibility, this sensory disturbance makes it evident that the cause of interruption is in the mixed nerve (in which the motor and sensory roots are combined), and not in the anterior (motor) root alone. I have recorded cases of neuritis in which marked decrease of tendon-reflex occurred in these circumstances.² All that is sure from percussion of the tendon and examination of the muscle is that a break exists somewhere on the motor side of the nervous arc. Nor may there be anything in the condition of the muscle in such a case to distinguish it from that which obtains when the break in the nervous arc is brought about by atrophy of the large ganglion-cells in the anterior horn. In the rough diagram (Fig. 4) it is seen that the line, indicating the nervous arc, passes through an anterior horn which is shrunk and atrophied, and in which there is but little trace of ganglion-cells to be observed, in striking contrast to the number and size of those in the anterior horn of the other side. In this shrunken anterior horn, then, the

"fault" occurs which causes absence of tendon-reflex. Now atrophy of the ganglion-cells of the anterior horn occurs in various conditions. It often happens as part of a diffuse myelitis, involving not only the anterior horn, but more or less completely the whole transverse section of the cord. In the acute atrophic paralysis of infants and adults (polio-myelitis anterior acuta, commonly called infantile paralysis), there is acute myelitis, which is practically confined to the anterior horn of grey matter. In this disease the loss of faradaic excitability of the muscles is very constant and marked. In the chronic malady, however, in which the same

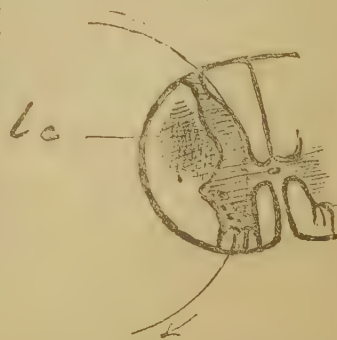
FIG. 4.



structure is affected (progressive muscular atrophy, protopathic amyotrophy—Charcot), it is somewhat remarkable that, as Duchenne has shown, no decrease of faradaic excitability is to be noticed in the muscle. (This is no doubt the rule, but I have seen exceptions to it.) In the former case apparently a mass of ganglion-cells is suddenly, or at least very rapidly, subjected to a change which arrests their function, and which is followed by atrophy of more or less of their number, of which a varying proportion recovers. In the latter disease it would seem as though, in consequence of a slowly creeping lesion, the ganglion-cells atrophied gradually, leaving those of them which are spared unaltered, or at least with their function unimpaired, until they in their turn are invaded and destroyed. The relation of tendon-reflex to progressive muscular atrophy is a good deal complicated by the circumstance of there being at least two classes of this affection—the protopathic amyotrophy and the deuteropathic amyotrophy of Charcot. In typical cases the former is a very slowly progressive muscular atrophy, the gradual loss of power of the patient being in proportion to the extent to which the anterior horns of the cord have been invaded and the muscular system correspondingly atrophied. The latter begins with loss of power (paralysis) independent of muscular atrophy, and is succeeded by a rapid muscular wasting of some or all of the muscles previously paralysed. It is this form which tends to extend into the medulla oblongata and to occasion death by destruction of the ganglion-cells essential to life, which are continuous upwards with those of the anterior horns of the spinal cord. The duration of this form is much shorter than that of the other. In the protopathic form the tendon-reflex may exist, to some extent at least, for a certain time, to be lost, however, when the atrophy has advanced, so that it is impossible to say that the behaviour of the tendon-reflex is at all characteristic. The break which causes its absence in such a case is in the anterior horn, as in Fig. 4.

The condition of the tendon-reflex in the deuteropathic form is extremely interesting. Before considering it, however, I should like to draw attention to Fig. 5. In this diagram there is a rude representation of sclerosis of a lateral column of the spinal cord. In a previous diagram (Fig. 2) the position of sclerosis of the posterior root-zone was indicated. It was shown that if the afferent fibres from the tendon go, as we believe they do, with the sensory roots, they pass through the outer part of the posterior column, and consequently are exposed to a lesion which produces atrophic changes in them. The nervous arc is therefore "cut" at this point, and that absence of tendon-reflex results, which is so conspicuous a feature of tabes dorsalis. The position of sclerosis of the lateral column, which we are now considering, is, it will be observed, altogether outside the nervous arc by which we

FIG. 5.



¹ In the preceding portion of this paper, published last week, I referred to a case of hemi-paraplegia under the care of Dr. Ramskill, and after mentioning that there was paralysis with extensive wasting of the left lower extremity, and anesthesia (without any motor complication) in the right lower extremity, I went on to state that the patellar tendon-reflex was absent in both legs, and attributed its disappearance in the right limb to the fact that the lesion of the cord, although probably to a large extent confined to the left segment, was not absolutely so. I thought that it encroached a little upon the right half of the cord, far enough to interfere with the integrity of the grey matter to a certain extent without affecting, however, the anterior horn. I ought to have mentioned that this view, which appears to me to be necessary in order to explain the break in the nervous arc subserving patellar tendon-reflex in the right limb, is supported by the existence of a patch of cutaneous anesthesia, about eight inches by four, in the neighbourhood of the left great trochanter.

² THE LANCET, April, 1879.

suppose the stimulus from the tendon to the muscle to be transmitted. We should expect, therefore, to find that in sclerosis of a lateral column the tendon-reflex would not be absent. And that is the case. The tendon-reflex is never lost as a result of uncomplicated sclerosis of a lateral column.

So far from being lost, the tendon-reflex is indeed increased, frequently to a very surprising extent. Ankle clonus (also knee clonus—Erb, Gowers, Waller) may be, in these circumstances, produced not only (in the case of ankle clonus) by sudden dorsal flexion of the foot,³ but by the patient's own movements, as well as by light blows on various structures (bones, muscles, tendons), and sometimes even by the slight vibration produced by an accidental jar of his bedstead. This excitability to various kinds of stimulation is, however, by no means constant. One sees in certain cases of lateral sclerosis something like the converse of what I have described as occurring in tabes. There is excessive tendon-reflex, knee clonus, as well as ankle clonus, yet the muscles concerned will not respond to a blow, and need a distinctly stronger faradaic current than in health to cause their contraction.

The question of prognosis is so mixed up with that of diagnosis in regard to the occurrence of ankle clonus, that the two may be considered together. The facts appear to show that in all cases the occurrence of increased tendon-reflex in anything like a marked form signifies that from some cause the inhibitory influence of the higher centres is no longer being normally excited. It always means apparently that something has come in the way (at some point or other) of the natural propagation of nervous impulses from above. It is generally accepted that impulses from the highest centres (so-called volitional impulses) travel to the ganglion-cells of the anterior horns by the antero-lateral columns of the cord (pyramidal tracts). The fact that by what is commonly called "an effort of the will" we can control to a certain varying extent the reflex actions which are subserved in different parts of the cord would seem to show that in all probability the restraining influence which is continually and unconsciously being exerted over certain spinal reflexes in a state of health is conveyed by this same channel.⁴ Now it is when these (antero-lateral) columns are most extensively invaded by sclerosis, that is to say, when the resistance to the propagation downwards of nervous impulses from above is greatest, that we obtain the most marked ankle clonus. When there is a history pointing to myelitis at some portion of the cord, followed by a more or less pronounced rigidity of the limbs, with excess of tendon-reflex which has existed for some considerable time, say upwards of a year or two, we shall hardly be wrong in assuming that a change has taken place in the lateral columns which is likely to be permanent. And so also in reference to the like symptoms often consequent upon an attack of hemiplegia. An excess of reflex combined with more or less rigidity of the limbs, if it has lasted for months, may be considered as indicating a structural change in the lateral column which is unalterable. But this is by no means the case when the symptoms have not been of long standing. I have under my care at the present time in hospital a young woman who came in last June on account of paraplegia of ten months' duration, referable, as it seems, to a subacute myelitis in the dorsal region of the cord. On admission there was such a spastic condition of the legs that they contracted when handled or upon any attempt being made to flex the joints, which were stiff. There was great excess of patellar tendon-reflex, and ankle clonus was readily produced in a marked degree in each foot. The patient has gradually improved. She can stand and walk with very little help. There is no longer any marked spastic rigidity, and ankle clonus cannot now be obtained in either foot.

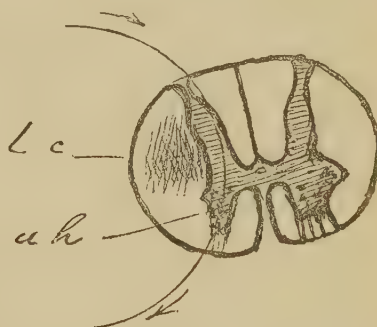
In hysteria the tendon-reflex is, so far as I have yet seen, usually increased, and in several cases I have witnessed the occurrence of ankle clonus, the possibility of producing which has entirely, and in one case suddenly, ceased on the patient's recovery. I submit that this fact is an

extremely important one in reference to the causation of the phenomenon. There would seem to be but little doubt that in hysterical paraplegia the cerebral influence which is propagated downwards in health by the antero-lateral columns of the cord is more or less in abeyance. It may be suggested that the reason why an hysterical girl does not walk is because the nervous impulses from above, which ordinarily act upon the various spinal centres for progression, do not arrive there. The absence, then, of impulses downwards through the lateral columns seems to result in an effect upon the tendon-reflex which is very similar to that occasioned by the resistance to their propagation through the columns which is interposed by the structural change occurring in sclerosis.

It is necessary to remark, then, that the existence of ankle clonus cannot be considered conclusive evidence of a structural lesion of the spinal cord. It may be, to use a term which is generally understood, although scarcely capable of exact definition, "functional." I have never seen, however, in a case of hysteria an excessive degree of ankle clonus. The automatic flexion and extension movements of the foot will go on for perhaps a dozen times, becoming gradually weaker, and ceasing spontaneously.

The behaviour of the tendon-reflex in deuteropathic amyotrophy (lateral amyotrophic sclerosis) is important. Even when the disease is tolerably far advanced, and a good deal of atrophy of the muscles has taken place, it will be often found that the tendon-reflex not only remains, but may be in some excess. I have a patient now under observation who presents a typical example of the disease. He cannot stand without help, and the muscles of his thighs are not only much wasted, but their faradaic excitability is diminished, and they hang flabbily from his bones. Not only is the patellar tendon-reflex, however, in excess, but there is some ankle clonus occurring when he plants his foot in certain positions. I would suggest the following as an explanation of such cases as these (Fig. 6). So long as a certain number

FIG. 6.



of ganglion-cells remain intact in the anterior horn the nervous arc (for tendon-reflex) is complete. Now, if the lateral columns were sound, the inhibitory influence from above transmitted by them would be potent enough to hold the reflex, in its necessarily diminished strength, in complete restraint (as, for example, in infantile paralysis), and no response would therefore occur to a blow on the tendon. But the lateral column is diseased; the check is consequently removed, and the reflex manifests itself often with great energy. As a matter of course, however, it is not so strong as in that form of lateral sclerosis which is unattended by muscular atrophy.

In an earlier part of this paper I have remarked that the response of the quadriceps to a blow on the patellar tendon "almost always signifies that the nervous arc is not seriously interrupted in that part of the spinal cord which gives origin to the lumbar plexus." In such a case as we are now considering (lateral sclerosis with muscular atrophy), it is evident that now and then the tendon-reflex may be apparently normal, and yet the spinal cord at the part which is concerned be affected with atrophy of some of the ganglion-cells in the anterior horn. The defect in the reflex mechanism is, as it were, just balanced by the defect in the mechanism which restrains reflex. It is necessary to bear this possibility in mind, in order to avoid an error, which, however, a little inquiry into the collateral circumstances will easily prevent.

³ I would refer to a lecture of mine in THE LANCET, Aug. 10th, 1878, for a detailed description of this phenomenon.

⁴ Dr. Hughlings Jackson believes that the rigidity in hemiplegia results because by atrophy of the fibres of the lateral column of the cord "cerebral influence" is taken off from the anterior horns, and thus the "cerebellar influence" upon them is no longer antagonised. On this principle, too, he would explain the increased tendon-reflex in cases of hemiplegia; *mutatis mutandis*, as regards lesions taking off the influence of the cerebellum.

ON CHIAN TURPENTINE AND ITS USE-
LESSNESS IN CANCER.

By HENRY MORRIS, M.A., M.B.,

SURGEON, AND SURGEON TO THE CANCER OUT-PATIENT DEPARTMENT, OF THE MIDDLESEX HOSPITAL.

(Concluded from p. 846.)

CASE 5. *Carcinoma of uterus and vagina; death.*—Janet M—, aged sixty-five, was admitted to Stafford ward, June 24th, 1880. A widow and the mother of seven children, the youngest thirty-five, the eldest forty-five; five born prematurely; no miscarriages; catamenia commenced between thirteen and fourteen, always regular till fifty-four. General health always good. No cancer in family. About twelve months ago she noticed a little hæmorrhage, which recurred from time to time, but never in great quantity. Has not markedly lost flesh. Was operated upon at Soho-square Hospital in January, 1880. Thinks chloride of zinc was applied. Became an out-patient at the cancer department of the Middlesex Hospital on April 15th, and continued till admission on June 24th.

Vaginal examination.—Os and greater part of cervix quite gone, and in their place a large, irregular, horny ulcerated growth, with indurated edges, which extends a little way along the posterior wall of the vagina, and further still along the anterior wall. The upper part of the vagina, where it joins the back of the uterus, gives to the finger the impression of a deeply-excavated, irregular chasm. Discharge abundant, offensive, and watery. Is a very emaciated woman, with pinched look, but no marked cachexia. Spirits good; sleeps well; appetite fair; bowels very confined; micturition sometimes difficult, but never very painful. Suffers but little pain.

She was at once placed upon the Chian turpentine mixture, taken three times a day. This was continued up to the 21st of August. During the first week in September there was diarrhoea. On September 7th the Chian turpentine mixture was resumed, and taken, with occasional intermissions, till a few days before death, on November 4th. From the end of September she suffered a great deal, owing to a fistulous communication between the rectum and vagina. Her distress on this account was, however, in great part relieved by injections of warm water, used daily, with the object of keeping the parts around the fistula clean. Occasionally antispasmodics and aperients were required in addition to the turpentine. Throughout opium pills were required at night occasionally; but during the last six weeks of life they were given at intervals during the day as well as at night.

Necropsy, by Dr. FOWLER, fifteen hours after death.—Body very emaciated, abdomen retracted. No recent peritonitis. The uterus was almost entirely destroyed by cancerous ulceration, which extended down the vagina to within one inch and a half of its orifice. The rectum had been opened about two inches and a half from the anus by extension of the ulceration. The bladder was not invaded, and was normal. The kidneys were normal, as were the other organs.

CASE 6. *Cancer of the uterus; death.*—Sarah Jane D—, aged forty-seven, a widow, mother of eight children, and engaged as a mission woman. Applied to the cancer out-patient department on April 22nd. She had suffered from occasional pain and discharge for two years and a half. Since December, 1879, has had a constant watery discharge, much pain, and from time to time flooding.

She was treated by tonics, anodynes, and disinfecting injection until May 13th, when Chian turpentine mixture was commenced. At this time ulceration of the os and cervix uteri was well marked, and she had a great deal of watery discharge.—July 1st: Still continues taking the Chian turpentine. There is now a clean, but irregular, ulcerated surface, with indurated edges. She complains much of pain in the right groin, but has had no flooding and much less discharge. One evening, shortly after this visit, having felt pretty well and in good spirits during the day, she suddenly called for the assistance of a neighbour on account of a profuse flooding. From this time she was

obliged to keep the house, rapidly became weaker, suffering agony up to within a week of her death, and died at the end of last August.

CASE 7. *Cancer of uterus, with profuse flooding.*—Elizabeth R—, aged thirty-eight, married, applied to the cancer out-patient department on June 10th. She had been ill nine weeks, and during that time had so frequently flooded, that on her appearance at the hospital she was reduced to extreme weakness, and presented a most marked bloodless appearance. She also complained of great pain in the back. There was a large sprouting ulcer involving the os and cervix of the uterus. She was anxious to know if she could safely take the journey to her dying husband in Germany, but her condition was so grave that I was compelled to forbid this, fearing at least that the effects of sea-sickness would be absolutely fatal.

She was treated with a mixture of ergot and cinchona, a morphia pill at night, and a belladonna plaster for the back. Under this treatment the bleeding stopped, and as a result she improved greatly in strength and looks.—Sept. 2nd: There has been no bleeding for some weeks, and there is but little discharge. She is altogether improved. Chian turpentine mixture was now ordered.—Oct. 7th: Has continued the turpentine for five weeks. The uterus is hard and enlarged, the os and cervix are at least five times larger in diameter than normal.—Nov. 11th: Is still under the Chian turpentine treatment, but there is no improvement in the state of the uterus. Her condition is extremely bad.—Nov. 22nd: Has been admitted to Stafford. The greater part of her vagina is filled with cancer growth.

CASE 8. *Cancer of the uterus, extending to the rectum.*—S. P—, aged fifty, the mother of ten children, came under treatment at the cancer out-patient department on June 24th, 1880. The os and part of the cervix uteri had disappeared. There was a wide irregular ulcer with thick edges, and surface crossed by hardened ridges; the posterior wall of the vagina at quite its upper part was thickened and deeply ulcerated. Her chief trouble was difficulty in defecation. Symptoms began with flooding and pain in April, 1880.

She was at once put upon the Chian turpentine mixture three times a day. There was flooding from the 10th to the 15th of July, and an excessive offensive watery discharge; constipation also troublesome. Sept. 9th: Flooding has been severe for fourteen days; suffers from frequent severe pains in the legs and pains of the character of labour-pains. Considers herself better for the mixture, and says she would be sorry to be without it.—Sept. 30th: Has taken the Chian turpentine regularly three times a day up to this date. Her sufferings are severe. To-day ordered Haust. Caryophylli Co. et Morphie twice a day, and to continue the Chian turpentine mixture twice a day.—Nov. 18th: Has continued the same treatment since September 30th, but she is much weaker, has shortness of breath and a cachectic look; is very anxious to be admitted, as she is unequal to her work. The vagina is thickened, and its lumen contracted about the middle by deposit in its walls; beyond the contraction is an ulcerated cul-de-sac. The fundus uteri is much enlarged and very hard. *Per rectum*, uterus is found greatly enlarged, hard, and irregular; there is infiltration of the anterior rectal wall and incontinence of fæces.

CASE 9. *Ulcerated scirrhus of the breast; death.*—Eleanor S— was admitted into Stafford ward on Oct. 15th, 1879, with an ulcerated cancer of the left breast. Married, but sterile. General health good. No cancerous history. Disease began about four years ago as a small lump the size of a marble in the outer side of the left breast; it gradually increased, and after twelve months the skin became affected, then ulcerated. The tumour discharged and then shrank, but cancerous infiltration extended up to the axilla. More or less pain suffered.—April 2nd, 1880: There is a large foul ulcer with induration around; the pain neither continuous nor severe. Chian turpentine pills were commenced, all other remedies being discontinued.—April 13th: No appreciable change.—16th: The discharge is greater in quantity, offensive, and not altered in character.—27th: Breast seems, on the whole, worse than formerly. There is more discharge, and some bleeding occurred this morning.—May 26th: Discharge considerable and offensive, pain severe.—June 10th: Had a fit this morning, attended with unconsciousness, sickness, and twitchings of the muscles of the face. It did not last long. Chian turpentine was continued regularly up to the first week in July, subsequently only at intervals and

less frequently. The disease slowly progressed, and she died, exhausted, on Sept. 11th.

CASE 10. *Ulcerated scirrhus of the breast; cicatrisation.*—Sarah W—, aged fifty-nine, a widow, applied at the cancer out-patient department on April 15th, 1880. Is a large-framed, stout woman, and the mother of four children. The cancer began as a tumour of the right breast five years ago, and after slowly increasing for two years ulcerated. When first seen there was a large circular ulcer, with thickened edges and foul, greyish, discharging base, in the sternal half of the mammary region, the remaining part of the mamma prominently enlarged. The ulcer is prone to bleed considerably at times, and she often suffers severe pain. A lotion of carbolic acid as a wash, a saturated solution of alum to be used if necessary to stop hæmorrhage, and the Chian turpentine mixture to be taken three times a day, were ordered.—April 22nd: She describes herself as having had no pain since commencing treatment.—July 8th: There has been a distinct improvement since she has been under treatment. There is much cicatrisation at the edges, and a healthy, purulent discharge from the surface of the ulcer.—Oct. 7th: A wide border of cicatricial tissue surrounds the ulcer, but in and beyond the cicatrix there is a ridge of indurated tissue due to fresh infiltration. There has been a diminution in the size of the remaining portion of the breast.—Oct. 21st: There has been more hæmorrhage again this week; continues with the turpentine mixture. She is still under treatment, but there is no further change.

Remarks.—If I had not seen cases of this sort before, I might certainly have believed that the turpentine had caused the cicatrisation.

CASE 11. *Ulcerated scirrhus of the breast; death.*—Mary Sarah R—, aged forty, widow, mother of three children, applied on July 22nd at the cancer out-patient department for ulcerated scirrhus of the left breast. Disease began three years ago as a small lump in the mamma, to the inner side of the nipple. When first seen there was a wide and offensive ulcer, involving the inner half of the breast. Nipple present and not retracted, the axilla stuffed with enlarged glands. On September 2nd she commenced the Chian turpentine mixture three times a day.—Sept. 9th: She considers herself better for the mixture. The whole surface of the wide, saucer-like excavation is covered with yellow felt-like secretion. She continued to decline, and on Oct. 21st was too ill to come and see me, but sent for more medicine. A few days later I heard of her death by letter.

CASE 12. *Nodular and rapidly-ulcerating scirrhus of the skin of the mamma.*—Mary Ann Y—, aged fifty, applied at the cancer out-patient department on Sept. 16th, with cancer of the skin over the right breast. Married, mother of five children, and had had four miscarriages. A stout, intemperate-looking woman; disease is said to have begun in March, 1880. When first seen there was a very large and wide area of ulceration, in patches, on the surface of a large and pendulous breast. Beyond this area there were several small pea-sized nodules (in places running into one another) in the skin, some of which were breaking down into circular, punched-out ulcers. The undestroyed skin between the ulcers was of a bright-red colour. A worm-eaten aspect was thus given to the parts. She used stramonium ointment and took quinine up to Oct. 7th, when the Chian turpentine mixture was commenced.—Oct. 21st: The number of cancerous warts has increased, and are spread over a wider area; fresh ulcers have formed by the breaking down of the warts, and present an ashy-grey slough at their base. A cuirass-like thickening is detected in the skin of the other breast. Eczema below the right breast, probably excited by the foul discharges. The stramonium ointment again resorted to on account of the severe pain, and a pill composed of two grains of extract of conium and three grains of extract of hyoscyamus to be taken every night, and in the daytime also if necessary. Chian turpentine continued.—Nov. 11th: The disease is still spreading widely; now around to the back upon the right side, as well as across the sternum over the left breast. There is a most offensive, loathsome odour with the discharge. Suffers much, and is very feeble: says she can no longer take the turpentine mixture, as it makes her sick, and begs to be put again upon the quinine treatment.—Nov. 18th: So ill, and altogether in such a bad condition, that she has been admitted to-day into Bird ward, instead of awaiting her turn for the cancer wards.

Of the foregoing cases eight are of the female genital organs, and four of the breast. Of the eight uterine cases five are dead, two are known to be extremely ill, and one after a short trial of the turpentine declined to continue taking it. This last is the only case in which the turpentine was not taken for several weeks in succession. Of the four breast cases two are dead; one is in the hospital, with the disease very rapidly advancing, and will probably not live many weeks; and the fourth is of that somewhat rare and chronic variety of scirrhus which, after ulceration, cicatrices, whilst fresh cancerous material is deposited in and beyond the cicatrix.

I might add notes of several other cases, both uterine and mammary, in which the turpentine has been given for many weeks, and even months, together, but without benefit.

I am not able to report that there is a single symptom over which the drug seems to exercise even frequently, not to say constantly, an influence. It cannot be relied upon to assuage pain, to diminish or alter the character of the discharges, to check hæmorrhage, or promote the destruction of the growth by ulceration or sloughing. In the few cases in which the patient at first thought she was benefited, the impression was due to that "clutching at straws" tendency, that is so often observed in persons suffering from lingering and incurable disease, and to her being encouraged to think that she was taking a new and certain cure. Rest, regulation of diet, attention to the bowels, an anodyne at night, and the extra local cleanliness which follows from the use of injections and lotions, will of themselves, and without any internally-administered drug, give temporary ease and improvement.

Besides, it must not be overlooked in observing the effects of drugs on cancer, that some cases of cancer seem to halt in their progress, and stand still for a longer or shorter time—nay, even more, they seem to retrogress. I have at the present time a man with a cancerous ring stricture of the rectum, who many months ago came to the cancer out-patient department emaciated, pinched, and haggard-looking. At his first visit there was a plug of hardened fæces stopping up the lumen of the stricture like a cork in the neck of a bottle. This being broken away, he was ordered confection of senna and quinine mixture, and would not hear of colotomy "at present." He still comes regularly, has improved in strength and appearance, and always says he is "wonderfully better"; but there is still the stricture. If he had been taking the turpentine I cannot doubt that it would have received all the credit for his improvement. Again, cicatrisation of a cancerous ulcer, such as has been going on in Case 10, though somewhat rare, is every now and again seen, more especially in old people and in cancer of the breast. During the last ten years I have seen eight or ten such cases at least, but the process is generally to be distinguished from healthy cicatrisation by the occurrence of fresh induration in or beyond the cicatrix, as in the above case. Lastly, one not unfrequently sees cases where the whole of a large tumour of the breast has sloughed away by degrees, leaving a narrow sulcus or fissure, with perhaps a small flattened indurated ulcer at one part, partly scabbed over, and having shallow sulci radiating from it into the thickened parts around. In some of these cases it is hard to believe at first that an operation has not previously been performed; but there has never been any reason to think that the tumour has "melted away" by the agency of any medicine.¹

It would have been a pleasant task to have reported a number of successes, and to have congratulated Professor Clay upon having made the discovery of a cure for cancer. But after a long and careful trial, the conclusion forced upon me is, that as a cure for cancer Chian turpentine is utterly valueless.

¹ These remarks are suggested by one or two of the cases which have been published in which Chian turpentine has been given.

PATHOLOGICAL SOCIETY OF DUBLIN.—The under-mentioned have been elected for the ensuing session:—President: A. Foot. Vice-Presidents: John T. Banks, Samuel Gordon, Edward Hamilton, Thomas Hayden, George H. Kidd, Joliffe Tufnell. Council: J. K. Barton, A. H. Corley, G. F. Duffey, J. M. Finny, R. J. Harvey, James Little, T. E. Little, R. McDonnell, William Moore, C. Nixon, J. M. Purser, W. Stokes. Secretary for Foreign Correspondence: J. W. Moore. Secretary and Treasurer: E. H. Bennett.

CLINICAL REMARKS TO STUDENTS ON THE DIAGNOSIS OF THE VARIOUS FORMS OF CONGENITAL HEART DISEASE.

By SEYMOUR J. SHARKEY, M.B.,
ASSISTANT-PHYSICIAN TO ST. THOMAS'S HOSPITAL.

(Concluded from page 847.)

THE diagnosis of the varieties of diseases of the heart acquired after birth has arrived at a perfection in no way attainable in cases of congenital disease. Indeed, it is, as a rule, impossible to say more than that a person has congenital heart disease, and to make a more or less probable suggestion as to its nature. Why this difference? you will ask. The principal points on which we rely for the diagnosis of ordinary acquired diseases of the heart are:—1. The fact that the blood passing through an orifice which is abnormally contracted, dilated, roughened, or guarded by incompetent valves, produces a murmur which is heard by the auscultator. 2. The murmur is heard in its maximum intensity in definite positions for each of the valves, and is conducted in the course of the stream of blood which produces it. 3. Observation of the time in the cardiac cycle at which the murmur occurs, which we express by the terms presystolic, systolic, and diastolic, helps to indicate the condition of the orifice at which the murmur is produced. 4. Those cavities of the heart which are behind the diseased part, that is, in the direction of the venous circulation, or which have any special stress thrown upon them, become hypertrophied and dilated, and we detect their increase in size by percussion.

Thus, for example, in aortic regurgitation: (1) a murmur is produced over the base of the heart, where the aortic orifice is situated; (2) it is diastolic in time and conducted down the sternum, that is to say, towards the left ventricle, into which the blood is regurgitating; (3) the left ventricle is found to be increased in size, owing to the additional pressure and work which is imposed upon it, by the blood which has already been propelled onwards ever returning to be propelled again.

Now in congenital disease there are at least two more orifices which have to be taken into consideration, in addition to those which are present in a normally formed adult heart. These are the aperture in the auricular septum and the aperture in the ventricular—orifices which are placed very close together and through which the blood may be flowing either from left to right or from right to left. There is likewise an additional vessel, the ductus arteriosus. Any one or all of these three structures may be opened or closed in any case without there being any means at our command for detecting their actual condition. Hence while in the adult we have an almost constant anatomical structure to deal with, in congenital diseases we have a variable one, and the varieties are not such as we can determine during life. When we try to apply to such patients the rules which serve so well for our guidance in cases of acquired disease, we soon see how lamentably they fail. Let us take an example or two.

If the case be one of constriction of the pulmonary artery there will also probably be present an aperture in one of the septa or a pervious ductus arteriosus, and the murmurs which may be produced as the blood passes through these structures will be added to that in the constricted artery, and will tend to confusion; or the murmur which should be occasioned at the diseased orifice may be suppressed, the pressure of the blood going through it being rendered insufficient for the production of an abnormal sound by the diversion of the stream in another direction. But more than this, we get little information, if we are not absolutely led astray, by observing the parts of the heart which are hypertrophied. If we conclude from an increase in size, which we find almost confined to the right side of the heart, that the pulmonary artery is the seat of disease, we may be right or we may be wrong. Should the obstruction to the onward flow of blood through the pulmonary artery be only partial, and should the septum ventriculorum be incomplete at its upper part and deviate, as it often does, to the left, so that the aorta rises partly from the right ventricle, then the latter

will be hypertrophied, owing to the obstruction in the pulmonary circulation which it tries to overcome, and to its efforts in assisting in the systemic circulation through the aorta. But suppose the obstruction is situated in the aorta, then the blood may flow backwards through the foetal orifices and be carried by the right ventricle into the ductus arteriosus, and so into the general circulation; and the right ventricle may become hypertrophied because it has to carry on not only the pulmonary but also the systemic circulation; while the left ventricle, which should have had the extra work to do, is relieved of its burden by the patent foetal openings, and may retain its natural size. Percussion then would indicate hypertrophy of the right side, whether the aorta or the pulmonary artery were the seat of the disease. Again, if the pulmonary artery were totally obliterated the blood would all pass over to the left side of the heart, and the left ventricle having to carry on the systemic circulation through the aorta and the pulmonary through the open ductus arteriosus, or other vessels, would become hypertrophied; while the right ventricle would be reduced in size, notwithstanding the presence of the abnormality on the right side. It is then the patency of these foetal communications which, while so beneficial to the patients, leads physicians all astray, by transferring the blood pressure, together with the hypertrophy which is caused by it, from one side of the heart to the other.

I venture to repeat, therefore, what I said before, that the most we can do in any given case is to diagnose the presence of congenital disease, and make a suggestion with more or less chance of being correct as to the exact seat of the abnormality. But, it may be objected, physicians do occasionally diagnose rightly the valvular lesion in congenital diseases. True, they do; but after all that is a very partial diagnosis, and of comparatively little worth. The value of a diagnosis must be gauged by its bearing on treatment and prognosis. The former is practically the same in all cases of congenital disease of the heart; but the prognosis should be very different according to the pathological condition present in each case. In acquired heart disease our prognosis depends—

1. On the particular lesion present, and our knowledge of the usual history of patients who are the subjects of it.

2. On the results of our physical examination of the heart, and the judgment we form as to the effect which the disease has already had on the muscular cavities which have to bear the brunt of it.

3. On the present general condition of the patient.

In congenital diseases of the heart, even if we detect the orifice which is the seat of the original disease, we are unable to make the really important part of the diagnosis: for we are unable to answer the question—what arrangements have been made in the course of development to neutralise the valvular defect by appropriate communications between the arterial and venous systems? Hence we are unable to say on what parts of the heart the stress has fallen, and how they have borne it. We have nothing, as a rule, to fall back upon but the general condition of the patient.

Let me conclude these few remarks by giving you the notes of two cases, which I had the opportunity of observing during life and of seeing examined after death—cases which illustrate well the points which I have insisted on. The patients were under the care of Dr. Peacock and Dr. Ord, to whose kindness I am indebted for permission to make use of them for my present purpose. A full account of Dr. Peacock's case may be found in the Transactions of the Pathological Society, 1878, page 43; of Dr. Ord's in the St. Thomas's Hospital Reports for 1879, page 227.

CASE 1.—E. P—, aged ten, was admitted under the care of Dr. Peacock on Nov. 28th, 1876. She had suffered from shortness of breath and pains in the chest from infancy, and was a puny, delicate-looking child. Her cheeks were flushed and her lips purple, and she had great dyspnoea on exertion. The feet were slightly oedematous, but the fingers were not clubbed or livid. The pulse was 108, somewhat irregular both in force and frequency; respiration short and rapid, 48. The chest-walls were very prominent over the cardiac area, and the dulness on percussion extended from the right nipple to a point just beyond the left, measuring in this transverse direction seven inches. A very loud musical murmur was heard all over the region of the heart, and was systolic and loudest at the base, though very evident at apex and faintly heard at the angle of the left scapula. The second sound was loud and crashing, especially on the left of the sternum. A thrill,

mainly systolic, was felt all over the heart, but was most distinct at the apex. The hepatic dulness descended to the level of the umbilicus, but the liver did not pulsate. The jugular veins were distended and pulsated. Respiration was puerile, but otherwise normal. Temperature 96.4°; urine 1031 sp. gr., and contained no albumen. The patient suffered from pain and paroxysms of dyspnoea at intervals. By Feb. 7th, 1877, the dropsy had increased, and the urine contained a quantity of albumen. She had much pain and severe paroxysms of dyspnoea, and there was much bronchitic rhonchus in the chest. She died on Feb. 24th, and during the latter part of her life the cardiac murmur was heard most loudly at the apex.

On post-mortem examination it was found that the heart was enormous. The right auricle and ventricle were greatly dilated and occupied almost the whole anterior aspect of the heart. The pulmonary artery was greatly dilated, but the valves healthy. The aortic and mitral valves were healthy, but the aortic orifice was very small, as was the whole thoracic portion of the vessel. In the auricular septum was a large orifice, which measured 3.4 inches in circumference. The foramen ovale and ductus arteriosus were closed.

The probable history of this case is, I think, that during intra-uterine life the development of the aorta was owing to some cause or another arrested. This increased the blood-pressure abnormally behind the aortic orifice, so that the blood found a way of escape into the right auricle through the incomplete auricular septum, and kept open a permanent orifice in it. The right side of the heart being thus constantly over-filled, acted with greater energy; and, by constantly propelling more than the normal amount of blood into the pulmonary circulation, it not only greatly increased in size itself, but also caused a simultaneous increase in the size of the pulmonary artery.

The closure of the foramen ovale, notwithstanding the persistence of an aperture in the auricular septum, may probably be explained by the fact that the blood flowed from the left to the right auricle, and, as the valve of the foramen ovale projects on the left of the septum, the increased blood-pressure in the left auricle would tend to close rather than to keep it open. When we consider the physical signs during life—viz., great increase of cardiac dulness to the right of the sternum, and but slight increase to the left, a thrill most evident at the apex, and a murmur which, though heard everywhere, was at first loudest at the base and subsequently at the apex—we must confess that no one could have solved the problem and predicted the results of the post-mortem examination.

CASE 2.—M. A. J.—, aged thirty-four, was admitted under Dr. Ord on Oct. 29th, 1879. She had had measles, but no other severe illness; had always suffered from palpitation, some shortness of breath, and tendency to blueness on exertion, but she had nevertheless worked hard. She had also suffered from occasional epileptic fits for the last twelve months before admission. When seventeen years of age she was "blown up" in a cartridge factory, when her spine was injured and her right leg broken. Her illness, for which she was admitted into St. Thomas's Hospital, commenced three weeks previously with pain in the "stomach," unaccompanied by tenderness or vomiting. On Oct. 29th she had been walking quick to get to the hospital in time, when she vomited a large quantity of blood. On admission the patient was ill-nourished, anæmic, short of breath, and altogether very ill. There was evident pulsation in the jugular veins. The cardiac area was prominent, and pulsation could be seen from the second intercostal space on the left to a point two inches below and within the nipple. A thrill could also be felt all over the cardiac area, but was most marked over the origin of the pulmonary artery. Dulness on percussion extended upwards to the first intercostal space on the left, to the right as far as mid-sternum, and to the left just beyond the nipple. A loud, crashing, systolic murmur could be heard all over the heart, but was most intense at the base, being heard loudly up the sternum and towards the left clavicle, and much less so to the right of the sternum. The lungs were resonant. She died on Nov. 7th.

Post-mortem examination.—The abdominal viscera were transposed. The pericardium measured seven inches and a half vertically, seven inches transversely in the line of the nipple. A number of old, white, thickened patches, from half an inch to an inch in diameter, were situated on the visceral layer of the pericardium on the anterior surface of

the right ventricle, and on the front of the great vessels at the base, where in some places they projected in conical villous masses. The heart was very large, and the greater part of it was situated on the left of the median line. Its anterior surface was almost entirely formed by the right ventricle. The right auricle and ventricle were greatly dilated and hypertrophied. The left auricle was also very much enlarged. The left ventricle was comparatively small. The conus arteriosus and the pulmonary artery were enormous, and apparently gave rise to the great increase of dulness to the left of the sternum towards the clavicle, which was observed during life. Though the calibre of the pulmonary artery was so greatly increased, the vessel and its valves were healthy. The septum ventriculorum was complete, and the ductus arteriosus closed. The auricular septum was very thin, and the foramen ovale was altogether open and destitute of valve. But, besides this, the whole of the lower part of the septum was absent, so that a very free communication existed between the two auricles. The tricuspid valve was healthy, and on looking up from the right ventricle towards the auricles, one saw clearly into both of them, the defect in the auricular septum being in a direct line between the left auricle and right ventricle. The mitral valve was thick, and the orifice constricted, not admitting two fingers. The aortic valves and orifice were healthy, though the vessel was rather small.

The probable history of this case is that the mitral orifice becoming diseased the flow of blood through it was obstructed, and the stream became diverted through the incomplete auricular septum, which consequently remained undeveloped. The blood arriving in the right auricle, as well as part of that in the left, was propelled through the tricuspid orifice into the right ventricle, and the latter became greatly hypertrophied owing to the abnormal amount of work thrown upon it. The great quantity of blood driven into the pulmonary artery by the hypertrophied right ventricle gave rise to an increase in the size of this vessel, while the small quantity of blood which passed through the aorta was accompanied by a diminution in its calibre.

It is possible, however, that an abnormally largely developed pulmonary artery was the original malformation, and that the incomplete septum, the diversion of the blood from its natural course, and consequent diminution in the size of the mitral orifice and aorta, were only secondary results. But whatever may have been the true intra-uterine history of the case, the only thing which could have been diagnosed during life was an abnormal condition of the pulmonary artery; while neither the condition of the auricular septum nor the mitral valve could have been determined. Such a case brings forcibly before us how little skill we can pretend to in the diagnosis of congenital diseases of the heart, and justifies, I think, some of the remarks which I have made upon this subject.

ON A CASE OF EXCISION OF THE SCAPULA.

By EDWARD BELLAMY, F.R.C.S.,

SURGEON TO CHARING-CROSS HOSPITAL; HON. FELLOW OF KING'S COLLEGE, LONDON.

ALTHOUGH the operation of removal of the entire scapula has been performed on several occasions, the cases are sufficiently uncommon to warrant an isolated one being placed on record, and that in detail, with any remarks which may have the effect of adding to the celerity of its execution and its bloodlessness. The proceeding has been instanced as "conservatism" in its highest sense, yet it is quite open to question whether, when undertaken for obvious malignancy, the term is absolutely applicable; however, there is no doubt that, if it be supposed that the scapula only be involved, it is the surgeon's duty to undertake it.

The patient on whom I recently performed this operation was a strong healthy-looking boy, fourteen years of age. A small swelling was observed about the middle of the scapula in August last, and when seen by me he was supposed to be suffering from a dislocation of the humerus; it was, however, evident that it was a very rapidly increasing malignant growth, probably either encephaloid or a round-celled sarcoma, forcing the humerus away from the

scapula. The tumour, when I operated, was about as large as a child's head, non-adherent to the integument, and the scapula was freely movable over the structures normally in relation with it.

On account of its rapid development I decided to remove the entire scapula at once, but I particularly desired to preserve the clavicle and humerus, as the scapulo-humeral articulation was evidently uninvolved. Accordingly, on Oct. 2nd, I operated as follows:—With the view of preventing hæmorrhage, I first cut down upon the subclavian artery, and directed an assistant to compress this vessel against the first rib, and to be ready to grasp the first flap should the bleeding be very severe. Next, I directed a second assistant to extend the arm forward with one hand, and to compress the axillary artery as high up in the axilla as he could with the other, in order to control the subscapular artery, which in this instance was easily detected, as it was thrown up by the growth. I thus prevented any large amount of blood from passing into the arm, and calculated on arresting any return current by the second manœuvre. My first incision extended from the tip of the acromion to the base of the spinous process, and the second along the spinal border of the scapula, involving integument only. I then nipped through the acromion. The tissues gaped sufficiently to expose the entire mass, which bulged into the wound. Next, I divided the muscular attachments to the spinal border, and passing my knife beneath the separated acromion, disarticulated the humerus. Grasping the mass with my left hand, I dragged it downwards and outwards towards the axilla, and divided the muscular attachments to the upper border of the bone, having now the tumour entirely under control. I now swept the knife along the axillary border, and the scapula and its growth were removed. The cutting part of the operation occupied but a few minutes; strict antiseptic precautions were adopted, and the wound healed by first intention. In a few days, unfortunately, the site of the acromion showed signs of recurrence, and accordingly on Oct. 28th I proceeded to remove it. I found that the disease was progressing downwards past the apex of the axilla, and evidently infiltrating all the tissues. Any further operation I regard as useless mutilation. My scapular excision was an attempt at conservatism, and in the face of a round-celled sarcoma an attempt merely.

The main points I desire to call attention to are the bloodlessness of the operation and the ease of removal of the mass. I have had the experience at present of but one case in my own practice, but I have seen others, and have been struck with the apparent difficulty of the operation. Of course, there may have been greater complications; but it would seem to me that by getting well under the scapula from its spinal border, and tilting it outwards and downwards towards the axilla, a large amount of leverage is obtained, and disarticulation may be performed with great rapidity, a factor of importance when hæmorrhage is expected.

The lad has complete control over the arm and forearm, and the divided scapular muscles seem already to have acquired some kind of attachment.

If I ever have the occasion of removing the scapula for a "growth" again, I shall take care to avoid any attempt at the preservation of the symmetry of the shoulders, supposed to be gained by leaving the acromion, and excise the bone *in toto* to the scapulo-clavicular articulation, on the chance of the disease being confined to the bone itself. Further, I should certainly not undertake it in the event of *immobility* of the scapula, or any decided failure in its "excursion" over the ribs.

Wimpole-street, Cavendish-square.

NOTE ON HEMIN, OR SO-CALLED HYDROCHLORATE OF HEMATIN.

By J. L. W. THUDICHUM, M.D., F.R.C.P. LOND.

On page 116 of the "Physiological Chemistry," by Dr. Gamgee, occurs the following statement:—"It is held by Thudichum that hæmin contains no chlorine, and he therefore looks upon it as crystallised hæmatin."

In the journal of the Chemical Society for September, 1876, will be found a paper by myself and my then assist-

ant, Mr. C. T. Kingzett, entitled "On Hemin, Hematin, and a Phosphorised Substance contained in Blood-corpuscles." In the research embodied in this paper the following was proved. Hemin, prepared by one of us, by a modification of Wittich's process (Eleventh Report of the Medical Officer of the Privy Council, 1869, p. 155), entirely crystallised in very minute bluish-black rhombic plates was analysed and found to contain 7.651 per cent. of iron, 3.021 per cent. of chlorine, and 0.608 per cent. of phosphorus (mean of three analyses). We then say: Hemin has been considered as a hydrochloride of hematin; by others, again, as a basic hydrochloride, or mixture of hydrochloride of hematin with free hematin. Our researches show that it contains besides these two bodies a considerable amount of a crystallised phosphorised substance. It is thus proved that the crystallised state of substances of such high atomic weight as the body before us is no guarantee of chemical purity or definite composition.

We then describe experiments intended to saturate the hemin with hydrochloric acid. Of this 3.3 per cent. were added to the hemin. This experiment shows that crystallised hemin is by no means saturated with hydrochloric acid, but contains hematin in the uncombined state; this latter probably takes up some of the hydrochloric acid added. But the possibility that the myelin (phosphorised substance) contained also in the hemin may also take up some hydrochloric acid cannot be lost sight of, and is raised to a probability by the known bearing of myelin from brain matter. In the next division, treating of the action of nitric acid upon hemin, we disprove a statement of Preyer, made in the little pamphlet on blood-crystals, so copiously used by Gamgee, that he had found suboxide of iron (ferrous oxide) in a solution containing excess of nitric acid. In the fourth division we show that hemin, subjected to treatment with concentrated sulphuric acid, yielded cruentin, the body first described by one of us in the Report of the Medical Officer of the Privy Council for 1867 (p. 228) and 1868 (p. 161). The fact that this body (cruentin), with many salts and varieties, was first discovered at the time, and first described in the publication mentioned, is not stated by Dr. Gamgee, who describes it as the discovery of a continental chemist, although the observations of the latter were not published until four years after those just quoted. We then proceed in the fifth division to describe experiments intended to effect the extraction of iron from the hemin by the process of C. Paquelin and L. Jolly,¹ and get as a result (after extraction and isolation of the phosphorised body) a hematin in which the iron had not only not been diminished, but which contained more iron than had ever before been found in any preparation of hematin. Its analysis led to the formula $C_{32}H_{32}FeN_4O_6$. We then disprove a statement of Hoppe-Seyler, who had explained an inconvenient excess of nitrogen found by him in his analyses of hematin as due to an absorption of ammonia from the air, by showing that mere vestiges of ammonia make hematin soluble in water.

In the last division of the paper we describe the isolation, properties, and analyses of the phosphorised body, and its cadmic chloride compound, and show that it is an amidated myelin, almost identical in composition with an amidated myelin isolated by one of us from the brain. This is the first and only analysis of the phosphorised body from blood-corpuscles ever made. It is not given in Dr. Gamgee's text-book.

On page 114 of his treatise Dr. Gamgee says that hemin, which he terms hydrochlorate of hematin, can be transformed into hematin by solution in potash and neutralisation of this solution by hydrochloric acid. The washings are to be tested with solution of silver nitrate. At the conclusion of the paragraph he quotes Hoppe-Seyler as his authority, and at the foot of the page the place, "Beiträge zur Kenntniss des Blutes des Menschen und der Wirbelthiere. Das Hæmatin. Med. Chem. Untersuchungen," Heft iv., 1871, s. 523.

Now, in that publication, and at that place, Hoppe-Seyler prescribes that the dissolved hemin shall be precipitated with sulphuric acid, and shall be washed with water (not "boiling water," as Gamgee says) until barium chloride leaves the washings clear.

Earl's Court-road.

¹ Comp. Rend., No. 79 (1874), p. 918.

CONGENITAL COLOUR-BLINDNESS INCURABLE.

By Dr. B. JOY JEFFRIES.

IN an English medical publication for August 21st is an editorial notice of Dr. Favre's paper read before the Paris Academy of Medicine on the "Relations of Colour-blindness." Dr. Favre's mistaken belief in the curability of congenital colour-blindness is apparently agreed with from this sentence: "All these circumstances go to prove that such an examination should be more generally resorted to, and that the colour-blind should be made responsible to the law for their mistakes; and as Daltonism can for the most part be cured by exercise, the legislation required would certainly become an excellent therapeutic agent. Those persons who were past cure would be warned that they must abstain from giving any judgment on coloured objects."

It seems particularly unfortunate that editorial credence should be given to Dr. Favre's ideas just at a time when a very general testimony of the members of the British Medical Association has drawn the attention of the profession to the subject of colour-blindness. It should at least have been stated that he stands almost alone in this belief of the curability of congenital colour-blindness by exercise with colours. A few years ago Dr. Favre's mistake might have been very natural, but at the present time, after the careful reports of the examination of many colour-blind by the best scientific observers, who have also worked practically, a belief in it should no longer be indulged. It is a most dangerous error to promulgate among the laity that a colour-blind sailor or railway employé can be cured by exercise with colours.

I took ground against Dr. Favre on this point in the *Boston Medical and Surgical Journal*, March 28th, 1878, quoting especially Nilson and Holmgren in my support. I have since then devoted a chapter to the subject in my volume on "Colour-blindness: its Dangers and Detection." I will not lengthen this communication by quoting from my book, as all can there read what is said. Since my book went to press a number of very competent observers have criticised Dr. Favre's curious mistake and shown the fallacy of his reasoning. This is especially the case with those gentlemen who have had time and opportunity to study the colour-blind and patiently test in many ways their chromatic sense, as Donders, Holmgren, Magnus, Cohn, Stilling, Pflüger, Netoliczka, Fontenoy, and others.

Respect for authority and isolation in my early work, alone prevented me from sometimes doubting whether the colour-blind could not see differently after years of familiarity with colours. I have since then come in contact with colour-blind scientists, chemists for instance, who have done everything to try to improve by practice their chromatic sense, and I have by intercourse with and watching under examination more than seven hundred colour-blind, learned somewhat more of how they supplement their defect, both by their other senses and, so to speak, through their very defect, as has been lately explained by Professor J. Stilling in his monograph on the "Vision of the Colour-blind."

Dr. Favre induced his teacher friends to test their scholars for colour-blindness by asking them the names of coloured objects. The girls could tell, the boys could not. Hence from 10 to 30 per cent. of the latter were called colour-blind, and these were cured by teaching them the names of the colours. This absurdity is now self-evident. Upon it was based his belief in the curability of congenital colour-blindness. He may not now adhere to the whole of what he once recorded, but his aim is the same.

The laity who see how the colour-blind who have had practice with colours will get on and conceal their defect, particularly if these laity are officially or pecuniarily interested in preventing legislative control of this dangerous defect, cannot often and will not even disbelieve in the change of the colour sense. The importance, therefore, of constantly impressing on the community that the chromatic sense does not alter, and as far as possible explaining the natural deception, must be recognised by all. Dr. Favre's opinion in this matter has no weight in Europe, as his per-

haps natural mistake has been often pointed out most satisfactorily. The editorial endorsement of it in the medical publication before referred to might, however, give it temporarily some weight in England, till such criticism as has been passed in Europe, and as I have here made, disabuses the community, the medical at least, of the value of the recorded observations.

I have thus called attention again to this important point, as the effort for control of colour-blindness and visual defects on land and sea is being pressed in all parts of the civilised world, and an International Commission has been proposed to discuss and agree on standards of efficiency and standard tests, a Bill having been reported and introduced into the last session of the American Congress, authorising the United States Government to take the initiatory steps for the formation of this commission.

Boston, U.S.A.

CASE OF CANCER OF THE UTERUS DURING PREGNANCY.

SAFE DELIVERY TO MOTHER AND CHILD.

By JAMES TURNBULL, M.B., C.M. EDIN.

Mrs. P—, aged forty-one, consulted me on February 28th, 1879. She complained of great weakness and loss of appetite. She had no particular pain, but stated that for the last three or four months the menstrual flow had become more frequent and lasted longer than formerly. This she attributed to the change of life, and objected to a vaginal examination. She was a little woman with an anæmic and unhealthy-looking appearance. She had five children, the youngest five years old; all her labours but the first had been easy. On examination I could detect no heart, lung, or renal disease. I prescribed a mixture of perchloride of iron and solution of the extract of ergot to be taken thrice daily along with nourishing food and wine. Under this treatment she improved considerably in health and appearance. On May 13th I was sent for as she had an alarming attack of hæmorrhage. I found her in bed, looking pale and exhausted. Her pulse was very rapid and feeble. She had evidently lost a large quantity of blood. On examination I found the vagina filled with dark clots of fetid odour. Growing from the posterior lip of the os I felt a nodulated mass of friable structure, which bled freely on being touched. The growth had a broad surface and was attached by a broad pedicle to the posterior lip of the os. I cleared the vagina of clots and swabbed the surface of the growth with a saturated solution of perchloride of iron in glycerine. This had the effect of completely staying the hæmorrhage. Hitherto my attention had been chiefly directed to the uterus per vaginam, but on passing my hand over the abdomen I could feel it enlarged, though not to any great extent. I suggested to her the possibility of her being pregnant. She said she had not the slightest idea of such a thing, more especially as she had menstruated so recently, and she had none of the feelings she used to have in the early months of her pregnancies. Evidently she had mistaken the hæmorrhage from the growth for menstruation. My diagnosis was cauliflower excrescence with probably coexisting pregnancy.

Of the nature of the tumour there was no doubt, as I examined a portion of it under the microscope and found it to be epithelial cancer.

The pregnancy was not sufficiently far advanced to make the diagnosis absolutely certain. I therefore determined to wait rather than pursue investigations further at that time. In about a week or so afterwards the difficulty was removed beyond a doubt, as the patient felt the movements of the child, and the fetal heart could be heard beating distinctly. The hæmorrhage did not return, and she continued to improve in general health.

On Saturday, Oct. 19th, at 10 A.M., I was sent for, as labour had commenced. There had been a considerable amount of hæmorrhage. The vagina was filled with clots. The os was sufficiently dilated to admit the introduction of the tip of the forefinger. The growth did not seem to have increased much in size, and appeared to be entirely confined to the posterior portion of the cervix uteri. The head was presenting, the membranes were intact, and the child was alive. The pains came on at long intervals, and

were not very strong. Labour went on slowly during the next four days; the patient's strength kept up wonderfully. On Wednesday, at 1 P.M., the pains became more severe, and were attended by gushes of blood. To stop the hæmorrhage, which was excessive, I introduced into the partially dilated os a piece of sponge saturated in perchloride of iron in glycerine. This had the desired effect. The os would then admit two fingers. About 9.30 P.M. she began to get restless, and seemed much exhausted; her pulse rose to 120, her temperature to 99° 6'. The membranes were ruptured and the pains had entirely ceased. I determined, therefore, to deliver at once by means of the long forceps.

The difficult conditions to overcome were two—viz., a rigid undilatable os and the obstruction of the diseased mass to the passage of the child. Owing to the disease being confined to the posterior lip of the os, I was able to dilate the anterior lip with my fingers, though only to a slight extent. The head was above the brim, with the anterior fontanelle to the right. Having administered chloroform I applied Barnes' long double-curved forceps. After pulling steadily at intervals I felt the head begin to advance, and in half an hour from the application of the forceps the patient was delivered of a fine healthy male child. A large portion of the diseased structure came away in front of the head. The placenta separated easily, and there was no further hæmorrhage. For two hours after delivery she was much exhausted, but on the administration of a little brandy and sedative solution of opium she soon rallied. For several days after delivery her temperature continued high, but otherwise she had no bad symptom. On the eighth day her temperature became normal; on the sixteenth day she was able to be out of bed. For the next three months she was able to attend to her household duties, and seemed in good health, having no pain or discharge. At the end of February of this year the disease began to spread rapidly, involving the bladder and rectum in its course. Having read of Mr. Clay's wonderful success with Chian turpentine in the treatment of this disease, I at once adopted his method, but am sorry to say without success. Possibly the disease was too far advanced before beginning the treatment. My patient sank under the disease May 23rd, 1880.

Such cases are fortunately rare in practice, and no definite rules for their treatment can be given. The duration of the labour was extremely long. Having read of such cases terminating favourably when left alone, I resolved to give nature every possible chance. I think, however, the condition of my patient was such as to warrant immediate interference, as she was rapidly sinking. I can hardly venture to say that it was good practice to draw the head through a rigid partially dilated os. I did so with the hope that if laceration did take place it would be through the cancerous mass. I cannot tell what actually did take place, not caring to explore too much, and being only too glad to bring such a long and anxious case to so favourable a termination.

Dunbar.

A Mirror

OF

HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium

LONDON HOSPITAL.

OVARIAN DYSMENORRHOEA, WITH RETROFLEXION OF THE UTERUS; SYMPTOMS DEMONSTRATED TO BE UNCONNECTED WITH THE RETROFLEXION.

(Under the care of Dr. HERMAN.)

In this interesting case, for the notes of which we are indebted to Mr. Winskell, it was demonstrated that the symptoms present were not connected with retroflexion of the uterus.

S. B—, aged twenty-three, a servant, single, attended the obstetric out-patient department on Nov. 28th, 1877. She stated that she had had rheumatic fever when aged eight, and the usual infantile disorders, but otherwise her

health had been good till her present illness. She first menstruated at fifteen, but was never regular, the flow returning at intervals varying from two to four weeks, frequently being brought on by fright or excitement. The hæmorrhage usually lasted five days, and was copious. Since the age of sixteen it had been accompanied with pain, which had gradually got worse, and for the last two or three years it had been so severe as to lay her up. The pain was wont to come on from two days to a week before the flow, and to reach its height on the third day of the hæmorrhage. It was described as a dull, heavy pain, constant, not paroxysmal, relieved by lying down; situate about two inches internal to each anterior superior iliac spine, in the sacral region, and extending down the thighs. The pain was worse when the flow of blood was profuse. For two or three years the pain had been felt not only at the menstrual periods, but in the interval as well, though less severely. For twelve months she had been troubled with leucorrhœa, and much pruritus of the vulva. Too frequent micturition was the only other local trouble. For two years her appetite had been bad; the bowels were habitually constipated, and there was also a feeling of weight and fullness after food. Sleep was disturbed, and the patient was very nervous; this was attributed to a fright four years ago.

On examination there was found tenderness on abdominal pressure over the situation of either ovary. Per vaginam, the uterus was found to be movable, natural in size, so sharply retroflexed that the body seemed to form with the cervix a right if not an acute angle. It was easily reducible with the sound, but fell back again directly the instrument was removed. Much pain was caused by pressure on the body of the uterus. Per rectum there was greater tenderness on each side of the uterus, the most being on the left side.

She was treated as an out-patient until May 18th, 1878. Medicines were given to improve digestion and general health, and various kinds of vaginal pessaries (Hodge's and its modifications) were tried, but none could be got to keep the uterus in the axis of the pelvic brim. There was no improvement in the symptoms, which, if altered at all, got rather worse.

On May 18th, 1878, she was admitted into the hospital. She had begun to menstruate on May 14th.

On the 30th, Wynn Williams's intra-uterine stem and shield were put in. She was subsequently examined several times at intervals, in order to ensure the pessary being kept in its proper position.

On June 17th the stem was still resting in the socket of the shield intended to receive it, so that from May 30th to June 17th the uterine canal was perfectly straight. She menstruated from June 6th to the 15th with *more pain than usual*. She felt only slightly, if at all, better in her general condition than when admitted. During the last few days she had complained of a discharge slightly mixed with blood, and of much pruritus. As, therefore, the mechanical straightening of the womb did not seem productive of benefit, the stem and shield were removed, and a thick india-rubber ring (the so-called "watch-spring" pessary) was put in. After the introduction of the ring the uterus was found bent back, the body resting on the ring, but the flexion not so acute as when the patient was without a pessary.

The patient menstruated from July 1st to the 8th less copiously than usual, and with "no pain to speak of." On the 12th she had no pain at all. The leucorrhœal discharge was better; the pruritus had been relieved by the use of calomel ointment. The uterus was in the same position as when the last note was made. The patient, who had kept her bed since admission, was allowed to get up.

On July 27th the uterus remained in the same position; patient thought herself quite well, and was sent to the country.

It will be seen from the foregoing that while straightening the uterus did not relieve the patient, the symptoms disappeared under the influence of rest, while the retroflexion was still present.

On November 16th the patient stated that she had thought herself perfectly well till the 13th, when she lifted something heavy, and fancied the effort had done her some harm; but she could describe no definite symptom. She was still wearing the ring, but the uterus was now in the axis of the pelvic inlet, not retroflexed, as formerly.

On Nov. 30th, the uterus being still in the normal position, the ring was removed.

On Dec. 14th she complained that her old pains were re-

turning. The uterus was still straight, and in the axis of the pelvic brim, although the patient had been for a fortnight without any pessary.

It is not needful to describe in detail the further progress of the case. It will be enough to state that her old symptoms gradually returned; that after they had persisted many weeks, the womb again became retroflexed. As she did not improve under treatment as an out-patient, she was not encouraged to continue attendance; and finally, in April, 1879, the flexion being presumably still present (nothing further having been done to correct it), the patient became pregnant.

Remarks by Dr. HERMAN.—Many gynaecologists hold that flexion of the uterus is a morbid condition which gives rise to symptoms; among others, to dysmenorrhœa and sterility. It is beyond question that flexion of the uterus frequently exists without any symptoms whatever. Where, as in this case, bending of the womb is found associated with symptoms, the causal relationship of the flexion to the symptoms is generally only a matter of hypothesis. The only way in which the hypothesis can be tested is by the effect of treatment; symptoms caused by bending of the womb should of course be removed when the uterus is straightened, and return if the organ should again become bent. It is not in every case that the treatment can be carried out in such a manner as to completely test this point, and cases recorded in which it has been thus demonstrated that the flexion is harmless are few. One case, of course, does not settle so wide a question; but as the one just reported is an item of singularly clear evidence, I have thought it worth record. The main facts of the case are these: (1) That the stem, which kept the uterus quite straight, did not relieve the symptoms. (2) That the symptoms disappeared while the flexion was still present. Did these facts stand alone, it might be asserted that the irritation necessarily caused by an intra-uterine stem prevented the relief brought about by the removal of the flexion from being as manifest and as speedy as it would have been had the uterus been straightened by less severe means. The next fact in the history of the case disposes of this view; for (3) the symptoms returned, although the flexion was absent. These three facts seem to furnish complete demonstration that the flexion had nothing to do with the symptoms. There are some other points, of less importance, which the case illustrates. (4) The case shows the least injurious effect of intra-uterine stem pessaries—viz., pain, discharge, and slight hæmorrhage; symptoms evidently due to traumatic endometritis, and which so commonly follow the use of these instruments, that one authority who recommends them has stated that he looks upon hæmorrhage and free discharge as good signs. (5) Although the uterus was retroflexed, the patient became pregnant. This fact would never have been ascertained had not the patient previously suffered from symptoms leading to an examination of the pelvic organs. It is obvious that no one can tell how many healthy young women there may be in whom the uterus is retroflexed, but who suffer from no symptoms, and when married quickly become pregnant. But until this is known it cannot be proved that flexion of the uterus causes sterility. This case is an item of evidence against the theory which assumes that it does. There is, of course, no ground for asserting that what took place in this case will also happen in others; but it may do so, and perhaps oftener than is supposed.

NEWCASTLE-UPON-TYNE INFIRMARY.

CASE OF CEREBELLAR TUMOUR; NECROPSY.

(Under the care of Dr. PHILIPSON.)

FOR the following notes we are indebted to Mr. E. L. Prowde, M.A., clinical clerk.

A. U—, aged thirty-four, a bricklayer, was admitted March 25th, 1880. He stated that he had enjoyed good health up to October, 1878, when he began to suffer from attacks of violent headache, giddiness, and vomiting. Subsequently he noticed that he could not see distinctly, and that he could not hear with the left ear. About this time he was told by his friends that his face was twisted. He admitted that he had lived very freely, and that he had suffered from syphilis when twenty-five years old.

At the time of his admission his expression was vacant. His face was drawn to the right side. He was unable to close the right eye, to wrinkle the right side of the brow, and

to whistle. His tongue when protruded was directed to the right. His food lodged between the teeth and cheek of the left side. There was no anaesthesia. When placed with his heels together, and with his eyes closed, he had a tendency to fall backwards. His gait was reeling, resembling that of a drunken person. The pupils were moderately dilated, equal, and, upon ophthalmoscopic examination, marked double optic neuritis was observed. The respiratory, circulatory, and genito-urinary systems were normal. His bowels were constipated. His principal complaint was of severe occipital headache, paroxysmal, vomiting, and slight difficulty in swallowing.

The diagnosis, as entered by Dr. Philipson, was that of a cerebellar tumour, gummatous in nature. Such was founded upon the following symptoms:—The persistent headache, the continuous vomiting, the paralysis of certain of the cranial nerves, the reeling gait, and the syphilitic history.

He was prescribed the iodide of potassium in large doses three times each day, the bromide of potassium at night, and a saline purge from time to time in the morning. Under this treatment the severity of the headache was somewhat relieved, but the vomiting continued, and, during May, convulsions occurred, tonic in character.

On July 26th it was noted that he was quite unable to walk, from a tendency to reel from the right to the left; on August 7th, that he was giddy when propped up in bed; and on August 14th, that he was rolling about in bed, and that he was delirious. On August 27th he was attacked with severe and persistent hiccough, which continued up to his death, which occurred on August 28th.

Autopsy.—On removing the brain it was found that the cerebellum, on the left side, was adherent to the portion of bone corresponding to the left internal auditory foramen, which foramen was large and excavated, and capable of admitting the end of the index-finger. The bone was eroded. This abnormal adhesion was found to be due to a tumour in the region of the left lobe of the cerebellum. The tumour was about the size of an ordinary jargonelle pear, elliptical in shape, soft, consistent, resembling brain matter, although of a yellow colour on section. The pons was very much flattened on the left side. The rest of the brain was normal. The tumour, upon microscopical examination, was found to resemble granulation tissue, in the general character and arrangement of the cellular structure.

MISSION HOSPITAL, KASHMIR.

OBSTRUCTION OF THE BOWELS CAUSED BY LARGE WORMS; AMUSSAT'S OPERATION; DEATH.

(Under the care of Dr. E. DOWNES.)

A MAN, about forty years old, applied at the out-patient room in June, 1879, complaining of constipation. Purgatives were administered and repeated. After a day or two his case became so serious that he was admitted. Purgatives and belladonna and enemata were tried without effect. On the second day he suffered considerably. There had been absolutely no evacuation for some days. There was vomiting, and it seemed that unless something was soon done he would die of the obstruction. There was no sign of a hernia. Enemata were tried once more, but to no avail. Towards evening it was resolved to perform Amussat's operation that night as a last chance of saving his life if there was not a speedy evacuation.

At about 9 P.M., accompanied by Dr. Ross, the civil surgeon, Dr. Downes saw the patient, and found him in the same state, or, if anything, weaker, and suffering more pain than before. There had been no evacuation. Without further delay he was placed under chloroform. The abdomen was a little tympanitic in places, and absolutely dull in others. It was very much distended, and some coils of intestines could be seen and felt pretty plainly through the abdominal walls distended with fluid faeces. The colon could not be made out. After a brief consultation, it was agreed to perform Amussat's operation.

An incision four inches long was made about two inches above the crest of the ilium on the left side, and about parallel to it. It was made with the greatest care. The structures were divided one by one on a director. At last, what was believed to be the colon was reached. This turned out to be a mistake, for on passing a silk suture into it to draw it forward, fluid escaped having a faecal smell; but it

evidently was not the bowel, but the peritoneal cavity. On opening it carefully a considerable amount of fluid escaped, and portions of two coils of intestine were seen much inflamed, and so distended with fluid and so compressed against one another that it was difficult to recognise them. One had a transverse direction, and it was taken to be small intestine; the other, which was behind and hidden by the former to some extent, appeared to pass downwards. With the opinion that this might be the descending colon, a portion (about an inch) was taken up in two places, about an inch apart, with a curved needle threaded with silk. The gut was gently pulled forward by the two threads, and the superficial portion divided with a bistoury to the extent of an inch; a tremendous gush of liquid fæces was the consequence, and the stench was so abominable that it was with difficulty that the operation could be completed. The middle of the two threads was pushed up and divided, and then the gut was pulled to the two margins of the external incision and fastened to the skin. All this time the patient was rolled on his left side, and care taken to prevent the fæces from entering the peritoneal cavity. An immense amount of fæces was expelled, and the wound was cleaned and closed with sutures, leaving the artificial anus.

The operation took nearly an hour, and the patient's pulse was weak, and the surface of the body cold. He was put to bed, and was ordered to be kept warm; some brandy was given, and simple, nourishing food, such as milk and soup, was ordered. Next morning he was comfortable, free from pain, and took his food fairly well; fæces had passed by the rectum, and none had that morning come by the artificial anus. Already the gut had become adherent to the margins of the wound; the sutures were therefore removed, and the wound dressed with lint and carbolic oil.

On the morning of the third day he was not so comfortable, and fæces were passing both by the artificial anus and the rectum. The patient's mother stated that an immense number of round worms had passed by the wound; she said about two pounds of these worms had been thus passed. A large round worm was seen finding its way out, and there seemed no doubt the obstruction had been caused by these worms. The bowel, which was rather protruding from the wound, looked inflamed, and there was a good deal of pain in the bowel, near the artificial anus. He was weaker than on the previous day, and the appetite was gone.

On the morning of the fourth day he was still weaker, and some blood was discharged by the artificial anus. At his request he went home, and he died shortly after reaching his home.

Medical Societies.

CLINICAL SOCIETY OF LONDON.

Hydro-encephalocele.—*Varicocele with small Testicles.*—*Ulceration of the Colon, with Hypertrophy and Dilation.*—*Right Hemiplegia after Scarlatina.*

The ordinary meeting of the Clinical Society was held on Friday, Nov. 26th, the President, Dr. Greenhow, in the chair. The papers read bore on subjects of considerable interest, but excited little discussion. Three living examples of skin diseases were also shown—erythema iris, lichen scrophulosorum, by Dr. Radcliffe Crocker; and tubercles in association with factitious urticaria, by Mr. Marrant Baker.

Dr. CARRINGTON read a paper on a case of Hydro-encephalocele, which he had exhibited last session. The boy, aged seven, an inmate of the Chelsea Infirmary, was under the care of Mr. Fortescue Ingram. The child was born by means of instruments; nothing was noticed wrong until he was two years old, when the back of the head began to protrude, and slowly increased, but has remained stationary for several months past, if not longer. At the upper and back part of the cranium is a large tumour, measuring fourteen inches and a half in circumference at its base, and seven inches and a half over its vertex from side to side. It is completely sessile, with a broad base, soft and fluctuating, non-pulsatile, not translucent. Compression

produces no effect at all, and the boy can stand on his head without any ill result. The tumour apparently springs from a large deficiency in the cranium, involving the parietals, especially the left, along the sagittal suture, and the posterior part of the left side of the frontal bone. There is a moderate amount of talipes varus. His general health is good; intellectually he is sharp and cunning, always cheerful, and keeps up an incessant prattle, which, however, is rational. When three years old he was knocked down by a cab, and since then has suffered from fits, which are usually short and transitory, but attended with complete unconsciousness; these have become more frequent and of longer duration during the last seven months, two having lasted some hours. There is weakness, with slight wasting, of the right arm and leg, also increased lately, and a peculiar mode of moving the arm, resembling that of athetosis. There is no optic neuritis. The boy has developed a lateral curvature of the spine, the left shoulder projecting more than the right.—Mr. MARSH asked whether any treatment had been employed, and whether it was not justifiable to tap the tumour with one of Southey's fine trocars; cases are on record where such treatment has resulted in cure.—Dr. CARRINGTON replied that the only treatment up to the present time had been the administration of bromide of potassium, which had exerted some control over the fits. He thought that to tap the tumour would be quite reasonable.

Mr. PEARCE GOULD showed two cases of Varicocele with small Testicles, and read a paper on some points in the pathology of this disease. One of the men shown was eighteen years old; the varicocele was large, had been noticed five months, but gave rise to no symptoms. The testicle was about half the size of the right, but of normal shape and consistence, with slightly exaggerated testicular sense. There had not been any previous injury or disease of the part; no other varices. The other man was seventeen years of age, presenting an almost precisely similar condition, the testicle being even smaller than in the first case; here the scrotal swelling had been noticed seven years, and had not altered during that time. After quoting the views of Paget and Curling as evidence of the prevailing uncertainty as to the effects of varicocele upon the nutrition and function of the testicle, Mr. Gould pointed out that in many so-called examples of atrophy of the testicle from varicocele there was a history of previous injury to, or inflammation of, the part; and he insisted that all such cases must be carefully excluded in an inquiry into this point. In many other cases no mention is made of the history, and they must therefore be accepted with caution. With these reservations he grouped cases of so-called atrophy of the testicle from varicocele in three series: (1) Cases in which the varicocele interfered with the full development of the gland at puberty, and in this group he placed the cases exhibited; (2) cases of very slight atrophy of the gland, a condition difficult to determine with certainty, but believed to be common; he had seen examples of it; (3) cases of extreme wasting of the testis. Though there is reason to believe in the occurrence of this atrophy, he had never seen an example of it, and did not know of any recorded case where the history was so precise as to exclude the possibility of its being either an undeveloped organ, or wasted as a result of injury or inflammation. That varicocele may cause sterility he considered proved by Curling and Gosselin: After the radical cure of the varicocele, slightly wasted or undeveloped testicles attain their normal size. Mr. Gould maintained that neither the greater length of the left spermatic vein, nor its passage beneath the sigmoid flexure, nor its mode of entrance into the renal vein, satisfactorily explained the relatively great frequency of varicocele on the left side; he suggested that the use of the valve usually present at the mouth of the left spermatic vein was to convert the direct aperture of the vein into an oblique one, and that the passage of the blood along the renal vein exerted an aspirating effect upon that in the spermatic vein; in one case he had observed where the valve was absent, the vein entered the renal vein obliquely. In comparing varicocele with other varices, it was shown that it is a disease of early life, most often arising before or at puberty; that it may remain stationary for years and not cause any symptoms, or may undergo spontaneous cure; that the veins are not subject to thinning of their walls and spontaneous rupture, and that it is not produced by the common causes of other varices; and it was thence argued that varicocele was not produced by a

yielding of the veins to increased internal pressure, but was a true venous hypertrophy. And Mr. Gould suggested that the special tendency to the development of venous tissue at this spot, evidenced in the normal pampiniform plexus, was re-excited at puberty and led to an abnormal development, either concurrently with or at the expense of the growth of the testicle. He maintained that there are cases of varicose veins of the lower extremities of the same kind—venous hypertrophies. Mr. Gould intends to practise the operation he recently described in our columns for the radical cure of the cases shown. A case in which this was performed with success thirteen months ago was shown to the Society, as was also a case of varicocele of several years' duration, stationary, and without any injurious effect on the testicle.—Mr. BRYANT thought that facts bore out Mr. Gould's theories. The affection is one of early puberty. He had seen a most typical instance in a boy of seven, in whom there was nothing to suggest a mechanical cause, and since that case he had met with three or four others in boys under puberty, and all of these had been on the left side. Some of the worst cases he had ever seen had been on the right side, and, although it was common on both sides, he could clearly recall two cases in which it was on the right side only. The cause of varicocele is certainly obscure, but the mechanical theory may be discarded. He also agreed with the view expressed in the paper that there is no evidence to show that the small testicles sometimes met with are really atrophied, and he was disposed rather to accept the theory of their being undeveloped. There is no doubt that where the radical cure has been performed, such organs grow and attain their proper size. He mentioned a case of a gentleman who had a large and very troublesome varicocele, with small testicle, on whom he operated, and eighteen months after the testicle was as large as the right, having formerly been only half that size. This patient married soon after the operation. Such cases are strong arguments for operating for varicocele, though it was only certain cases of varicocele that required it. He mentioned two cases of hæmatocele, which had followed violence or strain. In one the tumour was very large, and was mistaken for a hernia, and the surgeon's efforts for its reduction ruptured one of the veins; the other was ruptured during coughing.—Mr. WALSHAM had found in nearly all cases a valve two inches from the opening of the left spermatic vein, and he thought this an objection to Mr. Gould's view of the use of the valve at the mouth of the vein.—Mr. GOULD thought that in such cases as Mr. Walsham alluded to the vein was double almost up to its end, and that this valve merely acted to turn the blood into the alternative channel. He was at a loss to understand how the valve at the orifice of the vein could assist the circulation, if not in the way he had indicated. Mr. Bryant's cases confirmed his statements, and particularly that hæmatocele only results from injury to varicocele; never spontaneously.

Dr. GOODHART read notes of a case of Ulceration of the Colon, with Hypertrophy and Dilatation, in a girl of seventeen. The patient was admitted into Guy's Hospital, under Dr. Goodhart's care, on August 25th, 1880. She had always had delicate health, and in December, 1879, this began to fail, but without any definite symptoms. Her abdomen had been gradually increasing in size since January of the present year, but more rapidly in the last month. She had never had any severe pain in the abdomen, but had suffered from slight sudden pain at times. Since the onset of the abdominal swelling in January, the bowels had been irregular; sometimes she had had constipation, at others diarrhœa. In the last three weeks the bowels had acted seven or eight times a day, the motions being offensive and blackish in colour, with inability to retain them. The action of the bowels had caused no pain. She was remarkably anæmic and spare, and seemed very ill. Her pulse was 128, and her abdomen very much distended. The distension was found to be due to large, hard masses in the abdomen, which disappeared and reappeared in various parts, and were obviously due to a forcible peristaltic action on the part of the bowels. The peristalsis was, indeed, visible; and the abdomen was everywhere resonant. The abdomen was not tender. It contained no fluid, and there was no evidence of enlargement either of liver or spleen. She was suffering from a rather profuse diarrhœa, the motions being dark-coloured, quite liquid and offensive, but she confessed to little pain at any time, and none when the bowels acted. Her temperature was 100°. The other viscera were all healthy. The diagnosis rested upon her age, the extreme pallor, and evident severe illness,

the abdominal distension with increased peristalsis and frequent diarrhœa—all these symptoms slowly increasing in the course of eight months; and few will probably be found to criticise the opinion that the patient was suffering from *tabes mesenterica*; that the disease of the mesenteric glands had led to shortening of the mesentery; and this to intestinal obstruction of a partial kind, from which, and from the ulceration which would in all probability exist under such circumstances, the frequent diarrhœa resulted. The case was somewhat like that of a child who had been partially under Dr. Goodhart's care some months before, suffering from *tabes*, and in whom a fistula formed at the umbilicus, by which the obstruction was relieved; and the opinion was hazarded that from the distended appearance of the umbilicus perhaps a similar occurrence might happen in this case, but she was so ill that it seemed hardly likely that she would live long under any circumstances. The diagnosis seemed to be so clear that no other alternative one was suggested, and there was nothing in the progress of the case during the few remaining days of life to advance any suspicions as to its correctness. *Liquor bismuthi* and liquid extract of Bael were ordered, and the diarrhœa checked, but by no means arrested. The temperature varied between 99° and 101·6°; her pulse between 120 and 136. Death came by way of a sudden attack of abdominal pain, followed by speedy collapse, for which no remedies proved effectual. The inspection was made by Dr. Horrocks. The abdomen was enormously distended and tympanitic, the lower part of the colon being greatly dilated and occupying the entire front of the cavity. The sigmoid flexure occupied the right iliac fossa, having pushed the cæcum, which was not enlarged, backwards and inwards. Drawing the bowel from the ileum along the ascending colon, it was found that the latter suddenly dilated about the hepatic flexure, below which point it became wider and wider, so that the rectum formed a huge cylinder of seventeen inches in circumference. The dilated part contained a large quantity of black pulaceous fecal matter, without scybala, and some of this was exuding into the peritoneum from a small perforation in the sigmoid flexure. The dilated colon was much thickened and tough. It contained several ulcers—two close to the anus, immediately inside the external sphincter, oval in shape, and the size of half a crown, each of them. A little higher up were two others, and in the sigmoid flexure was a large one, with sinuous margins, in the middle of which was a small slough, with a central perforation. In all the ulcers the mucous membrane was destroyed, leaving the muscular fibre exposed, the surfaces being smooth, and the edges thick. There was no stricture at any part. The pelvic viscera were healthy. The following circumferential measurements were made after the bowel had been laid open:—Cæcum 7½ in.; hepatic flexure 11 in.; sigmoid 13 in.; rectum 17 in.; ileum 3½ in. The symptoms in this case were undoubtedly those of *tabes mesenterica*, but it is to be noted that the hypertrophied bowel produced when contracting masses of such hardness as were noticed at the time to be very unusual, and it may well be doubted whether, under such conditions of obstruction as were assumed to be in existence, *tabes mesenterica* ever leads to such a condition of hypertrophy of the muscular coat of the bowel as existed in this case. The remarkable absence of pain is another feature which ought, perhaps, to have led to a reconsideration of the diagnosis. The relations existing between the hypertrophy, dilatation, and ulceration were next discussed; and it was remarked that if the history of the case were discarded, undoubtedly the most probable explanation of the case is that from some unknown cause ulceration of the rectum had occurred, that this had led to spasm of the sphincter, and so to obstruction. But this hypothesis could not be so easily accepted—1st, because the history was very much against it; 2nd, because ulceration of the colon is a not uncommon result of distension; and 3rdly, because ulceration of the rectum is very uncommon in girls of this age. And it was suggested that the anæmia and ill-health of the patient made the general features of the case not unlike those of a few cases on record where dilatation of the stomach has occurred in young people without the existence of any obstruction at the pylorus,—cases which are paralytic rather than obstructive. It was then, in the light of this view, attempted to be shown that hypertrophy of muscle might follow partial paralytic distension, from what is known of the relations between hypertrophy and dilatation in other parts; and finally, the author combated the view that this was simply a case of hysterical

constipation, and entered shortly on the question of the effects of treatment in such cases.

Dr. HORROCKS made the autopsy of this case; the cause of death was evidently the perforation of the bowel, but he could not find any cause for the hypertrophy of the bowel, and he thought it must have been set up by ulceration of the bowel and then spasm during defecation. He could not agree with Dr. Goodhart that it followed atonic dilatation. There was no straining in defecation, and no scybala were found after death.—Mr. BRYANT considered that the hypertrophy of the colon must have been due to chronic obstruction of the bowel of some kind or other; the ulceration was secondary and similar to that seen particularly in the cæcum in cases of organic obstruction. He had had in Guy's Hospital a man, aged twenty-seven, who had been operated on when a child for imperforate rectum, but latterly had neglected himself and suffered from more permanent obstruction and died. At the post-mortem they found enormous dilatation and hypertrophy of the cæcum, colon, and sigmoid flexure, and the intestine ulcerated and gangrenous in parts. That it may occur in hysteria he was sure, and he instanced a case of an hysterical girl, aged twenty-four, on whom right lumbar colotomy had been performed for a supposed organic stricture; he closed the fæcal fistula, and several times passed his hand into the colon, which was quite flaccid and loose. After injections and other treatment it recovered its tone and she was cured. He thought this case was analogous to Dr. Goodhart's.—The PRESIDENT remarked that he had never seen such a condition; and he asked if in Mr. Bryant's male case the distension and hypertrophy were as great as in Dr. Goodhart's.—Mr. BRYANT replied that they were as great, if not greater.—Dr. GREEN thought the case very obscure. He had never seen visible peristalsis in *tabes mesenterica*, and should rather expect to find the intestines paralysed in that condition. He also doubted whether chronic constipation due to loss of power could be followed by hypertrophy of the gut: the two conditions were so opposite.—Dr. GOODHART had seen visible peristalsis in one case only of *tabes mesenterica*. There was no proof of hypertrophy of the colon in Mr. Bryant's second case, and he thought that was the difference between hysterical and this paralytic dilatation; the one is not and the other is followed by hypertrophy. Dilatation and hypertrophy of the heart go on *pari passu* if the primary dilatation is not excessive. In cases of stricture of the bowel scybala are never found in the intestine above the obstruction, for the constant churning movements of the bowel erode the scybalous masses.

Dr. F. TAYLOR read a case of Right Hemiplegia after Scarlatina, with embolism of the middle cerebral artery, destruction of Broca's convolution without aphasia, and death from diphtheria. The patient was a boy aged five years, and was seized, two weeks after an attack of scarlatina, with hemiplegia of the right side. There was no aphasia, but the boy answered questions intelligently and in long connected sentences. There was sensation in the leg, but not at first in the arm, and there were occasional attacks apparently of the nature of convulsions. Two or three weeks later sloughs occurred on the back of the hand and fingers; later still the right arm and leg became œdematous, and the urine was subsequently found to be albuminous. About nine weeks after the onset of the illness he was attacked with nasal and pharyngeal diphtheria, of which he died in a few days. At the post-mortem examination there was found embolism of the left middle cerebral artery, with extensive softening of the left hemisphere, involving the posterior portions of the second and third frontal convolutions, the lower parts of the ascending frontal and parietal, the supra-marginal convolution, the island of Reil, the corpus striatum, and the anterior part of the inner capsule. The heart showed a few minute vegetations on the mitral valve; it was not dilated. The right kidney had two large embolic infarcts, and the right hand presented over the abductor indicis one large, irregular ulcer, the result of sloughing of the skin, and three small sloughs on the fingers. Dr. Taylor called attention to the frequent occurrence of cerebral hemiplegia in connexion with exanthems in children; in many instances no opportunity was afforded of demonstrating the exact manner in which the paralysis was brought about. Thrombosis of the cerebral vessels was regarded as a frequent cause; but the present case showed that obstruction of the vessels might also arise from embolism as a result of an acute cardiac disorder. In relation to the persistence of the faculty of speech, it appeared from the history that the child had been left-handed, in consequence

of some enfeebled condition of the right arm, which was noticed from birth. This places the case in the category of those which seem to show that the speech centre is located on that side of the brain which is most educated for muscular movements. A third point of interest was the occurrence of diphtheria; its late appearance renders it probable that it was independent of the previous infection by scarlatina.—Dr. MAHOMED remarked that many cases of hemiplegia after the exanthemata are to be explained by the dilatation of the heart, with or without valvular disease, that frequently follows those diseases. He had recently observed cases of marked dilatation of the heart after scarlet fever. In a case of diphtheria that died from a dilated heart, he found thrombosis of the auricles and embolisms in many parts of the body, but not in the brain.—Dr. ALTHAUS thought the pathology of cases of hemiplegia after exanthemata obscure, but thrombosis and embolism were the most common cause. The destruction of Broca's convolution without aphasia was very interesting, but it was an apparent exception that really proved the rule.—The PRESIDENT regarded Dr. Taylor's case as very special, and quite different from the paralysis so common after diphtheria and typhoid fever. He had seen a good many cases of diphtheria occurring at an interval after scarlet fever; most of them were fatal.—Dr. TAYLOR replied that there was no evidence of dilatation of the heart at the autopsy; the signs of endocarditis were distinct, though slight. He did not bring forward this case as illustrating the sole cause of hemiplegia after exanthemata, but only one special form. It was an important question how exanthemata brought about the changes in the heart.

The Society then adjourned.

MEDICAL SOCIETY OF LONDON.

Perforation of Stomach in Hydrochloric-acid Poisoning.—Cerebral Embolism.—The Treatment of Genu Valgum.

At the meeting on the 29th ult., F. J. Gant, Esq., President, in the chair—

Dr. GILBERT SMITH exhibited a specimen of Perforation of the Stomach due to Poisoning by Hydrochloric Acid. The patient was a boy, aged six years and a half, who had swallowed about a tablespoonful of spirits of salts on the morning of admission into the London Hospital. Intense pain in mouth and throat was immediately followed by vomiting of dark-red matter. The vomited matters subsequently became colourless mucus, streaked with brownish material. There was much secretion from the mouth and fauces, deglutition was impeded, and there was great difficulty in breathing, especially in inspiration. There was much collapse, and death took place seventeen hours after taking the poison. The post-mortem examination revealed but little change in the buccal mucous membrane; that of larynx and trachea was red; the œsophagus of an ashy-grey colour; the mucous membrane of the stomach was red, except close to the pyloric end, where it was black, and in parts digested away; a perforation was found at the greater curvature, and there was recent peritonitis. The case was a typical one of poisoning by this acid, in which perforation occurred in about one-third of the cases. Death generally took place within twenty-four hours; in one case it occurred in so short a time as two hours; and to a girl, aged fifteen, one drachm had proved fatal. The laryngeal symptoms were due to the irritation set up by the volatile properties of the acid.

Dr. DOUGLAS POWELL showed a specimen of Endocarditis which had been attended with Multiple Embolism. The case illustrated the fact that embolism of both middle cerebral arteries might take place without any definite symptoms marking the event.—Dr. SYMES THOMPSON referred to a case of advanced heart disease, where the patient was attacked by aphasia on two separate occasions; the first lasted less than a day, the second occurred six months after, and continued for several days. Death took place from pyæmia, but was preceded by embolism of the posterior tibial artery.—Dr. DOWSE questioned whether the infarcts were not due to thrombosis, owing to a general inflammatory condition of

arteries in these cases.—Dr. D. POWELL said that in most of the cases there was no evidence of a general arteritis.

Mr. S. BENTON exhibited a boy, aged thirteen, who had made a good recovery from severe Knock-knee, being treated simply by tenotomy and instrumental means. Before treatment there was a divergence of 15 inches between the internal malleoli, and he could not walk without great pain and difficulty. One year ago he was admitted into the North-West London Hospital, and was three months under treatment. Mr. Benton divided subcutaneously the biceps tendon of both legs, and on the left leg he also divided the external lateral ligament. The instrument devised by Mr. Henry Baker was employed. The legs are now straight, the joints are quite strong, there is no stiffness or impaired movement, and the boy can walk eight or nine miles without fatigue. Great stress was laid on the selection of a suitable instrument, and the need of personal supervision in the treatment.

Mr. RICHARD DAVY then read a paper on the Advantages of Ogston's Operation in the Treatment of Genu Valgum. He thought the present opportunity a good one for upholding this operation, as so much had lately been published on the respective value of splints, tenotomy, and osteotomy. He could not admit any superiority in "extra-articular" osteotomy (as described by Mr. Reeves), and narrated his own case of excision of the inner condyle of the femur in 1871 for confirmed genu valgum, as a proof that surgical attention had been directed towards that point. The joint was opened without antiseptic precautions; the boy made a good recovery, and can now walk ten miles a day. He warmly praised Ogston's ingenuity in suggesting the oblique division of the inner condyle by a valvular opening. The cases suitable for the operation were the confirmed cases, where the horizontal plane of the condyloid end of the femur is markedly at fault, and progression interfered with by brushing of the knees. The rationale of the operation and the manner in which the obliquity of the condyle is increased were described and illustrated. He strongly urged the importance of an early diagnosis, as in that way cutting operation might be anticipated. He then described the method of operating, and exhibited a knife with a groove in one side of its back for the introduction of Rose's saw. The after-treatment was simple, but it was necessary to re-educate the patient on a fresh balance. The results were complete, and he had never seen a fatal case. He summarised Ogston's cases in Aberdeen, and also recapitulated ten cases of his own—eight left knees, two right knees. Constitutional errors and general treatment must not be lost sight of, and no surgeon could be so specially interested in any one operation as to overlook the characteristics of rickets, and indiscriminately perform it; but the fully confirmed rickety habit should not forbid the operation. He summarised its advantages as follows:—1. It is an operation mechanically correcting a mechanical defect. 2. Its conduct is simple, safe, and satisfactory. 3. No special antiseptic precautions are needed. 4. Its good results are rapidly gained; the tendency towards aggravation of the deformity is lessened. 5. There is but a trivial risk to the patient, and the operative impression seems to be permanent. 6. All future instrumentation at the hands of the surgical mechanician is abolished. Mr. Davy showed a boy, aged fourteen, who had been operated on ten months and a half previously. His height had increased three inches; his malleoli touched (there had been a divergence of sixteen inches and a half), and he could walk eight miles a day. The operation is a grand resource in these protracted cases of genu valgum, and the fact that two knee-joints had been opened in the same patient at one sitting and the condyles sawn off is a striking example of the progress of modern surgery.—The PRESIDENT said the author had not laid sufficient stress upon the risks of the operation in relation to the after-condition of the joint and the life of the patient.—Mr. HENRY BAKER said that Mr. Benton's case was a severe one, and the result excellent; the strength of the joints showed that fears as to permanent weakness following tenotomy and division of the external lateral ligament were unfounded. He asked Mr. Davy what were the dangers of division of the biceps tendon, which he had said was as dangerous as Ogston's operation.—Mr. EDMUND OWEN regretted that the two cases exhibited had not derived their improvement—he could not term it *cure*—from splinting alone, in spite of its tediousness. He found flat-foot and genu valgum so frequently associated that he looked upon them in the light of cause and effect; but he attributed the immediate cause of the joint deformity to a giving way of the internal lateral

ligament of the knee on account of its deriving little or no support from the adjoining fibrous structures; the internal lateral ligament had as allies the tendon of the biceps and the ilio-tibial band of fascia. Tenotomy had been spoken of as a trivial operation, and Mr. Davy urged that osteotomy even without Listerian precautions was less serious still; but no cutting operation should be lightly spoken of. He wished to know the ages of the patients on whom Mr. Davy had operated, as some surgeons had operated on children of two, three, and four years.—Mr. PEARCE GOULD called attention to Dr. Macewen's measurements in cases of genu valgum; he had found that the most frequent deformity was a curving inwards of the lower third of the femur or a lengthening of the inner side of the femur. The inner condyle is elongated in 84 per cent. of cases, but often to only a very slight extent. This was the explanation of the failure of Ogston's operation. Even in Mr. Davy's case there was an interval of five inches between the malleoli when the patellæ are placed directly forwards. In his experience he had never seen a severe case of genu valgum really cured by this operation. Mr. Barker had had a fatal case, and Mr. Gould had had a fatal case after osteotomy of the tibia. He had also seen suppurative of the joint, and stiffness; whilst Dr. Ogston himself mentions two out of eight cases with stiffness for months, and thickening round the joint. Dr. Macewen's operation was quite free from those dangers, and he believed it would soon completely replace Ogston's where osteotomy was necessary. No operation was perfectly safe; and certainly osteotomy could not be performed so perfectly subcutaneously as tenotomy.—Mr. ROYES BELL considered the case treated by instrumental means was most successful, but that it was not such a severe case of rickets as Mr. Davy's. Genu valgum was, no doubt, often associated with flat-foot, but the cases shown were very slightly affected; and many cases of flat-foot did not suffer from knock-knee. The osteotomies done at King's College Hospital were performed antiseptically.—Mr. WALSHAM could not agree that Ogston's operation was so safe as Mr. Davy avowed. He had seen a considerable number of patients treated by this method; and although many cases had been quite as successful as those of Mr. Davy, still he had seen very grave results follow—such as synovitis, suppurative of the knee, and one fatal case. Macewen's operation was the one now generally performed at St. Bartholomew's Hospital, and the one he most preferred.—Mr. DAVY, in reply, said five years and upwards was about the age of his cases, and pointed out the advantages as to time and convenience of operation compared with mechanical contrivances. He thought Ogston's would be the operation of the future.

Reviews and Notices of Books.

Demonstrations in Physiological and Pathological Chemistry.

By CHARLES HENRY RALFE, M.A., M.D. Cantab.
London: David Bogue. 1880.

The subject treated in this book is one which we venture to say hardly receives sufficient attention in the medical schools. Whilst the incomplete character of the preliminary examinations of most of the licensing bodies compels the schools to undertake instruction in the very rudiments of inorganic chemistry, the pass examinations do not require any more than a very superficial knowledge of the chemistry of the animal body. This, it must be confessed, is a weak point in the present curriculum; for although certificates of attendance upon classes of practical physiology are enforced, the examinations mostly do not *practically* test the knowledge of the candidates, except, perhaps, in the department of histology, which is not physiological but anatomical knowledge. On the other hand, it is by no means uncommon for candidates to be well posted in the more intricate problems of physiology gained from theoretical study, and at the same time to be profoundly ignorant of even elementary facts in physiological chemistry. There can be no question as to the importance of the subject in its bearings upon practical medicine; and for this reason, if for no other, we regard the publication of this book as most timely, and think that

it will be found of great use as a laboratory guide on the subjects of which it treats.

The author tells us that the book is based upon the systematic instruction he has for some years given at St. George's Hospital, and he has arranged the subject in the form of demonstrations. The first of these may be taken as a type of the whole. It deals with the saccharine and amylaceous principles. After their enumeration and general characters starch is dealt with separately, and all its reactions given; then follows glycogen, a brief physiological statement preceding the description of its method of preparation and its characters; next comes glucose, and, finally, lactose and inosite, which are treated in the same systematic way. The chapter concludes with a list of the materials, reagents, and apparatus necessary for the demonstration. The same methodical plan pervades each demonstration, the second chapter dealing with the fatty principles, and the third with the albuminous. Under the head of "Products of Decomposition," a chapter is devoted to the properties of lactic acid, and the long series of substances derived from the splitting up of the albuminoid bodies—viz., xanthin, cystin, kreatin, leucin, tyrosin, hippuric acid, uric acid, and urea. In the fifth demonstration the subject of digestion is discussed, and the properties of the digestive fluids detailed in order. The next two demonstrations deal with the nutritive fluids (blood, milk, chyle, and lymph) and the solid tissues (muscle, nerve, and bone). The demonstration that follows is upon the urine, and is an excellent account, within a small compass, of the physiological and pathological conditions of this excretion. A classification of the causes and conditions under which the colour of the urine is altered is useful, and there is a full disquisition upon the causes in the fluctuations of the reaction of the fluid. The conditions under which variations in the urinary constituents occur are then pointed out, and the characters of urinary deposits—freely illustrated—are described. The abnormal products met with in morbid urine follow next, and we note in passing that as a test for blood Dr. Ralfe regards the "guaiacum test" as very unreliable, since globulin, casein, mucin, &c., will develop the blue reaction when blood is absent. We miss any detailed reference to indican, although it is mentioned under the head of colour, but it is found in so many conditions that its importance may be overrated. Analysis of urinary calculi concludes this section. A chapter upon quantitative analysis and the manner of carrying this out in the gravimetric and volumetric methods concludes the book.

Dr. Ralfe has succeeded in producing a book which should be very useful not only to the student but to the teacher, and to those practitioners who are able to devote their leisure to the study of an attractive and important subject. By following strictly in the lines sketched out by the author, the student will find himself possessed of a sound knowledge of animal chemistry in health and in disease.

The Atomic Theory. By AD. WURTZ, Membre de l'Institut, Doyen honoraire de la Faculté de Médecine, Professeur à la Faculté des Sciences de Paris. Translated by E. CLEMINSHAW, M.A., F.C.S., F.I.C., Assistant Master at Sherborne School. London: C. Kegan Paul & Co. 1880. (International Scientific Series.)

THE fame of this excellent scientific series will not be impaired by the present, its thirtieth volume. The publishers have been wise in their choice of a book, and particularly fortunate in their translator. Mr. Clevinshaw has performed his task with equal care and skill. The translation is accurate and yet smooth, French idioms are almost entirely absent, French scientific phrases are well rendered, and there are, on the whole, very few misprints. Of the latter we notice the following as having some importance,

and as being easily corrected: Page 96, line 19, ethylene oxide should be ethylene; page 159, the atomic volume of gallium should be 11.7 instead of 1.17; page 202, line 3, for C_2H_6 read C_3H_8 ; page 253, the formula for potassium platinichloride is printed wrongly (probably the French author's error); page 257, line 20, for $VOCl$ read $VOCl_2$; page 321, line 19, "hundredths of millionths" should have been "millionths." Some errors of this kind are, of course, unavoidable in a first edition.

In the book itself there is much to praise and a little to lament. The modern chemical theory, in the establishment of which M. Wurtz has helped so materially, is expounded with remarkable clearness and brilliancy and with extensive learning. The historical order has been adopted, and the growth of our knowledge of chemical composition, reaction, and constitution, and of the physical laws with which they are inseparably connected, is traced side by side with the growth of the atomic and molecular hypotheses by which the results of experiments have been explained and the experiments themselves in many cases suggested. The earlier chapters of the book are almost entirely satisfactory, and everyone with the most elementary knowledge of chemistry will read with pleasure and profit the story of the successive discoveries and theories of Proust, Richter, Lavoisier, Dalton, Gay-Lussac, Avogadro, Berzelius, Dulong and Petit, Mitcherlich, Gerhardt, Dumas, Cannizzaro, Williamson, Frankland, Wurtz, Kopp, Kekulé, Kolbe, and Mendelejeff, to quote only a few from the long and illustrious roll. We are glad to note that but little national bias is perceptible in the history, and although it is annoying to find the law of gaseous elasticity uniformly ascribed to Mariotte, who did not, instead of to Boyle, who did, discover it, we must remember that Mendelejeff, a Russian chemist, gets the whole credit of the periodic law to which Newlands, an English chemist, was the first to draw attention.

We have said that the earlier chapters are almost entirely satisfactory. Their chief defect lies in this, that the author throughout uses too much the tone of an advocate anxious to make the best of his case, and therefore apt to slur over the difficulties, many or few, which beset it. This tendency is more apparent in the later chapters, and we cannot help thinking that better service would have been rendered to science if the stumbling-blocks in regard to the theory of atomicity had been more fairly recognised. That the theory is in the main useful, and within certain limits probable, no one doubts; but that it is capable of giving a satisfactory explanation of all the facts of mineral chemistry is by no means so certain, and we are inclined to think that it breaks down altogether in regard to some. The combination of hydrochloric acid with ammonia, involving apparently the fixation of chlorine to nitrogen, the existence of double salts containing the chlorides of monad metals, and numerous other cases that might be quoted, cannot at present be explained, and the fact should be fairly admitted.

The later chapters contain a very interesting sketch of modern views and discoveries in regard to the constitution of matter, in which the ideas of Van't Hof and Le Bel, Clausius, Clerk Maxwell, and, above all, Sir W. Thomson, are indicated. A fuller exposition of these hypotheses would be very useful just now.

The Science and Practice of Midwifery. By W. S. PLAYFAIR, M.D. Third Edition. London: Smith and Elder.

THE appreciation of this work by the profession is shown by the call for a third edition within so short a period of its first publication. In the present issue several important additions have been made, which bring the work up to the present state of obstetric practice. We find in it a full account of

the Cæsarean section, with the modifications proposed by Porro, where, in addition to opening the uterus and the removal of the foetus, the ovaries and uterus are also extirpated. A chapter is devoted to Laparo-elytrotomy, an operation proposed to take the place of the Cæsarean section, in which the advantages of the former over the latter operation, and the cases for which it is suitable, are clearly and ably set forth. In the chapter on Transfusion the observations of Schäfer, recently published, have been incorporated. The work has been carefully revised, and maintains its high position as one of the best text-books on midwifery.

New Inventions.

THE AROMATIC AND DEODORISING WATER-CLOSET.

THIS closet, the property of Messrs. Brazier and Son, 106, Blackfriars-road, presents some novel points. It is composed entirely of earthenware, and is in two pieces, the basin and the trap. The basin is of the ordinary conical form, with a flushing-rim. The trap into which it fits is an ordinary S bend, with a ventilating shaft leaving its highest point. The novelty consists of a subsidiary chamber, forming one piece with the trap, and communicating with it below the water-level by a small hole. There is a special plug-hole for "charging" this subsidiary chamber. The charging consists in putting some quicklime in the bottom and attaching a bag of camphor to the margin of the plug-hole. The water is then allowed to flow into the subsidiary chamber, and the level of the water is the same as in the trap. The plug is then replaced, and the only interchange between the trap and the chamber is by diffusion, for it is evident that no flow can take place from the chamber (in which the fluid is retained by atmospheric pressure as in a "bird fountain") into the trap. The chamber contains water saturated with camphor and lime, and if the water in the trap be not renewed too often that also becomes saturated with camphor and lime.

What the effect of a watery solution of camphor and lime may be upon sewer-gas or faecal matter we must leave professed chemists to determine and practical men to find out after a fair trial of this novel invention, the name of which is strangely contradictory, for that which is aromatic cannot be without odour.

MEDICAL TRIALS.

EXCHEQUER DIVISION.

(Sittings at Nisi Prius, before MR. JUSTICE STEPHEN and a Common Jury.)

EATON v. BASKER AND OTHERS, COMMITTEEMEN, AND THE MAYOR, CORPORATION, ETC., OF GRANTHAM.

MR. DAY, Q.C., and Mr. Finlay were counsel for the plaintiff; Mr. J. C. Lawrance, Q.C., and Mr. Dugdale appeared for the defendants.

This was an action brought by a surgeon against two sets of defendants to recover £97 7s. 9d. for medical attendance supplied to the poor in certain fever tents at Spittlegate and Little Gonesby, near Grantham, during an epidemic of scarlet fever in July, August, and September, 1878. The defendants pleaded that this was not a contract under seal; that if it was a contract it was contrary to sec. 200 of the Public Health Act, 1875; and that the contract was not made by the Local Board of Spittlegate or Little Gonesby, or by the Corporation under their seal. But these defences were stigmatised by Mr. Day in his opening as the reverse of meritorious; and he laid stress on the fact that this was a

very special attendance, as the fever tents were in a field, to isolate the patients, distant some one and a half miles from Grantham, where Mr. Eaton resided. It cut the plaintiff practically off from the rest of his practice, as few people would like to employ a doctor brought into such painful contact with a raging scourge as the fever then was, being of a particularly malignant type. While thus employed, the business of the plaintiff was almost wholly suspended. After arguments by counsel on either side as to the law of the case, Mr. Justice Stephen said he should allow the case to proceed, and the plaintiff was called, and deposed that Dr. Ashby, the medical officer of the sanitary authority, had applied to him to undertake the fever tents after a meeting in the Town-hall. At first he declined, as he believed it would injure his practice; but Dr. Ashby insisted that some one must do it, and the plaintiff suggested the names of several other well-known practitioners in Grantham. Whereupon the doctor replied they had most of them large and young families, and they much objected to running that risk; that the plaintiff must undertake the work, as he was the only bachelor in the profession in the town. Upon this the plaintiff consented, stipulating for half a guinea per day for the first two tents of six patients, and 5s. 3d. a day for every other similar tent. At first there was overcrowding, for Dr. Ashby had sent seventeen patients to the tents that properly held twelve. The witness had attended from June 30th to September 15th, sometimes seven hours a day, sometimes five or six, sometimes less; coming generally three times a day one and a half miles out of town. Out of sixty-five patients treated there only six had died. A correspondence was then read between the plaintiff and the secretary of the defendants, from which it appeared they had offered him at different times £58 and seven guineas, which sums, it was said, Dr. Ashby would pay after application and notice. The plaintiff added in his opinion his claim was a great deal too low.

Mr. Lawrance thereupon said he could not, on the part of the Mayor and Corporation, go on contesting the amount, some £30; but he submitted the committee were not personally liable, and the Corporation could not be sued on a contract not under seal.

Ultimately it was agreed to discharge the jury, and reserve these points of law for further consideration before his Lordship.

INFECTIVE PHTHISIS.

To the Editor of THE LANCET.

SIR,—The following, making due allowance for the ignorance and terminology of the period, looks so like a case in point, that if you do not think my estimate of it overstrained I will thank you to publish it in THE LANCET. It occurs under the head of "Catching an Atrophy," in Fizerbert's "Life of Cardinal Allen," and was taken by me from a little brochure, entitled "Cardinal Allen's Defence of Sir William Stanley's Surrender of Deventer," Chetham Society's publications, p. 69. The italics are mine, and the context implies, I think, that syphilis was not the cause of this "infection." However that may be, acute tuberculosis, or so-called galloping consumption, would appear to me to be the more appropriate interpretation; and I will only add, that I never saw or heard in India of the precautions against phthisis that Dr. Thompson mentions. "In those days [the reign of Elizabeth] a certain noble English youth, who had been entrusted to Alan's care at Louvain, had an atrophy, *his body gradually growing thinner*. As Alan, *assiduous in doing his duty*, remained with his pupil, he was also in a short time *infected with the same wasting away*, unnoticed at the commencement, for he was a man of vigour, *and yet the disease was not slight, as presently appeared*; for the poison was so attracted to the marrow, and so infused into the viscera, that besides infecting Alan with a disease which no course of time would cure, it so set at defiance all medicine, *that it threatened to bring him to a speedy death*, unless some escape . . . might by chance be obtained from the goodness of his own native climate and soil. Therefore Alan . . . returned stealthily to England," and regained in time his former health, as we learn from other sources.

Your obedient servant,

WILLIAM CURRAN.

Warrington, Nov. 1880

THE LANCET.

LONDON: SATURDAY, DECEMBER 4, 1880.

WE are threatened with another epidemic extension of small-pox in the metropolis. The disease is becoming very active in the eastern districts, and it has already overpassed the hospital accommodation provided there for the isolation of cases. Indeed, the question of extemporising additional hospital provision is under the consideration of the authority most concerned in the matter, the Metropolitan Asylums Board. While this is the state of things as regards small-pox in the metropolis, the chief provincial towns, in comparison, continue remarkably free from the disease. The cultivation of small-pox would appear to be becoming a specialty of the Local Authorities of London in combination with the Central Authorities (we use the plural term advisedly), and it is high time that we had some more definite information than we yet possess regarding the probable causes of these recurring outbreaks. For we are almost equally at sea whether we attempt to get at the true meaning of them viewed either in the light of facts in the natural history of the disease, or in the light of the proper application of the effectual means we have at our command for its restraint. It is in the latter, the practical light, the subject has the most pressing interest, an interest all the more urgent inasmuch as in solving the one question we shall go far to solve the other also.

And first let it be remarked that there is evidently a strange hesitation on the part of the Central Authority, or rather batch of Authorities, the Local Government Board, to whom we can alone look for information on the subject, either to give this information, or, assuming that the Board does not possess it (which is probably the fact), to get it. In the outbreak of small-pox in the metropolis preceding the one now threatening, the outbreak of 1876-78, several efforts were made in the House of Commons to obtain the information needed from the President of the Local Government Board. Motions set forth with a view of obtaining a thorough investigation of the beginnings of the outbreak of 1876-78 were met by a promise to put upon the table of the House papers showing the actual state of vaccination in the several districts of the metropolis. Not that this change of form mattered much, for to this day the promised papers have not been forthcoming, and there would appear to be little hope of even this imperfect instalment of what was sought for now seeing the light. The President of the Local Government Board was not unwilling that it should be known generally that the metropolitan population was the worst vaccinated in the kingdom, owing, it was said, to the migratory habits of a large section of it, and the exceptional draft of imperfectly vaccinated or unvaccinated persons from other parts of the country into it. He was willing that it should be inferred that it was to this imperfectly vaccinated state the metropolis owed the frequently recurring serious outbreaks of small-pox to which it was exposed. But he was careful to avoid enlightening the House as to the particular incidences of this imperfection in the different districts of the metropolis; and altogether both

he and his Department have displayed a marked desire not to ruffle the feelings of the local vaccination authorities, the Board of Guardians, by indiscreet disclosures. Yet, that there are disclosures to make about the way in which some of these authorities do their vaccination duties, and which it is desirable in the interest of the public should be made, is evident from the interviews which Dr. STEVENS, of the Medical Department of the Local Government Board, has recently had with Boards of Guardians in the east of the metropolis.

If the recurring outbreaks of small-pox in the metropolis are to be accepted as a gauge of its imperfectly vaccinated population (and in general terms we have little doubt that this is the case), it is to be inferred from the progress and character of the recent outbreaks that this imperfection is increasing rather than diminishing. Having regard to the circumstances under which public vaccination is carried out in the metropolis, there can be little wonder if such is the case. While professedly a public health measure, it is in reality a part of parochial administration, with all the narrow defects which attach to such administration. And notwithstanding that the central administration of public vaccination, both in its public health and parochial aspects, has been centred in the Local Government Board, the two aspects, in their administrative relations, are maintained as distinct as when they were attached to separate departments of Government. This want of a true union of the public health functions of the Board and its parochial functions is equally observed in every question with regard to small-pox in the metropolis, and underlies those serious difficulties which have sprung up in regard to hospitals for infectious sickness which are now impeding sanitary authorities in that matter.

Similarly the incoherent relations between the parochial and sanitary authorities of the metropolis and the Central Government contribute to the confusion and imperfection of action observed in public health matters. In fact, we see little hope of effectually dealing with the prevalence of small-pox and its recurring outbreaks, until, by a thorough investigation of the circumstances under which outbreaks like the one in progress occur, we are enabled to determine what part the shortcomings in the relations of the central to the local metropolitan governments play in the matter, and what share the deflections of local authorities, sanitary and parochial, take in their several duties in respect to small-pox. When these things are known we have little doubt remedies for insufficiencies will be forthcoming. Meanwhile, under the peculiar circumstances of the government of the metropolis, small-pox is undesignedly cultivated in a fashion from which smaller communities appear to be free, and which is a scandal equally to the Central Government and to the Local Government.

ACCIDENTS are often important factors in scientific discovery. They demonstrate the effect of combinations of influences which previous knowledge would not have led the investigator to combine, and they thus reveal, not rarely, previously unsuspected facts. Dr. BROWN-SÉQUARD accidentally dropped some chloroform on the skin of a healthy guinea-pig, in the position of the epileptogenic zone of animals artificially rendered epileptic. To his surprise,

the guinea-pig had a severe convulsive seizure. Recognising, with characteristic readiness, the suggestiveness of the fact, he commenced a series of experiments on cats, dogs, guinea-pigs, and rabbits, the results of which he has communicated to the Académie des Sciences.

If chloroform is dropped on to the skin of one of these animals a reflex contraction of the subcutaneous muscles is immediately produced. The respiration, as a rule, rapidly lessens, the temperature falls, the animal becomes lethargic and sinks upon its flank or back, without any attempt to resume the normal posture. A condition nearly that of sleep comes on, usually gradually, sometimes almost suddenly. Later, especially in guinea-pigs, tremor occurs in all four limbs, commencing in the hind limb on the side opposite to that on which the irritant liquid has been applied. The two hind limbs are drawn forward, the thighs strongly flexed on the abdomen; finally, general muscular relaxation occurs in many cases, especially in cats, which become then absolutely anæsthetic. A cat was exhibited in this condition, giving no other signs of life than feeble movements of the heart and respiration. After a quarter of an hour, an hour, or sometimes three or four hours, the animal wakes up, begins to move, and gradually returns to the normal condition.

Besides the tremors, convulsions are sometimes seen analogous to those of spinal epilepsy. Twice there was pleurosthotonos; in four animals, a cat and three guinea-pigs, there was rotation; and in two guinea-pigs, not epileptic, there was a violent attack of general epilepsy. Other interesting phenomena were also observed. Two cats became delirious. Two distinct forms of hemiplegia were seen: one cerebral, consisting in more or less complete loss of voluntary movement, with slight anæsthesia, in the limbs on the side irritated by the chloroform; the other spinal, with paralysis and hyperæsthesia in the limbs on the side of the irritation, and anæsthesia in the limbs on the opposite side. Paralysis of the two fore or of the two hind limbs sometimes occurred. These different paralyses were accompanied almost invariably with paralysis of half or the whole of the abdominal wall. The seat of the paralysis varies according to the part of the skin irritated. General hyperæsthesia often supervenes, in guinea-pigs especially, and lasts one or two days. The reflex action is more or less diminished, especially on the side on which the chloroform had been applied. The pupils become contracted in the cat, and dilated in the other animals, especially in the dog. Some animals presented complete paralysis of the intercostal muscles, others of the diaphragm. In two dogs and in several guinea-pigs, when the thorax was opened, it was found that one phrenic nerve had lost its excitability. The corresponding half of the diaphragm presented also a notable diminution in excitability. It was always the phrenic nerve and the half of the diaphragm on the side opposite to that on which the chloroform had been applied which were thus paralysed, while in many cases the phrenic nerve and half of the diaphragm on the side of the application were found to be more irritable than normal. The excitability of the nerves and muscles of the trunk and limbs was modified in a remarkable degree. An extremely feeble galvanic current was suffered to stimulate them, and after death, the irritability persisted for a much longer time than under normal

conditions. In guinea-pigs, for instance, the irritability persisted in the sciatic and brachial nerves three or four times as long as in animals the skin of which had not been irritated with chloroform. Another curious effect was the arrest of the exchange of material between the tissues and the blood, shown by a rapid fall in temperature, and pallor of the venous blood. Not only the peripheral nerves, but the spinal cord itself, acquired in many cases a remarkable morbid excitability. Moreover, a considerable congestion of the mesentery and of all the abdominal organs was found if the abdomen was opened before death. Lastly, two animals (guinea-pigs) died suddenly immediately the chloroform was applied to the skin—one by arrest of the heart, respiration continuing for some seconds, the other by simultaneous arrest of the heart, respiration, and of the exchange between the tissues and the blood.

This list of effects is a long and startling one, and, coming from a less eminent and experienced investigator, would probably be received with incredulity. From Dr. BROWN-SÉQUARD, however, we cannot but accept the facts, however mysterious may be their explanation. He points out that they cannot be regarded as the result of the entrance of chloroform into the blood. Very little of the vapour could possibly be inhaled, and chloroform in the blood would only account for a small part of these varied consequences. The only explanation which is offered is that they are due to an effect on the nerve-centres of a special irritation of the nerves of this region of the skin.

In a subsequent communication Dr. BROWN-SÉQUARD has described some experiments made with the object of verifying the hypothesis that these results are produced through the agency of the cutaneous nerves. In several guinea-pigs he divided the spinal cord transversely at the level of the ninth dorsal vertebra, and then applied chloroform on one side of the sacrum and abdomen—that is, to the parts receiving their nerve supply from the portion of the spinal cord which had been separated from the brain. In other guinea-pigs, the spinal cord having been divided at the same level, he applied chloroform to the side of the thorax and neck. If the remarkable effects of the chloroform be produced by the agency of the blood, it is clear that they should occur irrespective of the position of the application in regard to the divided cord. But they were absent in the first series of guinea-pigs, and present in the second. Hence, it seems certain that the effect is not produced by means of the blood, but by the agency of the nervous system. Several interesting facts were observed in these experiments. When the chloroform was applied to the parts behind the section of the cord, there was no congestion of the abdominal organs, such as invariably occurs when chloroform is applied to the skin if the spinal cord has not been divided. It occurred, nevertheless, when the chloroform was applied to the skin of the neck and thorax above the level at which the cord was divided, no doubt through the agency of the splanchnic nerves. It was found, however, that the application behind the section inhibits the reflex action of the dorso-lumbar part of the cord; and that its spinal influence on muscular tonicity is also lost, so that the abdomen becomes distended on that side, much more than on the opposite side.

In other experiments the transmission of the effect to the brain was investigated in cases of hemisection of the cord

in the cervical region. After the division of the cord on the right side, with the usual effect of causing hyperæsthesia of the right half of the body and anæsthesia in the left half, chloroform was applied in some cases to the right, in others to the left side. In the former the cerebral symptoms rapidly supervened, of the full character above described. On the other hand, in the second series, when the application was made to the anæsthetic side, the phenomena were either absent or tardy in their appearance, and the congestion of the abdominal viscera was absent. Another point investigated was, whether it is possible to kill an animal in perfect health by the application of chloroform to the skin. He found that whenever the liquid has produced loss of consciousness, anæsthesia, and a notable fall in temperature, death occurs with certainty if the liquid is still applied to the skin.

Certainly the annals of experimental pathology scarcely contain another example of a series of effects so profound from a cause so slight. Dr. BROWN-SÉQUARD does not point out the bearings of his experiments on therapeutics, but they are sufficiently obvious and important. It is evident that the remarkable anodyne effect of chloroform and other agents applied to the skin in cases of neuralgia, even of central origin, may find their explanation in the influence which he has discovered and investigated in these most interesting observations, and which can doubtless be produced in varying degree throughout the animal kingdom.

It must not be supposed from the fact that we have for some time past preserved a purposed silence on the subject of the private asylum system and Lunacy Law Reform, that the question originally raised by ourselves, and of late years freely discussed, with more or less wisdom, in the lay press, is not still engaging our attention. We are, in truth, pursuing researches of a very exhaustive kind in ways and by agencies more likely to give us a full and clear view of the subject than any we have previously been able to employ. It would be premature to say more at present, but in justice to the profession, and more particularly that section of it which is engaged in asylum practice, it is right to state that our long-standing conviction is confirmed, and we must adhere to an opinion which has to a great extent placed us at variance with the majority of Lunacy Law reformers—namely, that it is the system, rather than the way in which it is worked, or the persons working it, which most urgently demands the impartial scrutiny of the Legislature. It will be exceedingly unfortunate if the subject is not discussed on a proposal made by the Government during the approaching session; and our immediate object in reopening the question in these columns at this period of the recess is to point out the need of at once pressing the matter on the attention of the Cabinet.

The glaring and more mischievous faults of the present arrangements are specifically three: First, the loose mode of *certifying*. It is as true now as it ever was that any two medical practitioners—neither of whom need have heard a lecture on insanity, read a page in any work on the subject, been asked a question at any examination, or even seen a case of lunacy—can at will, and after a single visit, without consultation, or time or opportunity for reflection, sign a certificate which in many instances must be worse than a

death warrant, branding the person so certified with a life-long mark of social disability. It is, we protest, monstrous that the certified opinion of any practitioner of the art of Physic should have the force of a legal warrant for imprisonment; and that it should deprive the person named therein of personal liberty, self-support, and all that makes life pleasurable, without appeal. It is not necessary that any such certificate should be signed, and if it were otherwise it would not be fair to ask medical men to sign it. We are concerned with the study and amelioration of disease; and we do not desire to be interrupted in our scientific pursuits to perform this most unsavoury service. The notion that “certifying” patients insane offers the smallest safeguard to the public is purely chimerical. The protection needed is an efficient and sufficient inspection of asylums such as this country has never yet enjoyed. How long public opinion will rest content with the formal system of visiting carried out by the Board of Commissioners in Lunacy as at present constituted we will not venture to predict; but the fact cannot be gainsaid that, except in so far as the existence of a Commission in Lunacy results in the publication of systematic reports, and therefore keeps the subject of asylum-management before the public, it is practically useless. No more restraint is necessary in the treatment of a case of lunacy than in the management of a case of febrile excitement or delirium tremens. We are not asked to certify in the one class of cases; why should we be in the other? The safeguard against sane persons being put away in asylums must be the perpetual surveillance of these establishments, and such an arrangement as shall make those who act as “keepers” public officers publicly responsible.

This leads us to the second point—namely, the *private-asylum system*. It is, we once again assert, opposed to all the interests of law and of public safety that the power to imprison any person, sane or insane, self-controlled or carried away by an idea, should be entrusted to private persons. We have abolished sponging-houses for debtors; it remains to put an end to the system of allowing private persons to keep lock-up houses for the insane, as a matter of commercial business and in the way of profit. Nothing short of a complete and sweeping change of this system will suffice. Asylums ought to be put on the footing of *hospitals* so far as the treatment of mental disease is concerned, and the individuals to whose discretion the management is committed should be on the footing of public officers, gaining nothing by the detention or the discharge of their patients, either in money or prestige. It is useless to mince matters. The public asylums everywhere have their faults; they are too large, too palatial, wholly unlike the “homes” of their inmates; and they are conducted less as *hospitals* than as refuges. All these evils are deplorable, and they mar or hinder good medical work. Meanwhile, however, the private asylums are incomparably worse, not in themselves or as establishments, but because they rest on a wrong foundation, are organised on a bad principle, and place the medical man in charge—whether he be the proprietor or only *employé*—in a false and humiliating position. He cannot keep his patients long enough to assure their recovery without being suspected of acting from unworthy motives, and he cannot discharge them without subjecting his establishment to a loss which may or may not

be speedily compensated by the admission of new cases, but which is, as far as it goes, a pecuniary sacrifice to the business of the "boarding-house." It is wrong that this should be so, and nothing but harm can come of it.

The third of the three cardinal evils to which we have alluded lies in the *difficulty of getting patients out of asylums* when once they have been incarcerated, whether their admission was necessary or made in error. No assurances given by the Commissioners on this point can, or should, have the smallest weight with the public. What the Board means when it asserts that few, if any, cases of mistake have come under its notice is simply that, with very rare exceptions, the certificates sent to the Commissioners are fully made out and technically satisfactory, and that the keepers of asylums do not often (!) complain to them of patients being improperly placed in their establishments. It would be strange, indeed, if matters were not satisfactory, and if the most unqualified assurances were not forthcoming in respect to both these particulars. As a matter of fact, the Commissioners in Lunacy do not even see—as the official eye is gifted to see—anything like the "total" of patients that pass through these asylums. There are large middle-class institutions which, as the official Reports show, are not "visited" more than once a year, and not always thus frequently, whereas the majority of the cases "discharged on recovery" or "transferred," or who have "died" in asylums of all classes, reach the termination of their imprisonment, in one or other of these ways, "within six months"! We are speaking of the *system* with the general average of its consequence. We protest it is wholly bad. The difficulty in getting patients out of asylums is the fruit of the facility which exists for getting them in. Until the law relating to "certifying" is repealed and reconstructed there can be no satisfactory and sufficient change in the condition of the insane as regards the probability of their prompt discharge on recovery, or the frank avowal that an error has been made, and passing disturbance mistaken for permanent disease.

We will not pursue the subject further into detail on the present occasion, but we are anxious it should be recognised that, so far as we are concerned, the subject is not shelved. We shall not rest content until the whole question has been amply discussed in Parliament, and the profession and the public have had all the facts set clearly before them, and had their say.

THE last meeting of the Council for 1880 of the Metropolitan Hospital Sunday Fund was held on Tuesday at the Mansion House, under very favourable auspices, which call for a few words of notice. The first thing to observe in reviewing the history of the Fund this year is that a larger collection has been realised than on any previous year. In 1874 the total of the Fund was £29,936; in the present year it reached £30,423. Not only was there a considerable increase in the individual donations, but also in the number of contributing congregations. We may venture to hope that with further improvement in the commercial condition of the country the amount of the collection will yet further increase. Two or three other points in the history of the Fund for the year augur well for the future. The unsectarian character of the Fund has been well shown by the vindication of Rule 4. This rule, requiring that every in-

stitution shall be managed by a duly-appointed Committee, is of the utmost importance. It was elicited at the meeting on Tuesday that other institutions besides the Eastbourne Convalescent Home—which, by the way, has in this respect amended its constitution—are out of harmony with Rule 4. Sir SYDNEY WATERLOW explained that an intimation to this effect will be made to the institutions in question, so that they may have ample time before the distribution of next year to put themselves into the position of public institutions managed on public principles. It is evident that institutions managed by two or three persons, without meetings of subscribers and without a committee elected by and at such meetings, are, whatever their usefulness, only private establishments. Another point in respect of which the Hospital Sunday Fund is working well is in the difficult matter of Surgical Appliances. The charities which profess to provide these appliances are known to require a number of letters from subscribers, whose money value represents the value of the instrument or appliance required, so that, as in an instance stated at the meeting on Tuesday, a man requiring an artificial leg may have to travel all over the town for fifty letters before he can obtain that necessary adjunct. Last year it was resolved to set aside 1 per cent. of the Hospital Sunday Fund for the prompt relief of such cases. This has worked so well that the Council unanimously decided henceforth to set aside 2 per cent. of the Fund.

Finally, the Fund will be continued for the next twelve months under the most cordial support and sanction of the Lord Mayor, Alderman MCARTHUR, who, on Tuesday, expressed a strong wish that it should again be accommodated with quarters in the Mansion House, as at the beginning. Ever since the Fund has been obliged to have its own offices it has been favoured with the kind interest of two Lord Mayors and the use of the Mansion House for council meetings. But it will now again have its local habitation there with all the advantage which such an association gives it. The Council naturally passed a very warm vote of thanks to the Lord Mayor for this marked kindness, and will best show their appreciation of it by redoubled efforts to increase the Fund and maintain its impartial administration. We thus leave the Fund for the present, not without satisfaction in remembering that we ourselves made some special effort before the collection to emphasise the needs of the hospitals of London and the duties of London churches in reference thereto. The annual meeting of the constituency of the Fund is fixed for Dec. 20th.

Annotations.

"No quid nimis."

THE MEDICAL CURRICULUM.

NOTWITHSTANDING all that has been said and written and proposed during the past ten years, the problem of medical education still remains unsolved. Indeed, it would seem that each year it becomes more intricate and complicated. Numberless schemes of reform have, from time to time, been proposed, but few of them have had a really practical basis. Abuse has been lavish and general; at one time the student has been blamed, at another the teacher, and nearly always the examiner. The truth is, the system as a whole is wrong, and none of its parts work smoothly.

In another column will be found a sensible, though startling, proposal by an experienced teacher and examiner. Mr. Savory very properly ascribes the chief defects of the existing system of medical education to the fact that too much is attempted in the comparatively brief medical curriculum. Three remedies are available: either to lessen the number of subjects, or to lower the standard of attainments, or to prolong the period of study. Of these three courses only the last can be regarded as finally satisfactory. Few persons will maintain that the medical student or practitioner can know or learn too much. Each and every subject included within the curriculum is more or less essential to a complete education. What is needed is, an adequate prolongation of the compulsory course of study. Nor is this recommendation so much of an innovation as might at first sight appear. In the days of apprenticeship a course of training and education extending over six or seven years was the rule; it is only since the system of apprenticeship has grown into gradual disuse that the time for study has been clandestinely and almost illegitimately curtailed. The time formerly spent in pupilage has been saved without any corresponding extension of that passed at a medical school. Failing a *bona fide* apprenticeship (and there is much to be said both for and against this), six or seven years at a medical school cannot be held by reasonable persons to be too long for the professed elaborate education of the medical student of modern times.

THE EXCRETION OF INDICAN.

MUCH attention has lately been directed to the mode of origin of a substance which has been demonstrated to be one of the normal constituents of urine—indican. Its nature, and the conditions of its excretion, have been the subject of investigation by many writers since Schunk, in 1857, called attention to it, and the facts which have been ascertained have been well summarised and added to by Dr. H. N. Heineman in the *Archives of Medicine* for August. Indican has been separated from the urine in the form of white shining masses, by Bauman and Brieger, who class it in the aromatic series, to which phenol and benzol belong. It is a compound body, composed of indigo-blue, indigo-red, indigo-glucin, leucin, and acids. Nevertheless it does not give any colour to the urine, except in rare instances, and then the colouration is due to decomposition by a ferment, either before or after being voided from the bladder. A blue tint is observed, due to the liberation of indigo-blue, crystals of which may be found in the urine. The ease with which it undergoes this decomposition renders its detection in the urine easy, and also furnishes a means of its quantitative estimation. Hoppe-Seyler has found that the amount of indigo-blue produced is definitely proportioned to the amount of indican. Hence, if the indican is decomposed by hydrochloric acid, and the indigo-blue dissolved out in chloroform, the tint of the solution affords an index to the amount of indican. It is usual to add some calcium hypochlorite to the solution, which completes the decomposition of the indican, and intensifies the colour.

The source of indican, according to the researches of Jaffe, Kuhne, and Salkowski, appears to be a nitrogenous body called "indol"—the substance to which the peculiar odour of faeces is due. It is a product of the decomposition of albuminous substances when acted upon in the intestine by the pancreatic juices. Christiani has shown that if indol is injected hypodermically into the lower animals, the excretion of indican is thereby increased. Ewald, in a case of artificial anus, withdrew the secretions from the upper part of the small intestine, and found that then no indican appeared in the urine. The excretion has been found to be increased by a prolonged and exclusive meat diet. It is possible that it is derived also from other

sources, and it is conjectured that some may come from the blood, which furnishes, as far as we know, all the other colouring matters of the body. Many diseases which are attended with a diminution in the hæmoglobin of the blood, cause also an increase in the excretion of indican, and the two may be observed to coincide in time. It is thus evident that we have much more yet to learn regarding this substance.

The new observations which have been supplied by Dr. Heineman constitute an important addition to our knowledge. He has examined the excretion in upwards of 200 cases, of which 150 were cases of disease. He has added these to the cases examined by Hoppe-Seyler, Senator, and Hinnige, making a total of nearly 400 from which to draw conclusions. One hundred and forty-nine of the observations were on the excretion in health, and indican was found in all but 14, that is, in about 90 per cent. In nearly half Heineman's cases there was an increase above the average, and in one-fifth there was a marked increase. It seems, therefore, probable that the kind of diet must be taken into consideration in every case. Certain diseased conditions were found to produce a decided increase. The most marked excess was found in the diseases which affect the alimentary canal, and especially the small intestine, whether local diseases or general diseases with a local lesion. There was a marked increase, for instance, in dyspepsia, gastro-duodenitis, chronic constipation, intussusception, diarrhoea, peritonitis, cholera, lead-poisoning, and typhoid fever. In diseases causing inanition, phthisis, and scrofulous bone disease, an increase is also found. Although some diseases in which there is a reduction in the hæmoglobin of the blood cause an increase, there are curious, and at present mysterious, variations in the effect of diseases of this class. Thus, malaria, syphilis, rheumatism, alcoholism, progressive anæmia, and chlorosis, even when the blood-change is profound, do not always cause an increase in the excretion of indican. Further observations on this class of disease are needed to ascertain the conditions under which the excretion varies. There is a marked increase in certain nervous disorders—insanity, epilepsy, Addison's disease, progressive muscular atrophy, and paraplegia, and also cases of disordered function of the kidneys, as in chronic Bright's disease. The diseases, however, in which the most uniform and marked increase is met with are internal malignant tumours—sarcoma and carcinoma.

Theoretical reasons have been offered in explanation of these pathological variations, but our knowledge is at present too inadequate to furnish grounds for safe hypothesis. A suggested explanation of the increase in peritonitis, constipation, &c., which has been founded on the experiments of Jaffe, seems probable. He found that when the small intestine was tied the amount of indican in the urine was increased. This seems to show that a mere retardation of peristalsis may, by promoting the absorption of indol, increase the indican. Hinnige suggested that other diseases act through the nervous system, and produce a change in the nature of the pancreatic secretions, but it has been shown by Brieger that indol may be produced without the agency of the pancreatic juices, and by Senator that it is unquestionably a product of decomposition. It is possible that observations on the excretion under the influence of various drugs may throw further light on its origin.

THE LONDON FEVER HOSPITAL.

THE appeal of the noble President of the London Fever Hospital should not be forgotten as the season of Christmas arrives. Only medical men, perhaps, know the useful work which this hospital does, how it sends its ambulance for, and opens its doors to receive, fever-stricken servants, or members of families, and so not only provides for them, but

delivers the remaining members of such families from terrible risks, and the general public from wider extensions of disease. It is impossible to overstate the convenience and utility of this institution. Its claim on the public is not the less strong that it takes a payment for each patient; for those in the general wards two guineas, their cost to the hospital being eight; and for patients in private wards three guineas a week, which just suffices to pay their cost. It will thus be seen that the hospital is a charity of the very best kind. It charges patients, but it makes no profit. So far from doing this the noble Duke tells us that for the last six years the hospital has had to be carried on by the annual sale of about £2000 of its funded property. It is easy to see what the end of such a state of matters must be if the benevolent public does not step in with aid. There is one most tempting rule of this fund—viz., that a governor paying a guinea a year can have a servant admitted without charge at the discretion of the committee. We most heartily commend the urgent appeal of the Duke of Devonshire to the wise and benevolent of the public.

EFFECTS OF CARBONIC OXIDE ON ANIMALS.

At the last meeting of the Académie des Sciences, M. Gréchant read a paper giving the results of a series of experiments he has made upon the absorption of carbonic oxide by the living animal, and showing how he has been enabled to determine exactly the smallest proportion of this gas which proves fatal to different animals. He states that he first introduced into a large gasometer a homogeneous mixture of air and carbonic oxide, containing 1-400th of the latter gas. A dog weighing 15 lb. was compelled, by a properly arranged apparatus, to breathe this for the space of fifty-six minutes. At the expiration of this period, the muzzle being taken off, it remained lying for a few moments, then rose and walked about. A drop of the blood, examined with the spectroscope, showed that the bands of absorption of oxycarbonised blood were present. On the following day the same animal was made to respire a rather stronger mixture, containing 1-350th of the carbonic oxide gas; the experiment lasted forty-five minutes. The animal remained lying, and was only able to rise after the lapse of some minutes. On the following day, again, a mixture containing 1-300th of carbonic oxide was supplied to it. At the expiration of fifty minutes the respiratory movements stopped. The animal died without the least agitation. It had respired 146 litres of the mixture. One hundred cubic centimetres of blood taken from the inferior vena cava was only able to absorb 6·8 cc. of oxygen, proving that the hæmoglobin was almost completely oxycarbonised, and hence that for the dog the precise lethal dose was 1-300th of carbonic oxide. In experiments on another animal of the same species and weight the lethal dose was found to be 1-250th of the gas. This difference seems to explain how it is that when two persons are exposed to an atmosphere impregnated with carbonic oxide one may die whilst the other survives.

M. Gréchant finds from similar experiments on rabbits, exposing them successively to mixtures of air and carbonic oxide, containing 1-500th, 1-400th, 1-300th, 1-200th, and 1-100th of carbonic oxide, that even the last high proportion does not prove fatal to them. A mixture containing 1-70th was breathed for forty-eight minutes; the animal remained resting on its side for some minutes, but then rose and moved about. The proportion of 1-60th, however, proves fatal to the rabbit. It hence appears that great differences exist between different species of animals in regard to their resisting power to the action of the gas. In experiments with a stove without a chimney M. Gréchant finds that the combustion of two kilos of carbon of wood, in a chamber having a cubic capacity of forty-five metres, was sufficient to partially poison a dog to such an extent that

the absorbing power of the blood for oxygen, which normally amounts to 23·2 cc. per 100 cc. after two hours and a half was only able to absorb 12·4 cc. of oxygen, so that 10·2 cc. of oxide of carbon had been fixed by each 100 cc. of blood. Under these conditions a guinea-pig would have died, since 1-500th proves fatal to that animal.

SCARLET FEVER IN CHRIST'S HOSPITAL.

CHRIST'S HOSPITAL (the Blue Coat School), with its 700 and odd inmates, is now suffering from scarlet fever, after a long immunity from any considerable prevalence of the disease. In fact, during the ten years 1870-79 in no year did the number of cases which occurred in the school exceed four (1874 and 1877), while in seven years one case only happened in each year, and two cases in one year (1870). But on the 11th of the past month (November) of the present year four cases of scarlet fever took place among the boys, followed by six more in the next three days. From the 15th to the 20th there were no fresh cases; then from the 21st to the 25th thirteen more boys sickened of the disease—apparently showing an incubation period of about seven to ten days. The infection appears to have been introduced into the school from the playground, the most careful inquiry having failed to show any more probable source. It has been determined by the school authorities to leave the decision of retaining the healthy children in the school or sending them home, to their parents, and a circular has been issued to this effect. As a consequence, a large number of the children—about 250, we understand—has been withdrawn. We trust that the school authorities have taken means to insure that they receive information as to the subsequent history of these children in respect to scarlet fever. It has been long held of this disease that the dispersion of schools under these circumstances contributed to spread the infection more widely and more speedily through the country. From that point of view the future history of the children who have gone home will be of great interest, not only as furnishing information with regard to the doubtful point in preventive medicine, but as a guidance to the school authorities, should they unhappily be placed in a similar unfortunate position in the future. The type of the malady in the hospital is, we are glad to learn, of the mildest, while the scholars remaining are placed under the most favourable circumstances for avoiding the disease, or such as may contract it for passing through its course with least detriment to themselves.

THE LATE DR. HUDSON.

At a meeting of the Professors of the School of Physic, held on Nov. 25th, it was unanimously resolved, "That the Professors of the School of Physic in Ireland desire to place on record their sense of the great loss which medical science in Ireland has sustained by the recent death of Alfred Hudson, M.D., late Regius Professor of Physic in the University of Dublin. The Professors further desire to convey to Dr. Hudson's widow and brother their hearty sympathy with them in their present trial."

At a special meeting of the directors of the City of Dublin Hospital, held last week, the following resolution was unanimously adopted:—"That this Board has heard with deep sorrow of the death of Dr. Alfred Hudson, Physician-in-Ordinary to the Queen in Ireland, the consulting physician of this hospital, and they beg to convey to Mrs. Hudson their expression of sympathy and regret."

At the opening meeting of the Dublin Obstetrical Society on Saturday last, the Rev. Dr. Haughton referred to the loss which the country and profession had sustained in the death of Dr. Hudson, and moved, "That the Obstetrical Society of Dublin desire to record their sense of the loss that medical

science has sustained in the death of Dr. Alfred Hudson, and to convey to his widow and brother their warm sympathy in their deep bereavement." Dr. Kidd seconded the resolution, and said they were all deeply sensible of the loss the public and the profession had sustained by the death of so able a man. The resolution was passed in silence, and the secretary was directed to forward it to the family of the deceased gentleman.

The Committee of the Meath Hospital have also passed a resolution sympathising with Dr. Hudson's family in their bereavement.

THE EFFECT OF EXERTION ON TEMPERATURE.

DR. BONNAL of Nice has been experimenting on the effect of muscular exercise on the temperature of the body. The observations were made on four individuals, the temperature being taken in the axilla, popliteal space, groin, foot, hand, mouth, and rectum. The investigation has been prosecuted during four years, and the conclusions reached are the following:—All muscular exercise, even if of short duration, raises the temperature of the rectum, rarely, however, to a point exceeding 101° F.; but the rise occurs invariably, at whatever hour the exercise is taken, whether before or after rest, and independently of age, sex, and meteorological conditions. The effect bears no relation in degree to the duration of the exercise, or to the apparent fatigue. The influence of the same exertion, under identical conditions, varies in different individuals, and in the same individual at different times. The physical altitude, the state of the atmosphere, and the amount of clothes, exercise, as might be anticipated, a marked influence on the degree, and especially on the rapidity, of the rectal rise in temperature. On the other hand, however, the absence or abundance of perspiration has no appreciable influence on the variations in temperature during movement. Rest, after a given exercise, always determines a fall in the rectal temperature, more considerable and more rapid the shorter the exercise. All exertion which causes a great acceleration of the pulse and respiration lowers the peripheral temperature (mouth, axilla, groin), but the fall is immediately recovered from on rest, the rectal and peripheral temperatures becoming equalised, or resuming their normal difference—about two-thirds of a degree Fahrenheit. The greatest elevation by exercise which was met with amounted to 103·2° F., in the case of a celebrated runner, aged thirty-one years, who had just run eleven miles in an hour and a half without stopping, and without any other effect than an elevation of the pulse to 145. If the rectal temperature is below 98·6°, a moderate exertion, such as a gentle walk of a mile on level ground, raises the temperature up to the normal, even though the necessary rise amounts to 1½° F. But if the temperature is already above 98·6°, the same exercise will not raise the temperature more than ·4° or ·8° F. In a rapid ascent the greatest elevation of temperature almost always occurs during the first half hour; if the ascent is continued, the temperature may remain stationary, may be raised ·2°, or may fall ·2° or ·3°. Some other observations which corroborate the fact that gymnastic exercises cause a rise of temperature are not of special interest. The account of the investigations has been communicated to the French Académie des Sciences.

A JURY ON UNQUALIFIED ASSISTANTS.

AT an inquest touching the cause of death of George Beighton, of Marsh Gate, Doncaster, the jury found that he died of erysipelas, and expressed their disapproval of medical men leaving unqualified persons in charge of their patients. The coroner stated that he had received a letter from Mr. Jessop, of Leeds, giving the assistant, Mr. David

Allison Bradbury, a very good character. Doubtless Mr. Jessop had good grounds for doing this; but it is nevertheless indefensible for a surgeon to leave an unqualified *locum tenens* in charge for three weeks. Beighton, in driving to Walworth, in a state of intoxication, fell from his cart and incurred a severe bruise of the right temple. Mr. Bradbury, thinking, as he said, there was pus, made an incision, which bled more or less, according to the evidence of the deceased's wife, till death. It is not clear whether the man died of erysipelas or hæmorrhage. Mr. Bradbury says there were no veins in the neighbourhood of his incision! But one thing is clear, as the jury said, that unqualified assistants should not be left in charge of patients for any length of time.

PROFESSOR LISTER.

IN his presidential address at the Royal Society on St. Andrew's Day (Nov. 30th), Mr. Spottiswoode thus referred to the work of Professor Lister with which his name and fame are more particularly associated:—

"One Royal Medal has been awarded to Professor Joseph Lister, F.R.S. Mr. Lister's claims to the honour of a Royal Medal are based upon his numerous and valuable contributions to physiological and biological science during the last thirty years. Condensed into a single sentence, the merit of Mr. Lister consists in the generalisation to living matter of the results obtained by Schwann and Pasteur with dead matter. He began with cases of compound fracture and with abscesses. In simple fracture the wound is internal, the uninjured skin forming a protecting envelope. Here nature works the cure after the proper setting of the injured parts. In compound fracture, on the other hand, the wound extends to the surface, where it comes in contact with the air; and here the operator can never be sure that the most consummate skill will not be neutralised by subsequent putrefaction. In the earliest of his published communications, Mr. Lister clearly enunciates, and illustrates by cases of a very impressive character, the scientific principles upon which the antiseptic system rests. He refers to the researches of Pasteur, and shows their bearing upon surgery. He points to the representative fact then known, but unexplained, that when a lung is wounded by a fractured rib, though the blood is copiously mixed with air, no inflammatory disturbance supervenes; while an external wound penetrating the chest, if it remains open, infallibly causes dangerous suppurative pleurisy. In the latter case the blood and serum are decomposed by the microscopic progeny of the germs which enter with the air; in the former case the air is filtered in the bronchial tubes, and all solid particles are arrested. Three years subsequently this inference of Professor Lister was shown to be capable of experimental demonstration."

"NUTRICINE."

A NEW method of preparation and preservation of meat in a small bulk has been described to the Paris Académie des Sciences by M. Ed. Moride. The details of the process are not published, and it is not, therefore, possible to form a critical estimate of its practical character, but it promises to be of value if the statements of its inventor can be relied upon. It consists in treating, in special apparatus, finely-divided meat, together with certain "nitrogenised alimentary substances," which have the property of absorbing the constituent water of the meat, and perhaps of forming with the meat certain organic compounds, still undetermined; the whole is then dried at a low temperature and powdered. There results a yellowish powder of an agreeable taste, which will keep indefinitely if not exposed to moisture or to a great heat. By mixing it with mucilage, albumen, or fats, tablets or cubes of any size can be prepared for various culinary or nutritive purposes. The powder is said to contain all the elements of raw meat in their natural condition, so that blood thus treated preserves all its properties of solubility, colour, and coagulation on heating. Nevertheless, the solution in cold water of the prepared blood does not decompose for several

days. In the preparation the meat is not cooked, and so it is in a state ready for digestion. Weight for weight it is more nutritious than meat, since it contains no excess of fat and no tendinous structures, and, moreover, the three-fourths of water removed are replaced by the same proportion of slightly cooked farinaceous substances, which contain, besides hydrocarbons, 2 per cent. of nitrogen. Hence nutrine contains 5 per cent. of nitrogen; whereas the meat from which it was prepared contains only 4 per cent. It is suggested that, by this process, the refuse of slaughter-houses will yield a useful food for dogs, pigs, and fowls.

SHAM PROVIDENT DISPENSARIES AND UNQUALIFIED ASSISTANTS.

THE *Evening Standard* gives a correspondent an opportunity of warning the public against what he calls sham provident dispensaries, basing his charges on reports of two inquests which had recently appeared in our contemporary, the facts of which he thus summarises:—"Two women are deceived into joining a so-called provident dispensary, are treated by an unqualified man, and die under circumstances necessitating an inquest." There can be no reasonable doubt that the writer in the *Standard* warns those who would be provident and who go to cheap dispensaries against a real danger. It cannot be denied that a very large number of these dispensaries are conducted by unqualified persons, though nominally belonging to registered practitioners. If such practices go much further, it will be the duty of coroners to hold still more frequent inquests, and to bring the facts under the notice of the Government. Meantime sensible people should ask themselves how it is possible to be supplied with educated opinion and medicines for a week for a sum that would not pay for half a week's beer.

THE ROYAL HOSPITAL FOR INCURABLES.

THIS hospital held its annual meeting a few days ago at the Cannon-street Hotel, and had the benefit of a little criticism from one of the subscribers, Mr. Alsagar Hay Hill. Critics are an unpopular class at public meetings of charities. And so Mr. Hill seemed to prove. Nevertheless we think this hospital would do well to give a little more heed to reasonable criticisms and complaints. To take, for example, even the rough figures of expenditure and work—these would really be the better for some explanation. Thus we have legacies from £2471 to 19 guineas in the course of the year. The receipts for the year, with the balance from last year, were £25,108 17s. This is a very large sum to have to use. It is expended on 183 inmates and 419 pensioners; or, to speak more strictly, £23,744 7s. 4d. was expended. If we allow twenty pounds each to the pensioners, this leaves £15,364 to be spent on 183 inmates, or over eighty-three pounds a year for each. This seems to us a large sum for cases housed together. When, in connexion with this large expenditure, we consider the costly mode of election and admission, we cannot but regret that a hospital with so good an object should be so open to criticism and so little thankful for it.

EDWARD GOODEVE MEMORIAL FUND.

A MEETING of the friends of the late Deputy Inspector-General Edward Goodeve, M.B. Lond., Honorary Physician to the Queen, was held at Connaught-square, Hyde-park, London, on November 18th, Deputy Inspector-General F. J. Mouat in the chair, at which it was unanimously resolved—"That subscriptions be invited for the purpose of raising an 'Edward Goodeve Memorial Fund,' to be devoted to the purchase of a marble bust for the Calcutta Medical College, and the endowment of a Scholarship in connexion with the Professorship of Medicine in that school."

The following gentlemen were nominated as an executive committee to carry the resolution into effect:—Inspector-General J. Forsyth, C.B., Q.H.P. (President); Surgeon-General Sir Joseph Fayrer, M.D., F.R.S., K.C.S.I.; Surgeon-Major A. Grant, F.R.C.S., Q.H.S.; J. H. Matthews, Esq.; Deputy Surgeon-General S. B. Partridge, F.R.C.S. (Honorary Treasurer). The General Committee is to consist of Dr. Goodeve's former colleagues at the Medical College and such other friends as may be willing to act.

Subscriptions (not to exceed two guineas) to the fund may be paid to Messrs. Grindlay and Co., 55, Parliament-street, Westminster; to Messrs. Grindlay and Co., Clive-street, Calcutta; or to the hon. treasurer, Deputy Surgeon-General S. B. Partridge, Thicket Lodge, Thicket-road, Anerley, London, S.E.

THE BIRKENHEAD SEWER ACCIDENT.

THE adjourned inquest on the death which occurred in the Birkenhead sewers a short time ago was held on the 25th ult. Dr. Vacher, the medical officer of health, gave evidence to the effect that the deceased labourer had lost his life from the inhalation of sulphide of ammonium generated by the sewage, and he expressed the opinion that the ventilating openings in the sewers were too far apart—in other words, that the sewers were insufficiently ventilated. It appeared from other evidence that the sewers contained much deposit, and needed frequent periodical flushings, which had not been given. The jury gave a verdict in accordance with Dr. Vacher's evidence of the cause of death, and added the following presentment:—"We consider the Corporation have been guilty of great neglect in permitting such an accumulation of sludge in the sewer as has been elicited in evidence, and that such a deposit ought not at any time to be allowed to exist."

VETERINARY SURGERY.

WE have much pleasure in learning that, in the forthcoming session of Parliament, a Bill is to be introduced for the protection of the title of Veterinary Surgeon, conferred by two separate charters on the graduates of the Royal College of Veterinary Surgeons, the first dating so long ago as 1844. Such an Act is greatly needed, as the country swarms with men who have no right whatever to the title—indeed, anyone may adopt it with impunity. People perfectly unacquainted with medicine or surgery—coachmen, grooms, farriers, blacksmiths, &c.—dub themselves Veterinary Surgeons, and even Members of the Royal College of Veterinary Surgeons; and thus not only impose on the public and cause serious loss, but cruelly maltreat animals. It is astonishing the Royal College of Veterinary Surgeons has not moved in the matter long ago; but we are gratified to find that the present president, Mr. George Fleming, Army Veterinary Inspector, has taken up the question, and we may be sure nothing will be left undone to carry it to a successful termination. It is one in which the medical profession has an interest, and it should receive their support.

RABIES IN IRELAND.

RABIES still manifests itself in Ireland, and it is probably extending. On September 3rd an artillery horse had to be destroyed at Kilkenny in consequence of the disease. It had been bitten on the nose at the Curragh camp on July 4th by a mad dog, which ran amuck among the horses and people there. A characteristic symptom presented by the poor creature was intense itching at the seat of injury. On November 21st great excitement was caused at Kilmainham by the rushing about of a mad dog, which was not killed until it had succeeded in biting two

men and a dog. One of the men, a labourer, it seized by the thumb. Then dashing into Island Bridge barracks past the sentry, it entered the quarters of Lieutenant Aylmer, of the 19th Hussars, whom it caught by the left arm, inflicting a severe bite. It was eventually destroyed by a police constable.

PATHOLOGICAL SOCIETY OF LONDON.

THE Debate on Rickets will be resumed at the meeting of the Pathological Society on Tuesday next. Specimens of foetal rickets will be shown by Dr. Barlow and Mr. Shattock, and microscopical specimens by Dr. Turner. Drs. Dickinson, Gee, Moore, Baxter, and Longhurst, and Messrs. Haward, Parker, and Lucas are expected to speak; there is thus hardly any prospect of bringing the discussion to a close on this occasion.

THE usefulness of the object aimed at by the St. John Ambulance Association—that, namely, of imparting instruction to public servants and others in the best modes of affording first aid to the wounded—appears to be receiving hearty recognition all over the country. Dr. Palk, surgeon to the Southampton Borough Police, has been lecturing on the subject; Dr. Stiven, of Sunderland, has inaugurated an ambulance class at Ferry-hill; and the movement seems to have gained great popularity in Dublin, where Major Duncan, in the presence of the Lord Mayor, a few days since presented certificates to a large number of successful candidates.

SIR BENJAMIN COLLINS BRODIE, Bart. (son of the late distinguished surgeon), who died at Torquay on the 24th ult., was born in 1817, was educated at Harrow, and took his B.A. degree at Balliol College, Oxford, in 1839, and his Mastership of Arts in 1842. He was appointed to the chair of Chemistry at Oxford in 1855, and became President of the Chemical Society in 1859–60. The deceased was a Fellow of the Royal Society, and was created D.C.L. of his *alma mater* in 1872.

FROM the sixth annual report of the Syndicate appointed to superintend the examinations in State Medicine at Cambridge, it appears that at the October examination nine candidates presented themselves in Part 1 and eight in Part 2, five of whom passed in both. The small average number of candidates for this examination has suggested the necessity of some change in the arrangements under which it is conducted, or the raising of the fees.

MR. A. BREEDON WADE, M.R.C.S. Eng., formerly house-surgeon to the Royal South Hants Infirmary, and recently acting in that capacity until his successor should be appointed, was, on his leaving the institution, presented by the officers, nurses, and servants, with a handsome stationery cabinet and writing-desk, as a mark of the esteem in which Mr. Wade is held by the donors.

ANOTHER “bogus” institution has been exposed in America called the “New England University of Arts and Sciences.” The University was incorporated by the New Hampshire Legislature in 1875, but the charter was repealed in the following year. The diplomas were, it seems, chiefly medical, and cost from 100 to 145 dollars.

DR. BARTHOLOW, of the Jefferson College Medical School, has introduced a new feature in his method of teaching therapeutics. A laboratory has been fitted up in the College, and the students are taught practically how to compound and manipulate drugs.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Craven (Combined District).—The several reports of Dr. Frederick W. Barry on the sanitary districts (three rural and five urban) entering into the Craven combination, and sundry special reports on parts of these districts, have been published in one volume. We know no series of reports which more completely fulfil our notions of what the reports of a medical officer of health should be, and we would especially refer to the report on the Settle rural sanitary district as a model of the sort of report which should be aimed at in such districts. The greater number of the reports were noticed in THE LANCET at the time of their presentation to the sanitary authorities; others have been delayed in their appearance until their publication in the present volume.

The entire series of reports as here presented must prove invaluable to the combination of districts to which they relate, and will be found full of interest to medical officers of health and sanitary officers generally. We regret to say they will be the last reports that will be received from the pen of Dr. Barry as the medical officer of health of an English sanitary combination, at least, for some time to come. Dr. Barry has accepted the appointment of sanitary commissioner with the Government of Cyprus, and we are fain to congratulate that island on an acquisition which we most unwillingly have lost after just proving its value.

Rotherhithe.—The first annual report which Dr. Browning, as medical officer of health for the parish of St. Mary, Rotherhithe, has been called upon to make, and which only now sees the light towards the close of 1880, is for the year ending December, 1878. It is issued with the annual report of the Vestry for the year ending March 25th, 1879, but even when published in this association it is not easy to understand why its general distribution should have been so long delayed.

Dr. Browning introduces his report by a brief description of the sanitary condition of Rotherhithe in the past as compared with the Rotherhithe of the present. In 1856, he tells us, the various local governing bodies in the metropolis were first authorised to appoint “medical practitioners of skill and experience” to act as their advisers in matters of public health. Rotherhithe was then supposed to be one of the most insalubrious suburban districts. It was almost entirely unsewered, marshy, with a scanty water-supply, and that “so contaminated as to be usually refused even by horses from other parts of the town which had to bait while passing through it.” Further, it had within its boundaries fifteen miles length of open, fetid, stagnant ditches, serving as watercourses and cesspools. Its population of 15,000 was mostly packed into “a narrow river-side street, backed generally by blind alleys and courts, amidst which numerous offensive manufactories flourished unchecked, and where the various agues, fevers, and other communicable diseases could at any time be seen without protracted quest.” The average annual death-rate of the parish was then 30 per 1000 population, and the fever-rate 23 per 1000. There was no public recreation ground, no provision for systematic removal of nuisances, nor for isolation of infectious diseases. This was the state of things in 1856. How different now! Rotherhithe with its 33,000 inhabitants, its 5000 houses having foundations below Trinity high-water mark, and its two miles and a half of foreshore, we learn from Dr. Browning, can vie as to airiness, dry, gravelly subsoil, cleanliness, good drainage, water-supply, and sanitary improvement generally, with any workmen’s quarter in the metropolis. There are no open ditches, and malarious illness is unknown. Noisome trade factories exist only on two or three sites, which possess certain prescriptive rights. Finally, Rotherhithe possesses a public park which attracts visitors from all parts of South London; communicable disease, as a rule, visits its precincts more lightly than those of its neighbours, its annual death-rate for the last decade averaged only 18·6 per 1000 population, and its fever-rate 3·6 per 1000, so that while the district had doubled in numbers of inhabitants and in density per acre, the mortality had diminished by nearly one-half.

Such are the great results of twenty-three years' intelligent sanitary administration of Rotherhithe. Dr. Browning's report for 1878 proves that the results as affecting the health of the inhabitants are being steadily maintained, and that even a higher state of health than has yet been attained will probably be secured in the future.

Wolverhampton.—Mr. John Harry Love, the medical officer of health for Wolverhampton, in his report for the year ending September 30th, 1880, records the lowest number of deaths which have occurred during any year for the past eight years. Moreover, there had been no epidemic during the period to which his report refers, and there was a further reduction in the mortality from preventable disease. Yet, satisfactory as this may be, much, he observes, has to be done in the town from a hygienic point of view. The following remark on infantile mortality deserves quotation:—"Many assign as the different causes [of this mortality] errors of diet and delicacy of infants; doubtless these have their place in the list, but I am constrained to add that it may in the main be traced to the scourge of this country, *drunkenness*. For where do we find premature birth, marasmus, inanition, atrophy, diarrhoea, and convulsions most prevalent but in the wretched, squalid hovels of the drunkard, the dissipated, and the indolent?" Mr. Love assigns the improved health of Wolverhampton to the abolition of the old midden system, the adoption of the pan system of excrement disposal, the better water-supply, and the removal of many surface nuisances.

Bradford, Yorks.—The medical officer of health's (Mr. Butterfield's) report for the summer quarter shows a birth-rate equal to 31·7 per 1000 persons estimated to be living in the borough, as against 35·8 and 31·2 in the corresponding periods of 1878 and 1879; and a death-rate of 22·4, as against 22·3 and 16·8 in the two previous corresponding quarters. In a severe epidemic of scarlet fever, it is remarked, the fever hospital proved of great advantage, and greater willingness was shown by parents to send their sick children there.

THE METROPOLITAN ASYLUMS BOARD.

The report of the meeting of the Metropolitan Asylums Board on the 27th ult., shows in the most striking way the anomalous position in which that Board is placed with reference to the provision of hospital accommodation in London. A Poor-law body, it has thrust upon it the most important sanitary functions, and is still required to act on the strictest Poor-law lines. Moreover, the advice tendered to it by the Local Government Board is wholly based upon poor-law tradition and practice, and as completely purged of public-health considerations as if the Central Board had no public-health responsibilities. This determined maintenance by the Local Government Board of poor-law relations solely with the Metropolitan Asylums Board, virtually ignoring the general sanitary functions they must unavoidably perform, has been the cause of much inefficiency of action already, and is about to be the cause of further inefficiency of action in the near future. The Central Board, in its endeavours to bring the action of the Asylums Board into some sort of agreement with that of the sanitary authorities and the sanitary requirements of the metropolis, appears simply to succeed in worrying and irritating the latter Board, handling its leading-strings in a feeble and vacillating fashion, humiliating to a body of which puerility is the last thing to be predicated. Here we are at the beginning of another epidemic of small-pox, with the existing accommodation for the disease exhausted before the epidemic is well declared. Not only this, but it is proposed by the Asylums Board to rent the only sanitary hospital existing in the East of London, and so (with the approval of the Local Government Board) turn to folly the action of the one sanitary authority there—the Poplar, which had done its duty in providing hospital accommodation. The Local Government Board still fails to reconcile its public health and its poor-law functions, and as a consequence exposes both sorts of authorities to untold annoyances in their relations with it. We sympathise with the Metropolitan Asylums Board in its most anomalous position.

THE METROPOLITAN WATER-SUPPLY.

Colonel Bolton, R.E., the water examiner, reports for the month of October that the water in the Thames at the intakes of the several water companies was good from the 1st to the 6th October, when it became very bad, and remained so to the end of the month. The water of the river Lea was

generally bad throughout the month. Filtration, although carefully attended to by the companies, failed to free the Thames water from the effects of organic matter, principally arising from vegetation brought down by the very heavy floods which prevailed during the greater part of October. The remarks attached to the tabular statement given respecting each company appear, however, to indicate that the filtration was of better quality than is here implied. The water from the Lea, after filtration, seems to have been "generally clear."

Colonel Bolton is getting "bothered," we are glad to see, with the chemical analyses of waters, from several independent analysts, which he multiplies in his reports, and which, not being comparable with each other, are of very doubtful utility. He again urges that "a standard of quality" should be adopted, and directs attention to the intermediate fouling of water which is apt to occur in storage cisterns.

AN IMPORTANT AND SUCCESSFUL EXPERIMENT IN THE ISOLATION OF SCARLET FEVER BLURRED.

We regret to find that the most interesting experiment which has yet been made in England in the isolation of infectious disease has given rise to legal proceedings on the part of a medical man intimately connected with it. We refer to the experiment tried by Dr. Ashby, medical officer of health for Grantham and the neighbouring districts, of dealing with an outbreak of scarlet fever in that town during the summer of 1878, by means of isolating the patients in tents. He prevailed upon the local authorities to erect a tent hospital on the outskirts of the town, and induced parents to send their sick there. The experiment was most successful. Parents availed themselves of the tents largely (their early prejudice against them being readily overcome), the patients admitted to the tents did remarkably well, and the spread of the disease was unquestionably much curtailed. Altogether the example set was one which deserved to be copied, and showed with what readiness the spreading diseases of children may be dealt with by the exercise of energy and forethought. Unhappily, we now learn this unique experience is defaced by the fact of the medical officer who had charge of the hospital having to take legal proceedings against the local authorities to recover the money due to him for his attendance. We print the case as it now stands elsewhere.

Sir Richard Cross, in answer to a communication from the Local Rights Association respecting the Artisans and Labourers' Dwellings Improvement Acts, 1875, addressed to him when Home Secretary, attributes the present imperfect working of the Act in the metropolis to the administrative authorities rather than to the original legislation. Many of the defects in the working might be remedied, he believes, by more cordial co-operation between the vestries and the Metropolitan Board of Works.

It is currently reported that the local authority of Maidstone has ingeniously contrived to produce two cases of typhoid fever in the town at a cost of £50,000—in other words, that the new system of sewerage it has constructed at this cost has, through the foul air coming from the ventilation-shafts of the sewers, produced this result. We are to infer that before the sewerage was completed typhoid fever was unknown in the town.

Bridlington Quay appears to have got into difficulties about a new system of sewerage, and discontented inhabitants are making known their grievances in the local press. The Local Government Board has even been appealed to, but it has replied to the complainants that the question at issue is one in which it cannot interfere, and must be settled between the local authority and the citizens themselves.

The Sanitary Committee of St. Saviour's, Southwark, have agreed to the presentation of a memorial to the Home Secretary praying that a Bill may be introduced into Parliament requiring the local medical officer of health, in all cases where no certificate of the cause of death has been given by a legally qualified medical man, or no inquest has been held, himself to give a certificate.

Although Birmingham possesses five mortuaries it is complained that they are little used, the people displaying great antipathy to the sending of corpses there.

An outbreak of fever is reported from Southport, said to be dependent upon the conveyance of infection through a milk supply. The milk was derived from a farm in the Ormskirk rural sanitary district, and the Rural Sanitary Authority is co-operating heartily with the Southport Corporation to put a stop to further mischief from this source.

Notice has been given that a Bill will be submitted to Parliament during the next session which will contain provisions for enacting a Water-Trust for the metropolis, and for giving to this Trust ample powers for entering into arrangements with the existing Water Companies for the acquirement of their works and for obtaining water from other sources.

The Native Guano Company, we learn, has been engaged in making some experiments at Lincoln, with the object of abating a nuisance arising from the sewage of the County Hospital. It is reported that the experiments have been successful, and that by the adoption of their process it will be possible to deal with the sewage without creating a nuisance.

We learn from the medical officer of health of the Brown-hill's Urban Sanitary District, Staffordshire, Mr. David Edgar Harris, that seven deaths only occurred in the district during the month, representing a death-rate of 7.7 per 1000 inhabitants per annum. This is, indeed, a singularly low rate of mortality for a large mining district.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

The rate of English urban mortality showed a slight increase last week. In twenty of the largest English towns, estimated to contain in the middle of this year a population of seven and a half millions of persons, or nearly one-third of the entire population of England and Wales, 4874 births and 3175 deaths were registered last week. The births were 311, and the deaths 100, below the average weekly numbers during 1879. The deaths, however, showed an increase of 131 upon the low number returned in the previous week; and the annual death-rate per 1000, which had been equal to 22.8 and 21.2 in the two preceding weeks, rose again last week to 22.1. The lowest death-rates in the twenty towns last week were 16.7 in Bradford, 16.7 in Portsmouth, 18.0 in Brighton, 18.5 in Leeds, and 18.9 in Birmingham. The rates in the other towns ranged upwards to 25.3 in Salford, 25.7 in Plymouth, 25.9 in Sunderland, 26.1 in Nottingham, 28.7 in Liverpool, and 29.5 in Wolverhampton. During the first eight weeks of the current quarter the death-rate in these twenty towns averaged 22.1 per 1000, against 22.0 in the corresponding periods of the four years 1876-9.

The deaths referred to the seven principal zymotic diseases in the twenty towns, which had been 474 and 367 in the two preceding weeks, rose again to 405 last week; they included 162 from scarlet fever, 62 from measles, and 55 from fever, principally enteric. The annual death-rate from these seven diseases averaged 2.8 per 1000 in the twenty towns, and ranged from 0.7 and 1.1 in Plymouth and Birmingham, to 5.6 and 7.6 in Salford and Sunderland. The fatal cases of scarlet fever, which had been 163 and 138 in the two previous weeks, rose again to 162 last week, and showed the largest proportional fatality in Sunderland and Nottingham. Measles was most fatal in Salford and Leicester. The highest death-rates from enteric fever occurred in Salford, Sunderland, Portsmouth, and Liverpool. The 17 deaths from diphtheria in the twenty towns included 11 in London and 3 in Portsmouth. Small-pox caused 21 more deaths in London and its outer ring of suburban districts; but no death from this disease was recorded in any of the nineteen provincial towns. The number of small-pox patients in the Metropolitan Asylum Hospitals, which had increased in the four preceding weeks from 77 to 182, further rose last week to 210, a higher number than has been under treatment in these hospitals since the end of July last. The number of new cases of small-pox admitted to these hospitals, which had been 31 and 99 in the two preceding weeks, were 57 last week. The Highgate Small-pox Hospital contained 19 patients on Saturday last.

The deaths referred to diseases of the respiratory organs in London, which had been 421 and 332 in the two preceding

weeks, rose again to 367 last week, but were no less than 116 below the corrected weekly average; 221 resulted from bronchitis, and 104 from pneumonia. The annual death-rate from lung diseases was equal to 5.2 per 1000 in London, and 7.1 in Liverpool.

In the twenty towns last week 65 deaths were registered without the production of the certificate of a registered practitioner or the holding of an inquest; these were equal to 2.0 per cent. of the total deaths. The proportion of uncertified causes of death did not exceed 1.2 per cent. in London, whereas it averaged 2.8 per cent. in the nineteen provincial towns. No uncertified deaths were registered in Brighton, Portsmouth, or Norwich, while the largest proportions occurred in Sunderland, Wolverhampton, and Sheffield.

HEALTH OF SCOTCH TOWNS.

In eight of the largest Scotch towns, having an estimated population of rather more than a million and a quarter persons, the annual death-rate last week was equal to 24.7 per 1000, against 23.8 and 20.9 in the two preceding weeks, and was 2.6 above the average rate in the twenty large English towns. The rates in the eight Scotch towns ranged last week from 17.5 and 21.1 in Perth and Dundee, to 32.1 and 38.2 in Greenock and Paisley. The deaths referred to the seven principal zymotic diseases in the eight towns, which had been 125 and 95 in the two previous weeks, rose again to 112 last week; they included 37 from scarlet fever, 20 from diarrhoea, 17 from whooping-cough, 14 from measles, 14 from diphtheria, 10 from fever, and not one from small-pox. The annual death-rate from these seven diseases averaged 4.5 per 1000 in the eight towns, and exceeded by 1.7 the average rate from the same diseases in the twenty English towns. In the eight Scotch towns the zymotic death-rate last week ranged from 0.5 and 1.3 in Aberdeen and Dundee, to 7.4 and 8.0 in Paisley and Leith. The fatal cases of scarlet fever in the eight towns, which had been 53 and 45 in the two preceding weeks, further declined last week to 37, of which 18 occurred in Edinburgh, 8 in Leith, and 11 in Glasgow. The 20 deaths from diarrhoea showed a marked excess for the time of year, and included 8 in Glasgow and 4 in Paisley. The deaths from whooping-cough, measles, and diphtheria also showed a considerable increase upon recent weekly numbers. This increase was most marked in Glasgow, where 12 of the 14 fatal cases of diphtheria were recorded. The deaths referred to fever, which had been 20, 14, and 12 in the three preceding weeks, further declined to 10 last week, of which 4 occurred in Glasgow, 3 in Edinburgh, 2 in Greenock, and one in Paisley. The deaths referred to acute diseases of the respiratory organs (bronchitis, pneumonia, and pleurisy) in the eight towns, which had been 154 and 137 in the two preceding weeks, rose to 166 last week. The annual death-rate from these lung diseases was equal to 6.7 per 1000 last week in the eight Scotch towns, against 4.7 in London; the highest death-rates last week from these diseases in the Scotch towns occurred in Glasgow and Greenock.

HEALTH OF DUBLIN.

The death-rate in Dublin showed a marked increase again last week. The annual rate of mortality from all causes in the city, which had been equal to 39.6 and 33.3 in the two preceding weeks, rose again last week to 37.8. During the past eight weeks of the current quarter the death-rate in the city has averaged 34.8 per 1000, against 21.4 in London and 22.4 in Edinburgh. The 228 deaths in Dublin last week exceeded the number in the previous week by 27, and included 42, or 18 per cent., which were referred to the seven principal zymotic diseases, showing an increase of 17 upon those returned in the previous week; 17 resulted from fever (including typhus, enteric, and simple), 11 from scarlet fever, 6 from whooping-cough, 4 from measles, 2 from diarrhoea, 2 from small-pox, and not one from diphtheria. The annual death-rate from these zymotic diseases was equal to 7.0 per 1000 in Dublin last week, against 2.8 in London and 5.7 in Edinburgh. The deaths referred to fever, which had been 7 and 10 in the two previous weeks, further rose to 17 last week; the annual death-rate from this cause has averaged 1.4 per 1000 in the city during the past eight weeks, against 1.1, 1.5, and 1.0 in the first three quarters of the year. Fever has been since the beginning of the year exceptionally fatal in Dublin. The 11 deaths from scarlet fever in the city last

week showed a considerable increase upon the numbers in the two previous weeks. The fatal cases of measles and of whooping-cough were also more numerous. The deaths of infants in the city showed a further decline last week, whereas those of elderly persons exceeded the number returned in any week since the middle of February last.

AUSTRALIAN VITAL STATISTICS.

The colony of Victoria has recently issued its Statistical Register for the year 1879, which has been compiled by the Government Statist, Mr. H. H. Hayter. As regards tabular arrangement and fulness of detail these statistics leave little to be desired, and it is only to be regretted that want of faith in the trustworthiness of the materials from which they are constructed should to so large an extent destroy the interest which would otherwise attach to their publication. This Statistical Register consists of a series of tables, which, as we have said, are excellently arranged, but they are unaccompanied by any explanatory remarks, which might throw light upon some of the figures that undoubtedly require explanation. The mean population of the colony of Victoria in 1879 is estimated at 888,500; the annual rate of marriages, births, and deaths, per 1000 of the population, during the year is given as 5.6, 30.2, and 13.6 respectively. With regard to the rate of marriages, we find by doubling it that the rate of persons married in the colony in 1879 was 11.2 per 1000, against 14.4 in England and Wales; this figure would not seem suspiciously low, except for two facts that throw doubt upon its accuracy. In the first place, the marriage rate has steadily declined in the colony during the past eleven years from 13.6 in 1869, to 11.2 in 1879; and secondly, the marriage rate in about half of the entire population classed as extra-urban is returned at but 4.6 per 1000. We certainly doubt that in a population constituted as is that of Victoria, the marriage rate would steadily decline during a period of eleven years; neither is it probable that among the nearly half a million of persons living in the extra-urban districts the marriages should scarcely exceed the rate of 2 per 1000 of the population. We are forced to take exception on very similar grounds to the Birth and Death statistics; the figures show an almost similar decline in the birth-rate and death-rate of the colony during the eleven years 1869-79. The recorded birth-rate, which is given as 37.4 and 38.3 in 1869 and 1870, is said to have declined to 30.6 and 30.2 in 1878 and 1879. So with the death-rate, it has rapidly and steadily declined from 18.8 in 1875 to 13.6 in 1879. The death-rate is suspiciously low throughout the eleven years, and added to this we find that the urban rate in 1879 did not exceed 18.7, while in the extra-urban population, of nearly 430,000, the rate is given at the almost incredibly low figure of 8.1 per 1000. Bearing in mind the remarkable, and altogether unusual, steady decline in the rates of marriages, births, and deaths during the eleven years under notice, it appears impossible to avoid the conclusion that the Government Statist has considerably over-estimated the population of the colony; he has unfortunately omitted to state the method which has been used in arriving at the estimate, and there is, therefore, no possibility of judging of the trustworthiness of the estimate, except through the calculated rates. There is only one other way that suggests itself for explaining the low and declining rates of marriages, births, and deaths in Victoria in recent years; this is, defective registration of the marriage, birth, and death facts, which in the more sparsely populated portions of the colony is probably unavoidable. It may readily be believed that the age constitution of the Victoria population residing in the extra-urban districts would render it liable to a low death-rate, but it is difficult to believe that if all the deaths were registered, and the numbers of the population were more accurately known, the annual death-rate would be found to be so low as 8.1 per 1000.

HEALTH OF SWITZERLAND.

The Federal Statistical Bureau has issued its quarterly summary of vital statistics relating to the three months ending 30th September last. These returns deal with an aggregate population estimated in the middle of this year at nearly half a million of persons living in the twenty Swiss towns, with upwards of 7000 inhabitants. It appears that during the three months ending September last the annual death-rate in the aggregate population of these

twenty towns averaged 22.8 per 1000, showing a further decline from the rates in the four preceding corresponding quarters, in which they had steadily decreased from 25.0 to 23.6. Among the several towns the annual rate in the quarter ranged from 12.0 and 12.9 in Geneva and Locle, to 25.9 in Basle, 27.2 in Herisau, 27.7 in St. Gallen, and 29.2 in Einsiedeln. No less than 710 deaths in the twenty towns during the three months were due to the seven principal zymotic diseases, being equal to 27 per cent. of the deaths from all causes; in the main, however, this zymotic fatality showed a decline from that which prevailed in recent summer quarters. Only three fatal cases of small-pox occurred during the quarter, two in Chaux-de-Fonds, and one in Zurich. The deaths from typhus and enteric fever were more numerous than in either of the two preceding summer quarters, owing to epidemic fatality in Basle and in the district around Zurich, where scarlet fever and diphtheria were also fatally prevalent. Although fever was more fatal last quarter than in the summer quarters of 1878 or 1879, it was very considerably less fatal than in the corresponding periods of 1876 and 1877. It is worthy of note that, with one or two exceptions, all the causes of death in the quarter were duly certified and attested.

HEALTH MATTERS GENERALLY AT HOME AND ABROAD.

THE SOURCE OF TYPHOID FEVER: AN INSTRUCTIVE CASE.

The Vestry of Lambeth and its medical officer of health have been much perturbed by a certificate given by Sir W. Jenner and Mr. Dee Shapland to the effect that a fatal case of typhoid fever that had occurred in the district, and had been attended by them, was probably caused by the imperfectly-arranged drainage of the house in which the patient lived, and implying that the local sanitary authority had been neglectful. Dr. Archer Farr has published a pamphlet purporting to show that Sir W. Jenner and Mr. Dee Shapland had been wholly misinformed as to the drainage arrangements of the house in question; that the local authority had been far from unmindful of its duties in the house when there had been occasion to exercise them; and that in all probability the fever had been contracted at the patient's place of business in the City, where the drainage arrangements appear to have been as bad as could well be, where the medical officer of health writes of the premises as having "long been a source of trouble and anxiety" to him, and where a brother of the principal contracted an illness, presumably from this source, about the same time when Mr. Dee Shapland's patient sickened, and which illness, at the time of Dr. Archer Farr writing his explanatory pamphlet, was suspected to be typhoid fever.

EXCESSIVE MORTALITY AMONG SOUTH-SEA ISLANDERS IN QUEENSLAND.

A report has been published by the Legislative Assembly of Queensland on an excessive mortality amongst the South-Sea Islanders engaged on certain sugar plantations in Maryborough. The reporters were Dr. John Thomson and Mr. C. J. Hill-Wray, and they disclose a very unsatisfactory state of things among the labourers in the plantation, who are recruited from the South-Sea Islands. It would appear that there is no proper security that the recruits brought over are of sufficient maturity to undergo the heavy labours of a plantation; and that the hours of work are too protracted, the accommodation provided too often ill-considered, the water-supply bad and wanting during the period of work, and the diet at times insufficient both in quantity and quality. It is not surprising then to find fatal sickness prevalent among the Polynesians, and that "dysentery" is a prevalent disease among them—a term, however, which, not dictated by a medical attendant, appears to include pulmonary consumption accompanied by diarrhoea, enteric fever, and, as the reporters had an opportunity of observing, even scurvy. Poor feeding, bad water, overwork, and the absence of proper care when sick, were, in the opinion of the reporters, the causes of the excessive mortality which had been brought to the notice of the Colonial Government, and there is little likelihood of these causes being removed until the Legislative Assembly has given more efficient protection than it has hitherto done to the unfortunate islanders.

We regret to see, from the *Daily Picayune* (New Orleans), that the State Board of Health of Louisiana and the National Board of Health have disagreed about a question of quarantine. We trust that the disagreement arises rather from a misapprehension of facts than from any dissent from the general policy of the National Board.

It is proposed to give the inhabitants of Painswick, near Stroud, a free water-supply, using for the purpose of procuring it a bequest of £5000 left to the town by Mr. F. Gyde.

THE SERVICES.

THE ROYAL MILITARY ACADEMY, WOOLWICH.

Surgeon-Major G. J. H. Evatt, M.D., has been appointed to succeed Surgeon-Major Roberts as Medical Officer to the Royal Military Academy, Woolwich. Dr. Evatt has recently arrived from Afghanistan, where he had been in charge of one of the field hospitals with the Cabul Field Force for the last two years.

Brigade-Surgeon J. Ekin, M.D., is appointed to the administrative charge of the Allahabad Division, with the officiating rank of Deputy Surgeon-General.

Brigade-Surgeon J. Hanbury is appointed to the Rawal Pindi Division, with the officiating rank of Deputy Surgeon-General, *vice* Deputy Surgeon-General A. Smith, C.B., on sick leave.

Sickness has considerably increased in the Candahar Force since the inactivity and reaction after the siege and late battle with Ayoub Khan. By the last advices, the European Army had nine per cent. in hospital, and the native troops eleven. The coming cold weather will, we trust, considerably improve the health of the garrison.

MILITIA MEDICAL DEPARTMENT.—Surgeon-Major William Batley, Royal Sussex Militia, resigns his commission; also is permitted to retain his rank, and to continue to wear his uniform on retirement.

ADMIRALTY.—Staff-Surgeon W. B. Fletcher has been appointed to Devonport Dockyard; Staff-Surgeon J. L. Sweetman to the *Fawn*; Staff-Surgeon C. J. Fennel to the *Téméraire*, when recommissioned; Staff-Surgeon W. P. L. Boyle to the *Dotterel*, when recommissioned; Staff-Surgeon Valentine Duke to the *Champion*, when recommissioned; Surgeon James Porter to the *Orontes*; Surgeon John Tyndall to the Haulbowline Hospital; Surgeon H. M. Ellis to the Royal Marine Artillery Division; Surgeon James Simms to the *Excellent*; Surgeon H. E. F. Cross to the *Téméraire*.

Correspondence.

"Audi alteram partem."

ON MEDICAL EDUCATION.

To the Editor of THE LANCET.

SIR,—The great question of medical education, at all times an urgent one, has been of late pressed forward with more vehemence than ever. And no wonder. For after all that has been said and done, a solution of the difficulty which can be, in any sense, called satisfactory seems as far off now as when many years ago the conjoint scheme was first proposed. I would suggest that our failure hitherto has been due to the fact that we have dealt with the evil in the wrong way. We have from the first been attempting to prescribe for the symptoms without previously ascertaining the cause of the mischief. Witness the lengthened discussions of the subject, and especially what was said in some of the sections at the recent meeting of the British Medical Association at Cambridge. Speak to a teacher of medicine, and he tells you how inadequately the study of medicine is carried on. Speak to a teacher of surgery, and he tells you the study of surgery is strangely neglected. The obstetric physician bewails the indifference shown to the study of obstetric medicine. The psychologist is shocked that so little heed is given to his side. Then all the teachers

of natural science with one voice declare that it is idle to expect of students, in the circumstances in which they are at present placed, anything like a genuine knowledge of anatomy, physiology, or chemistry. What is to be done? Reduce in some degree the amount of knowledge required of some of the subjects, so that more attention may be given to others? But only let some one propose to remove from the curriculum of study any single subject, or to reduce the proportion in which it challenges the attention of the student, and at once an army of champions arises not only with irresistible arguments against obliteration, or even reduction, but with many very forcible ones to show why the study of that particular subject should be extended. There appears to be one point only on which all teachers are agreed; eager criticism, always more or less unfavourable, of examinations and examiners, while examiners, in their turn, deplore the shortcoming of teachers and the way in which they waste the time of the student. The student, himself the victim, of course, heartily agrees with the criticism on both sides. Now, what does all this mean? Surely there must be something wrong somewhere. I, for one, think there is something wrong everywhere, and that it is this—*want of time*. The student has not time enough for the work which ought to be done. Only think for a few moments of what is required of a student during the period at which it is arranged he shall be at a hospital. Think of the few months allowed for anatomy and physiology, for medicine and surgery. Is it practicable for average human intelligence, or even for extraordinary ability, thus in any way to do justice to the several subjects of study? By degrees the evil has arisen, and so it has come to be endured. Surely, if we were placed at once face to face with the existing order of things, we should think it too absurd for consideration. Let us try to contrast the demand made upon a student at the present day with what it was a quarter or half a century or so since, and compare this with the additional amount of time at a hospital given to him within the same period. Surely, then, one may begin to understand how this supreme difficulty has arisen, and to anticipate, in the present state of affairs, its inevitable increase. Obviously, therefore, the first step forward to take in the way of education is to lengthen the period of the students' work at the hospital. I should say at once that, in my opinion, seven years is not an hour too long. But how impracticable! Why? I suppose chiefly or solely on account of the additional expense. Well, I cannot now, in this letter, enter into this objection further than to declare that it seems to me to have little magnitude in proportion to the evil which exists, and for which I believe it to be the sole remedy. I cannot help setting forth this view, although, of course, I have no expectation of its acceptance, and, failing its adoption, I must say, after some experience in the matter, that rather than consent to the existing state of things I would reduce within far narrower limits the area of studies, insisting, however, at the same time, that what was actually required should be thoroughly learnt. For I am convinced that the system of cramming, which now passes current for knowledge, is not only, in chief part, useless in practice for any technical purpose, but that it is positively mischievous, in no slight degree demoralising, to the student. In many it is altogether, and in all it is in some degree, opposed to honest study, to real genuine knowledge, to thoroughness of purpose, and devotion to truth. For it is, in its very nature, essentially false.

I am, Sir, yours, &c.,

Nov. 30th, 1880.

Wm. S. SAVORY.

ON WATCHING THE PULSE DURING THE ADMINISTRATION OF CHLOROFORM.

To the Editor of THE LANCET.

SIR,—In reading the article on the Administration of Anæsthetics by Dr. Saundby in THE LANCET of Nov. 20th, I was surprised to find that he says with reference to the administration of chloroform, "The pulse may be disregarded, as it gives no timely warning of approaching danger." As this is in direct opposition to my own experience, I shall be glad if you will permit me to give my reasons for saying that the careful watching of the pulse during the inhalation of chloroform is of the utmost importance.

During the present year I have given anæsthetics at

St. Bartholomew's Hospital 1420 times, and of these chloroform 572 times; and in three of these cases I have had reason to be thankful that I carefully watched the pulse during the administration. I believe that had I not done so I should have lost the patients.

Case No. 7673 was a woman, aged forty, under the care of Mr. Power. The operation was iridectomy of the left eye and abscission of the right. The patient took chloroform well until the end of the operation, when the pulse failed suddenly, the respiration continuing. I gave directions for the feet to be raised (Nélaton's method), and I had drawn out the tongue and was ready to commence artificial respiration when the breathing, as I had anticipated, failed also. After three or four thorough compressions of the chest the patient gasped, but did not breathe properly for some minutes, during which time artificial respiration was maintained.

Case No. 8688 was a woman, aged seventy-six, bronchitic and asthmatic. Removal of large tumour of the breast, under the care of Mr. Thos. Smith. During the operation the pulse became weak and irregular, and then stopped, the respiration continuing. I treated her in the same way as the case above. The pulse returned and gradually improved from the time the legs were raised. The operation was completed without interruption. The respiration did not entirely cease.

Case No. 8702 was a man, aged thirty-four. The operation was for the removal of a small tumour from the scalp, and was performed by Mr. Lockwood, house-surgeon. During the operation the pulse became weak and irregular, and then stopped. Knowing what to expect, the same treatment was adopted. Respiration also now stopped, and artificial respiration was immediately performed while the patient was supported by the legs. A minute and a half elapsed before the respiration returned.

Now, in each of these cases I maintain that the pulse gave timely warning of approaching danger. No looker-on, how carefully soever he may have watched the respiration, would have suspected what was about to happen before I had given directions for the patient's legs to be raised, and had in my hand a pair of dressing-forceps ready to draw out the tongue.

It may be argued that to have three cases of the kind quoted in 600 administrations is a very unusual occurrence. And with this I entirely agree. Out of the total number of cases (nearly 9000) in which I have administered anaesthetics of one sort or another, I do not think more than half a dozen cases of this kind have occurred. To have three cases, therefore, in a year, represents merely the curious manner in which exceptional cases occur together; the last two happened within a few days of each other. It may be said, too, that in point of time a few seconds only were gained in each of these cases. But if by watching the pulse a few seconds can be gained in the application of restorative means to one case in *ten thousand*, it is in my mind a sufficient reason for most carefully watching the pulse in each and every case.

I am, Sir, yours obediently,

JOSEPH MILLS,

Administrator of Anesthetics to St. Bartholomew's Hospital.

Nov. 27th, 1880.

M. PASTEUR'S EXPERIMENTS WITH CHICKEN-CHOLERA.

To the Editor of THE LANCET.

SIR,—The researches of M. Pasteur, published in your columns on Nov. 6th, must claim the careful consideration of all who are interested in the present state of preventive medicine and sanitary science—and who are not? Prof. Huxley had expressed an opinion that these experiments would be the means of placing vaccination upon a scientific basis, but this opinion does not seem to be justified.

M. Pasteur's chief points are—that chicken-cholera is a virulent disease, rarely recurrent, due to a microscopic parasite, capable of cultivation, and also of *attenuation* outside the body; the attenuated virus, when retro-inoculated, producing a mild disease, and securing from subsequent attack. A reference to vaccination in the paper suggests an analogy between it and the attenuated virus, but M. Pasteur is too scientific a man to insist this relation. "The difference

is great," he says, "in some respects between the two classes of facts, and it may be well to remark that as regards our knowledge and our deductions the advantage is with the study of fowl's cholera; the relations between variola and vaccine are still a matter of controversy." The experiences of the Lyons commission, conducted by M. Chauveau, were, no doubt, in M. Pasteur's mind when he hesitated to draw an analogy between small-pox and vaccinia and chicken-cholera and its attenuated derivative; this commission and its admirable report, entitled "*Vaccine et Variole, nouvelle étude expérimentale sur la question de l'identité de ces deux affections*," have been too much ignored, at least in this country. After careful and patient investigation the commissioners reported that, "Notwithstanding the apparent resemblances which, both in animals and man, exist between variola and vaccinia, these two diseases are none the less perfectly independent, and cannot be transformed the one into the other." As Dr. Cameron has tersely put it, "You can no more make small-pox into cow-pock than by stunting an oak tree you can make it a gooseberry bush."

But to return to M. Pasteur's paper, and to the most important question raised in it, By what means is the cholera virus attenuated and destroyed? The answer is clear, logical, and conclusive: "It is the oxygen of the air which weakens or extinguishes the virulence." Tubes of virus hermetically sealed retained their virulence for months; tubes of virus exposed to pure air gradually and progressively, with almost mathematical precision, lost their virulence, and became innocuous. The microscopic parasite was dead! Here was the presence of the cause (the oxygen) followed by the presence of the effect (the death of the parasite, and extinction of the virulence of the poison), the absence of the cause followed by the absence of the effect; and the greater the amount of the cause the greater was the effect. What more logical? M. Pasteur wisely asks, "May we not here be in the possession of a principle? It may be hoped the inherent action of atmospheric oxygen, a natural force which is everywhere present, will be found efficacious in other virus. May we not presume henceforth that it is to this influence we may attribute the limitation of great epidemics?" Without accepting unreservedly this plausible hypothesis, it is curious to see how readily it offers an explanation of many scattered facts with which we have become acquainted—e.g., the efficacy of isolation and the limitability of infection, the utility of oxidising disinfectants, the salubrity of the country and the morbidity of the town, the success of the cool or open-air treatment of certain diseases, the decline of zymotic disease before the progress of sanitation, and many others. The theory harmonises these facts, and supplies a reason for what was before empirical only, though none the less true.

M. Pasteur's conclusions receive additional support from experiments made by Professor Thiersch and Dr. Burdon Sanderson on mice with the poison of human cholera. It was found that the poison intensified up to the third day, and then attenuated under exposure to air or cold.

What, then, are the inferences to be drawn from these facts? Do they warrant the inoculation of all persons with the attenuated viruses of all zymotic diseases with a view to prophylaxis? Do they not rather establish a stronger plea for extended sanitation, for the means of fighting diseases outside our bodies and not within them, for making our hygiene so good that prophylactics and antiseptics shall be superfluous?

I am, Sir, yours faithfully,

W. J. COLLINS, B.Sc., M.R.C.S.

St. Bartholomew's Hospital, Nov. 16th, 1880.

GUY'S HOSPITAL.

To the Editor of THE LANCET.

SIR,—I beg leave to inform your readers, if you will kindly print this, that a committee is formed in Southwark for the reform of the government of Guy's Hospital. The first step will be to increase the committee, and then immediately to hold a public meeting at the Bridge House Hotel. Mr. Alexander Hawkins, jun., member of the School Board, is the honorary secretary. I hope members of our profession, favourable to this movement, will send their names for this committee, directed to Mr. Hawkins, Vestry Hall, Borough-road, Southwark.

I am, Sir, your obedient servant,

W. RENDLE, F.R.C.S.

IRELAND.

(From our own Correspondent.)

THE name of Dr. Lyons, M.P. for Dublin, has been mentioned as a probable successor to the late Dr. Alfred Hudson on the General Medical Council.

The entries of students at the various medical schools in Dublin ceased on Nov. 22nd, and from the returns received from those institutions, I learn that for the present session a total of 848 students have been enrolled. Of the five medical schools the Ledwich, as usual, has the highest number—viz., 230; followed by Trinity College, 192; next the College of Surgeons, 183; then the Carmichael, 149; and lastly the Catholic University, with 94. All these institutions exhibit an increase over the session 1879–80—a fact which may be partly attributed to the fifty-eight students who were attached to Steevens's Hospital Medical School last year having been dispersed, owing to the closing of that school of medicine.

The first meeting of the forty-third annual session of the Dublin Obstetrical Society for the present year was held in the College of Physicians on the 27th ult. Sir Edward Burrows Sinclair, the outgoing President, delivered a short address, thanking the members for the honour they had conferred upon him in electing him their president, the duties appertaining to which he had endeavoured to discharge to the best of his ability. He congratulated those present upon the progress the Society was making in Dublin, and mentioned the fact that the Presidents of both the College of Surgeons and the College of Physicians were members of that Society. Allusion was then made to the honour Her Majesty had conferred upon him—the honour of knighthood—a distinction which he greatly prized as coming direct from the Sovereign herself. It was an honour conferred upon him because of the efforts he had made in having trained upwards of four hundred skilled nurses at Sir Patrick Dun's Hospital as midwives for the wives of soldiers; and he was happy to say one of those trained nurses would at present be found at almost every station of the British army, whether at home or abroad. Sir Edward concluded by referring to the lamented death of Dr. Alfred Hudson. Dr. McClintock, President of the College of Surgeons, moved the thanks of the Society to the outgoing president, on whom a high distinction had recently been conferred—bestowed on only two previous occasions, as far as he was able to ascertain, on men eminent in obstetric science. Dr. George Johnston, President of the College of Physicians, seconded the motion, which was cordially adopted.

The Board of Management of the Belfast Royal Hospital, in their recent report for the year ending 31st of last August, regret that they had to apply to the Corporation for authority to expend a large proportion of the donations and bequests to meet the current expenditure of the institution, and clear off the old outstanding debts. To carry on the hospital, however, in full efficiency they had no other course open to them, the fixed annual income of the charity not being sufficient for the requirements of the institution as at present worked, and recourse was had to capital sums, or the usefulness of the charity must have been materially reduced. During the year 1609 persons were treated in the wards and 14,867 patients attended to at the extern department.

Dr. Mapother, President of the Statistical and Social Inquiry Society of Ireland, delivered the inaugural address last Tuesday.

Dr. Faussett, late medical officer of Clontarf dispensary district, has been granted a retiring allowance of £106 6s. 3d. per annum by the Guardians of the North Dublin Union, the Board having rescinded their former grant of £50 yearly. This tardy recognition of Dr. Faussett's services has come too late, as that gentleman died last Monday, the 29th ult.

The returns for the September quarter show a decrease in the population of Dublin of 11,375, caused by emigration. The poor-law returns furnished by the Local Government Board exhibit a considerable increase in the number of persons receiving relief, as compared with the corresponding quarter of 1879.

Dublin, Nov. 30th, 1880.

PARIS.

(From our own Correspondent.)

A SOCIETY has recently been founded in Paris for the propagation of cremation, which is at present illegal in France, and the names of a number of medical authorities and municipal councillors figure amongst the general committee. The object of the society is twofold. First, to agitate for legislative measures in favour of cremation; secondly, to encourage scientific research as to the best means of putting it into practice. All those who are in favour of cremation, and who will engage to exert themselves actively in the furtherance of the cause, are invited to join, the number of members being unlimited, and as the annual subscription is small a great many adhesions may be expected. When the first object is attained, and cremation has become legal, the society will change its name to that of Société Française de Crémation, and will devote itself peaceably to the construction of crematoria and cineraria, and to the gratuitous incineration of defunct members.

The *Progrès Médical* contains an article by Dr. Laudouzy on a means of arresting the cough of phthisical patients, at any rate for a sufficient length of time to enable the hospital physician to perform auscultation. This is the hypodermic injection of distilled water, or, better still, a weak solution of cherry-laurel water. In order that the knowledge of the remedy used shall not be a bar to its efficacy, Dr. Laudouzy prescribes it under the name of binoxide of hydrogen. The injection should be made as near the pulmonary lesion as possible.

At the Academy of Medicine the greater part of the last three sittings has been occupied by Dr. Maurice Raynaud, who communicated his researches on the treatment of cerebral rheumatism by cold baths. The method seems to have been as successful in France as it has been in England.

PYRMONT AND OEYNHAUSEN.

*(From our Roving Correspondent.)**(Concluded from p. 833.)*

NOT much space need be devoted to a description of Oeynhausen. The natural beauties of the locality cannot in any way compete with those of hundreds of other health resorts, and its main attraction is its mineral water. I shall therefore give only a few words to the locality, and shall discuss the merits of the water at some length. Oeynhausen is a small town in close connexion with the neighbouring village of Rehme, and the words Rehme and Oeynhausen, either separately or in combination, are used almost indifferently to denote the locality. It has a station on the direct line from Cologne to Hanover, and is 154 miles from the former and fifty miles from the latter city. In the village of Rehme are large salt-works belonging to the Prussian Government, which date from about the year 1750. In the year 1830 it was thought advisable to increase the quantity of salt water available for the salt-works by sinking an artesian well, and the necessary operations were completed after sixteen years of labour by an engineer named Oeynhausen, who sunk his shafts to a depth of 2200 feet, and ultimately obtained a continuous flow of salt water, amounting to sixty cubic feet in the minute. The water was first used for bathing purposes by the workpeople engaged in the boring operations and by the peasantry of the district, and the first bath erected was in 1839–40. In 1848 the commencement of the present bathing establishment was made, and it was named after the distinguished engineer (Oeynhausen) who conducted the works. At present there are two large bathing establishments and a vapour bath, and the annual number of guests amounts to between three and four thousand. The bathing establishment is surrounded by a large park, laid out upon the sandy soil, and the usual amusements (music, reading-room, concert-room, &c.) are provided for the visitors. The neighbourhood is pretty enough, but not likely to attract mere pleasure-seekers. The huge walls of faggots constructed for the purposes of the salt works and over which salt-water is

continually trickling, are said to ozonise the air in proximity with them and to fill it with saline particles, and certain classes of invalids are recommended to haunt the neighbourhood of these moist faggot-piles for the purpose of inhaling the so-called *Gradier-luft*.

Without its salt-water Oeynhausen could have no claim to be considered as a health-resort, and I will, therefore, refer somewhat fully to this water and its effects. The water contains about 4½ per cent. of solids, of which 3½ per cent. are chlorides (chiefly sodium chloride). It has a specific gravity of 1030, a natural temperature of about 90° F., and each litre contains about 750 cubic centimetres of free carbonic acid. Warmth, salt, and free carbonic acid are, therefore, the three factors which may be credited with special therapeutic effects.

Julius Braun, the author of the well-known work on Baths and Mineral Waters, was physician at Oeynhausen for many years, and his explanation of the effect of salt (or Sool) baths may be accepted. There is no evidence that either the salt or the carbonic acid undergoes any absorption, and the effect of the bath is entirely due to the irritation by the water of the terminations of the cutaneous nerves. Braun asserts that the effect produced by a strong salt bath at a temperature of 95° F. is equal, both as regards objective phenomena and subjective symptoms, to a pure water bath at 100° F. The water of Oeynhausen has a natural temperature fit for bathing, and thus having neither to be cooled nor heated before use the contained carbonic acid is not suffered to escape during a long exposure or expelled by artificial heat. The water comes frothing into the bath tub, and there suffers its first loss of gas. On being placed in one of these natural baths the patient experiences a slight sense of chill, but this in the course of a minute or so gives way to a strong reaction, as evidenced by a feeling of warmth and comfort and a glowing skin. The temperature of the body sinks during the bath, but the patient nevertheless experiences (it is said) the comfort and quiet of a warm bath. It is essential that the bath be not too hot, or else the stimulation becomes too violent. It is necessary also that the water be not agitated, so that the escape of carbonic acid be not hastened, and the pernicious effects of its inhalation by the patient be engendered. The effect of such a bath is to strongly stimulate the skin, and through it the central nervous system; blood movement is increased, tissue change is hastened, and the whole system is roused to an unusual state of activity. These baths are said to be of particular service to weakly convalescents unable to undergo the fatigue of sea-bathing, or to take active exercise, in order to produce reaction. By the triple irritation of warmth, salt, and carbonic acid, reaction is produced with a maximum facility. In cases of gout and rheumatism, where the joint affection has not become too chronic, and in cases of muscular rheumatism, Oeynhausen has some reputation, but it is for scrofula in all its manifestations that these baths are most employed. "Skin culture" is much insisted on in Germany as a means of treating scrofula, and the baths of Oeynhausen are naturally popular as skin stimulants. All forms of paraplegia are said to derive benefit here, especially cases of acute spinal myelitis, which are quickened in their recovery by a judicious use of the baths. "After the termination of the acute stage," says Braun, "which is marked by fever and violent eccentric pains, paraplegia develops itself *without paralysis of the sphincters, and without anæsthesia*; and this is the point at which the antiphlogistic treatment hitherto indicated must give way to that of baths." In other words, the cases must be in a fair way to recover in order that the magical effect of Oeynhausen shall be produced. Having seen the baths of Oeynhausen, and having read what Braun, its chief apostle, has to say upon the subject, the Englishman will ask himself seriously whether it can be worth while to send patients from England to Oeynhausen.

The results obtained by sending scrofulous subjects to Margate and other bathing-places on the east coast are so splendid, often bordering on the miraculous, that we are not likely to grow dissatisfied with them, or to imagine that Oeynhausen can effect what Margate cannot. It must be better to bathe in the sea than in a room more or less filled with carbonic acid, and it must be that the carbonic acid escaping from the Oeynhausen water is inhaled by the bather. Skin-culture is certainly much better understood in England than in Germany, and when our Teutonic brethren have studied our habits a little more attentively, they will perhaps, learn that a rough towel is, as a skin-cultivator

much better than carbonic acid, and has the great advantage of producing no deleterious effect. Bathing quickens and stimulates nutrition, and it is essential that baths of all kinds should be taken in the purest air possible.

As regards the relief of paralytic troubles, I may remark that, "There is a tide in the affairs of paraplegia, which, taken at the flood, leads on to fortune." In cases of spinal hæmorrhage, and in cases of localised meningitis, especially if the subjects be young, there comes a time when, after a prolonged rest in bed, the pathologic conditions reach that minimum stage which we call a cure, and the spinal cord is ready to resume its functions and rouse from the dormant state engendered by the injury and the enforced rest. Then is the time to stimulate the skin (which in such cases always becomes dry and harsh), and there is nothing better than baths and friction. Such favourable results have been obtained in these cases by simple warm water and rough towels that it would be difficult to believe that Oeynhausen could accomplish more than can be attained by ordinary simple methods.

With regard to the effect of warm bathing and "skin culture" on gout and rheumatism there can be no doubt, but in connexion with this subject it may be well to recite a case which has come very closely under the writer's observation. A single lady, aged thirty-six, in the summer of 1876 was suffering from "gout." There was nodular enlargement of the finger-joints and of the toes, and some of the bigger joints were also affected. A similar condition existed to a marked extent in a maternal uncle and aunt. The patient was somewhat pale, and slightly inclined to be stout. Her habits were most abstemious, and at the time when she first came under observation she was very weak, and quite unable to walk except very slowly. In the summer of 1876 she was sent to Spa, where she took constant warm baths, and from there went to Homburg, where she continued her bathing. After some three weeks she was no better. The baths were given up, and it was resolved to try what life in the open air would accomplish, together with a daily perspiration induced by exercise. A start was made in the middle of August for the Black Forest and Switzerland. The patient rose at six, spent the whole day in the open air, carefully avoided all crowded rooms (such as the salons of hotels at night), took as much exercise as she could accomplish (which at first was very little), and went to bed at nine. The result was wonderful. At the end of three weeks she was able to walk from Airolo to Andermatt, over the St. Gothard, and returned to England in robust health. She continued well till the present summer, when the symptoms took a fresh start, and the fingers, toes, elbows, and ankles were attacked. The treatment so successful in 1876 was repeated, and a walking tour in North Germany was undertaken (not, be it observed, in a high mountain district, as was the case in 1876); and, notwithstanding the implication of one ankle, she was encouraged to use it as much as possible. The best results followed, and in a little time she had no difficulty in walking ten miles a day, sleeping well, eating well, and able thoroughly to enjoy existence.

Before giving credit to the effects of baths and mineral waters, one must be acquainted with the results obtainable by a natural and a simple mode of life. If patients would go to some healthy locality and make it a rule to spend at least fourteen or fifteen hours in the open air, to take all the exercise possible, and enjoy the daily luxury of a good vulgar "sweat," followed by a rapid sponging and a dry rub, avoid crowded rooms, eat simple food, and practise the rule of "early to bed and early to rise," I believe that a wearisome sojourn in some foreign Bethesda might often be avoided.

Obituary.

SURGEON-MAJOR BRYDEN,
BENGAL ARMY.

OUR columns last week announced the death of another distinguished member of the Indian Medical Service. Dr. James Lumsdaine Bryden died at Upper Norwood on the 18th ult. at the early age of forty-seven, leaving a widow and three young children to mourn his loss. Dr. Bryden was educated at the High School, Edinburgh, receiving his

medical education also in the university of that city, obtaining his M.D. degree in 1855. He entered the Bengal Medical Service in 1856, and served through the Indian Mutiny, being present at the siege of Delhi and relief of Lucknow—medal and two clasps. He was for four years civil surgeon of Buxar, and was then transferred to Calcutta for statistical duty, shortly afterwards being appointed "statistical officer to the Sanitary Commissioner with the Government of India," which office he held till compelled by failing health to leave India in August last. For more than ten years Dr. Bryden worked uninterruptedly at the important subject of the statistics of the European and native armies of India and of the gaol population; the voluminous and able Blue Books published by Government under his authority are too well known to require further reference in these columns. They are the result of unceasing labour and patient research on a subject hitherto entirely neglected. The time and thought bestowed on their compilation were immense, and proved even too much for a frame endowed by nature with robust strength and physique. Bryden broke down under the strain of incessant work, the value of which had been barely, if at all, recognised by the Government, whose faithful and able servant he was. He died in harness.

One who knew him well and intimately writes: "Sensitive, modest, and retiring, to a degree seldom met with but in men of the finest and most highly-strung moral fibre, Bryden's life was one long self-sacrificing consecration to duty. Had he been endowed with a larger share of noisy and obtrusive self-assertion his talents might have advanced him to a much more prominent position than that accorded to him by the Government of India under the long-sounding but subordinate title of 'Statistical Officer to the Sanitary Commissioner with the Government of India.'" There is only too much reason for the suspicion that the absence of appreciation of his long and valuable services on the part of the Government of India, or at least the delay in the expression of any such appreciation, until over and beyond the time at which such an acknowledgment would have been gratifying and inspiring to him, contributed to increase the mental depression which is such a frequent accompaniment of the insidious disease under which he laboured, for a longer period than he or his friends were aware of—viz., Bright's disease. With all Bryden's philosophic knowledge of the subjects which had become the study of his life, was added an intense power of concentration and that painstaking accuracy as to details which is such a frequent as to be an almost essential attribute of genius—this depth of insight and breadth of view concerning the vast problems involved in the consideration of the vital statistics of our Indian Empire, entitling him to rank among the most advanced of medical philosophers and thinkers,—was combined with a disposition so gentle, simple-minded, and childish, as to endear him to all who came under its winning influence. Within the sacred precincts and associations of the home circle his affectionate and loving nature exhibited its fullest development and enjoyed its most prized rewards. He was truly, and without exaggeration, one of those "pure in heart who shall see God," and although dead he still speaketh to all sincere workers by the example of his gentle and devoted life, for his works live after him.

He was interred at the Norwood Cemetery on November 22nd, being followed to his grave by his only son, a boy of eight years, a few relations, intimate friends and brother officers; among the latter were General Harrington, of the India Office, and Brigade Surgeon L. Kidd, of the Army Medical Department.

DR. WILLIAM LAUDER LINDSAY.

WE regret to record the death of this much-esteemed physician, which took place at 3, Hartington-gardens, Edinburgh, on the 24th ult., at the age of fifty. Wm. Lauder Lindsay, M.D., F.R.S.E., and F.L.S., was a talented and apt scholar at the Royal High School in 1845-6, where he carried off six medals and other honours. He was appointed medical officer to Murray's Royal Institution for the Insane at Perth in 1854, which appointment he held for a quarter of a century. He took his degree in medicine at the University of Edinburgh in 1852, when he distinguished himself as a student of no ordinary type, having obtained many honours. He was also a thesis medallist. Lindsay was a keen botanist,

having collected a valuable and rare herbarium, lichens having been his favourite study. Geological research was only second to that of botany. He held medals from Edinburgh University for botanical dissections, 1848 and 1849. Among the honours Dr. Lindsay obtained after his graduation, we may mention First Neill prize of the Royal Society, 1859; Gold Medal from the London International Exhibition of Fine Arts; Medal from New Zealand Exhibition, 1865, and Medal from the Royal Society for eminence in Natural History. His popular "Memoirs on the Spermatogones and Pycnides of Lichens" was his first published work in 1870, which was followed by "The Superannuation of Officers in British Hospitals" in 1875, and his last and best effort was published in 1879—namely, "Mind in the Lower Animals in Health and Disease" (2 vols., Kegan Paul and Co.). Lindsay's pen was seldom idle, as we find a long series of articles on "Cholera," "Glycerine," "Insanity," "Toxicology," "Therapeutics," and "Hygiene," published in the medical journals. He was ever fond of books; in fact, almost a bookworm, even spending his pocket-money when at the High School in purchasing standard works; he was especially fond of Scott and other celebrated authors. In consequence of enfeebled health he relinquished or resigned his duties at Perth in November, 1879. He suffered from severe dyspepsia, and could eat little food. Various remedies were tried, and several changes of climate were advised, but to no purpose. His health gradually declined during this year, and he died from absolute exhaustion of mind and body. In private Dr. Lindsay was most unobtrusive and retiring, and usually shunned the company even of his oldest friends. He shrank from ostentation, marked even in his death, having left orders that his body was either to be cremated or buried in a plain deal coffin. At all times unwilling to trouble any one, he was nevertheless deeply sensitive to the kindness of his medical brethren. Dr. Lindsay had been a widower for seventeen years, and has left one daughter. His only brother is Dr. Murray Lindsay, physician to the Derby County Asylum. We may only add that Dr. Lindsay was very reticent in regard to his religious views; he was a member of the Free Church of Scotland.

Medical News.

UNIVERSITY OF LONDON.—The following is a list of the candidates who have passed the recent M.D. Examination:—

Buchanan, Arthur, Guy's Hospital.
Cattle, Charles Henry, Leeds and University College.
Chapman, Paul Morgan, University College.
Colquhoun, Daniel, Charing-cross Hospital.
Dunbar, James John Macwhirter, St. George's Hospital.
Ferrier, John Christian, Guy's Hospital.
Gristock, William, Univ. College and Westminster Hospital.
Henderson, G. Courtenay (Gold Medal), University College.
Jones, Arthur Henry, Guy's Hospital.
Lubbock, Montagu, Guy's Hospital.
Mackern, George, Guy's Hospital.
Phillips, Sidney Philip, Univ. College and Middlesex Hospital.
Sainsbury, Harrington, University College.
Silcock, Arthur Quarry, B.S., University College.
White, William Hale, Guy's Hospital.
Wiglesworth, Jos., Liverpool Royal Infirmary and St. Thomas's Hospital.
Wilkinson, Arthur Thomas, B.A., B.Sc., Owens College.
Willcocks, Frederick, King's College.

LOGIC AND PSYCHOLOGY ONLY.

Bond, James William, B.S., University College.
Lendon, Alfred Austin, University College and Middlesex Hospital.
Plumbe, Samuel Thomson, St. Bartholomew's Hospital.
Prowse, Arthur Bancks, St. Mary's Hospital.
Ryley, James, University College.
Williams, Dawson, B.S., University College.

The following gentlemen have passed the Second M.B. Examination (Honours):—

MEDICINE.

FIRST CLASS.

Newsholme, Arthur (Scholarship and Gold Medal), St. Thomas's Hospital.
Money, Angel (Gold Medal), University College.
Saunders, Arthur Rich, University College.
Barnes, George Frederick, St. Bartholomew's Hospital.
Sellers, William, University of Edinburgh and London Hospital.
Meek, John William, Guy's Hospital.
Pollard, Bilton, University College.
Paddle, James Isaac, B.A., B.Sc., University College.
Suckling, Cornelius William, Queen's College, Birmingham.

SECOND CLASS.

{ Brooke, H. Ambrose Grundy, B.A., Owens Coll. and Guy's Hosp.
 { Harvey, Alfred, Queen's College, Birmingham.
 { Shaw, John, St. Thomas's Hospital.
 { Wainwright, Robert Spencer, Guy's Hospital.
 { Baddeley, Charles Edward, King's College.
 { Dalton, Norman, King's College.
 { Penny, Edward, Guy's Hospital.

THIRD CLASS.

{ Day, Donald Douglas, St. Bartholomew's Hospital.
 { Sayer, Mark Feetham, University College.
 { Notley, William John, B.A., University of Edinburgh.

OBSTETRIC MEDICINE.

FIRST CLASS.

Barnes, G. F. (Scholarship and Gold Medal), St. Bartholomew's Hospital.
 Paddle, James Isaac (Gold Medal), University College.
 Banks, William, University College.
 Saunders, Arthur Rich, University College.
 Newsholme, Arthur, St. Thomas's Hospital.

SECOND CLASS.

Pollard, Bilton, University College.
 Sayer, Mark Feetham, University College.
 Rich, Arthur Creswell, St. Thomas's Hospital.
 Permewan, Arthur Edward, University College.

THIRD CLASS.

Sellers, William, University of Edinburgh and London Hospital.
 Dalton, Norman, King's College.
 Harvey, Alfred, Queen's College, Birmingham.
 Meek, John William, Guy's Hospital.
 Day, Donald Douglas, St. Bartholomew's Hospital.

FORENSIC MEDICINE.

FIRST CLASS.

Meek, John Wm. (Scholarship and Gold Medal), Guy's Hospital.
 *Paddle, James Isaac (Gold Medal), University College.
 †Banks, William, University College.
 †Shaw, John, St. Thomas's Hospital.
 Rich, Arthur Creswell, St. Thomas's Hospital.
 Money, Angel, University College.
 Berry, Frederic Haycraft, Guy's Hospital.

SECOND CLASS.

Newsholme, Arthur, St. Thomas's Hospital.
 Penny, Edward, Guy's Hospital.
 Pollard, Bilton, University College.
 Wainwright, Robert Spencer, Guy's Hospital.
 Saunders, Arthur Rich, University College.

THIRD CLASS.

Faulkner, John Thomas, Owens College.

* Obtained number of marks qualifying for University Scholarship.

† Obtained number of marks qualifying for Gold Medal.

The following gentleman passed the M.S. Examination :—
 Symonds, Charters James, M.D., Guy's Hospital

The following gentlemen passed the B.S. Examination :—

FIRST DIVISION.

Claremont, Claude Clarke, University College.
 Gill, Richard, B.Sc., St. Bartholomew's Hospital.
 Neale, William Henry, University College.
 Pollard, Bilton, University College.
 Sheppard, Charles Edward, St. Thomas's Hospital.
 Smith, Robert Percy, St. Thomas's Hospital.

SECOND DIVISION.

Day, Donald Douglas, St. Bartholomew's Hospital.
 Money, Angel, University College.

APOTHECARIES' HALL.—The following gentleman passed his examination in the Science and Practice of Medicine, and received a certificate to practise, on Nov. 18th :—
 Pratt, Reginald, Billesdon, Leicester.

The following gentlemen passed on Nov. 25th :—

Beresford, Chas. William, Royal Infirmary, Isle of Wight.
 Daly, Edwin Owen, Colleshill-street, Eaton-square.
 Flood, Francis Pulteney, Guy's Hospital.
 Mortimer, J. Desmond Ernest, Westminster Hospital.
 Oulton, Hy. William, Balleckmoyler, Queen's County.
 Robinson, Charles William, North Shields.
 Shelley, Robert Williamson, Sunderland.
 Willey, Charles Henry, Leicester.

The following gentlemen also on the same days passed their Primary Professional Examination :—

Anthony John Bathe and Chas. Nathaniel Simons, St. Bartholomew's Hospital; Joao Francisco Braga, King's College; Albert Bleckly Clarke, Charing-cross Hospital.

THE Board of Guardians of the Thetford Union have added nine guineas per annum to Mr. J. R. Clouting's salary, in consideration of the long distance (over nine miles) he has to drive, through an unpopulated piece of country, to one of the parishes in his district. The original proportion of salary allotted for that particular parish was eighteen shillings per annum.

LAST week a deputation from the Lancashire and Cheshire Association for the Prevention of Noxious Vapours had an interview with the President of the Local Government Board, to urge the Government to deal with the subject of noxious vapours next session. The interview was private.

DUBLIN OBSTETRICAL SOCIETY.—The following office-bearers have been appointed for the ensuing year :—
 President : John A. Byrne. Vice-Presidents : Robert Dill, Arthur V. Macan. Committee : George Hugh Kidd, John R. Kirkpatrick, Alfred H. McClintock. Treasurer : John Joseph Cranny. Secretary : Wm. Roe.

VACCINATION GRANTS.—The following gentlemen have received the Government grant for successful vaccination in their districts :—Mr. Charles Lyddon, L.R.C.P., M.R.C.S. Eng., L.S.A. Lond., Oldbury, West Bromwich Union, £25 10s. Mr. A. H. Boys, of Pill, near Bristol, £7 8s. (second time).

THE Duke of Edinburgh is expected to assist as one of the executants at a concert to be given on the 18th inst., at the Royal Albert Hall, by the Amateur Orchestral Society, in behalf of the funds of the French Hospital. The Prince of Wales, also, it is stated, will be present.

THE contributions by the Locomotive Department of the North-Eastern Railway, Greensfield, Gateshead, to the Newcastle Hospital Saturday Fund have this year amounted to £55, as compared with £47 4s. 3d. last year, showing an increase of £7 15s. 9d.

Medical Appointments.

Intimations for this column must be sent DIRECT to the Office of THE LANCET before 9 o'clock on Thursday Morning, at the latest.

ALEXANDER, L., L.R.C.P.Ed., L.F.P.S.G., has been appointed Medical Officer of the Good Hope District of Trelawny, Jamaica.
 BANKS, W., M.B., has been appointed Assistant Medical Officer to the Friends' Retreat, York, vice Campbell, resigned.
 BARR, J., M.B. & C.M., has been appointed Certifying Factory Surgeon for the Clayton-le-Moors, Great Harwood, and Rishton Districts.
 BARTON, E. W., L.R.C.P.L., M.R.C.S.E., has been appointed Medical Officer of Health for the Market Rasen Urban Sanitary District. £10 10s. for one year.
 COOKE, Mr. E., has been appointed House-Physician to the Royal Infirmary, Glasgow.
 CROSSLEY, C., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Surgeon to the Leicester Provident Dispensary.
 DONALD, Mr. J., has been appointed House-Physician to the Royal Infirmary, Glasgow.
 FORT, T., L.R.C.P., M.R.C.S.E., has been appointed a Certifying Factory Surgeon, vice Halkyard, F.R.C.S., resigned.
 GRAY, T., M.B., L.R.C.S.Ed., has been appointed Clinical Assistant to the Ophthalmic Wards of the Royal Infirmary of Edinburgh, vice Woodhead, resigned.
 GUEST, Mr. A. H., has been appointed House-Physician to the Royal Infirmary, Glasgow.
 HORMAZDJI, R. N., M.R.C.S.E., L.R.C.P.Ed., L.S.A.L., has been appointed Resident Surgeon and Honorary Secretary to the Cheltenham General Hospital Branch Dispensary, vice J. G. Boughton, resigned.
 HUNTER, Mr. C. B., has been appointed House-Physician to the Royal Infirmary, Glasgow.
 JOHNSTON, Mr. J., has been appointed House-Surgeon to the Royal Infirmary, Glasgow.
 JONES, E. S., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer for the Abererch District of the Pwllheli Union, vice Hughes, resigned.
 KNOX, J. H., M.B., L.R.C.S.Ed., has been appointed Medical Officer and Public Vaccinator for the Clapham District of the Settle Union, vice Deighton, deceased.
 MCKAY, H., M.B., C.M., has been appointed House-Physician to the Royal Infirmary, Glasgow.
 MCLENNAN, Q., M.B., C.M., has been appointed House-Surgeon to the Royal Infirmary, Glasgow.
 MATTHEWS, V., M.R.C.S.E., L.S.A.L., has been appointed Sambrooke Medical Registrar to King's College Hospital.
 MOIR, J. F., M.B., C.M., has been appointed House-Surgeon to the Royal Infirmary, Glasgow.
 NEISH, J., M.D., has been appointed Health Officer at Port Royal, Jamaica, vice Altman, who retires.
 PALMER, C. DE M., M.B., M.R.C.S.E., has been appointed Medical Officer for the Halford District of the Ship-ton-on-Stour Union.
 PICKWORTH, A. J., L.R.C.P.Ed., L.F.P.S.G., L.M., has been appointed Medical Officer to the Nenthead Lead Miners' Union, at a salary of £120 per annum. Also Medical Officer to the Nenthead District of the London Lead Company's Men, at £65 per annum, house-rent free, and private practice.
 PREES, W. M., L.R.C.P.Ed., M.R.C.S.E., has been appointed Assistant Medical Officer at the Mill-road Workhouse of the West Derby Union, vice Boucher, resigned.

SHETTLÉ, H. W., M.R.C.S.E., L.R.C.P.Ed., has been appointed House-Surgeon to the Royal South Hants Infirmary, Southampton.

SPOLTON, G., L.R.C.S.I., has been appointed Medical Officer for the Newtownore Dispensary District of the Bawnboy Union, vice Kenny, resigned.

STEDMAN, A., M.R.C.S.E., L.S.A.L., has been reappointed Medical Officer for the Eppingham District of the Dorking Union.

STEELE, W. C., L.R.C.P.Ed., M.R.C.S.E., has been appointed Assistant Medical Officer and Dispenser at the Infirmary, St. Saviour's, Southwark.

WAGSTAFF, E. H., M.R.C.S.E., has been appointed House-Surgeon to the Hull General Infirmary.

WATSON, Mr. J. M., has been appointed House-Surgeon to the Royal Infirmary, Glasgow.

YOUNG, W., M.B., C.M., has been appointed House-Surgeon to the Royal Infirmary, Glasgow.

Births, Marriages, and Deaths.

BIRTHS.

BAIN.—On the 22nd ult., at Bournemouth, Hants, the wife of Benjamin Bain, L.R.C.P.Ed., L.R.C.S.Ed., of a son, who survived his birth two days.

PEACEY.—On the 20th ult., at Lewisham High-road, S.E., the wife of William Peacey, M.B., of a son.

SKERRITT.—On the 30th ult., at Thornton Villa, Richmond Hill, Clifton, the wife of E. Markham Skerritt, M.D., M.R.C.P., of a daughter.

SMITH.—On the 1st inst., at Christ's Hospital, London, the wife of Dr. Alder Smith, of a son.

WHITTINGTON-LOWE.—On the 29th ult., at Llanrhyth, Hove-drove, West Brighton, the wife of R. Whittington-Lowe, M.D., Staff-Surgeon (Army), of a son.

MARRIAGES.

PHILPOTS—SHARP.—On the 24th ult., at St. Bride's Church, by the Rev. J. Scott Ramsay, M.A. (cousin of the bride), Harris Philpots, M.D., of Tavistock, Devon, to Wilhelmina (Mina), eldest daughter of William Sharp, Banker, of 5, Huskisson-street, Liverpool, formerly of Stafford and Manchester.

SAUNDERS—SOLOMON.—On the 27th October, at Sea Point, Cape Town, Henry William Saunders, M.B.Lond., F.R.C.S.E., of Rondebosch, near Cape Town, second son of James T. Saunders, of Carvalla Lodge, Upper Tooting, to Jeannie, sixth daughter of Henry Solomon, of Sea Point.

TINKER—ISHERWOOD.—On the 18th ult., at St. Paul's Church, Southport, by the Rev. W. Millington, M.A., Frederick Howard Tinker, M.R.C.S.E., L.R.C.P., only son of the late Frederick Tinker, F.R.C.S., of Hyde, Cheshire, to Sarah Ann, youngest daughter of James Isherwood, Esq., of Southport.

WAKLEY—DOERING.—On the 2nd inst., at St. Martin's-in-the-Fields, by the Rev. W. G. Humphry, B.D., Vicar, James G. Wakley, M.D., youngest son of the late Thomas Wakley, M.P., to Clementina Agnes Doering, eldest daughter of the late Major Sutherland G. G. Orr, Madras Cavalry.

DEATHS.

CEELY.—On the 27th ult., at Aylesbury, Robert Ceely, F.R.C.S.E., aged 83. Friends will please accept this intimation.

FAUSSETT.—On the 29th ult., William Faussett, M.B., F.R.C.S.I.

GRANT.—On the 24th ult., at Cleator Moor, Cumberland Garden, Milne Grant, M.R.C.S.E., L.R.C.P.Ed., aged 33.

JACKSON.—On the 3rd ult., at Linden Villa, 68, Laurel Grove, Penge, Surrey, Harriet, widow of Mr. William Jackson, Medical Bookseller and Publisher (late of King-street, Borough, London), in her 87th year.

LINDSAY.—On the 24th ult., at 3, Hartington-gardens, Edinburgh, William Lauder Lindsay, M.D., F.R.S.E., F.L.S.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

BOOKS ETC. RECEIVED.

ALLEN, W. H., & Co.
Report of the Proceedings of the International Congress on the Education of the Deaf, held at Milan. With an Appendix. pp. 159.

ANN ARBOR PRINTING & PUBLISHING COMPANY.
Handbook of Chemical Physiology and Pathology, with Lectures on Normal and Abnormal Urine. By Dr. V. C. Vaughan. Third Edition, revised and enlarged. pp. 347-32. With Illustrations.

BAILLIÈRE, TINDALL, & COX, London.
Movable Atlas of the Brain. By G. J. Witkowski, M.D. Text translated, with the Author's permission, by Dr. T. Stretch Dowse.
Movable Atlas of the Male Generative Organs. By G. J. Witkowski, M.D. The text translated, with the Author's permission, by Dr. D. Campbell Black.

BRADBURY, AGNEW, & CO.
Echoes from the Counties. pp. 320.

CHURCHILL, J. & A., London.
Surgical Enquiries. By Furneaux Jordan, F.R.C.S. Second Edition. pp. 312. With Illustrations.
Clinical Lectures and Cases, with Commentaries. By Henry Thompson, M.D., F.R.C.P. Lond. pp. 197.
A Manual of Ophthalmoscopy, for the Use of Students. By Dr. Dagnestet. Translated by C. S. Jeaffreson, F.R.C.S.E. pp. 240. With Illustrations.
Observations on the Cæsarean Section, Craniotomy, and other Obstetric Operations. By Thomas Radford, M.D. Second Edition. pp. 225. With Diagrams.

GRIFFIN, CHARLES, & Co., London.
The Science and Practice of Medicine. By W. Aitken, M.D. Ed., F.R.S. In 2 vols. Seventh Edition. pp. 1150-1181.

KIMPTON, H., London.
A Practical Treatise on the Diseases of Women. By T. Gaillard Thomas, M.D. Fifth Edition, enlarged and thoroughly revised. pp. 806. With 266 Wood Engravings.

LEWIS, H. K., London.
A Text-book of Practical Medicine, with particular reference to Physiology and Pathological Anatomy. By Dr. Felix von Niemeyer. Translated by Dr. G. H. Humphreys and Dr. C. E. Hackley. Revised Edition. 2 vols.
A Treatise on the Practice of Medicine, for the Use of Students and Practitioners. By R. Bartholow, M.D., LL.D. pp. 848. With Illustrations.
Ringworm, its Diagnosis and Treatment. By Alder Smith, M.B.Lond., F.R.C.S. pp. 81. With Illustrations.

LINDSAY & BLAKISTON.
The Mouth and the Teeth. By Dr. J. W. White, D.D.S. pp. 150.

LOCKWOOD (CROSBY) & Co.
Domestic Plumbing and Water Service. By Wm. White. pp. 30.

LONGMANS, GREEN, & Co., London.
Wish and Will. An Introduction to the Psychology of Desire and Volition. By G. L. Turner, M.A. pp. 356.
Transactions of the Clinical Society of London. Vol. XIII. pp. 390. With Illustrations.

MACLAREN & STEWART, Edin.; SIMPKIN, MARSHALL, & Co., London.
The Structural Anatomy of the Female Pelvic Floor. By Dr. D. B. Hart. pp. 45. With Plates and Woodcuts.

MITTLER, E. S., & SOHN.
Armee- und Volks-Ernährung. Ein Versuch Prof. C. von Voit's Ernährungstheorie für die Praxis zu verwerthen von Dr. C. A. Meinert. In zwei Theilen mit 8 lithographirten farbigen Tafeln.

MURRAY, J., London.
The Power of Movement in Plants. By C. Darwin, LL.D. Assisted by Francis Darwin. pp. 592. With Illustrations.
Peruvian Bark: a Popular Account of the Introduction of Chincona Cultivation into British India. By Clements R. Markham, C.B., F.R.S. pp. 549. With Map and Illustrations.

PHARMACEUTICAL SOCIETY OF GREAT BRITAIN.
Historical Sketch of the Progress of Pharmacy of Great Britain. By Jacob Bell and Theophilus Redwood. pp. 415.

SMITH, ELDER, & Co., London.
Atlas of Histology. By Drs. Klein and E. Noble Smith. Part XIII.
A Treatise on the Theory and Practice of Medicine. By J. S. Bristowe, M.D. Third Edition. pp. 1179.

On the Management of Infantile Eczema. By Dr. L. D. Bulkley.—On the Use of Sulphur and its Compounds in Diseases of the Skin. By Dr. L. D. Bulkley.—Dress, its Sanitary Aspect. By Richard Roth. (Churchills).—The Philosophy of Sleep. By W. K. Bayley.—Dynamics of Racial Diet in British India. By Dr. J. W. Johnston, F.R.S.Ed.—Proceedings of the Medical Society of the County of Kings.—Ward and Lock's Universal Instructor; Parts I. & II.—Victorian Review, October.—Illustrated Catalogue of Surgical Appliances, &c. By James Gillingham.—Virchow's Archiv, Nov.—Surgical Treatment of Naso-Pharyngeal Catarrh. By Dr. Goodwillie, New York.—Monthly Review of Dental Surgery.—Die Homöopathie Hahnemann's und die der Neuzeit. Eine vergleichende Studie von Dr. C. Koeppe. (Herschwald, Berlin).—A Case of Combined Intra-uterine and Abdominal Twin Pregnancy. By Dr. H. P. C. Wilson. (Wood, New York).—Annual Report of the Supervising Surgeon-General of the Marine Hospital Service of the United States for 1880.—Fraser's Magazine, December.—London Opinion, No. 1. (Dean & Son).—On Infant Nurseries for the Poor. By Mrs. E. P. Grant.—Médicaments Assimilables Fer-iodo-arsenic Diastases du V. Baud.—Fourth Report of the Medical Superintendent of Yaws Hospital.—Transactions of the American Otological Society.—Friendly Greetings.—Girl's Own Paper, December. (Religious Tract Society).—The Electric Laryngoscope. By Dr. A. W. Adams.—Operations on the Upper and Lower Extremities. An Address by W. H. Folker, F.R.C.S.E.—Vierteljahresschrift für Dermatologie und Syphilis.—Suggestions as to the Therapeutic Value of Rest in the Treatment of Laryngeal Diseases. By D. B. Robinson.—Sulla Malattia di Diessler od Ernoglobino-Albuminuria Parossistica. Per Dott. G. Silvestrini e A. Conti.—Colburn's New Monthly Magazine.—The Veterinarian, December.—Nephrectomy by Abdominal Section. By A. E. Barker, F.R.C.S.E. (Adlard).—The Journal of Anatomy and Physiology, Vol. XIV, Part IV. (Macmillan).—The Carisbrooke Magazine, December.—The Sunday Magazine, December.—Good Words, December.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

| THE LANCET OFFICE, December 2nd, 1880.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radiation in Vacuo	Max. Temp. in Shade	Min. Temp.	Rain fall.	Remarks at 8.30 A.M.
Nov. 26	29.72	W.	56	55	..	57	44	0.05	Overcast
" 27	30.04	W.	46	44	..	55	43	0.06	Bright
" 28	30.47	S.W.	50	47	..	54	40	..	Bright
" 29	30.43	W.	46	44	..	52	42	..	Foggy
" 30	30.47	S.W.	44	42	..	48	40	..	Overcast
Dec. 1	30.20	S.W.	46	45	..	51	41	..	Overcast
" 2	30.25	N.W.	43	41	..	48	39	0.02	Foggy

Medical Diary for the ensuing Week.

Monday, Dec. 6.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS. — Operations, 10½ A.M. each day, and at the same hour.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL. — Operations, 1½ P.M. each day, and at the same hour.

METROPOLITAN FREE HOSPITAL. — Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL. — Operations, 2 P.M.

ST. MARK'S HOSPITAL. — Operations, 2 P.M.; on Tuesday, 9 A.M.

ROYAL INSTITUTION. — 5 P.M. General Monthly Meeting.

MEDICAL SOCIETY OF LONDON. — 8½ P.M. Dr. Dowse will exhibit a Patient suffering from Tabes Dorsalis, with anomalous Symptoms. — Dr. Broadbent, "On Pleuritic Effusion."

Tuesday, Dec. 7.

GUY'S HOSPITAL. — Operations, 1½ P.M., and on Friday at the same hour.

WESTMINSTER HOSPITAL. — Operations, 2 P.M.

WEST LONDON HOSPITAL. — Operations, 3 P.M.

PATHOLOGICAL SOCIETY OF LONDON. — 8½ P.M. Discussion on "Rickets," continued by Dr. Norman Moore, Mr. Warrington Howard, Dr. Dickinson, Mr. Parker, Dr. Longhurst, Dr. Baxter, and Mr. Lucas. — Dr. Barlow: Case of so-called "Fetal Rickets." — Mr. Shattock: Osseous Lesion in the Fœtus. — Dr. F. C. Turner: Anatomical and Microscopical Specimens of Ricketty Bones. — Dr. N. Moore: Cancer of Prostate (recent specimen). — The President: Card Specimens.

Wednesday, Dec. 8.

NATIONAL ORTHOPÆDIC HOSPITAL. — Operations, 10 A.M.

MIDDLESEX HOSPITAL. — Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL. — Operations, 1½ P.M., and on Saturday at the same hour.

ST. THOMAS'S HOSPITAL. — Operations, 1½ P.M., and on Saturday at the same hour.

ST. MARY'S HOSPITAL. — Operations, 1½ P.M.

KING'S COLLEGE HOSPITAL. — Operations, 2 P.M., and on Saturday at 1 P.M.

LONDON HOSPITAL. — Operations, 2 P.M., and on Thursday and Saturday at the same hour.

GREAT NORTHERN HOSPITAL. — Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL. — Operations, 2 P.M., and on Saturday at the same hour.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN. — Operations, 2½ P.M.

HUNTERIAN SOCIETY. — 7½ P.M. Council Meeting. — 8 P.M. Dr. C. Turner, "On a Case of Intussusception." — Mr. Waren Tay, "On a Case of Colotomy performed six years ago for supposed Annular Stricture." — Mr. Gilbert: "Notes on Cases in General Practice."

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM. — 8 P.M. Living Specimens. — 8½ P.M. Dr. Hughlings Jackson, "On the Eye Symptoms in Locomotor Ataxy." — Mr. Higgens, "On Hypocleral Cyclotomy." — Mr. Critchett, "On Peritomy in Partial Pannus." — Dr. A. D. Davidson, (1) "On Detachment of Retina after Albuminuric Retinitis"; (2) "On Congenital Absence of one Eyeball." — Mr. J. E. Adams: "Peculiar Opacities in Vitreous Humour following Injury." — Dr. S. Mackenzie, (1) "On a Case of Scurvy with Retinal Hæmorrhages"; (2) "On a Case of Idiopathic Anæmia with Retinal Hæmorrhages."

ROYAL MICROSCOPICAL SOCIETY. — 8 P.M. Dr. Hudson: "Floscularia trifolium" (new specimen). — Mr. C. Stewart: "Some Structural features of Echinometridæ." — Notes on the Movements of Diatoms, the Construction of Object-glasses, Swinging Substages, &c.

SOCIETY FOR THE ENCOURAGEMENT OF ARTS, MANUFACTURES, AND COMMERCE. — 8 P.M. Dr. A. Carpenter, "On London Fogs."

Thursday, Dec. 9.

ST. GEORGE'S HOSPITAL. — Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL. — 1½ P.M. Surgical Consultations.

CHARING-CROSS HOSPITAL. — Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL. — Operations, 2 P.M., and on Friday at the same hour.

HOSPITAL FOR WOMEN, SOHO-SQUARE. — Operations, 2 P.M.

Friday, Dec. 10.

ST. GEORGE'S HOSPITAL. — Ophthalmic Operations, 1½ P.M.

ST. THOMAS'S HOSPITAL. — Ophthalmic Operations, 2 P.M.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL. — Operations, 2 P.M.

QUEKETT MICROSCOPICAL CLUB. — 8 P.M. Ordinary Meeting.

CLINICAL SOCIETY OF LONDON. — 8½ P.M. Mr. Tyson (Folkestone), "On a Case of Pneumonia, with Remarks on the Physical Signs of the Disease." — Dr. Habershon, "On a Case of Aphasia, with Hemiplegia on the Left Side; Tumour on Right Side of Brain at third Frontal Convolution." — Mr. Norton, "On an Operation for the Radical Cure of Web-fingers." — Mr. Davies-Colley, "On a Case of Villous Growth of the Bladder successfully removed by Perineal Section." — Mr. Croft will show a Case of Cured Hydronephrosis. — Mr. Tyson will show a Case of Cross-legged Progression.

Saturday, Dec. 11.

ROYAL FREE HOSPITAL. — Operations, 2 P.M.

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Local papers containing reports or news-paragraphs should be marked.

Lectures, original articles, and reports should be written on one side only of the paper.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET to be addressed "To the Publisher."

"TEMPERAMENTS."

THERE has been a good deal of hair-splitting among medical writers on the subject of temperaments. It is not worth while to revive the controversy, or even to recapitulate the names of classes under which the several "temperaments," as they are called, have been grouped. The truth is that the term "temperament" has been employed to designate very different qualities of the physico-medical organism—namely, general type and constitution, and—somewhat too vaguely perhaps—the temperament or temper in its true sense. The popular significance of this word temper—as applied to steel, for instance—holds good, and is especially suggestive and accurate as employed to describe the habitual state of the animal organism. A sound temper or temperament is a well-balanced and regulated condition of mind and body, wherein a healthy degree of tension, as it were, is maintained by the just equipoise and counter-action of the inherent qualities of which the nature is composed. An irritable temper or excitable temperament is one which is too highly or unevenly strung, and will therefore jar on the smallest provocation. A sullen, stolid, or dull temper, merging into moroseness, indicates a condition in which the tension is low, and certain of the more selfish faculties are not duly equilibrated. Just as in the muscular apparatus, if opposing muscles are not of equal strength or duly energised, the limb will not be in a state to act either quickly or continuously in obedience to the will; so in a temperament exhibiting want of due correlation of the inner forces, the judgment has seldom the whip-hand of conduct, and the active life of relation is almost sure to be defective. Temperament has much to do with health preservation. The sound and good-tempered resist disease, and pass unscathed through many dangers, as the stiff craft bending steadily to the breeze, and well under the control of her helm, may thread a narrow passage among the rocks, or as the horse that bears equably on the rein grasped by a firm hand can be driven safely through a crowded thoroughfare. The variable, uncertain, irritable, and, above all, the sullen of temper, are a misery to themselves and those around them; the troubles of life fret their strength, and the perils that lurk in their path can seldom be certainly and pleasantly avoided. There is no better way to live healthily and happily than to cultivate a temperament wherein the most contradictory qualities and properties of the organism are perfectly counterbalanced and combined.

Mr. W. Davison.—The question is entirely legal; but on moral grounds our correspondent seems well entitled to a quarter's salary. A friendly settlement should be quite possible.

Dr. W. R. Smith, (Cheltenham.)—Yes.

W. R.—Marshall on the Enlisting and Discharging of Soldiers, last edition.

M.D.—The use of the handbill with the adoption of a system of advertising is a sad exhibition of the want of professional taste and spirit.

Scapula.—As early as possible.

Lupus had better apply to one of the pay hospitals.

SCHOOL-BOARD CERTIFICATES.

To the Editor of THE LANCET.

SIR,—I am glad to see in THE LANCET of Nov. 20th a letter from a provincial house-surgeon on the above subject. As one of four assistants in a large railway practice, I can say that we are continually pestered with parents asking for certificates to say their children are unable to attend school; and not content with that, when the children are convalescent (if they have been suffering from fever of any kind), they again come, requesting certificates to say they are now fit to attend school, and are free from infection!—thus entailing great additional labour and responsibility on us. Surely if the School Board require medical certificates they should pay for them.

Yours faithfully,

Wilts, Nov. 1880.

H. B. F.

MEDICAL SERVICES IN SPAIN.

DR. ALVARO MENDEZ, the editor of *El Siglo Médico*, of Madrid, Dr. C. Velasco, of Nice, and Dr. de Pietra Santa, of Paris, have entered a protest against the tendency to look upon Spain as the last of nations with respect to sanitary and medical progress. Dr. Velasco remarks that now more than sixty years have elapsed since the Duc de Sesto, then the alcalde corregidor of Madrid, created the *casas de socorro*, an institution which might be imitated with advantage by many nations to the north of the Pyrenees. In each quarter of Madrid there is by law established a house where four to six beds are always held in readiness to receive any persons suffering from accidents or sudden illness, and whom it would be difficult to transport either to the hospital or to their homes. At each of these depôts there are two or three doctors, according to the importance of the district, two nurses, a clerk, and two stretcher-bearers. Both day and night a medical man remains on duty at this post, and he has with him the necessary surgical instruments, bandages, medicaments, &c. This institution is in vogue in all the large towns of Spain. The medical attendants receive fair remuneration, and are appointed by public competition. These appointments supply practice to young doctors, and enable them to tide over the earlier and more difficult period of their careers. For a village of forty poor families and 130 cottages and houses, the local authorities pay the medical man a yearly salary of £23, and the well-to-do inhabitants contribute £77. This total of £100 a year for a country so poor as Spain compares favourably with the sum our rural authorities give to their medical officers of health. The regular functions performed by the "inspectors of salubrity" and the municipal veterinaries, the organisation of a general service for vaccination for the relief of the poor, and the sanitary supervision of ships, all show that Spain is not far behind the age. Indeed, it must be acknowledged that in one respect she is even ahead of her neighbours. The Spaniards have erected two Orders as special rewards for devotion to the cause of public health. The first is a medal or decoration given to doctors who have distinguished themselves during periods of epidemics, and the other is the Order of Benevolence, given as the reward of acts of civic heroism, abnegation, and charity.

Mr. T. Bell, (Uppingham.)—The paper is marked for insertion.

"A NOTE ON INTENTION IN THE DETERMINATION OF SEX AND OF THE MENTAL AND PHYSICAL INHERITANCE OF CHILDREN."

To the Editor of THE LANCET.

SIR,—Dr. Granville's able paper in your journal of October 23rd has opened up a subject of vast importance to the scientific mind of the profession. His argument on "intention" is a grand one, and, as he says, is not even yet recognised, and suggests that the province must be thoroughly explored. Therefore I wish to ask how sex is determined in the case of hermaphrodites, and in those monstrosities where there is no sex at all? What frustrates intention here? Again, for six or seven generations in some families male children only appear; the same in others for girls. Are the "constituent elements" of the "nature" so powerful as to pass through so many generations, no matter how ardent the male or female may be? And where is the "mean" of the two sets of qualities of both parents? Does the "direct" inheritance annihilate the "mean" for so long a time? As Dr. Granville has gone so deeply into the subject, perhaps he can smooth the way for those who wish to follow him by offering some explanation on these curiosities of genesis.

I am, Sir, yours truly,

Linslade, Nov. 22nd, 1880.

WM. STORY.

To the Editor of THE LANCET.

SIR,—“A. G. P.’s” difficulty, as stated in your last impression, would seem to resolve itself into some confusion existing in his mind about mental and physical qualities and the connexion between them in an individual, or else his language fails to give both himself and others a full grasp of his real meaning. Thus observation leads us to the conclusion—

1. Quite as much as sexes differ, so do minds, even in the same family, and minds will copy any model set before them.

2. Physical qualities of one parent may descend to children, or the physical qualities may be a compound of both, or may be qualities quite distinct from those of either of the parents, but in the latter case there is always one very distinct peculiarity which indicates how the exception arises.

3. A governing principle being assumed in the mere animal act, it is clear that principle can never be less than duplicate, just as it is impossible to govern mind on one principle.

4. This principle being never less than duplicate in ordinary cases, it is equally clear that where twins are born of different sexes, but with unity of placenta, there must be in such cases at least a third principle involved, as has, in fact, been demonstrated over and over again by those who have satisfied themselves there is nothing more to discover in that direction beyond the fact that mental and physical qualities are quite distinct.

There is nothing, therefore, to answer in “A. G. P.’s” query as far as his meaning can be apprehended.

Yours &c.,

Baden-Baden, Nov. 1880.

M.

EXAMINATIONS AT THE ROYAL COLLEGE OF SURGEONS.

THE following were the questions on Surgical Anatomy and the Principles and Practice of Surgery submitted to the 82 candidates at the pass examination for the diploma of Membership of the College on the 12th ult., when they were required to answer at least four (including one of the first two) out of the six questions:—

1. Give the relations of the right common iliac artery, and state by what arteries the collateral circulation is established after ligation of that vessel.
2. Enumerate the structures which must necessarily be divided in excision of the scapula.
3. To what visceral complications may severe burns of the skin give rise, and to what stage of the case are they most likely to appear?
4. What is spina bifida? Describe the anatomy of the deformity, and the means you would adopt for its relief.
5. Describe the symptoms of a foreign body impacted in the larynx, and state how you would relieve the patient.
6. Describe the formation and treatment of fistula in perineo.

The following were the questions on the Principles and Practice of Medicine submitted on the following day to those candidates who had not passed a recognised medical examination:—

1. Give the symptoms, course, complications, and treatment of acute rheumatism.
2. Describe the symptoms and course of tubercular meningitis. Note the distinctions which separate it from the diseases which clinically resemble it, and mention the appearances commonly met with after death from this cause.
3. State the effects, preparations, and doses of digitalis, elaterium, colchicum, acid tartrate of potash, and perchloride of mercury.

A POET'S LAMENT.

A WRITER of considerable merit, Xavier Aubryet, died in Paris on Monday, the 15th November, of locomotor ataxia. He had suffered for the last six years from the disease in its severest form. Some time back he published a book which was written towards the beginning of his illness, entitled “La Maladie à Paris,” and he had intended to publish a work written afterwards, and which he considered to be his *chef-d'œuvre*; but the progress of the disease had deprived the author of his sight, and none of his friends could decipher the handwriting. The *Figaro* in its obituary notice gives the following verses, which were written by Aubryet to describe his sufferings:—

LE VIOLON DE DIEU.

Quel Stradivarius pour la douleur physique
Que l'étrange instrument qu'on nomme corps humain !
C'est Dieu qui pour lui seul compose sa musique,
La main qui tient l'archet, c'est sa terrible main !

Quelles vibrations que nos cris de souffrance !
Quelles cordes d'un jeu tout-puissant que les nerfs !
Désespoir, pour trouver toute la résonnance,
Les bois les plus fameux valent moins que nos chairs !

Quelle gamme sans fin de la plainte uniforme !
Quel dessin de douleurs sur des thèmes mortels !
Comme ils vous envierient, les maîtres de la forme,
Pizzicati sanglants et points d'orgue cruels !

Elle a trois clefs aussi cette musique noire :
Dans le mal au début, la clef du purgatoire,
Quand il est sans espoir, c'est la clef des enfers,
La clef du Paradis quand la mort rompt ses fers !

XAVIER AUBRYET.

“THE CHLOROFORM DEATH-BILL FOR TWELVE MONTHS.”

To the Editor of THE LANCET.

SIR,—Under the above heading, in THE LANCET of the 6th instant, Dr. Jacob of Leeds reports twenty-five deaths from chloroform during the past year. He names the operation in twelve cases, and certainly there is reason for the remark that the operations were of the simplest kind. Anyone who has interested himself in the cases of death from chloroform, reported from time to time, must have been struck with the frequent occurrence of fatal results in what are usually called “simple operations.” As far as I have observed, the largest number of deaths have occurred during extraction of the toe-nail, extraction of teeth, and operations on the eye. Now, these are frequently, I may say almost invariably, performed while the patient is sitting upright, or, at all events, not in a recumbent position. This, I believe, more than any other cause will explain the many deaths during “simple operations.” In the twelve cases cited by Dr. Jacob, any of them, with the exception of excision of the breast, might have been, and probably were, performed whilst the patient was sitting upright.

There are very few operations, if any, which may not be performed while the patient is lying down, and it seems to me that an unnecessary risk is run when chloroform is administered in any other position. My personal experience in the administration of chloroform does not go beyond 2000 cases. I have never had an accident, and, for the last twenty years, have made it a rule never to administer it unless the patient be in the recumbent position. The only cases in which I have observed the anæsthetic produce anything like dangerous symptoms were in excision of the eyeball. I suppose that this fact has been observed by other surgeons.

I am, Sir, yours truly,

Florence, Nov. 13th, 1880.

G. DODS.

A CHANGE IN THE WIND.

THE Holborn guardians, according to the *Metropolitan*, have discovered that the patients in their infirmary sell the spirits served out to them as medicine. Commonly the complaint is that the poor too often turn what money they can get into drink; but in this case they turn drink into money. What they do with the latter may be a question of some interest. In other words, what for them has charms superior to those of drink?

Dr. G. Stanley Murray.—Our correspondent takes, it seems to us, a sensible view of the matter, and expresses it in terms so reasonable that we do not care to do more than assure him of our concurrence. Such qualities should be used in an unselfish way for the gratification of others, and, provided the use of them is not allowed to interfere too much with professional work and that scant leisure for study which keeps a man abreast of his art, it cannot be too highly commended. Some very distinguished members of our profession have so used "the gift that was in them."

Fairplay should address his complaint to those whom he holds to be responsible for the *lâche*.

G. should consult an analytical chemist.

Dr. Ridpath should write again. His former letter has probably miscarried.

TONGA.

To the Editor of THE LANCET.

SIR,—I have by the last mail received from Dr. Bancroft, of Brisbane, some information respecting "tonga," a medicine used for neuralgia, which I think will interest many of your readers.

"Mr. Christy having been making inquiries about the remedy for neuralgia called 'tonga,' obtained from Fiji, and by the kindness of his botanical friends has ascertained that a gentleman who lived on one of the Fijian Islands, away from all medical assistance, was for years a martyr to neuralgia, and unable to find any remedies to give him relief. In this hopeless condition he began to try the leaves, bark, fruit, and roots of every plant that grew wild on the island where he was living. He pounded the leaves &c., mixed them with water, used the preparation externally, and drank it as well. Any of these that gave him relief he placed on one side; still he kept on trying various plants. At last he had three or four remedies, each of which afforded him partial relief, and when the whole of these were mixed the effect was magical. He refused to give further information as to the plants, except that the 'tonga' is a combination of several, bark of one, leaves and roots of others. He wishes to make what profit he can by the sale of his remedies. He is a German, and unacquainted with botany. He and a friend who introduced the medicine in England are the only persons who know the composition of the tonga remedy."

I have omitted the names from the above letter, as one of the party is very ill, and the other is only the party who forwards the article. The question will naturally arise, How could any man unacquainted with the plants on a tropical island arrive at such a happy result as tonga appears to give? If it is correct, which has been surmised, that one of the parties married the daughter of a Chief, nothing would be more natural than that the medicine-men among the Indians should be instructed to search for certain drugs, known perhaps only to themselves, which gave relief, then by combining those which appear to answer best, the composition "tonga" may have been easily arrived at. This report bears out the opinion of some scientific men who examined for Messrs. Hanbury and Co. the composition of the small bags the tonga came over in. They have decided there are certainly more than one variety of plant, root, or stem in each bag.

Dr. Bancroft, who is known to have carefully studied the native drugs in Australia, sends me some other information respecting "Alstonia constricta," which he has used in the hospital for ten years. He says: "I make into tincture of alstonia two ounces of bark to twenty ounces of proof spirit; one or two drachms in half a pint of water gives a fluid scarcely to be distinguished from solution of quinine. I have also used it in my private practice for a similar period, and still use it. I have poured some tincture into a tumbler with water, and asked old experienced surgeons if they knew what it was. They invariably said 'quinine!' I am sure there is a large future for this valuable drug, the bark of which can be got at such a low price in this country, and I think it is a pity medical men do not use it more generally in England. I am glad to hear that in America the demand for the alstonia is daily increasing."

Dr. Bancroft has also sent by this mail some pounds of pituri leaves.

Nov. 27th, 1880. Yours truly,
THOS. CHRISTY, F.L.S.

T.—See the Home Hospital, Fitzroy-square, and visit the Parkes Museum of Hygiene, University College. In the first place, our correspondent will get all the knowledge he requires if the hospital he is interested in is within a sewered district; in the second place, he will probably learn all he needs if the hospital is situated outside a sewered district.

Mr. Gillespie.—Thanks.

THE following paragraph appeared in the *Daily Telegraph* of the 19th ult. Comment is superfluous:—

"MEDICAL.—Wanted, a Diploma (registerable).—Address, Mr. _____."

Mr. L. Newton.—Attendance is generally expected, and when, as usually happens, the magistrate is not a medical man, it seems expedient.

"WANTED, A DIAGNOSIS"; GIVEN, A SUGGESTION.

To the Editor of THE LANCET.

SIR,—Your correspondent, "L.R.C.P.," probably has to deal with a gouty kidney.

I will give an illustrative case. It is that of a distinguished and highly honoured member of our profession, who had practised most successfully for many years in one of our larger West Indian colonies, and who died recently in this country, after a well-earned retirement of about four years' duration. I had attended him along with other medical men for many years in the Greater Antilles. He was subject to most frightful attacks of inherited gout. During the attacks his urine was invariably non-albuminous. At all other times (for he regularly examined it himself) it was highly albuminous. Being a man of great power of will, and of indomitable courage and energy, he was intensely annoyed by the frequent interruptions caused to a large and lucrative practice by these attacks of gout, and at length resorted to "Leville's drops"—a mode of treatment much affected by the French residents of these regions. The effect of that "secret" medicine (said to contain veratria) was simply marvellous so far as concerned the usual gouty manifestations. These consisted of enormous swellings of the knees, ankles, &c., which would shift from the one side to the other of the body in the course of a few hours. He would be able under the influence of "Leville" to go on with his work, visiting from sixty to seventy patients a day, besides doing his consulting-room business. One result, however, was most distressing: Dr. — has often told me that he purchased the "repression" at a frightful expense mentally, and used to say that after taking his "Leville" he felt in danger of suicide (ordinarily an idea that, owing to his fixed religious and firm moral convictions, could never enter his vigorous mind) unless he "worked it off." At such times his urine would be more densely albuminous than ever; it would solidify in the tube. The patient went on in that kind of way for many years, taking his "Leville" after his retirement even occasionally, and having albuminous urine to the last, which happened at the age of sixty-six. He never had dropsy in any form, unless oedema of the lung, towards the end, could be so called.

I submit, Sir, that we have here a case which may help in the elucidation of "L.R.C.P.'s" doubts. If I be right, your correspondent may go straight through the Pharmacopœia, adding to the formidable array of drugs stated as already tried until he has tried them all; but he will not influence the albuminous condition of the urine unless a regular gouty attack should in some way or other be manifested or brought about. Again, the albuminuria having, it is stated, existed for so long a period as four years, without the occurrence of such symptoms as usually happen within that time, in Bright's disease, I think that actual nephritic change may be eliminated from the diagnosis. It is not improbable that the occurrence of the "fit" twelve years ago betokened the starting point of something, seeing that it occurred at an age when, in my experience, the gouty tendency sometimes shows itself somehow—in dyspepsia for example,—particularly if a predisposed person have not been careful in his mode of life; nor is it out of the bounds of probability either that the albuminuria may have existed unnoticed all these years. But we have no positive evidence either way as to this. Moreover, it seems to me that the eruption of acne and the "warm feeling across the lumbar region" show that a *materies morbi* of some kind has, and is, trying to eliminate itself.

There remains the question of syphilis, stated to have been contracted some years ago. In my experience, syphilitic albuminuria, so to call it, for I have often seen it, yields either to iodide of potassium or to mercury cautiously given, so that this, too, may perhaps be put aside.

It would be out of place here to offer any suggestions as to treatment, which indeed are not asked for; but if my hint should lead to anything, I shall be happy to write to "L.R.C.P." privately, through you, if he wishes.

Shaldon, Nov. 1880.

Yours truly,

M.D.

To the Editor of THE LANCET.

SIR,—In reply to your correspondent in your issue of Nov. 20th, I look upon his patient's case as one of latent gout, and would consequently advise that he give him a little colchicum for a week or two, carefully watching its effects upon the system; and would suggest the following mixture:—Carbonate of ammonia, forty grains; bicarbonate of soda, one drachm and a half; tincture of colchicum seed, two drachms; syrup of oranges, four drachms; water to eight ounces: one-eighth part to be taken twice daily (at 11 A.M. and 4 or 5 P.M.) Let him abstain from alcohol for a fortnight, taking meat once a day and fish once a day, and I prognosticate that at the end of a fortnight his morbid sensations will vanish, as well as the albumen from the urine. A warm bath might aid in the cure.

Earl's-court-road, W., Nov. 23rd, 1880.

E. MAY, M.R.C.P.

To the Editor of THE LANCET.

SIR,—If "L.R.C.P." can refer to Niemeyer's Medicine, he will see at once that his case is one of chronic Bright's disease. The treatment recommended is: Give plenty of protein substances, as soft boiled eggs, strong meat broths, roast beef, &c., in as large a quantity as the patient can digest; a moderate quantity of beer or good wine; quinine and iron mixture. Sometimes an exclusive milk diet is successful. Hot baths and cream of tartar and Dover's powder are also often of use. Avoid squills, cubebs, copaiba, and other irritating diuretics, also ardent spirits.

Yours truly,

Hayward's Heath, Nov. 22nd, 1880.

A. H. NEWTN.

THE ANTIGUA WEEKLY REGISTER.

THE case seems to have been one of placenta prævia; but we cannot comment on it without more particulars than are contained in the newspaper report. It is to be greatly regretted that a medical man did not go to the assistance of the midwife.

Mr. William Bund.—Apply to one of the hospitals for the relief of nervous diseases.

Mr. Roger Williams.—The paper will appear in an early number.

FISH-EATING AND LEPROSY.

To the Editor of THE LANCET.

SIR,—In your issue of the 6th instant you publish a letter from Mr. Jonathan Hutchinson, in which he contests Mr. Startin's conclusion that, in the case of leprosy recorded by him in your number of the 30th ult., the disease could not in that case be considered due to a fish diet, and states "that I have not seen a single instance of leprosy in which the fish hypothesis was impossible; nor do I know of a single district where the facts, when sifted, are strongly opposed to it"; and he concludes by asking for particular information as to leprosy in certain districts of India.

I cannot give him the information as to those districts; but I can give some as to another district in India which bears upon the point under discussion, and appears to me strongly opposed to the "fish hypothesis." At Bangalore, the principal military and civil station in the Mysore territory, with a population of over 120,000, leprosy is by no means uncommon among all classes of the native population, inclusive of Brahmins, whose customs in that part of India as to diet are so exclusively vegetarian as to completely exclude the use of fish; eating it would involve pollution and expulsion from caste. Having held medical charge of the civil hospitals on the station for over ten years, I can say that I have seen there a good many Brahmins affected with leprosy.

I am, Sir, yours &c.,

J. KIRKPATRICK, M.D.,

Retired D.S.G., Madras Establishment.

Edinburgh, Nov. 11th, 1880.

APPLICATION OF CALOMEL DUST IN THE TREATMENT OF PTERYGIUM.

To the Editor of THE LANCET.

SIR,—The treatment of pterygium by calomel dust was frequently adopted by Mr. Henry Power at the Royal Westminster Ophthalmic Hospital as far back as 1870, during the tenure of my house-surgeony under that gentleman. The treatment appears to be new in Tokio, but it is not in London. Calomel and quinine dust used by Mr. Power proved to be exceedingly efficacious in some cases, especially in those of debility. Quinine, calomel, oxide of zinc, &c., are valuable in pterygium, corneal opacities, granular lids, and all such pathological states.

I am, Sir, yours obediently,

Staines, Nov. 22nd, 1880.

P. W. DE LA MOTTE, M.R.C.S. Eng.

COMMUNICATIONS, LETTERS, &c., have been received from—Sir J. Fayer, London; Mr. W. Rivington, London; Dr. Sharkey, London; Dr. Thin, London; Dr. Pick, London; Mr. Sawyer, Shaftesbury; Mr. Thornton, Margate; Mr. Wyndham; Dr. Hine, Sheffield; Mr. Lupton, London; Dr. D. J. Mackenzie, Glossop; Mr. Messenger; Dr. Fogarty, Meerut; Mr. Harris, Royapooran; Mrs. Hopwood, London; Dr. C. E. Saunders, London; Mr. Priestley, London; Dr. Alder Smith, London; Mr. Baker, London; Dr. Maclaren, Carlisle; Mr. Colville Brown, Berwick-on-Tweed; Mr. Rendle, London; Dr. Day, London; Mrs. J. Stewart; Dr. Hermann; Messrs. Domecq and Co.; Mr. R. H. Carpenter, London; Mr. J. Liddle, London; Mr. R. L. Williamson, Wakefield; Mr. Mason, Burton-on-Trent; Dr. Ackman, Guernsey; Mr. T. C. Eager, Woking; Dr. Mundie, Hesse; Mr. Tickle, Liverpool; Mr. Newton, Huntingdon; Dr. Phipson, Putney; Dr. Young, Edinburgh; Dr. Rae, Blackburn; Mr. Cooper, Needham Market; Mr. Christy, London; Mr. Gunning, Hounslow; Mr. Durrant, Ipswich; Mr. F. Mason, London; Mr. Dyer,

Ringwood; Dr. Dale, King's Lynn; Mr. Balkwill, London; Dr. Low, Helmsley; Dr. Harrison, Newland; Mr. Willett, London; Dr. Wilson, Hornby; Mr. J. Marshall, London; Dr. Gramshaw, Gravesend; Dr. Thomas, Sheffield; Mr. Applebe, Hay; Dr. Cameron, Glasgow; Dr. Curran, Warrington; Dr. Slade-King, Ilfracombe; Dr. Lowe, Lynn; Dr. Finlay, London; Dr. Morris, Spalding; Dr. R. Shingleton Smith, Clifton; Dr. Eade, Norwich; Dr. O'Dwyer, Shorncliffe; Dr. Dyson, Sheffield; Mr. Withington, Doncaster; Mr. T. Smith, London; Dr. Jacob, Leeds; Mr. Blackburn, Barnsley; Dr. Tayler, Trowbridge; Dr. Alchin, London; Dr. Lloyd Roberts, Denbigh; Mr. Newhouse, London; Messrs. Smith, Elder, and Co., London; Mr. Husson, Liverpool; Dr. Hine, Londonderry; Mr. Clouting; Mr. Fieldson, Norwich; Mr. Gulliver, London; Mr. Ransford; Dr. Meymott Tidy, London; Mr. Duncan, Vieux Fort; Dr. Lediard, Carlisle; Dr. Snow, London; Dr. Naismith, Ayr; Mr. MacDowall, London; Mr. Higginbottom, Glasgow; Mr. Davidson; Mr. Clarke, Bodmin; Mr. Copestake, Derby; Dr. Pye, London; Dr. Crocker, London; Mr. A. E. Barlen, London; Mr. Haviland, Northampton; Dr. Robertson, Bexton; Dr. Meade, York; Dr. Mitchenson, Lincoln; Mr. H. P. Smith, Shepton Mallet; Dr. Pratt, Newtown; Mr. Baker, Derby; Dr. W. S. Walker, Hanley; Mr. Jessop, Leeds; Mr. Gaylor, Belper; Dr. Ferguson, Cheltenham; Messrs. Argyle and Sons, Tamworth; Mr. Alexander, Glasgow; Dr. Sephton; Mr. Hodgkins, Oxford; Dr. Finch, Salisbury; Mr. Stillard, Birmingham; Messrs. Harvey and Reynolds, Leeds; Dr. Woolfrees, Portsmouth; Mr. Burton, London; Dr. Lawton, Poole; Mr. Fowler, Epping; Dr. Mackinnon, Netley; Dr. Balthazar Foster, Birmingham; Dr. Munro, Kilmarnock; Dr. Strange, Worcester; Mr. Faris, Aldershot; Dr. Russell, Birmingham; Mr. Shuttleworth, Lancaster; Mr. T. Bryant, London; Mr. Williamson, Ventnor; Mr. Winter, Wolverhampton; Mr. Nunn, London; Messrs. Marston, Birmingham; Mr. Savory, London; Mr. Ash, Holsworthy; Mr. E. Barnes, Eye; Mr. Brodhurst, London; Mr. Munro, London; Dr. Donkin, London; Dr. J. Pollock, London; Mr. S. C. Smith, Halifax; Dr. Bantock, London; Dr. Cook, Manningtree; Dr. Wilson Fox, London; Dr. Pitman, London; Mr. Spencer, London; Sir Thomas Watson, London; Dr. Clement Lucas, London; Dr. Ryding, Neath; Dr. Matthews Duncan, London; Dr. S. Thomson, Westgate; Dr. Hughlings Jackson, London; Dr. Roper, London; Mr. J. K. Thornton, London; Mr. B. Hill, London; Mr. Cowell, London; Mr. W. Howard, London; Mr. J. A. Morris, Caerleon; Mr. A. Lloyd; Dr. W. Walter, Manchester; Dr. Balmanno Squire, London; Dr. Whipple, London; Dr. J. Harley, London; Mr. J. H. Potter; Mr. J. Beale, London; Dr. Neale; Esprit de Corps; A Searcher after Truth; M.; M.B.; Fairplay; An English Graduate; C. L. K.; F.; H. E. H.; M.B., M.A.; W. X. Y.; &c. &c.

LETTERS, each with enclosure, are also acknowledged from—Mr. Kearney, Caddishead; Mr. Dane, Wansford; Mr. Young, Bridgwater; Mr. Blatchley, London; Dr. Dickinson, Gillingham; Messrs. Smith and Son, Birmingham; Mr. King, Leeds; Mr. Thomas, Manchester; Mr. Gasquet, Burgess Hill; Mr. Bridgman, Barnstable; Mr. Munday, Greenhill; Messrs. Hyde and Tayler, London; Dr. Peirce, Hoylake; Physician; Millgate; Medicus, London; M.D., Strand; M.R.C.S., Barton-under-Needwood; A. B., Worcester; Medicus, Scarborough; Medicus, Earl Soham; P. J. B.; Alpha, London; Asclepius; C. P., Truro; Fideliter; E. J.; M.; M. O. H.; G. W. N., Stratford; &c.

Daily Courier, Chemists' Journal, Teacher, Concours Medical, Boston Medical (and Surgical Journal, Medical Record, Southampton Times, Jamaica Gazette, Weekly Gazette, Nottingham and Lincoln Gazette, El Medico y Cerujano Centro-Americano, Anti-Compulsory Vaccination Reporter, Journal of Medicine and Dosimetric Therapeutics, L'Egypte, Braintree and Bocking Advertiser, Specialist, Indian Medical Gazette, Vanity Fair, Coffee Public-house News, Science, Preston Guardian, Heckmondwike Reporter, Estates Roll, Church of England Temperance Chronicle, &c., have been received.

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Tables of Contents, with the Index of Advertisements, for each Number can be had on application to the Publisher.

Agent for the Advertising Department in France—J. ASTIER, 66, Rue Caumartin, Paris.

Clinical Lectures

ON

DISEASES OF WOMEN,

AS LINKED WITH GENERAL PATHOLOGY.

By ROBERT BARNES, M.D.,

OBSTETRIC PHYSICIAN TO ST. GEORGE'S HOSPITAL.

LECTURE IV.

ON THE GENITAL MUCOUS TRACT—(Continued).

Dysmenorrhœa by retention; menopause; association of stenosis of os externum uteri with dysmenorrhœa and sterility; treatment—dilatation, bougies, leeches, incisions of the os externum, advantage of.

GENTLEMEN,—In the preceding lecture we referred to the pathological consequences of stenosis or closure of mucous canals, discussing particularly the consequences of closure of the genital mucous canal. Glancing at other properties of mucous canals, we dwelt upon the great fact that all mucous membranes secrete, that their secretions must have an outward vent, and that to obstruct this vent is to expose the patient to serious disease or danger. This law applies not alone to the openings of the great mucous canals of the respiratory, alimentary, and urinary organs, to close which is death, but in minor degrees to obstruction of the subsidiary divisions of these great tracts, and even to the glands and glandules which open on their free surfaces. And there are degrees of obstruction from total closure to stricture or narrowing, involving minor but yet not inconceivable evils.

Another general physiological remark. As elsewhere, the utero-vaginal mucous membrane and its glands are under the influence of the nervous centres. Emotion, we know, causes diarrhœa, salivation. It seems that the nervous centres in their normal static condition exert a regulating and inhibitory control over the glandular system, through the vascular system. When this static balance is lost or overturned, the glands pour forth their secretions with astonishing profusion. This sudden secretion is in marked relation to the dominant play of the emotional and reflex actions. Examples readily occur. I will only stop now to remind you that the influence of emotion and reflex action is not limited to mucous secretions, but that in the case of the uterus it may extend to the rapid outpouring of blood, even in dangerous volume. In this connexion you will not fail to remember that blood finds a normal exodus by the uterine mucous membrane. Let me recapitulate some of the consequences of obstruction to the ready escape of fluids, mucus, or blood, which may thus sometimes slowly, but not seldom rapidly, even suddenly, be poured into the cavity of the uterus. First, there is mechanical distension, exciting colic or spasmodic contraction; secondly, the probability of some of the compressed fluid being driven into the peritoneal cavity through the Fallopian tubes; thirdly, the retained fluids undergo changes by decomposition; fourthly, the thinner parts of the retained fluids, easily charged with septic matter, may be absorbed and carried into the circulation. This last event is seen in a striking manner in cases of concealed or "occult menstruation," with complete occlusion of the vagina, as where the hymen is imperforate; but it may be observed in more or less marked degree in most cases of dysmenorrhœa by retention. This is in accordance with a general pathological law. We have a familiar example in retention of urine from stricture or other cause. There is absorption of urine, causing urinæmia. We might not inaptly fix the fact in the mind by calling absorption of menstrual fluid from the uterus—"menopause." Evidence of this absorption may be found in the turbid complexion, in the peculiar fetid odour exhaled by the skin and lungs. Fifthly, the glands of the mucous membrane become irritated, inflamed, sometimes obstructed, hypertrophied. Consequently the mucous membrane itself is affected; its regular development into decidua, and its shedding are deranged, leading at times to the formation and throwing off of membrane in shreds or entire casts of the uterine cavity. Sixthly,

No. 2989.

the uterus itself is enlarged by hyperplasia, and in danger of passing into fibrous change. Seventhly, increased bulk and weight, and the reflex pains excited, promote prolapsus and retroversion. Upon these local conditions arise various constitutional disorders—hæmic, nutritive, nervous.

It is not difficult to trace this sequence of ills in many cases starting from stenosis of the os externum uteri. But you must be careful at the onset to avoid the conclusion that they are always and necessarily associated in this and in no other order. Dysmenorrhœa membranacea, other diseases of the mucous membrane, hypertrophy of the uterus, displacement, constitutional disorders, may arise in very different ways and from various causes. We are dealing at present simply with obstruction and its results.

There is another condition frequently associated with obstructive dysmenorrhœa—that is, sterility. So frequent, indeed, is this association, that when a woman has been married some years without having borne children, and has long suffered from dysmenorrhœa, we may predicate with tolerable certainty that there is stenosis or flexion of the uterus. And we may go further, we may assume that the dysmenorrhœa and sterility are both consequences of the mechanical obstruction, and acting upon this conclusion we may hold out a reasonable hope that by removing the obstruction we shall remove the attendant evils.

It must not, however, be hastily concluded that constriction even to a marked degree is infallibly attended by distress so great as to give rise to complaint on the part of the subject, or to lead to any obvious inroad upon her health. But I confidently affirm as the outcome of daily observation that in a very large proportion of cases of dysmenorrhœa, with sterility, there is the association with a narrow os externum uteri, narrowed to the extent that it barely admits the uterine sound.

I will make a further concession. It is not desirable in every case at once to resort to the *ultima ratio* of enlarging the os externum by incision. In very young, and single women especially, it is only proper to exhaust what are called "the usual remedies," although I must warn you that they usually fail. You take a careful survey of the system, interrogating all the functions, and do your best to correct whatever you find to be out of order. Thus having removed as well as you can all complications, you apply particular remedies to the relief of the distressed uterus. The complications, as constipation, dyspepsia, anæmia, are best dealt with in the intermenstrual periods. Then, when the period comes, you meet the difficulty in its simplest form. Pain, pelvic at first, frequently especially intense in the left iliac region—and therefore often supposed to signify ovaritis—then radiating to the hips, lumbo-sacral region, and thighs, commonly begins some days before the appearance of the flow. Generally the pain is at its acme on the first day of the flow, but often it goes on for two or three days, and throughout the flow. The pain that attends the flow is different in character from that which precedes. It is spasmodic, like colic, forcing, capulsive, resembling the pangs of labour, and the conditions are very analogous. The uterus is labouring to expel its contents, struggling to overcome a mechanical resistance. As commonly happens when the uterine fibre is put upon the stretch, especially in the cervical region, vomiting may occur. The whole nervous system is disordered. Partly under emotional influence, partly from disturbance of that regulating power which controls and guides in harmonious relation the several functions, diarrhœa may set in. Various other nervous symptoms break out. Hysteria, convulsions even, epileptic or epileptoid, neuralgia are manifest in severe cases and in impressionable subjects. The pain is often described as agony. The subject writhes upon the bed or floor. The mind, in spite of resolute will, loses its balance, and it gives way to delirium. By and by, the menstrual difficulty being overcome, things gradually resume their accustomed order, and the patient may for two or three weeks manifest perfect health. But these monthly blows struck at the nervous centres, these ever-gathering storms, cannot be encountered without leaving traces of damage. It can hardly be expected that the uterus itself, the centre of trouble, should escape unhurt. The seat of repeated and prolonged congestions, far surpassing the ordinary physiological hyperæmia, the mucous membrane of the cervix undergoes chronic thickening, its glands become hypertrophied, secrete in excess, and the secretion, from glairy, bland, and clear, becomes muco-purulent and irritating. This, like the menstrual

blood, is liable to retention; at least, it finds imperfect issue through the narrow os with difficulty and pain.

Now comes the crucial test of treatment—"Curatio ostendit morbum." The old saw never had a more satisfactory application.

Now, having fairly exhausted "the usual means," satisfied that they have failed, we arrive at the conclusion that it is best to remove the mechanical obstruction. How shall we remove the obstruction? By dilating the narrow os externum uteri, and by remedying flexion. If there is flexion only the treatment will, in the first place, be simply limited to restoring the uterus to its proper form and position. The modes of doing this we shall discuss hereafter. We will now consider how to deal with stenosis, and we have first to determine the exact seat of the stenosis. This, I believe, to be almost always at the os uteri externum. You see—every week we see examples amongst the out-patients—a minute round aperture that barely admits the sound, instead of the normal fissure, the classical os tince, which opens freely into the cervical cavity. When you pass the sound in such a case, two things are generally observed; first, the partial momentary dilatation of the sound allows the escape of a mucus, sometimes like molten glass, clear, viscid, sometimes viscid and turbid from admixture with pus-globules. This is the secretion from the irritated inflamed glands of the cervical canal. It cannot escape freely through the narrow os, more or less of it is long pent up, and becomes a source of irritation, often of pain, felt in the intermenstrual period. Commonly you also see the vaginal portion red, congested, and the minute os looks deeper red, angry, its epithelium partly or wholly shed, so that the slightest touch with the sound causes a little bleeding. And now, if you pass the sound gently to the isthmus or os internum, you may find an arrest at this point, but keeping well in mind the axis of the uterus, guiding the point of the sound by a finger upon the cervix you will rarely fail to pass through the os internum. This is proof that the seat of obstruction is not here; for the natural bore or calibre of the os internum, as you may see by these sections of the uterus, is just large enough to admit the sound. Why should we make it larger? I know of no valid reason. Anatomy and clinical experience alike protest. It is not only superfluous; it may be dangerous. The danger is especially great if dilatation be effected by cutting. If you look at these sections of the uterus and drawings again you will see that bloodvessels, in profusion and of considerable size, penetrate the substance of the uterus at this level. Large veins without valves and small arteries gape, and when divided are apt to bleed profusely, and present a ready entrance for septic matter. Nor can we be secure against dividing them. The incision must be made by a knife cutting out of sight; it must be difficult to regulate to a nicety the depth of the incision, the more so if you use one of those ingenious two-bladed machines, more or less automatic, and in so far out of the control of the operator. The only kind of assent I could give to the incision at the os internum would be to make a very slight nick, so as to divide the mucous membrane and some of the superficial circular fibres of the muscular coat. This may allay spasmodic sphincteric action. But I give even this qualified assent with considerable reserve, believing that the cases where it might be useful are rare. Of course, I am now speaking only of cases of dysmenorrhœa from stenosis. Freer incisions are sometimes eminently useful in severe metrorrhagia with fibrous growths.

Almost then excluding incisions of the os internum, we may turn back to the modes of dealing with the os externum. And we may first dispose of the alternative method of dilating by bougies, laminaria tents, and various expanding instruments. This proceeding is free from the risk of bleeding. If cautiously pursued there is not much danger of any kind. But if often repeated it becomes exceedingly harassing to the patient; the action of the laminaria tent is commonly very painful, vomiting often attends the expansion. After a time, usually very short, the canal will have returned to its pristine narrowing, and the proceeding has to be repeated again and again. To a certain extent the same objections apply to dilatation by graduated bougies, and other dilators. The pain is less, the regulation is more delicate, but the gain is not more enduring. Thus I have known not a few cases in which this kind of dilatation had been practised, at short intervals, over periods of twelve months or more, without any compensating gain. Then there is the method of rapid dilatation. This is effected

by instruments made with expanding or diverging blades on the principle of similar instruments devised for the urethra. This method is occasionally useful. The objections are that it hardly applies to the cases under discussion; that it is very painful unless anaesthesia be induced; that the gain is transitory; and that it entails no slight risk of metritis. Indeed, no mode of bloodless dilatation is free from this last danger. Instrumental dilatation, whether gradual or rapid, involves some degree of violence, and the penalty may be inflammation—that is, metritis, pelvic cellulitis or peritonitis.

Not rejecting these methods of dilatation, least of all that by bougies, I can only accord them a secondary place. The strictly limited incision of the os externum as I practise it, very nearly resembling the "discission" of the late Dr. Peaslee of New York, is at once less painful, more rapid, more certain, and more safe.

I need not dwell long upon the operation. You have so many opportunities of seeing it done that description is unnecessary. It consists simply in enlarging to a very moderate extent the os externum by help of a pair of scissors constructed *ad hoc*, one blade terminated by a probe-end, which enters the os, the other blade, terminated by a hook, which seizes and fixes the vaginal portion at the point desired. One stroke of the scissors divides the intervening tissue in a straight line. The proceeding is then repeated on the other side of the os, and the operation is completed. Two useful objects are at once achieved—first, the gorged vessels are relieved; you have gone far to cure the congestion and to relieve the chronic endometritis which so commonly attend this stenosis. This incision you have seen is equivalent to scarification, often a most effective remedy in congestion from other conditions. It is infinitely better than leeching, which I have long discarded for several reasons other than its inferiority to scarification—firstly, a leech is not an intelligent animal; it will not always bite exactly where you wish; sometimes it is obstinate, and will not bite at all; and it is not always a clean animal. It is more than suspected that its bite may, under certain circumstances, either inherent in the animal or in the patient, cause unhealthy inflammation. From this danger scarification is wholly free; it is, besides, more expeditious and more accurate. I may here mention that one of the conditions often met with in chronic congestions and inflammations of the vaginal portion is obstructed glands—the so-called ovula Nabothi. These form the foci of little inflamed areas. The cure for this condition is to prick or divide them with the scarifier; and it is remarkable how prompt and efficacious this treatment often is. It is true that these ovula Nabothi are not common in the nulliparous uterus. They most frequently occur in multipare, as a consequence of chronic inflammation—hypertrophy—of the cervix. In cases where the division of the os externum is called for, this scarification, or opening of ovula Nabothi, is, however, sometimes useful. It may be done at the same sitting. Now, these things, both essential to cure—the topical bleeding and the cure of obstructed glands—cannot be effected by bougies or other modes of dilating. The other immediate effect of division of the os externum is the letting out of imprisoned irritating mucus.

Now you have a patulous os externum, which means that you have secured free exit for uterine discharges, and free access to the interior of the cervical and uterine cavities for topical treatment. But, in truth, the chronic catarrhal state of the mucous tract is frequently soon relieved by the liberation of the os externum. There is a tendency to contract again after the operation. To meet this a variety of intra-uterine pessaries or stems have been devised. A modification of the late Dr. Wright's is the best. The principle of this lies in the divergence of the two halves of the intra-uterine portion by elasticity so as to maintain itself *in situ*. It is made of one piece of vulcanite. The next I should prefer is Meadows' glass stem. Both these are perfectly clean, and little apt to cause foul discharge. The elastic gum pessary is not free from this objection. The use of it entails some risk of causing septicæmia, local or general. But as a matter of experience, I do not find it necessary to use any contrivance of the kind. The simple operation is less painful, and not less satisfactory.

Next, menstruation is precipitated—that is, it sets in before it is due. Sometimes great relief is felt, but perhaps oftener two or more periods are passed without very sensible benefit. But it is in my experience quite exceptional for the operation to fail. It is hardly severe enough to call for

anæsthesia; but as the surgeon cannot always gauge accurately the sensitiveness, mental and physical, of the patient, it is desirable, whenever this sensitiveness is acute, to call in the beneficent ally that for the occasion blots it out.

This operation may be usefully modified in cases of marked curvature forwards of the cervix uteri. Instead of dividing the os externum bilaterally or transversely, Dr. Marion Sims splits the posterior lip—or what should be the posterior lip—in the median line. The effect of this is, in many cases, to make a more direct passage from the new os externum to the os internum, and thus to secure a readier evacuation of the uterine cavities.

We will talk of menorrhagia more particularly another time. This symptom is associated with various conditions. But it is in place here to call to mind that menorrhagia not infrequently accompanies the form of obstructive dysmenorrhœa we have now been discussing. The intense congestion induced by the difficulty of excretion, and the consequent turgidity of the mucous membrane, lead to hæmorrhages which exceed the physiological intention. Thus a pathological drain is set up, which, whilst it lasts, aggravates the other evils of the stenosis. This evil also is commonly relieved by the operation, or by topical medication to the interior of the uterus, which the operation enables us to carry out.

In some instances, however, the menorrhagia resists treatment for months. When once a woman has become the subject of recurrent hæmorrhages she begets a habit of making blood rapidly; the vascular system is periodically subjected to high tension; then comes the provocation of ovulation, which determines pent-up blood seeking a vent to the uterus, the natural safety-valve, whence it escapes in immoderate proportion.

To control this recurrent menorrhagia something more than topical treatment is called for. The vascular system, its central organ especially, has probably undergone some physical changes; certainly it has grown more irritable, it acts under exaggerated tension. Here, then, we find our indications; we have to moderate the blood-making process by careful diet, by exercise, by avoiding stimulants, especially malt liquors; to counteract the overfilling of the vascular system by careful promotion of due activity in all the excretory organs—lungs, skin, intestines, liver, kidneys; more particularly at the time of the flow to steady the heart's action by digitalis and salines, sometimes aiding this indication by the use of styptics or astringents, as ergot, hamamelis, gallic acid, sulphuric acid, turpentine, and other remedies of this order. But I must warn you that these too frequently fail unless their use is directed by a clear understanding of the time, sequence, and other conditions in their relation to the physiological and pathological principles which govern uterine hæmorrhages.

There is yet another feature we must not forget before closing this subject. After a time, if the stenosis is not removed, menorrhagia may give way to defective menstruation, even to amenorrhœa. The interference with the function gradually induces such changes in nutrition or such perversions of the circulation that the uterus no longer responds to the ovarian excitation. Sometimes relief is found in vicarious menstruation—menoxenia. In short, the obstruction is pretty sure, sooner or later, to bring disordered function here as elsewhere in the economy. To express by a generic term the disorders or perversions of menstruation we may conveniently use the word "paramenia," introduced by William Farr.

HOSPITAL AMUSEMENTS.—About 150 selected patients, the officials, a few families, the nursing "sisters" and the gentlemen attending the Medical School were recently invited to an afternoon performance in the Netley Recreation Room, when the Reverend Mr. Bateman, Lieutenant Condon, R.M.L.I., Surgeons Cottell, Polden, and Twiss delighted the audience with attractive songs, both grave and gay, for instance, "Cleansing Fires," "The Midshipmite," "The Trooper," and "Hearts of Oak." Clever reciters and amusing Ethiopian Minstrels belonging to the Army Hospital Corps also did their best to enliven the invalids. The manager (Dr. Hogg) announced that Surgeon-Major Boileau was preparing the next concert, and that every effort would be made to carry on a series, if people in the neighbourhood would only co-operate in volunteering to assist.

SUBSTANCE OF A

Clinical Lecture

ON

CASES OF ACUTE ATROPHIC PARALYSIS IN INFANTS AND ADULTS

(ACUTE ANTERIOR POLIO-MYELITIS).

Delivered at the National Hospital for the Paralysed and Epileptic, on Dec. 2nd, 1880,

By THOMAS BUZZARD, M.D., F.R.C.P.

LECTURE I.

GENTLEMEN,—Within a comparatively recent period the disease of which I shall show you some examples was called "infantile paralysis," or "essential paralysis of children," from its being thought to be peculiar to early life. It is now known to occur not at all unfrequently in adults; as Duchenne (to whom we owe an admirable description of the disease in children) was one of the first to point out. It is a form of "systematic" myelitis, to use a convenient term, suggested by Vulpian and adopted by Charcot, for lesions which are circumscribed within certain well-defined limits, without involving neighbouring parts. In this case the lesion is concentrated (to a great extent) in the anterior horns of grey matter of the spinal cord. Hence the term acute anterior polio-myelitis (*πολιός*, grey; *μυελός*, marrow; *itis*), has become applied to the disease, whether occurring in infants or adults. (To illustrate this subject reference was made to an excellent classification of different forms of systematic myelitis from Dr. Grasset's "*Maladies du Système Nerveux*," and also to a diagram from Dr. Charcot's lectures, showing the position of the various strands of fibres in the transverse section of the cord, copies of which hung in the hall.)

As it occurs in infancy (and it is peculiarly apt to attack children under two years of age) the essence of the disease is this, that after a varying amount of febrile movement, one or more or all of the limbs are observed to be paralysed. The muscles of the trunk also are sometimes involved, and very exceptionally some of those supplied by the medulla oblongata. There may have been convulsion, coma, some transient loss of cutaneous sensibility, and a temporary trouble with the bladder or rectum, but to a great extent (though not exclusively) the brunt of the disease falls suddenly, or at least very rapidly, upon the motor power of a limb or limbs. After the first day or so any change which takes place in the power of movement is a change for the better. The limbs do not become more paralysed. On the contrary, after a few weeks, or sometimes days, there is a gradual clearing off of the difficulty as regards some of the limbs, one or more perhaps remaining unimproved. There is a remarkable feature in this form of paralysis. Many of the muscles paralysed lose their faradaic excitability entirely within a week, and rapidly waste. But although they fail to respond to the strongest induced currents they react to slow interruptions of the constant current (reaction of degeneration). The nerves to the muscles, on the other hand, lose their excitability to both forms of electrical excitation. Some, again, of the muscles whose faradaic excitability has been lowered, but not lost, are not long in regaining the power of contraction to voluntary impulses. (Duchenne felt able, from his experience, to say that any muscles retaining some amount of faradaic excitability after the eighth day would recover.) The muscles paralysed are flaccid. This constitutes what is called the first period. The second begins a few weeks, or may be delayed for several months, after the attack. It is called the period of regression, for in it there is a gradual return of power in more or less of the muscles, and their excitability to faradism again appears. The amount of recovery differs extraordinarily in cases, so that it is impossible to say more than this that when several limbs are attacked at first it is much more common than not for some of them to recover, but rare for all to do so. In the sequel of the disease atrophic changes are marked

in the muscles, which may be so wasted as to leave the limb in a skeleton-like state, or fatty substitution may mask the real loss of muscular substance, and give a false air of plumpness to the limb. The development of the osseous system is more or less arrested, so that a bone may, in course of years, be some inches shorter, and considerably thinner than its fellow. There is diminution in the calibre of bloodvessels leading to comparative coldness and blueness of the limb, which also often shows unusual liability to chilblains. And most important of all, perhaps, the tonicity of such muscles as remain sound or comparatively little injured, causing them gradually to overpower those whose function is destroyed, gives rise to deformities which often tend to persist and increase in spite of all efforts to reduce them. Here are some examples of the disease at present under my care in the hospital.

CASE 1.—Ernest R—, aged four years, five months ago had a febrile attack lasting a few days, on recovery from which it was observed that he could do nothing with his *right leg*. The other limbs do not seem to have been affected. He has improved, so that he can stand and walk, although imperfectly, the limb being chiefly moved by the iliaco-psoas muscle, the knee-joint lax, very slight power of extending or flexing the leg, and none of extending or flexing the foot. This limb is smaller than the left, and Dr. Beevor, our resident medical officer, tells me the wasting chiefly concerns the quadriceps extensor, anterior tibial group, and peroneus longus, and also to a certain extent the calf muscles. So that the muscles most affected do not lie in the district of one nerve, and, on the other hand, all the muscles in the district of one nerve are not equally affected. The patellar tendon-reflex is absent, as you see, on the right side; present on the left. There is no loss of cutaneous sensibility. The muscles of the right limb when last examined did not react to faradism, but contracted to slow interruptions of a constant current from ten cells of a Stöhrer's battery.

CASE 2.—Daisy H—, aged one year and a half, fourteen months ago had a febrile illness which lasted about ten days, in the course of which there were convulsions, squinting, and loss of consciousness for three days. It was not till the end of this attack that the *right arm* was observed to be powerless. It remains imperfectly paralysed, the deltoid and biceps being especially wasted. She can move her fingers and hand, but cannot flex the elbow-joint, although she can extend it. The muscles of the arm show no response to faradism. They react to the interrupted constant current.

In such a case as this, having regard to the head symptoms, it may easily be suggested that we have to do with a cerebral hemiplegia. Now, when I tap the tendon of the supinator longus of the left side just above the wrist, there is a contraction of the muscle, and the forearm is suddenly, and, as you see, very perceptibly flexed. (The supinator longus, notwithstanding its name, is a flexor of the forearm, as Duchenne has shown.) On the right side, however, no such result occurs. This absence of tendon-reflex has the same significance as that which we saw just now in the case of the boy's leg. It means that there is a break in the nervous arc which connects the tendon with the muscle through the grey matter of the cord. The wasting of the muscles, their loss of faradaic excitability, the complete preservation of cutaneous sensibility, show that this break is on the motor side of the arc, and must be, therefore, having regard to other circumstances, either in the large ganglion-cells of the anterior horn, or the anterior roots of nerve. Now, if this were a case of cerebral hemiplegia, the tendon-reflex, if it were modified at all, would be exaggerated. It would not be lost, nor, again, would the muscles have lost their faradaic excitability. Cerebral hemiplegia may be confidently excluded. The fact that the deltoid (which with the biceps is the most affected muscle) is supplied by the circumflex nerve, and that the triceps (one of the least affected) is supplied by the musculo-spiral which comes from the same cord of the brachial plexus as the circumflex, shows, as also does the absence of cutaneous anaesthesia, that we have not to do with lesion of a nerve or of a plexus. We are driven further back, and seek the lesion, by exclusion, in the anterior horn.

CASE 3.—Arthur P—, aged four, nearly three years ago was observed to have entirely lost power (in one day) in the *left arm and leg*. No other symptoms were observed. He rather rapidly improved, and was in a few months as much recovered as you see him now. There really seems little or nothing wrong with his arm. The left lower extremity, however, is smaller than the right (the left thigh measuring an inch and a quarter less than the right), and he walks a

little lame with it. It is interesting to find that the patellar tendon-reflex is quite absent in this limb, little as it appears to be affected. And when we come to seek an explanation we find that faradaic excitability in the vastus internus muscle is distinctly although not greatly reduced.

CASE 4 (late in the hospital).—Ernest T—, aged fourteen years, had all four extremities and many muscles of his trunk paralysed about thirteen years ago. His limbs are short and small; patellar tendon-reflex absent on both sides. Feeble grasp with either hand; elbow-joints can be flexed and the left arm can be raised to level of shoulder-joint, the right cannot. In the upper limbs all the muscles react to faradaic currents in the following order of excitability: The forearms best, the arms next, the deltoids and pectorals least well. In the lower extremities no muscles (except those of the calves) react to faradism. In the right thigh there is still a slight reaction to the slow interruption of a constant current from forty cells. In the back the serrati magni and the mass of the erector spinae react to very strong induced currents.

In the next lecture I hope to show some examples of the disease in adults, and to demonstrate the changes in the electrical reaction.

NATURE'S PLAN IN THE DETERMINATION OF THE SEXES AND THE HEREDITARY TRANSMISSION OF PHYSICAL AND MENTAL QUALITIES, AND THE ACQUISITION OF NEW ONES.

By CHARLES ROBERTS, F.R.C.S., &c.,
LATE ASSISTANT-SURGEON, VICTORIA HOSPITAL FOR CHILDREN.

In a note "On Intention in the Determination of Sex," &c., published in THE LANCET for Oct. 23rd, Dr. Mortimer Granville asserts that "sex is determined by the relative ardency of the parents. A preponderance of impulse on the part of the male produces female offspring, while excess on the part of the female parent produces male progeny." Dr. Granville gives no statistical data in proof of his theory, but endeavours to support it by some confident statements as to the result of marriages contracted under conditions which would seem to indicate the relative affection of the two parents. I think it would be exceedingly difficult to obtain direct data in support of this hypothesis even by observing the lower animals, and such indirect data as we possess bearing on the subject in its relation to the human species is adverse to it. All physiologists and naturalists agree in asserting that the sexual instinct is stronger on the whole in the male than in the female; and whether we accept Darwin's or Wallace's theories of sexual selection, this fact must be accepted as the groundwork. Now, we find that in the human species the number of male births exceeds the number of female births in the following proportions: Great Britain 105.0, France 105.1, Austria 106.3, Italy 106.4, and Spain 106.5 males to 100 females. But these figures only represent the children born alive. If we take the still-births the proportion is much higher. In France 144, in Italy 140, Belgium 135, Sweden 133, and in Prussia 129 males to 100 females are stillborn; and if we combine the living and the stillborn, say in France, we have the proportion of 149.1 males to 100 females—a proportion which would, according to Dr. Granville's theory, imply a great excess of the sexual instinct in females; which is quite contrary to the opinion of those who have paid most attention to the subject.

But my object is not to endeavour to confute Dr. Granville's hypothesis, but to advance one of my own, based on such data and information as I have been able to collect while investigating the influences bearing on the physical development of the human species. It is exceedingly difficult to trace to its origin the purpose which Nature has had in view in differentiating the sexes.¹ It would seem that her plan has been to carry on the organism through the germ cell steadily and persistently in one direction, the germ dividing again and again, and reproducing itself with as little modification as possible, and with the least

¹ "I have often personified the word Nature, for I have found it difficult to avoid this ambiguity; but I mean by nature only the aggregate action and product of many natural laws, and by laws only the ascertained sequence of events."—DARWIN.

possible expenditure of vital force. Thus, females would produce females like themselves *ad infinitum*, if we imagine them, for the purpose of my hypothesis, capable of continuing the species without the intervention of the males, as, indeed, occurs in cases of parthenogenesis, where ova frequently become developed into perfect beings without the addition of the male element. On the other hand, it would seem that the sperm-cell is a portion of the organism cast off, as it were, at random, and in great profusion, to accommodate itself to new conditions of life, and being modified to bring back its newly-acquired qualities to the parent stock. Broadly stated, the germ-cell, or female, transmits the form and hereditary qualities of the race, while the sperm-cell, or male, introduces the variations which fit the race to survive under new conditions of life, the sex being determined by the greater vigour and maturity—or what is the same thing, the greater fitness for survival—of either parent. Where the conditions of life are uniform and constant, the germ-cell will predominate, and females will be produced in excess (as we see in the extinction of races and families by the failure of males); and where the conditions of life are variable or injurious to the race, the acquired vigour (in the struggle for existence) of the sperm-cell will predominate, and an excess of males will be the result.

It would occupy too much space to produce here the evidence which exists in support of my first proposition, that the process of reproduction in animals is identical in kind, and different only in degree from the process of budding in plants—a process which, though occasionally liable to inherent variations, is chiefly directed to the exact reproduction of the parental form and qualities. After examining the evidence on this subject in all its aspects, Darwin observes: "We may conclude that the several forms of gemmation and of fissiparous generation; the repair of injuries; the maintenance of each part in its proper state; and the growth or progressive development of the whole structure of the embryo, are all essentially the result of one and the same power."² And, again (page 362): "The difference between sexual and asexual generation is not nearly so great as at first appears.....The capacity of fertilisation by the male element seems to be the chief distinction between the ovule and a bud; and this capacity is not invariably brought into action, as is the case of parthenogenetic reproduction."

Throughout the organic kingdom we see on the one hand the anxiety, so to speak, of Nature to preserve and develop the germ-cell, while on the other we are constantly reminded of her lavish production and apparent wastefulness of the sperm-cell. Outside the human race (in this, perhaps, only in its civilised communities) there is hardly such a creature as an old maid, while the whole animal kingdom is teeming with bachelors, a state of things which shows the relative value, from a racial point of view, of the two sexes. In our biological speculations we are very apt, as Mr. Ruskin has told us, to forget the life and purpose of the individual, and think only of the race. "With respect to plants, as animals, we are wrong in speaking as if the object of this strong life were only the bequeathing of itself. The flower is the end or proper object of the seed, not the seed of the flower. The reason for seeds is that flowers may be, not the reason of flowers that seeds may be. The flower itself is the creature which the spirit (nature?) makes; only in connexion with its perfectness is placed the giving birth to its successor."³ Nevertheless, we see everywhere how serious Nature is in her efforts to continue the race, and how careless she is of the life of the individual, more especially of the male. In the plant the female organs form the axis of the flower, and the flower the apex of the branch. There is a stubborn clinging to hereditary characters in the female organs of plants, which contrasts strongly with the mutability of the stamens, and which enables botanists to use them with confidence as a basis of classification—a fact, by the way, which has not been sufficiently recognised by zoologists in their classification of the animal kingdom. Among insects the relative value of the germ- and sperm-cells is well marked. In a hive of bees several males exist, but only one is necessary, and this one dies the instant it has performed its sexual function, while the female becomes the parent of a numerous race, nearly the whole of which are imperfect females, buds, as it were, of the parent stock. Among the higher forms of animal life Nature protects the female from dangers by assimilating her colour to that of surrounding

objects, or by endowing her with protective mental qualities; while she renders the male conspicuous by greater size, brighter colouring, or bolder mental qualities, which expose him to external dangers, and excite rivalry, which excludes him from sexual life, or leads to his destruction. It is only in the human species, and this only in its civilised condition, that we find the two sexes of equal value, or inclining to the side of the male.

Confining our attention to the human race, and taking the living and stillbirths in various European countries, we find the proportion of the sexes is 143·3 males to 100 females. We also find that in the first births of a marriage the males are largely in excess. I found on examining Debrett's "Peerage" for 1877, that in 419 families, consisting of 1004 male and 1011 female children, the living birth-rate for the first year was 119 males to 100 females; while in Austria, among the general population, the first birth-rate was 110 males to 100 females. These figures show that there is not only an absolute excess of male births, but that the excess occurs at the earliest and most vigorous period of married life. In Norway it was found by M. Block⁴ that from the first to the sixth year of married life the proportions were 116 to 100, and from the seventh to the ninth only 107 males to 100 females.

But the sex rate is largely dependent on the relative maturity of the parents as well as on their vigour, the more mature parent being the most potent in determining the sex; the sex being the same as the most mature parent. The following well-known statistics, given by Hofacker and Sadler, are evidence of this. The figures show the proportion of male births to 100 females:—

HOFACKER.			
Father younger than mother ...	...	...	90·6
Father and mother of equal age ...	...	...	90·0
Father older by 1 to 6 years ...	...	...	103·4
" " 6 to 9 " ...	...	...	124·7
" " 9 to 18 " ...	...	...	143·7
" " 18 and more ...	...	...	200·0
SADLER.			
Father younger than mother ...	...	...	86·5
Father and mother of equal age ...	...	...	94·8
Father older by 1 to 6 years ...	...	...	103·7
" " 6 to 11 " ...	...	...	126·7
" " 11 to 16 " ...	...	...	147·7
" " 16 and more ...	...	...	163·2

As females attain to maturity two or three years earlier than males it is probable from the above table that, with a difference of age of three years in favour of the father and other things being equal, the number of the two sexes would be equal, or with a slight excess of vigour in one parent all would be of the corresponding sex. In the case of illegitimate births it is probable that the age and other circumstances are nearly the same in both parents, and consequently we find the proportion of 102·5 males to 100 females prevails, and this in spite of the excess of males which should result from first births.

The experiments on the impregnation of the ovum made by Quatrefages, Provost and Dumas, Newport, Kölreuter, and Gärtner, help us to understand not only how the sexes are determined, but how other physical differences and even some monstrosities are produced. The three French authors have shown, in the case of the teredo, that more than one spermatozoon is required to fertilise an ovule, and Newport, besides confirming these observations, has shown that when a very small number of spermatozoa are applied to the ova of batrachians they are only partially impregnated, and the embryo is never fully developed, although partial segmentation of the yolk does occur to a greater or less extent. The rate of segmentation is likewise determined by the number of spermatozoa. Gärtner found that even thirty grains of the pollen of a malva did not fertilise a single seed, but that when forty grains were applied a few seeds of small size were formed. Naudin fertilised a flower of *mirabilis* successfully with three grains of pollen, but of twelve flowers which were fertilised by two grains and seventeen flowers by one grain, only one flower of each lot perfected its seed; and the plants produced by these two seeds never attained proper dimensions, and bore flowers of remarkably small size. "From these facts," says Darwin, "we clearly see that the quantity of the peculiar formative matter which is contained within the spermatozoa

² Animals and Plants under Domestication, vol. ii., p. 359.

³ Queen of the Air, p. 76.

⁴ Traité de Stat., p. 344.

and pollen-grains is an all-important element in the act of fertilisation, not only in the full development of the seed, but in the vigour of the plant produced from such seed. We see something of the same kind in certain cases of parthenogenesis—that is, when the male element is wholly excluded; for M. Jourdan found that out of about 58,000 eggs laid by unimpregnated silkworms many passed through their early embryonic stages, showing that they were capable of self-development, but only twenty-nine out of the whole number produced caterpillars.¹⁵

In asserting that hereditary (physical and mental) qualities are transmitted by the female, and that variation and adaptability to new conditions of life are introduced by the male, I do not wish to imply that the germ-cell is not modifiable by external conditions, but only that it is subjected to fewer causes of variation, that it possesses a strong inherent disposition to resist change, and that it will be destroyed rather than accommodate itself to very marked changes in the conditions of life. We see instances of this in the destruction of the partially developed embryo by constitutional syphilis in persons otherwise healthy, and of the resistance of the embryo to other constitutional diseases, as, for instance, of acquired consumption, where it proceeds to full development in spite of the diseased parent.

The practical applications of this theory are sufficiently obvious. From the statistics which we possess it is probable that the births should be in the proportion of about three males to two females, and this number would be a typical family which would admit of the sacrifice—not necessarily the destruction—of one male, to accommodate the race to the ever-changing conditions of life, and to assure the constant accession of fresh vigour and maturity. The number of the living members of the families of the English peerage—where we find man living under the most favourable conditions of nurture and sanitary surroundings—gives an average of 4·8 children for each family, and the sexes are in almost equal proportions (one family of eleven girls makes the number of females very slightly predominate). But here, no doubt, there has been the usual destruction of males at birth—in this instance with no benefit, but absolute loss to the race,—and during childhood the greater destruction of boys than girls by children's diseases, which, with the single exception of whooping-cough, are all of them more fatal to male than female children.

As vigour is necessarily a relative term, it is difficult to see how this quality could be utilised, but it is obvious that persons living under very similar conditions of life should not marry. A literary man should not marry a literary woman, nor a tailor a seamstress; and the rule would apply to persons of the same temperaments and physique. The immense trouble, so to speak, which nature has taken to secure cross-fertilisation in the lower races of animals and in plants should guide man in his selection of a partner, and teach him the evils of in-and-in breeding, which is not necessarily a matter of blood relationship, *but of the similar conditions of life*. With respect to maturity, it is a great error to believe that puberty in either sex is a sign of fitness for marriage. Throughout nature we see that growth and reproduction cannot go on together beneficially, reproduction being, as I have endeavoured to show, a diversion of growth, or development in a new direction—namely, from the individual to the race. Men do not cease to grow till the age of from twenty-one to twenty-five years, and women till the age of from eighteen to twenty, according to the good or bad nurture they have been subjected, the best nurtured attaining maturity first. It is obvious that these respective ages are the very lowest at which marriage should take place, and we have statistics to prove that there should be a considerable difference in favour of the age of the husband if male progeny is desired.

Probably the best way of increasing the male birth-rate will be to direct all our energies to prevent the great loss of male life at the moment of birth, amounting to about 140 to 100 females. This is being done in a slight degree by the great improvements in the art of midwifery; but the mischief lies in the disproportionate size of the male fœtus and the mother, and it is impossible to estimate the great loss which the race sustains in superior physical and mental qualities by this unceasing destruction of its finest products. At birth, and in children born alive, the average length of male infants is 19·34 in., and of female infants, 18·98 in.; while their weights are respectively 7·55 lb. and 7·23 lb.—

the difference in height being only 0·35 in., and in weight 0·32 lb., or about the third of an inch, and less than a third of a pound weight. But these figures are a mere register of the size of the female pelvis, and we possess no data of the relative size of still-born children. The remedy for this waste of valuable life is to be found in the direction of the improved development of girls by physical education, and by a more careful matching of the sexes in marriage. The average stature of Englishwomen is from 5 ft. 2 in. to 5 ft. 3 in., and of men about 5 ft. 7 in. to 5 ft. 8 in., the difference between the two sexes being from four to five inches; and as stature carries with it other relative proportions of the body, it is probable that if these limits were observed all through the scale of heights, there would be fewer still male births. It is probable, also, that the intellectual struggle for existence going on among men at the present day is causing the development of larger heads in male children; and the recent impetus given to the education of girls and the employment of women in intellectual occupations is adding to this difficulty, and if it does not end by producing sterility (as is probable), or of female children only (as is still more probable), it must tend to the destruction of more and more males at the moment of birth. It is obvious that whether we consider the health and happiness of the individual, or the future prosperity of the race, the healthy physical development of girls is of the first and supreme importance. In the sense in which we say the boy is father of the man, we may also say that the girl is the mother of the race; for to her is entrusted not only the accumulated hereditary characteristics of our ancestors, but the means of transmitting them, and, indirectly, of acclimatising and accommodating the race to new and varying conditions of life.

Bolton-row, Mayfair, W.

FIVE YEARS' SURGICAL WORK IN THE CARDIFF INFIRMARY.

BY ALFRED SHEEN, M.D.,

SURGEON TO THE INFIRMARY.

(Concluded from p. 766.)

Abscesses.—This is not an interesting class of cases, and I fear that my treatment has been altogether of a too desultory and routine a character. The antiseptic treatment of such cases seems to offer better prospects of success than I have hitherto attained to, and in future I shall give it a more extended and persistent trial. One case of lumbar abscess was

ABSCESSSES.

	Under ten.	Under twenty.	Under forty.	Under sixty.	Over sixty.	Totals.
	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.
Lumbar ..	2 0	0 1	.. ..	.. ..	.. ..	2 1
Buttock and hip ..	.. ..	.. ..	.. ..	1 0	.. ..	1 0
Hip ..	.. ..	.. ..	1 0	.. ..	.. ..	1 0
Gluteal region..	.. ..	.. ..	1 0	.. ..	.. ..	1 0
Groin..	0 1	.. ..	.. ..	.. ..	.. ..	0 1
Knee ..	.. ..	1 0	.. ..	.. ..	.. ..	1 0
Shoulder ..	.. ..	.. ..	3 0	1 0	.. ..	4 0
Forearm ..	.. ..	.. ..	.. ..	.. ..	1 0	1 0
Thecal ..	.. ..	1 0	.. ..	1 0	.. ..	2 0
Psoas ..	.. ..	.. ..	0 1	.. ..	.. ..	0 1
Breast ..	.. ..	.. ..	.. ..	0 1	.. ..	0 1
	2 1	2 1	5 1	3 1	1 0	13 4

aspirated, and did well; twelve ounces of pus were drawn off, and the patient was discharged cured two months afterwards. The breast case was sent in as one of tumour for removal, but the history and appearance clearly pointed to its being a chronic abscess. Iodoform 1 to vaseline 15 was applied for some weeks, and the induration left by the abscess disappeared.

TUMOURS.

	Under ten.	Under twenty.	Under forty.	Under sixty.	Over sixty.	Totals.
	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.
Lymphadenoma ..				1 0	.. ..	1 0
Epulis ..			0 1	.. ..	.. ..	0 1
Thyroid ..				1 0	.. ..	1 0
Elephantiasis labium ..			0 1	.. ..	.. ..	0 1
Shoulder: fatty ..			1 0	.. ..	.. ..	1 0
Breast: cystic ..			0 2	.. ..	.. ..	0 2
.. .. adenoid ..			0 1	.. ..	.. ..	0 1
Hypertrophy, clitoris ..			0 1	.. ..	.. ..	0 1
			1 6	2 0		3 6

⁵ Animals and Plants, vol. ii., p. 364.

The lymphadenoma was extensive, in the neck chiefly, with only a three months' history. The patient died of exhaustion fourteen months after his discharge. The thyroid tumour was of the size of an orange. The patient was admitted as an urgent case, suffering from sudden attacks of dyspnoea, and in one of these he died, twenty-four hours after admission.

CANCER.

	Under ten.	Under twenty.	Under forty.	Under sixty.	Over sixty.	Totals.
	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.
Thigh: medullary ..	—	—	1 0	—	0 2	1 2
Lip: epithelioma ..	—	—	—	3 0	4 0	7 0
Penis: epithelioma ..	—	—	3 0	—	—	3 0
Tongue ..	—	—	—	2 0	—	2 0
Eyelid: rodent ..	—	—	—	1 0	—	1 0
Tibia ..	—	—	—	1 0	—	1 0
Neck ..	—	—	1 0	—	—	1 0
Nose: epithelioma ..	—	—	—	0 1	—	0 1
Glands: angle of jaw ..	—	—	—	—	1 0	1 0
Rectum ..	—	—	0 1	—	1 0	1 1
Breast ..	—	—	—	0 1	0 2	0 3
Upper maxilla ..	—	—	—	0 1	—	0 1
	5	1	7	3	6	4
	18	8				

Many of these cases were operated on, and one is accounted for under another heading. One case of cancer of the tongue and one of the upper maxilla were deemed too extensive to be interfered with, and were therefore discharged. The case of cancer of the neck involved deep structures, and the patient died suddenly from hæmorrhage.

HERNIA.

Operations.	Deaths.	—	Und. ten.	Under twenty.	Under forty.	Under sixty.	Over sixty.	Tot.
			M. F.	M. F.	M. F.	M. F.	M. F.	M. F.
3.	3	Femoral	—	—	0 1	—	0 3	0 4
5	4	Inguinal	—	—	4 0	2 0	1 0	7 0
8	7				4 1	2 0	1 3	7 4

Of these eleven cases of hernia eight were operated on, and seven of these died, a most lamentable result, which I have commented upon under the heading "Operations." Of the remaining three cases, one was a large scrotal hernia in a patient aged thirty-two, which had been down three days without his being able to return it, as he had previously done; and another was a small strangulated femoral hernia, complicated by the existence of a previously existing irreducible hernia, in a female aged thirty-seven. The strangulated portion was returned.

SPINAL DISEASE.

	Under ten.	Under twenty.	Under forty.	Under sixty.	Over sixty.	Totals.
	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.
Lateral curvature ..	—	1 0	2 0	—	—	3 0
Angular curvature ..	4 0	0 2	—	—	—	4 2
	4 0	1 2	2 0			7 2

Most of the cases of spinal disease were admitted before Sayre's treatment came prominently before the profession. In two cases, however, a boy aged eight, and one aged four and a half, with dorsal angular curvature, the jacket was applied with marked relief, the children being from that time perfectly free from pain, and able to run about without any difficulty, their previous condition being just the opposite of this. This was in 1878. Previous to the advent of the plaster jacket the treatment of these cases was in the highest degree unsatisfactory, whilst now it is almost everything that could be desired, and many cases have the jacket applied and are even treated as out-patients. I prefer the poroplastic jacket for cases of lateral curvature.

ARTERIES.

	Under ten.	Under twenty.	Under forty.	Under sixty.	Over sixty.	Totals.
	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.
Arterial thrombus ..	—	—	0 1	—	—	—
Popliteal aneurism ..	—	—	1 0	—	0 1	—
			1 1		0 1	1 2

VEINS.

	Under ten.	Under twenty.	Under forty.	Under sixty.	Over sixty.	Totals.
	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.
Varicose: leg ..	—	—	0 1	—	—	0 1

In the class "Arteries" the case of thrombus was a sequel of scarlet fever. It was in the femoral artery close to the groin. It is noticed under the heading "Amputations." The case of aneurism in a female I had seen in consultation two months previous to admission, and advised her immediate removal to the infirmary for treatment. I was interested about the case, as I was anxious to try the effect of pressure by means of the elastic bandage, as suggested, I believe, by Dr. Reid, R.N., but I heard nothing more of her till she was admitted. She had passed through several hands (surgical). The sac had ruptured, and there was now nothing left to be done but to remove the limb. Amputation was performed, and the patient did well. The second case did remarkably well (*vide* "Operations").

The case of varicose veins in the leg was in a woman aged forty, of seven years' duration, accompanied by much swelling and severe pain. She was treated by rest in bed, on an inclined plane, for forty-four days, when she was fitted with an elastic stocking and discharged.

EYE.

	Under ten.	Under twenty.	Under forty.	Under sixty.	Over sixty.	Totals.
	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.
Trichiasis ..	—	—	0 1	—	—	0 1
Lacrimal fistula ..	—	0 1	—	—	—	1 0
Acute conjunctivitis ..	—	—	—	2 0	—	2 0
Purulent ophthalmia ..	1 0	—	—	—	—	1 0
Scrofulous ophthalmia ..	—	0 1	—	—	—	0 1
Granular lids ..	—	0 1	—	—	—	0 1
Senile cataract ..	—	—	—	—	3 0	3 0
Soft cataract ..	—	1 2	—	—	—	1 2
Corneitis ..	0 3	2 1	0 1	—	—	4 3
Ulcer of cornea ..	0 1	—	—	—	—	0 1
Inflammation of globe ..	—	—	—	1 0	—	1 0
Staphyloma of cornea ..	2 0	0 1	—	—	—	3 0
Iritis ..	—	—	1 0	—	—	1 0
Glaucoma ..	—	—	—	0 1	—	0 1
	3 4	3 7	1 2	3 1	3 0	17 10

There is no special ophthalmic department in our infirmary, and this will account for the comparatively large number of eye cases admitted under my care, the greater number of which are of no particular interest. One case of acute conjunctivitis occurred in a previously blind eye, and rapidly subsided under ordinary treatment—namely, rest and from eight grains to an ounce of collyrium of alum.

The case of purulent ophthalmia was in a boy aged three, the result of contagion, and very severe. One eye was already lost before his admission, and the other was saved only by the very frequent and regular application of a twenty-grain collyrium of alum. This treatment changed the aspect of the case in twenty-four hours, and the eye rapidly recovered. (This child had neglected eczema of the whole scalp. It had been under intermittent treatment for many months at home without any permanent benefit, but six weeks of persistent treatment "under orders," in the infirmary, completely cured it. Glycerine of tannin was used locally.) The case of granular lids of two years' duration, not very severe, was apparently cured by the careful application of lapis divinus. The operation-cases in this class are noted under the heading "Operations."

RECTUM.

	Under ten.	Under twenty.	Under forty.	Under sixty.	Over sixty.	Totals.
	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.
Hæmorrhoids ..	—	1 2	0 1	—	—	1 3
Anal fistula ..	—	—	3 0	1 0	—	4 0
Stricture ..	—	—	—	0 1	—	0 1
Obstruction ..	—	—	—	1 0	—	1 0
	1 2	3 1	2 1			6 4

The case of obstruction was obscure as to its cause, but complete. The index-finger introduced into the rectum as far as it would go impinged on something which gave one much the same feeling that the os uteri does, and on its withdrawal a small clot of dark blood was adherent to it. Nothing had passed for thirteen days previous to the operation of colotomy in the left loin, which was performed (for the first time in this infirmary), and the patient was discharged in twenty-five days with an artificial anus, which he said gave him no trouble or annoyance. He was a healthy-looking man, with no appearance of malignant disease, and there was no evidence of the presence of a tumour on careful examination of his abdomen. He was discharged on

August 9th, 1879, and on December 2nd he was readmitted on account of the contraction of the opening in the loin, so as only to admit a No. 6 gum elastic catheter. A sponge-tent left in for twenty-four hours completely relieved this state of matters, and he was discharged. On Dec. 21st he passed flatus per rectum for the first time since the operation, and later on the same day he passed fæces. Next day he had three motions *per vias naturales*, all semi-fluid and very dark, almost black, but no pus or blood. I saw this patient recently (Nov. 1880). The opening is still patent in the loins, but his bowels are relieved naturally. He has been losing flesh somewhat lately, and complains of some pain in the seat at times when sitting, and says he can feel something like a bone close to the anus. On examining him I found a hard epitheliomatous tumour, the size of a large nut, just inside the anus, posteriorly and a little to the left, whilst anteriorly and slightly higher up the rectum is a thickish diagonal band of new deposit about a finger's breadth, which is evidently lessening the calibre of the bowel. He is kept under observation. Previous to the operation this case was interesting as indicating the uselessness and even danger of giving purgatives in such cases, and the great value of puncturing the bowels through the abdominal wall with a small trocar and cannula for the relief of tympanites.

The hæmorrhoids were mostly external, and they were removed by the knife or scissors. The fistula cases were all operated on and did well. In three cases a sharp-pointed bistoury was pushed gently through the fistula on to the finger inserted in the rectum, and then brought down. I prefer this mode of operating to any other, as being the simplest, and there is no fear of wounding one's own finger if ordinary care be exercised. The case of stricture was not complete, was malignant in its nature, and was not interfered with; the patient, being discharged, disappeared from observation.

URINARY ORGANS.

	Under ten.	Under twenty.	Under forty.	Under sixty.	Over sixty.	Totals.
Chronic cystitis	1	1	1	1	1	5
Prostatic disease	2	2	1	1	4	10
Stone	1	1	1	1	4	4
Incontinence of urine ..	1	1	1	1	4	4
Stricture	7	11	1	1	19	19
Phimosis	1	1	1	1	4	4
Hydrocele	3	3	1	1	8	8
Orchitis	1	1	1	1	4	4
Hypospadias	1	1	1	1	4	4
	1	2	13	17	5	38

Of the 38 cases of disease of the urinary organs here tabulated, one-half were cases of stricture of the urethra. All the patients were males. The cases of enlarged prostate were chiefly in old men, and were mostly admitted on account of retention of urine; by rest in bed, passing a catheter, a simple diet, and in some cases a little medicine, this symptom was soon sufficiently relieved to allow of the patient's discharge. The stone cases were two in number. In one patient, aged nineteen, lateral lithotomy was performed in the usual way, and a mulberry calculus extracted, weighing 3 drs. 45 grs., and measuring 1 in. by 1½ in. The size of the stone was ascertained previous to the operation by the aid of the lithotrite. Should such another case come under my care, I should be inclined to practise Bigelow's operation of litholapaxy. The other case was in a patient, aged twenty-eight. There were two phosphatic stones. Lithotripsy was performed, the stones being crushed on nineteen different occasions. Weight of detritus ½ oz. Both patients did well. One case of prostatic disease proved to be an abscess in that gland, for on introducing a catheter for the relief of the retention, exit was given to a considerable quantity of pus, with great relief to the patient. The cases of stricture were mostly organic; some few were traumatic, and some spasmodic. The organic and traumatic were all treated on the principle of gradual dilatation, and the patient, before leaving the infirmary, was taught to pass an instrument for himself, was cautioned to pass it from time to time, and was told of the incurable nature of his complaint. If this were systematically done in all our hospitals, and if the patients could be induced to take that constant watchful care of themselves which is needed, we should, I think, seldom have these cases in hand a second time. I do not think the nature of spasmodic stricture is always sufficiently clearly recognised in general practice. In most of these cases which have come under my notice in hospital, fruitless and continued efforts had previously been

made to pass a catheter into the bladder, with no result but hæmorrhage and pain; and so constant in my hands have been the good effects of rest in bed, the administration of chloral or morphia, and the avoidance of all instrumental interference, that I have adopted this line of practice as a piece of routine in such cases. One case of stricture was the result of amputation of the penis. The case of phimosis was in a married man, aged thirty, the father of five children, who only sought relief on account of inflammation and thickening of the edge of the prepuce. In two cases of hydrocele a radical cure was attempted, and was successful.

CASE 1.—Aged fifty-four; five months' duration; cause unknown; right side; 12 fl. oz. drawn off, and half a drachm of tincture of iodine, with one drachm of water, injected into the sac. The patient was in bed six days, and had neither pain nor swelling.

CASE 2.—Aged fifty-six. Similar treatment and results.

In the case of hypospadias there was an opening on the under-surface of the penis just beyond the prepuce, about the size of a pin's head, and the urethra was impermeable from that point onwards. It was not considered advisable to interfere by way of operation.

The following cases, which were also admitted under my care, I have been unable to classify under any of the previous headings:—

	Under ten.	Under twenty.	Under forty.	Under sixty.	Over sixty.	Totals.				
	M. F.	M. F.	M. F.	M. F.	M. F.	M. F.				
Eczema of scalp	—	—	—	0	1	0	1			
Chronic dermatitis	—	0	1	—	—	0	1			
Congenital syphilis	1	0	—	—	—	1	0			
Syphilitic lupus of nose ..	—	—	0	1	—	0	1			
Syphilitic ulceration of fauces and palate .. }	—	0	1	—	—	0	1			
Deafness	—	—	1	0	—	—	1	0		
Genu valgum	1	0	—	—	—	—	1	0		
Chronic bubo	—	—	1	0	0	1	—	1	1	
Vesico-vaginal fistula ..	—	—	—	—	0	1	—	0	1	
Double hare-lip	0	1	—	—	—	—	0	1	—	
Sinuses about elbow	—	—	1	0	—	—	—	1	0	
Solid œdema of thigh and leg }	—	—	—	—	—	1	0	—	1	0
Pelvic cellulitis	—	—	—	0	1	—	—	—	0	1
Disorganisation of leg from pyæmia }	—	—	—	—	1	0	—	—	1	0
Nervous mimicry	—	—	—	0	1	—	—	—	0	1
Ingrowing toenail	—	—	0	1	—	—	—	—	0	1
Onychia	1	0	—	—	—	—	—	—	1	0
Infantile paralysis	0	1	—	—	—	—	—	—	0	1
	3	2	2	3	1	3	1	0	8	11

Of these cases the syphilitic were cured by large doses (ten grains three times a day) of iodide of potassium. The case of deafness was chronic and incurable, the middle ear being completely destroyed. One case of chronic bubo was dispersed by repeated (three) blisters. The case which is called nervous mimicry was an obstinate case of hysteria. The patient, a female aged twenty-four, had in previous years been from time to time under my care in the outpatient department, and was now admitted supposed to be suffering from some disease of her right knee and leg. She stated that she had been unable to get about without crutches for some months. The muscles of the right leg were flabby and smaller than those of the left from want of use, and the knee apparently larger than its fellow. She declared she could not bend her right knee, and refused to do so, but on one occasion, after she had been asleep, her knee was observed to be bent (the usual position of the limb being straight), and she called a nurse to straighten it for her, as she said she was unable to do so herself. Galvanism of the muscles of the leg was ordered, but on the appearance of the battery in the ward she asked for her discharge, stating that she felt much better. A few months previous to her admission I saw her walking about without any aid, and three months after her discharge she was observed walking along the street, with only a very slight limp, and without any support.

The ingrowing toenail was removed under ether spray, but the patient complained severely of the pain of the latter. The case of infantile paralysis was much improved by a month's daily faradisation of the affected muscles.

This is but a brief survey of about one-half of the surgical work of our infirmary during a period of five years. I might have entered into further detail on many points, but my paper has already exceeded the limits I proposed at its commencement.

Cardiff.

FLATULENT DISTENSION OF THE COLON.

By R. W. BURNET, M.D., M.R.C.P.,
PHYSICIAN TO THE GREAT NORTHERN HOSPITAL.

WHEN one meets with patients suffering from a sense of fullness and discomfort in the epigastrium, with more or less pain in the right or left hypochondriac region and in the back, or, as they often say, "through to the back," one generally finds they have come to the conclusion that their liver is at fault, and they have had recourse to the usual popular measures for reducing to order the offending organ.

In some exceptional instances, no doubt, the patient is right in throwing the blame upon the liver, for in organic disease of that organ we do undoubtedly get pain in the back, between the scapulae, in the right scapular region, and so forth. If, however, we exclude cases of impacted gall-stone, where the pain often takes curious and anomalous forms, and may be referred to one or more points remote from the hepatic region—cases of malignant disease and of abscess, cases of extreme congestion, causing marked distension of the capsule, and of advanced cirrhosis where the hepatic substance is compressed by a greatly contracted capsule—excluding these cases I venture to think that the liver is more blamed as the cause of pain, and even as the source of discomfort, than it deserves.

Many of the indefinite backaches and pains in the side complained of by women, of the poorer classes especially, are, no doubt, due to uterine disorders and displacements, and although to say that every woman has a pain in her back may seem to be a loose way of talking, yet I have heard the remark made by a physician of large experience, and am convinced that applied to hospital patients, at least, it is nearer the truth than might at first sight be supposed.

Upon the consideration of these hepatic and uterine disorders I do not mean here to enter, but what I wish to show is that in a large proportion of cases the source of the trouble lies in the colon—in those cases, namely, where, on examination, we find that the large bowel has become distended in some part of its course, and by pressure on the surrounding organs and structures causes the symptoms of which the patients complain.

Assuming then for the moment that such a condition as flatulent distension of the colon does exist apart from the distension from stricture caused by the cicatrisation of ulcers, by malignant disease or by pressure from without, what are the causes that lead to it? In general we may say that everything which tends to bring about a relaxed and atonic condition of the mucous and muscular coats of the bowel is a predisposing cause. The patients are for the most part women, and they are women who are more or less sedentary in their habits and whose tissues are soft and flabby; they have usually suffered at times from gastrointestinal catarrh, from irregular action of the bowels and from constipation, for which they have been in the habit of taking quantities of aperient or antibilious pills and other purgative medicines. In some the excessive use of brown bread of the coarser sorts seems to act unfavourably on the mucous membrane, and in one well-marked case in a gentleman it seemed to follow a prolonged course of hydropathic treatment where, in addition to the use of all varieties of hot and cold baths, the patient had for some time worn compresses round the abdomen. Such agents as these bring about an irritable condition of the mucous membrane, together with a want of tone in the walls of the bowel. The site of the pain I think throws some light on the immediate cause. I have said that it is very frequently in the right or left hypochondriac region—i. e., in the parts of the bowel preceding its sharp curves, the hepatic, the splenic, and the sigmoid flexures. In women the configuration of the body and the mode of dressing tend largely to impede the free movements of the parts upon which the tight garments press, and looking at the colon as a tube, we see how largely it will be affected by these restrictions. An indiarubber tube through which a stream of water is passing will, if sharply bent, dilate and even burst before it allows the water to pass. Again, any lodgment of fæces or other irritating cause may set up spasmodic contraction, and if this occurs, as is most probable, at a part where the calibre of the bowel is

already narrowed, the consequence is distension behind the site at which the impediment exists.

Coming now to the symptoms which characterise this condition: the patient looks worn, and he may even be depressed and haggard; the complexion is muddy and wanting in that clearness which characterises perfect health; the tongue is whitish or dry, and coated, often marked at the edges by the pressure of the teeth; the pulse is natural in frequency, but soft, compressible, and easily excited; palpitation and "fluttering of the heart" are frequently complained of, accompanying a sense of fullness and weight which they experience sometimes after meals. Along with the more distinctive symptoms, there are the general ones of languor, headache, nervousness to a greater or less degree, and usually very marked depression. Here I would notice in passing the remarkable association that there is of mental depression with affections of the lower bowel. Whether the relation is sufficiently close to warrant its receiving the name of "colonic melancholia" I am not prepared to say, but I think it cannot be denied that the depression of spirits which accompanies disorders and diseases of the colon and of the rectum is out of all proportion to the extent of the mischief. A recent writer on constipation,¹ speaking of the effects of that condition on the nervous system, looks upon it as the result of blood-poisoning from absorption of some part of the faecal matter, and no doubt this takes place in cases of long-standing constipation; but from cases of the nature of those I am now considering, it is evident that a further element is involved. Why is a patient with flatulent distension of the colon utterly dejected, while one with lumbago is howling every time he moves, and then laughing at himself for crying out? That there is an intimate connexion between the state of the bowel and the state of the mind I feel sure, but am unable to offer any satisfactory explanation of the fact.

Patients who are the subjects of the affection now under consideration are liable to sudden attacks. At one time, as already mentioned, it is a heart attack, by which I mean more than a mere fit of palpitation. They have great discomfort in the cardiac region, and feel "as if the heart were going to stop." At other times it is an attack of colicky pain usually in some part of the colon. Indeed, in describing the different places at which at one time or another they have had these pains they often point out exactly the course of the colon, commencing below the hepatic flexure, and following it across the epigastric to the left hypochondriac region. In their depressed state a sharp attack of pain of this kind alarms them, and they conclude that they are suffering from inflammation of the bowels. Except the pain there is, however, no symptom common to this condition and to enteritis, and even the pain is quite dissimilar in character. It is variable; it is more or less widespread; it is not only not increased, but is usually rather relieved by pressure; it is temporarily relieved by the action of the bowels, especially if some flatus be got rid of at the same time; it is shifting, or at least somewhat movable, for patients say that they "have to hold their side," and that when they do so the pain is lessened or shifts to some other part of the bowel.

Physical examination reveals a distended colon. On palpating the abdomen we have in some part of the course of the colon a feeling of resistance, and by careful handling we may make out the rumbling of flatus under our fingers, with sometimes the jumbling of fluid in the distended bowel. On percussion we get a tympanitic note over an area more or less extensive, and corresponding to the amount of distension. Exceptionally we find slight tenderness, but usually even firm pressure causes no uneasiness.

In considering the treatment of the affection I am now speaking of, we must have regard to the causes that have been at work in bringing it about, and to the habits of diet and mode of life in each case. If we can put our finger on the cause and remove it, we shall be far advanced in the treatment. We must find out whether the patient is in the habit of drinking much tea or large quantities of hot fluids, and if so we must considerably reduce the supply. The use of tea has a marked effect in aggravating the distension and discomfort, so much so that where the tendency to this state of bowel is strong, tea taken in any quantity will be almost certain to bring on an attack of pain. Patients have sometimes found this out for themselves, and have given up the use of tea. We must limit the diet to simple easily digested

¹ THE LANCET, Feb. 14th, 1880.

food, given in three or four small meals a day. We must exclude tea, coffee, malt liquors, and strong wines, also raw vegetables, pastry, sweets, and ices. The quantity of liquid taken with food should also be limited to one breakfast cup or less with breakfast, half a pint in the middle of the day, and the same quantity with the evening meal. With the two latter we may allow in the water either a glass of claret or of dry sherry, or a half glass of spirit. If there is much tendency to constipation the simple remedy of a half tumblerful of fresh cold water, sipped the first thing in the morning and the last thing at night, will often aid the action of the bowels, and it seems to supply at a time when it does not harm the quantity of fluid required by the system. A daily natural action of the bowels should, if possible, be obtained, and this may often be gained by enforcing the habit of soliciting their action at a fixed time every day. Cold or tepid sponging followed by vigorous friction will also be useful. As far as drugs are concerned, the treatment is very much what we should adopt in ordinary colic and dyspepsia, at the different stages of these two affections. If there be much pain when we see the patient, and the condition be purely a temporary one, probably we shall most easily and speedily attain our end by giving a dose of castor oil, with or without a few drops of laudanum, and following it up, if necessary, by an enema. In less urgent circumstances we may give at night an alternative and aperient pill of blue mass, with colocynth and hyoscyamus, and in the morning an aromatic rhubarb draught. Such measures as these are calculated to give speedy relief for the time being, but we must endeavour to obviate the recurrence of the attacks, and we should probably have recourse to the good old-fashioned mixture of soda and gentian with aromatic spirits of ammonia, or to bicarbonate of potash with tincture of nux vomica and infusion of calumba, given twice or thrice daily, two hours after food. Sometimes ten drops of the tincture of nux vomica in a little water, three times a day, will answer well. Following this, we may give a pill of reduced iron with pepsin and extract of nux vomica and of belladonna with food twice daily.

In hospital practice, probably, the readiest and most useful medicines at this stage are the ordinary aloes and iron and the aloes and assafoetida pills. Finally, with a clean tongue and free secretion we should give a mixture of hydrochloric acid and extract of bark between meals twice a day, or the citrate of iron and quinine with a few drops of liquor strychniæ. When the mucous membranes are free these tonics undoubtedly bring about a healthier tone of the digestive organs and give excellent results.

Nottingham-place, W.

AN IMPROVED METHOD FOR EXCISING THE WRIST-JOINT.

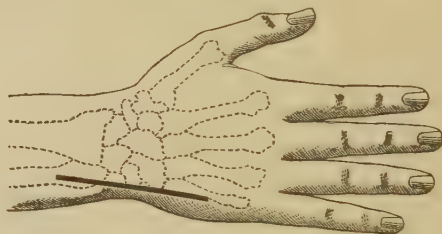
By W. ROGER WILLIAMS, L.R.C.P.L., M.R.C.S.E.,
SENIOR HOUSE-SURGEON, ROYAL ALBERT EDWARD INFIRMARY, WIGAN;
LATE DEMONSTRATOR OF ANATOMY AT UNIVERSITY COLLEGE;
AND FORMERLY AT THE MIDDLESEX HOSPITAL.

It is not so long since Malgaigne wrote of excision of the wrist joint, "une opération déplorable, et qu'il est temps de rayer absolument de la pratique." But all this has changed now—thanks to the labours of Mr. Lister,—and the great advantages to be derived from the operation are generally recognised. Yet it is seldom performed. This, I believe, is mainly due to the complicated procedure usually adopted. "It has," says Liston, in the introduction to his work on Practical Surgery, "been well and truly remarked by the celebrated Desault, that the simplicity of an operation is the measure of its perfection." In endeavouring to carry out this injunction I have planned an operation by which the dorsal incision is altogether dispensed with, and the tendons are separated with less disturbance than was formerly possible—advantages, as I think, of considerable importance, since the large wound in the midst of the tendons is thus avoided, and consequently no cicatrix is left to which the adjacent parts become matted, as so often happens after the operations of Lister and Langenbeck. Another point on which I lay great stress is the preservation of the trapezium. The subsequent utility of the thumb, and indeed of the whole hand, is greatly enhanced by this.

Whatever proceeding may be adopted, the removal of this bone is always a matter of some difficulty; and experiments on the dead body have convinced me that the radial artery seldom escapes division. It has been usual to describe the intercarpal synovial membrane as common to all the carpal bones except the pisiform, and this has led to the idea that in disease all the bones must be pretty equally affected. But according to M. Tillaux¹ the intercarpal synovial membrane consists of three separate sacs; and the trapezium is connected with only one of these—viz., that one which is chiefly special to the articulation of the scaphoid with the trapezium and trapezoid. It is hardly necessary to mention that the synovial membrane between the trapezium and the first metacarpal bone is special to that joint.

Thus there is reason to believe that a careful examination of cases suitable for excision will show that the trapezium is less frequently diseased than might be expected. In all cases an endeavour should be made to ascertain its condition before commencing the operation; and if diseased the gouge should be used.

To commence the operation the hand should be placed prone. In this position it is easy to make out the following landmarks:—The inner border of the fifth metacarpal bone, which is immediately external to the projecting mass of the muscles of the little finger; following this upwards we come to a small, but perfectly obvious, projection, due to the apex of the cuneiform; still higher up is the much larger prominence of the head of the ulna, and a little in front of this is its styloid process. Speaking in general terms, the incision may be said to pass along the back of the wrist near its inner border (see Fig.). The point of the knife is



entered over the tendon of the extensor carpi ulnaris, at a short distance above the head of the ulna. The incision is prolonged downwards between the head and styloid process of the bone, over the apex of the cuneiform, and thence along the inner border of the fifth metacarpal bone, at the middle of which it ends. In the upper part of the wound the tendon of the extensor carpi ulnaris must be laid bare, at its middle the pisiform is to be disarticulated, and in its lower part the opponens minimi digiti should be detached from the metacarpal bone. The extensor carpi ulnaris tendon is now to be separated from the base of the metacarpal bone, and to be freed from the ulna as far as may be necessary. The articular surfaces of the ulna and the fifth metacarpal bone are then to be sawn off. The next step is to cut off the unciform process with the bone forceps. It is then easy to raise the soft parts from the front of the wrist, with scarcely any injury to the synovial sheaths. The tendon of the flexor carpi radialis lying in the groove of the trapezium is not to be disturbed. The articular surfaces of the three middle metacarpal bones are now to be cut off; and the trapezium must be separated from the trapezoid and scaphoid. The latter part of the proceeding may be done most conveniently by introducing the blades of the bone forceps between the first and second metacarpal bones, and cutting upwards towards the outer part of the lower end of the radius. The soft parts being held up by the copper spatula, a small jaw saw—one with a strong back, the breadth of whose blade does not quite equal the thickness of the lower end of the radius—should then be applied to the front of this part of the bone, just above its articular surface. The section is not to be quite complete: the dorsal lamina should be broken through. A few touches with the knife suffice to separate the detached extremity from the dorsal tendons, with scarcely any injury to these. There is nothing now to prevent the removal of the excised bones.

Of course, if the parts are much altered by the disease, it

¹ Anatomie Topographique. Deuxième édition, p. 541

will often happen that a more irregular proceeding will be adopted.

The trapezium, pisiform, and the unciform process should be left alone unless they are diseased.

The after-treatment is that recommended by Mr. Lister; and the parts divided are the same as in his operation.

Wigan.

ON THE ASSOCIATION OF AFFECTIONS OF THE THROAT WITH ACUTE RHEUMATISM,

By J. KINGSTON FOWLER, B.A., M.B.,

ASSISTANT-PHYSICIAN AND PATHOLOGIST TO THE MIDDLESEX HOSPITAL,
ASSISTANT-PHYSICIAN TO THE BROMPTON HOSPITAL FOR CONSUMPTION.

I HAVE for some time past made it a rule in all cases of acute rheumatism which come before me to inquire carefully for any history of tonsillitis or catarrh of the pharynx having preceded the attack. I was led to do this by a remark from Dr. Garrod, F.R.S., when he was attending me for a severe attack of rheumatic fever in the winter of 1874.

A month before my illness I had a sharp attack of acute tonsillitis, and Dr. Garrod told me he had noticed that the two affections were not uncommonly associated. I have lately kept notes of all cases of acute and subacute rheumatism, and find that in a very large proportion the attack has been preceded at an interval varying from nearly a month to a few days by some affection of the throat. It may be a simple catarrh, but in many cases it takes the form of acute inflammation of the tonsils. Without at present being able to give an exact percentage of cases presenting this premonitory symptom, I think I should not exaggerate if I were to put it at 80 per cent. Dr. Garrod tells me that further experience has confirmed his first impression, and he is disposed to put the figure quite as high as I have stated above. Trousseau¹ has described a "rheumatic sore-throat," evanescent in character, and preceding by a few hours the articular manifestations, but he does not mention tonsillitis among the premonitory symptoms, and his observations have apparently been overlooked by the authors of our text-books on medicine.

In some cases the throat and joints are affected simultaneously; and I have also met with cases of relapse from acute rheumatism where the primary attack and the relapse have both been preceded by throat symptoms. I believe this sequence of events is of too frequent occurrence to be explained on the hypothesis of a merely casual connexion—i. e., that a person having, through a chill, or some other cause, had a "sore-throat," further exposure has brought on an attack of rheumatic fever. Tonsillitis is a very common affection, and in many cases is not followed by rheumatic symptoms. Nevertheless I believe that not unfrequently it is an early manifestation of the rheumatic diathesis, and that by so regarding it we may prevent the further development of that tendency. This sympathy is not limited to rheumatism, for it is a matter of common experience that scarlet fever and measles, diseases which are almost invariably ushered in by severe affections of the throat, are frequently followed by the so-called "rheumatic" affections of the joints; by acute arthritis; and even occasionally by pyæmia.

Mr. Hilton² was of opinion that in these cases some antecedent injury or over-fatigue of the joint had deteriorated its vitality, and that the depressing influence of the disease led to inflammation of the joint, which appeared after the fever had subsided. I think, however, that these affections of the joints following acute fevers are of too common occurrence to be thus accounted for. Bearing in mind the extreme prevalence of valvular affections of the heart, which, as is well known, can in the young be generally traced to fibrinous vegetations having formed on the valves during an attack of rheumatism, it must be admitted that any means which enable us to foresee and possibly ward off a disease causing agonising pain, and often leaving behind it an irreparably damaged heart, are of great value. Sir William Jenner has shown the importance of early treatment in enteric fever, and it is not less important in acute rheumatism. The

cardiac complications usually appear early in the case, and when once the patient has been got to bed the danger from that source is much lessened. I am now so firmly convinced of the truth of these facts that I think far more seriously of seemingly trivial throat affections, and in all such cases advise my patients to be on their guard against the slightest subsequent exposure to cold, and to seek medical advice on the first appearance of pain in the limbs or joints. I believe that in this way I have in two or three cases, by a timely administration of anti-rheumatic remedies, such as the salicylates, succeeded in warding off what might have proved a severe attack of acute rheumatism. One can only speak with great reserve on such a point, as it is impossible to say whether or no an attack was imminent. Hospital out-patient cases are so soon lost sight of, and it is a matter of such difficulty to follow them up, that the opportunities for prophylactic treatment are far fewer than in private practice.

The following are very brief notes of twenty cases of acute rheumatism which have quite recently come under my observation. The first six cases were under the care of Dr. Cayley at the Middlesex Hospital:—

CASE 1.—Thomas C—, aged thirty. Aug. 21st, 1880: Had a sore-throat, so severe that he could scarcely speak.—Sept. 6th: Admitted for acute rheumatism. Tonsils enlarged and mucous membrane of pharynx injected.

CASE 2.—Frederick S—, aged twenty-one. Sept. 24th, 1880: Had sore-throat, pain in swallowing, and coughing. Admitted Oct. 9th for acute rheumatism. Tonsils enlarged, uvula and pharynx injected.

CASE 3.—Eliza J—, aged twenty-four. On August 28th, 1880, had sore-throat and difficulty in swallowing. Admitted September 11th for acute rheumatism.

CASE 4.—Kate L—, aged twenty-one. Had sore-throat, not severe, when pains appeared. Admitted for acute rheumatism on September 20th. During convalescence she had an attack of tonsillitis; no return of rheumatic symptoms before discharge.

CASE 5.—Clara H—, aged seventeen. On September 25th, 1880, had a bad sore-throat, with pain in swallowing. Was admitted for acute rheumatism on October 16th. Tonsils enlarged, and mucous membrane of fauces injected.

CASE 6.—Thomas L—, aged twenty-seven. On October 12th, 1880, had a sore-throat.—Oct. 19th: Admitted for acute rheumatism. Tonsils enlarged, uvula elongated, mucous membrane of pharynx injected.

The four following cases were under the care of Dr. Coupland, in the Middlesex Hospital:—

CASE 7.—August M—, aged thirteen. August 11th, 1880: Attended as out-patient under my care at the Middlesex Hospital for acute tonsillitis.—August 26th: Was admitted for acute rheumatism and endocarditis.

CASE 8.—George S—, aged twenty. Four years ago had acute rheumatism preceded by sore-throat.—Sept. 16th, 1880: Had severe sore-throat.—Sept. 28th: Rheumatic pains with effusion into knees, ankles, and nearly all joints of left hand.—Oct. 2nd: Admitted for acute rheumatism and endocarditis.

CASE 9.—Louisa A—, aged eighteen. Out-patient under my care for some weeks for enlargement of cervical lymphatic glands.—Aug. 28th, 1880: Had an attack of acute tonsillitis.—Sept. 11th: Complained of pains in knees.—Sept. 25th: Admitted for acute rheumatism and endocarditis. Relapse on Oct. 10th, accompanied by fresh attack of tonsillitis.

The following cases have been under my care in the out-patient department:—

CASE 10.—Henry F—, aged thirty-three. Five years ago had acute rheumatism; laid up for a month. Had severe sore-throat a week preceding the attack.—Oct. 9th, 1880: Slight pains in limbs.—Oct. 16th: Had acute tonsillitis, followed in a few days by return of pain.—Oct. 23rd: Complained of severe pain in all his joints.

CASE 11.—George L—, aged fourteen. Whilst out-patient, suffering from bronchitis, had on Oct. 23rd, 1880, a severe attack of acute tonsillitis, followed in three days by pain in nearly all joints.

CASE 12.—Elizabeth A—, aged nineteen. Oct. 7th, 1880: Had acute tonsillitis, with enlargement of glands at angles of jaw on both sides.—Oct. 28th: Came as out-patient. Tonsils enlarged, right shoulder fixed and very painful, pain in limbs and back.

CASE 13.—Walter T—, aged eight. Sept. 7th, 1880: Had a bad sore-throat with pain and difficulty in swallowing.—

¹ Clinical Medicine. Sydenham Soc. Trans., vol. ii., p. 466.

² Lectures on Rest and Pain.

Oct. 2nd: Complains of pains in nearly all joints. Temperature 101·8°. Tonsils enlarged.

CASE 14.—Harriet E—, aged twenty-seven. Oct. 27th, 1880: Had acute tonsillitis, followed in a few days by pains in nearly all her joints.

CASE 15.—Margaret M—, aged fourteen. Aug. 24th, 1880: Had sore-throat and pain in swallowing.—Aug. 28th: Pain in nearly all joints; tonsils inflamed and enlarged.

CASE 16.—Selina C—, aged twenty-eight. Oct. 7th, 1880: Had acute tonsillitis, followed on Oct. 16th by pain in the left shoulder.—Oct. 21st: Complained of severe rheumatic pains in joints. Tonsils enlarged; uvula adherent to left tonsil.

CASE 17.—Dorothy A—, aged twenty-eight. Oct. 17th, 1880: Throat-sore; pain and difficulty in swallowing.—Oct. 22nd: Had acute rheumatism; metacarpo-phalangeal joint of left hand enlarged and painful; left shoulder also painful.

CASE 18.—Bertha N—, aged four. Mother states that she had a sore-throat last summer, followed in one month by pains in her limbs.—Oct. 14th, 1880: Complained of sore-throat.—Oct. 16th: Pain in both arms and in knee-joints.

CASE 19.—Eliz. B—, aged twenty-eight. Had a rigor on Oct. 11th, 1880; on the following day acute inflammation of the tonsils commenced; a few days subsequently pains appeared in the limbs and joints.

CASE 20.—Jane M—, aged forty-two. Sept. 20th, 1880: Had sore-throat, which was better in a few days.—Oct. 14th: Had bad sore-throat.—Oct. 21st: Severe pains in right shoulder and arm. Laid up for ten days subsequently with acute rheumatism.

Clarges-street, Piccadilly.

THE CURE AND CARE OF THE INSANE.

By ROBERT BOYD, M.D., F.R.C.P.,

LATE SUPERINTENDENT OF THE COUNTY SOMERSET ASYLUM.

It is stated, on the authority of Pinel, that the greatest number of recoveries from madness take place in the first month of its duration.¹

My experience for several years in the St. Marylebone Infirmary is in accordance with this statement. It arose in this way. The Hanwell Asylum being full, a proposal was made by the guardians of the poor to the Visitors of Hanwell to exchange chronic for recent cases, to which the Visitors refused to accede. In relation to this matter, the following is from the Report of the Metropolitan Commissioner in Lunacy, page 879:—

“In the Lunatic wards of the Marylebone workhouse there were admitted in the years 1842 and 1843, 190 paupers considered as insane. The overseers being able to obtain admission into the Hanwell Asylum for only 27 of these 190 cases, they therefore ceased to apply for more admissions, and left a note at the asylum, requesting to be informed when any vacancy might occur. The overseers also requested permission of the committee of the Hanwell visiting justices to permit some of their old incurable patients at that asylum to be exchanged for recent curable cases from the Marylebone workhouse. This the Justices refused to do, on the ground that the diet was better at Hanwell than at the workhouse, and that the patients enjoyed more comfort at the County Asylum.

“In reference, then, to the populous parish of St. Marylebone, the magistrates of the Hanwell Asylum refused to exchange old incurable for recent and curable cases. But the professed and indeed main object of a county asylum is, or ought to be, the cure of insanity. The patient who has had the benefit of a trial in the asylum where he has become incurable, should, we submit, give way to the afflicted pauper who is in the workhouse or at home, and is probably curable, and equally entitled to be received at the asylum, where by prompt and proper treatment he might be restored to health and to his family, instead of being permitted to become an incurable lunatic, a source of expense to others, and of suffering to himself. A county asylum is erected for the benefit of the whole county, and is to be considered not merely a place of seclusion or safe custody, but a public hos-

pital for cure. A large number of the patients now at Hanwell derive no substantial advantage from the means of exercise and employment furnished in that asylum, and might be provided for in a separate establishment, thus making room for patients who are susceptible of cure.”

Thus the justices of the Middlesex Asylum cause a disastrous result, adverse to the interests of the insane, and, indeed, to the intention of that asylum; and, moreover, needlessly increase the expenses of the county. In short, the greater part of the recent cases are excluded in favour of the vast number that admit of no benefit from treatment, and, in fact, are merely hopeless incurables only requiring safe custody.

“We have called attention to the state of the County Middlesex with respect to its pauper lunatics, because, although the evils which exist there prevail to a very great extent in other counties, they have risen in the County Middlesex with a rapidity which has not been equalled elsewhere, and to a magnitude which appears to us to require the serious attention of the Legislature.

“The disease of lunacy, it should be observed, is essentially different in its character from other maladies. In a certain proportion of cases the patient neither recovers nor dies, but remains an incurable lunatic, requiring little medical skill in respect to his mental disease, and frequently living many years. A patient in this state requires a place of refuge, but his disease being beyond the reach of medical skill, it is quite evident that he should be removed from asylums instituted for the cure of insanity, in order to make room for others whose cases have not yet become hopeless. If some plan of this sort be not adopted, the asylums admitting paupers will necessarily continue full of incurable patients, and those whose cases still admit of cure will be unable to obtain admission until they become incurable, and the skill and labour of the physician will thus be wasted upon improper objects. The great expense of a lunatic hospital is unnecessary for incurable patients; the medical staff, the number of attendants, the minute classification, and the other requisites of a hospital for the cure of disease, are not required to the same extent. An establishment, therefore, upon a much less expensive scale would be sufficient.”

The noble chairman of the Commissioners in Lunacy and Mr. Proctor, also Dr. Prichard, the highest British authority on insanity, signed this report.

In my report as to lunatics chargeable to the parish of St. Marylebone in 1844, which was published after the usual annual visits to the County Asylum and licensed houses, where there were patients chargeable to the parish, it is stated that “there were in the Hanwell Asylum 79 cases, 35 males and 44 females, belonging to the parish of St. Marylebone. The whole of the males were incurable, with one exception, and that one doubtful; 3 of the females were considered curable, 3 doubtful; the remainder incurable; of these, 22 were so quiet and harmless that they might have been advantageously exchanged for recent cases as they occurred in the parish. Although this subject was brought before the guardians in 1841, and again in 1842, when the application was made to the Visitors of the asylum to sanction the exchange, nothing was done to remedy this growing evil. There was not a case in Hanwell of less than a year's duration, after which, according to statistics, a continuance of the disease may be expected. There were about 40 cases in licensed houses and in the infirmary, many of them of recent date. Relapses of convalescent patients, by the introduction of recent cases into the same ward, were of frequent occurrence in the parochial infirmary, the result of defective means of separation. This objection is not confined to the infirmary, for in the workhouse the want of separation of the epileptics, idiots, and imbeciles from the other paupers is equally manifest, and nearly led to suicide in an imbecile, who assigned as a cause the constant jeering of others in the workhouse yard. In the first half-year of 1844 the number of recent cases in the infirmary was about 20, and 31 patients had been sent to licensed houses. The cases admitted were mostly in the prime of life, often with families, and generally engaged in some active business or trade, the temporary depression of which had occasioned a sudden attack of the mental disease. It will be quite obvious that such comprise the most curable of all cases. This indicates another urgent reason why the best acknowledged means of recovery should be made available; for the issue of each case not only concerns its own social relation (a subject of serious reflection), but affects also, very materially, the economy of the parish funds. Convinced as I am

¹ Prichard's Treatise on Insanity, p. 129. London, 1835.

of the impossibility of the insane poor in this extensive parish ever having the advantage of proper treatment in the early and curable stage of their disorder until an asylum is provided for them, I earnestly entreat your Board to take the matter under your serious consideration."

A country establishment for 200 patients was recommended, and the retirement of the parish from further contributions to the Hanwell Asylum, to which it had already been taxed to the amount of about one-eighth of the whole cost of that institution, which it was then proposed to enlarge. It was found that without an Act of Parliament the separation could not be effected, and the matter was ultimately abandoned.

The statistics of the St. Marylebone Infirmary were published in THE LANCET, December, 1841, and in June, 1842, including upwards of 13,000 cases, and in the *Edinburgh Medical Journal*, No. 156, and several subsequent numbers. The infirmary was then a recognised medical hospital, having a staff of physicians and surgeons from the time of Dr. Hooper, and including Drs. Hope, Lee, Sims, Clendinning, Macreight, and Mayo, the President of the College of Physicians, also Dr. Harrison, a distinguished pupil of Laennec, who gave demonstrations in the wards on the use of the stethoscope. Post-mortem examinations were frequent. Dr. Sims was interested in cerebral diseases, Dr. Clendinning in the weights of the organs, and Dr. Mayo was an authority on mental diseases, and Dr. Chas. J. B. Williams, Professor Gulliver, Mr. Kiernan, and Mr. Hutchinson were also actively prosecuting their well-known pathological researches in the infirmary.

After the passing of the Lunacy Acts in 1845 a licence was obtained for ninety-five patients in wards prepared for their reception, with the approval of the Commissioners in Lunacy, in the workhouse and infirmary, where the recent cases of insanity were successfully treated for several years, the great obstacle to the present treatment, the delay in obtaining certificates, being thus avoided. From the necessary delay and the stringency insisted upon in filling up these obnoxious and unnecessary certificates I have known suicide to occur, the discharge of a patient being ordered owing to an informality in filling up the certificate not having been corrected within the allotted time; and I have known of a homicide from delay in obtaining an order of admission, and saw the patient rational after some years in Broadmoor Asylum, where he was retained until his death.

The certificate of the parish doctor, the entry in the registers of admissions at the asylum, and the signature of the chairman of committee of visiting justices to the registers after seeing the patients, would practically fulfil all that is necessary, without subjecting the unfortunate patient to the cruel delay, in many cases to be strapped down in bed by force, and left with broken ribs, whilst the relieving officer is traversing the country for miles to find a magistrate to have an order signed to take the patient to the asylum under the jurisdiction of the magistrates.

(To be concluded.)

AN EXAMPLE OF THE VALUE OF LISTER'S METHOD IN A PHTHISICAL PATIENT.

By GEORGE THIN, M.D.,

AND

J. KNOWSLEY THORNTON, M.B., C.M.,
SURGEON TO THE SAMARITAN FREE HOSPITAL.

MR. M—, wine merchant, aged twenty-six, consulted Dr. Thin on Nov. 5th, 1879, under the impression that his health was being undermined by syphilis. He had been under treatment for this disease during six months, and taking without intermission small doses of grey powder. There were no symptoms of syphilis, but he had had gonorrhoea, followed by copaiba rash. He was a feeble, sickly-looking man, with a peculiar waxy pallor, and was of a phthisical family. He complained of increasing debility, of cough, and of a fixed pain, situated over the fifth rib. Physical examination showed tenderness on pressure and pleuritic friction round the tender spot. He was also subject to attacks of asthma, which had troubled him for years. Towards the end of the month a slight boggy swelling appeared over the tender rib. A blister was applied, but gave only temporary

relief. The swelling increased, and by Dec. 7th fluctuation was distinct, when Dr. Thin asked Mr. Knowsley Thornton to see the case in consultation. Mr. Thornton made a small incision antiseptically and evacuated a few drachms of thick curdy pus, a probe was passed into the opening and a considerable surface of the rib was found to be bare and rough; the probe passed along the lower border of the rib for nearly two inches, and for this distance the whole face of the rib was denuded of periosteum. A small drainage-tube was inserted, the wound was dressed with gauze, and the discharge at the first dressing, on the second day after the incision, was considerable; after that it became entirely serous. The dressings were changed on the second, sixth, tenth, fourteenth, eighteenth, and twenty-third days after the incision; then once a week till Feb. 23rd, when the drainage-tube was extruded and the wound healed and Mr. Thornton ceased to attend.

Two weeks after the dressings were discontinued the patient complained for a few days of some discomfort—"a drawing like a boil"—in the old place, but it passed off of itself. During this satisfactory progress and termination of the surgical complication, the general condition of the patient had become steadily worse; night sweats and cough were troublesome; and the physical signs indicated advance of tubercular mischief in the right apex. He was much troubled with pains in the bones; sometimes in the ribs, sometimes in the hips, and once in one of the femora. These pains were localised to a spot tender on pressure, but no swelling was ever detected. A painful point generally lasted some days, and sometimes for more than a week.

In April Dr. Thin strongly advised a voyage to Sydney, and the patient arrived there fat and in good health; the bone pains no longer troublesome. Dr. MacLaurin of Sydney, writing on August 2nd, reported that there was "no trace of the necrosis of the rib, and that the affection of the lung was quiescent."

The following are special points of interest in the case:—First, the effect of a prolonged course of small doses of mercury on an already feeble and phthisical subject. Partial necrosis of one rib, and recurrent periosteal pains continuing for many weeks after the use of the drug had been abandoned and a tonic treatment adopted. Second, the complete restoration of the affected rib without exfoliation. This affords a beautiful illustration of the power of nature to repair, if only protection be afforded against fresh irritation. The diseased bone was kept free from all irritation, escape being provided for the discharges preceding and accompanying repair, and perfect asepticity being secured by the use of Lister's method. Had the abscess been opened without antiseptic precautions, prolonged fetid suppuration and exfoliation must have resulted. The immediate risk to the pleura during the early irritative stages of putrefaction would have been considerable, and had these been successfully passed the prolonged suppuration would probably have hastened the tubercle to such an extent as to render his condition too hopeless for the voyage which has proved of such signal benefit to him.

A Mirror
OF

HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium

GREAT NORTHERN HOSPITAL.

INWARD COMPOUND DISLOCATION AT THE ANKLE-JOINT,
WITH FRACTURE.

(Under the care of Mr. GAY.)

For the following notes we are indebted to Mr. Wharry, house-surgeon.

The patient, a young man, aged twenty-one, fell from a scaffolding thirty-five feet high, in a skeleton building, and alighted, as far as it was possible for him to control his fall, on his feet. The results were, first, a comminuted fracture of the left leg about the middle, and, secondly, a compound

inward dislocation at the right ankle, with oblique fracture of the tibia. The joint was very much deformed. The sole of the foot presented itself inwards, as though the whole foot had made almost a quarter of a revolution on its long axis, and there was a large protuberance in place of the malleolus, with a hollow below. On the outer side there was a wound in the integument, through which the external lower end of the fibula protruded to the extent of more than two inches. The bone was denuded of periosteum, but was entire. The lateral ligaments were all torn through, and portions of the peronei muscles were exposed through the rent made by the fibula in the skin. This opening was barely large enough to allow the passage of the bone, so that the edge of the skin was puckered and tucked in behind and below in such a manner that the bone could not be retracted without some help. It is not often easy to study the displacement in these cases, but in this case, after the reduction of the fibula, it was not difficult to do so. The treatment in relation to the fibula was the first point to be considered, and Mr. Gay remarked that where reduction of a protruded bone can be obtained by *enlarging the wound*, he thought it was much better to do so than remove a portion of the bone, unless the question relates to a portion of bone, or bones, as the astragalus, that has been so separated from its connexion as to leave no hope of its retaining or regaining vitality. Mr. Gay made a vertical incision through the skin edge, below the point of the malleolus; but though the bone was easily passed through this opening, it met with resistance at that in the deep fascia. This had therefore to be enlarged in the same direction and to the same extent as that in the integument, when the bone was easily replaced. The nature and extent of the remaining injury could now be ascertained. The end of the tibia had sustained an oblique fracture, which had separated the internal malleolus and almost the whole of its articular surface; and the foot had made partial rotation on its long axis, so that the head of the astragalus was lying partially on its outer side, and had been carried inwards, driving the detached portion of the tibia with the malleolus before it. Mr. Gay could not discover that the astragalus had parted company with the calcis. It was, indeed, apparently Potts' fracture reversed. The reduction, *with the knee-joint flexed*, was easy, and the foot and leg were subsequently placed on a back iron splint with a foot support, and fixed by bandaging. A good dose of opium was given, with the effect of producing sound and salutary sleep. A series of abscesses (three) formed below the periosteum along the spine of the tibia, with a temperature of 105°. These were opened with the effect of a reduction of temperature, and are now discharging healthy pus. In all respects the patient is going on well, with the prospect of having a useful limb, if even the joint should ultimately be stiff.

FISTULA.

Mr. Gay lately operated on two cases of fistula. One in a boy ten years old—a blind track that originally led from the perineal side of the left buttock to a chronic abscess in or adjoining the gluteus, which had almost closed up. It had remained stationary for six years, and still discharged slightly. The opening that remained was found to be of very little depth. Mr. Gay laid it freely open.

Another case was that of a woman aged forty-five, who a month before was seized with symptoms of ischio-rectal abscess. It formed quickly, discharged a large quantity of unhealthy pus, and resulted in fistulous passages, one of which led up behind the sphincter into the rectum, and another—a considerable sinuous passage—which led from it towards the median perineal line, but which turned out to be a cul-de-sac. Mr. Gay cut through the sphincter as usual, remarking that the only unfortunate result to be apprehended in these cases is the occasional permanent loss of power over the sphincter, for which a reason might perhaps be given.

Fortunately it is not often that patients submit to an operation for rectal fistula until some time has elapsed; they find the part does not heal; and this perhaps supplies a reason why the consequence alluded to is comparatively unfrequent. Mr. Gay therefore objects to *early* operations in these cases, and to the use of any other instrument than the knife or sharp scissors; and thinks that, as a rule, they ought not to be resorted to until the walls of the abscess, and as well as of the consequent fistulous track, have assumed a condition of health and a *disposition* to take on a healing process. Unless such a disposition exists in

these parts, the division of the sphincter should not be attempted. It is clear, on reflection, that the *conditions* which *forbid* the healing of such a fistula do not include an *indisposition* on the part of the tissues in which it lies to healthy and reparative activity. These relate simply to the form, it might be, of the sore (the special fistulous track-surface), to the patient's general health, or it may be to the deterrent influences of sphincter activity. At all events, these do not extend to and include the action of the tissues in which the sore is situated. These must be in a sanitary state, and disposed to heal on being released from the operation of those conditions which interpose to prevent their healing, or an operation might be useless. The fistula should be dry, and not unctuous with purulent discharge. Hence Mr. Gay, in these cases, recommends operation being deferred, as a rule, until the sac of the abscess had filled in, and nothing is left but the mere sinuous passage. Operations done before this stage has been reached are those most likely to be followed with fecal incontinence, and this is readily explained by the amount of reparative action that, in the great majority of cases, is required before the parts are in a condition to resume healthy action, embracing a period which is partly occupied by tissue degradation and destruction, preliminary to that of repair, and perchance in part by processes which do not favour that kind of ultimate reunion of the divided textures, including the sphincters, which can alone ensure the restoration of their natural functions.

UNIVERSITY COLLEGE HOSPITAL.

AMPUTATION OF BOTH UPPER LIMBS; RECOVERY.

(Under the care of Mr. GODLEE.)

FOR the notes of the following cases we are indebted to Mr. Stanley Boyd, surgical registrar.

At about 10 P.M., or a little earlier, on the night of June 30th, the patient was crossing a railway line near Willesden Junction; he heard an engine approaching, and suddenly felt fixed to the spot. He became unconscious, and remained so for a time. When he recovered his senses he stated that he got up, and wanted to pick up his coat, which he had been carrying on his arm. He then discovered that he was unable to do so on account of the loss of both his arms. He walked about 250 yards towards the station, then met some friends, who put him in a cab and took him the rest of the way. Tourniquets were at once applied, and he was conveyed to hospital by the next train. At the time of the accident patient was perfectly sober. He was never subject to fits.

At about 11.50 P.M. he walked into the casualty room, assisted by two men. Both arms had been amputated through the upper part of the lower third, the left rather higher than the right. A long narrow strip of skin, which would apparently have reached to the wrist, hung from the left stump. The patient was much excited, but shock not at all marked.

At about 2 A.M. July 1st Mr. Godlee performed a modified circular amputation on each side, saving all skin which seemed likely to live. The bones were sawn near the meeting of upper and middle thirds. On the left side the incision passed through bruised triceps, and the skin seemed a little tight. The patient was a very muscular man. Drainage-tubes were introduced at the outer angles of the wounds, and antiseptic dressings were applied.

He slept well on the first night; ate fish on the second day. On the third full diet was allowed. On the sixth everything was satisfactory, but no firm union had occurred between flaps.

On the evening of the 7th the temperature rose to 100.4° sleep was disturbed, and epistaxis occurred on the following morning, when the temperature was 101°. Circumscribed erythematous patches were found about both knees and other parts.

On the 10th the rash had almost gone, and the temperature had again become normal. Three stitches were removed from the left and one from the right stump, and on the thirteenth day all the stitches were removed, and boracic dressings were substituted for the antiseptic gauze on the left side, the wound being almost healed. Two days

later the same was done for the right, and on the twenty-first day the man was discharged with only a single granulating point about one-eighth of an inch across on right side.

Remarks by Mr. GODLEE.—The case presents two or three points of some interest. It is difficult to understand, in the first place, how it is possible for a train to pass over the arms at the junction of the middle and lower thirds, without causing some injury to the head. In the second place it is worth noticing that with careful antiseptic management, the incision of an amputation may be carried much nearer to the seat of injury than would be at all safe if putrefaction were anticipated. On the left side, for example, the triceps at the point of section was black from extravasated blood, yet the stump healed without the appearance of the slightest blush or the discharge of a drop of pus. Lastly, it offers an interesting problem to the instrument-makers to supply a suitable pair of arms to be of any material service to a strong young man nineteen years of age. It is proposed that he should have a hook on one side, and on the other an arm with an elbow-joint which works stiffly, so that he can shift its position in such a way as to enable him to carry light parcels of varying shapes.

RUPTURE OF CENTRAL PORTION OF EXTENSOR TENDON OF RIGHT THIGH, JUST ABOVE PATELLA, THE LATERAL EXPANSIONS FROM THE VASTI MUSCLES BEING INTACT AND THE KNEE-JOINT UNOPENED.

(Under the care of Mr. Beck.)

The patient, a man of sixty, was going downstairs, lighting his pipe, and had reached the last step, when he fell forwards on both knees on to the landing. As he did so he heard a loud snap, felt no pain, but found that he could not rise on account of something wrong with his right leg. Being set upon his legs he walked to the hospital, keeping the right knee extended and getting off pavements sideways with the right leg first.

When seen he was lying with the right knee fully extended. A slight depression was visible above the patella, causing it to appear unduly prominent. A finger could be pressed on to the condyles of the femur at the depressed point; above the depression was the firm end of the transversely torn tendon; below it, and about one inch distant from the tendon, was the upper edge of the patella. No distinct portion of tendon could be felt on this; but, on the other hand, no scale of bone seemed to have been detached from it. The lateral boundaries of the depression above the patella were formed by the expansions from the vasti to the patella. These were rendered very evident when the patient endeavoured to raise the limb from the bed, keeping the knee extended—an action which he was quite unable to perform. The outer expansion then became a sharp fibrous band—the inner was softer and less prominent. The lower end of the tendon scarcely moved at all in the efforts at extension.

When the knee was flexed over the edge of the bed and the leg hung vertically the patient was able to extend the knee very slightly. He could prevent passive side to side movement of the patella by the vasti muscles.

There was not the least swelling of the knee-joint, no effusion between tendon and patella, no bruising of skin, and no pain or tenderness.

The limb was placed on a back splint, and both it and the body were well raised on inclined planes. There was never any effusion into the knee. Gradually the lower end of the tendon became a little swollen and rounded off, and a firm material filled up the gap to a certain extent, so that the finger could no longer be pressed on to the femur. There remained one-half to three-quarters of an inch separation between the tendon and the patella.

On the twenty-ninth day the patient was discharged, wearing a plaster-of-Paris splint from groin to ankle, and walking with crutches.

The plaster soon rubbed the skin over the patella, and was replaced by a simple back splint.

On the fifty-sixth day this was removed. The depression above the patella was very slight, and its boundaries, given above, were still distinct. The lower end of the rectus tendon was rounded and thickened. The interval between it and the patella was about three-quarters of an inch; apparently there were no adhesions in the knee.

ALNWICK INFIRMARY.

EXTENSIVE LACERATION OF BOTH FOREARMS WITH FRACTURE OF THE BONES; RECOVERY.

(Under the care of Dr. MAIN.)

For the following notes we are indebted to Mr. F. A. McEwen, M.B., resident medical officer.

G. T—, aged six years, was admitted into the infirmary on July 9th, 1880, suffering from extensive laceration of the soft parts of both forearms, with fracture of the bones. On the day before admission he had been in the hayfield, where his father (a farm labourer) was driving a hay-reaper. He had, unseen by his parent, got close behind the knife-board while the machine was in motion, and for some reason had reached over his left hand in front of the knives, and was caught by the middle of the forearm. Before the horses could be pulled up he tried with his right hand to extricate the left, with the result that it also was caught in the same way and frightfully mangled.

On examination it was found that the left forearm was diagonally cut right through in the fleshy part of the upper third, both bones being divided and the forearm all but severed. A rude splint had been bandaged along the outer aspect of the forearm, and the wound had been stitched. The right forearm presented the following appearance:—A large portion of the muscular tissue on the anterior aspect had been torn away in a mass, the ulna was fractured, and the thumb had been amputated besides a part of one finger.

The injured limbs were placed on pillows and the wounds were dressed with carbolic oil (1-20). In two days the stitches in the large wound on the right forearm had to be taken out and the wound gaped considerably.

For the first ten days after admission the pulse stood at 136, and the temperature varied from 99° to 100·2°. There was slight sloughing of the large wound on the right forearm, after which it granulated healthily, and twenty days after the accident that arm could be moved about. On August 15th the left forearm was put up in a starch bandage, the bones having united, and the wound having cicatrised to a considerable extent. The forearm was a little bent on its anterior aspect, and the hand could not be pronated and supinated. Patient was discharged on August 21st, with the promise of two useful arms.

Remarks.—The case was first seen on the spot by Dr. Main, along with the local practitioner who was called in at the time of the accident. It was thought then that double amputation was the only chance of saving the boy's life, though there was naturally an anxious desire to try to save one limb. There was a difficulty in deciding which limb had the better chance, and as the boy's surroundings at home were not at all conducive to success he was admitted into the infirmary. The result was most gratifying.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Osteitis Deformans—Rickets.

THE ordinary meeting of the Pathological Society was held on Tuesday, Dec. 7th, the President, J. Hutchinson, Esq., in the chair. Mr. Treves showed an interesting living specimen of osteitis deformans, and other specimens and cases bearing on the subject of rickets were exhibited. The Debate on Rickets was resumed by Dr. Dickinson, and was chiefly remarkable for a vigorous speech from Sir William Jenner, after which it was again adjourned.

Mr. TREVES brought forward a living specimen of Osteitis Deformans, the subject being a woman, aged forty-eight, whose mother had been crippled with "rheumatism" for six years before her death; with this exception her family had been very healthy and long-lived, and she herself had enjoyed robust health, and had not suffered from rickets or any serious disease. She was the mother of twelve children, the last was born when she was thirty-four years old, was very rickety, and died at two years and two months, four others

died in infancy, and two children, born when she was respectively twenty-eight and thirty-five, showed slight signs of rickets. Five years ago she had aching pains in her legs after standing and walking, quite absent at night; a year later she noticed that the left shin was growing out. She is now so weak that she cannot walk more than half a mile; the left tibia is much bent forwards and slightly out, quite smooth, and not tender; the right tibia less affected. The right femur is bent forwards and out, the left femur is unaltered in shape. There is no œdema. Both ulnæ are prominent, and the right is distinctly bent back. She stoops a little with a bend in the upper dorsal region of the spine, and her friends have noticed that she has grown shorter of late. There are no other bony changes.

The debate on Rickets was then resumed.

Dr. DICKINSON.—I will venture, Sir, in obedience to a request with which you honoured me, to say a few words upon the state of the viscera in Rickets. The enlargement of some of the abdominal organs which occurs with rickets was not very prominently referred to by Dr. Fagge, but I understood him to express an opinion in opening the discussion (I judge by the report of his speech, which I had not the advantage of hearing) that this visceral enlargement was rather an accidental accompaniment of rickets, brought on by similar causes, than properly a part of the disease. I do not hold this opinion, but regard the swelling of the organs just as much a part of rickets as the change in the bones, and believe the two to be closely analogous. This enlargement has attracted the attention of many observers, old and new. Whistler thought that "the obstruction" in the liver and spleen was the first departure from health. We, perhaps, know the condition best from the description of Sir William Jenner in his well-known lectures. I will briefly sketch an outline of the changes as they have come under my own observation. It belongs to the rickety period of childhood; I have notes which show it between the ages of seven months and four years, I daresay the range is actually wider. The spleen, liver, and lymphatic glands become enlarged; the spleen most so, the lymphatic glands least; of these the mesenteric glands show the most decided swelling, the superficial glands, perhaps, becoming shotty to the touch, but without more decided tumefaction. The enlargement of the spleen may be such that the organ fills half the belly, reaching from the ribs to the pelvis, and from the lateral aspect to the median line. All degrees of enlargement up to this are to be found, the lesser being the more common. The liver does not undergo the extreme enlargement which the spleen does, though it is common to find it projecting two or three inches below the ribs. The increase in the viscera is a form of hypertrophy which bears resemblance to that which occurs in the bones. There is no new growth or deposit, only an irregular development of the proper tissues of the organs. The interstitial substance is largely increased, and the epithelial and corpuscular elements somewhat. The portal cellular tissue of the liver is soft, loose, and visibly and measurably magnified, and displayed on the cut surface by a pattern of minute hexagons, one round each lobule. In the spleen the trabecular tissue is similarly increased, so that its threads, which should be in as slender proportion as those of a net, are sometimes as wide as the spaces they enclose. The swollen organs are not materially altered in shape or in smoothness of surface. The Malpighian bodies of the spleen do not undergo the same transformation characteristic of the lardaceous condition, nor do any of the affected structures give the iodine reaction. The rickety enlargement is totally different in all respects from the lardaceous. The earthy salts would seem to be diminished in the viscera as in the bones. I examined a well marked rickety spleen, and found the earthy salts in a given weight reduced by two-thirds as compared with a healthy spleen examined at the same time. I think there can be no reasonable doubt that the swelling of the viscera is as much a part of the rickety condition, and as essentially belongs to it, as that of the bones. It is, however, to be remarked that when the visceral change is most marked that in the bone is seldom extreme, as if its disease exhausted its force in one direction or the other. It is amenable to treatment, though slowly. Under cod-liver oil, iron, and hygienic measures a spleen which touched the pelvis may gather itself up so as to be nearly out of reach of the fingers. The symptoms of this form of organic enlargement are less marked than those of the lardaceous; jaundice and ascites are not known among its results, though when the spleen is greatly affected there may be marked anæmia.

Dr. GEE wished to dwell on one point, apparently a small one, but which he believed to be of great importance. When seeing the out-patients at the Children's Hospital he came to the conclusion that it was very uncommon for rickets to commence after the first year of life, but he was aware that some, as Trousseau, spoke of rickets as sometimes occurring in adult life, and he should be glad to have that question finally answered. Mollities ossium has been spoken of as a rickety change. He had no experience of the disease, but it was so uncommon that it hardly invalidated his view that rickets is really a disease commencing in the first year of life. He had been much struck with M. Parrot's statement—stronger in his printed paper than in his speech—that syphilis is not only a cause, but the cause of rickets. Amongst other objections to this view is the fact that rickets is met with in animals; he was familiar with it in dogs, where, as in the human species, it occurred in the young only. It was, of course, competent for M. Parrot to reply that this was a different disease, but the *onus probandi* of that would rest with him and his followers.

The PRESIDENT, in reference to the subject of mollities ossium that had been raised, handed round the photograph of a skeleton in the Brighton Museum, which he had received from Dr. Ormerod, which displayed the changes in mollities ossium in a very marked degree. The subject had two fractures during birth, and was believed to be rickety in infancy, but grew out of it, and was well till thirty, when mollities ossium developed, and before fifty, the time of death, every bone had become bent, and innumerable fractures had occurred. The subject had had two daughters, who were rickety, one of whom died after the operation of Cæsarean section performed on account of a typically rickety pelvis. He thought this case illustrated some connexion between mollities ossium and rickets.

Dr. NORMAN MOORE first referred to a point in the history of rickets suggested by a reference of Dr. Fagge to Whistler as the discover of rickets; this claim rests only on the assertion of Whistler that he printed a thesis on it in 1645, but there is no trace of this thesis, and in face of the fact that Whistler appropriated to his own use some of the funds of the College of Physicians, his own unsupported statement was of small value. Glisson is known to have been at work on rickets in 1645, and he published his work on it in 1650, a book which marked the dawn of medicine after the darkness of the middle ages. One development of rickets Dr. Moore thought had been overlooked, this was a heaping up of bone at the edge of the vertebral centra, which he had observed in the majority of cases. It is sometimes considerable when the beads on the ribs are small, and it leaves a permanent deformity, which is liable to be confounded with the results of rheumatoid disease. He had calcined in a platinum crucible equal portions of two rickety ribs, and of two healthy ribs, all from children under two years of age, and found the quantity of earthy residue as near as possible the same, so that he was inclined to believe that the quantity of earthy salts in rickety bones was but slightly, if at all, diminished. On May 2nd he examined minutely a child aged five, in whom whooping-cough was commencing; her chest was of normal shape, and she had no symptom of rickets; the cough was severe. On August 13th she had a distinct pigeon breast, and the case answered Dr. Fagge's question as to the necessary association of rickets with this deformity of the chest.

Mr. WARRINGTON HAWARD.—In dissertations and discussions upon rickets it has been usual to lay great stress upon the bone changes which accompany the disease, and this is very natural and proper when it is considered how large a part they play in the disease and in the production of its most obvious symptoms. Dr. H. Fagge, however, pointed out at the onset of his remarks that rickets was a general disease, of which the bone lesions are but a part. I would go further, and say that the bone changes are not always a prominent part of rickets, and that he who looks only for these signs of the disease will fail to recognise some of the most severe cases. It may be useful, therefore, to recall attention to the condition of some of the other organs, especially the muscles and ligaments. Rickets may be described as a special form of debility, the stress of which falls upon the organs of motion—the muscles, ligaments, and bones. A special form of debility because it has concomitants which distinguish it from all others, and make rickets a very definite disease. I allude, of course, to the marked tendency to certain convulsive affections, which is so great as always to bring rickets to our minds if we see

a child who has no marked fever attacked by fits or laryngismus; to the singular sweating about the head and upper part of the body; to the extreme tenderness, and often to the great fatness, of the children, which last symptoms make it less easy to detect what would otherwise be more often noticed—the enlargement of the viscera, and the slight enlargement of the lymphatic glands. With these symptoms are seen certain changes in the apparatus of motion, among which is a notable weakness of the muscles and ligaments. If a child who has walked becomes rickety one of the earliest symptoms is an unsteadiness of gait, soon followed by an inability to walk. The mother says, "The child is taken off its feet." This inability to walk is not because of the changes in the bone, which are probably coincident, but because of the muscular weakness, which shows itself in other ways—e.g., the bowed spine of rickets depends upon the weakness of the spinal muscles, which are not strong enough to keep the spine erect. So the prominent abdomen depends not only upon the visceral enlargements, but on the weakness of the abdominal muscles, which yield to the weight of the viscera they cover. The knock-knee and flatfoot are other instances of muscular weakness; the muscles being weak, undue stress is thrown upon the ligaments, which, being soft, readily yield. But the cases in which the muscular weakness is most marked are those of acute rickets in very young children. A case was related in illustration of this. A child, ten months old, rapidly and almost completely lost the power of moving its extremities. The lower limbs were everted and motionless, the upper limbs occasionally moved in a slow and languid manner. The child was enormously fat. The fontanelle was widely opened and depressed, it sweated profusely about the head and upper part of the body; it was intensely tender, so that it screamed if only gently touched. The spleen was palpable. The upper incisor teeth only were cut. The father was very healthy, the mother fragile, and had had children fast. This was the fourth child, the three others being healthy. Neither of the parents had been rickety. It had been brought up by hand and fed partly on Swiss milk and partly on a patent farinaceous food. Here the muscular weakness was so great as at first sight to simulate infantile paralysis, and the bone lesions were very slightly marked; but a careful examination revealed nodulated ribs and slight enlargement of wrists. It would be interesting to know the microscopical changes of the muscles in such cases of acute rickets. In less severe cases the only changes I have found are that the muscular tissue is pale and ill developed. With regard to the bone changes: doubtless a marked symptom of rickets is the widely open fontanelle and its long delayed ossification. But if we exclude the retarded ossification, I should say the changes of the cranium are usually more of shape than of tissue. The head is flattened at the top, and bulges at the front and sides. But we do not find the remarkable prominences around the fontanelle often associated with cranio-tabes, and which Drs. Lee and Barlow have shown to be often accompanied by marked symptoms of syphilis. Dr. Fagge objected to the observations of Drs. Lees and Barlow that they have been too ready to exclude rickets in their cases because of the absence of beading of the ribs, and that they did not weigh with sufficient minuteness the condition of the epiphyseal line by section of the bones. But it must be remembered that Drs. Barlow and Lees did not merely exclude rickets, but they found syphilis; it was not merely that they found rickets absent, but they found syphilis present in the majority of their cases, and they interpreted the meaning of the cranio-tabes by its concomitants, and gave strong reasons for regarding it as a symptom of syphilis rather than of rickets. So with the long bones. The enlargement of the long bones seen in some cases of inherited syphilis is of a quite different nature to that of rickets, and leads to separation of the epiphyses (of which specimens were shown, to contrast with the ricket changes), and the loss of power in the limbs in these cases is due to inflammation and not to muscular weakness, as in rickets; and the bone changes are associated with a quite different train of symptoms in the two diseases,—so that the cases of rickets and syphilis are quite distinct and separable.

Mr. PARKER considered that one of the most important points to decide was the age at which rickets first begins, and thought a good deal of the pathology depended on this. Was rickets congenital? English authors in the past had, for the most part, answered this question in the negative; but German authors, including Bednár of the Vienna

Foundling Hospital, Dr. Ritter, and Dr. Vogel, had recorded well-marked instances of congenital rickets. Then, if congenital, was rickets hereditary? It seemed difficult any longer to disregard hereditary influence, when one remembered what a large proportion of London children were rickety, and what an influence must be exercised by such parents on their offspring, especially when born under social conditions favourable to the further development of such constitutional peculiarity. Sir William Jenner had drawn especial attention to the influence which unfavourable hygienic causes acting on the mother must exercise on the fetus *in utero*. By congenital rickets he did not mean *fœtal* rickets. He had not seen rickets as ordinarily understood in children under one month, but that was due, perhaps, to the fact that in younger children the rickety manifestation escaped the mother's notice altogether, and never needed medical treatment. He agreed with Dr. Elsässer that cranio-tabes was a sign of rickets, and was found quite independently of syphilis. He could not, therefore, agree with Dr. Lees and Dr. Barlow in the view they had expressed that syphilis was the largest factor in the disease. Neither could he accept M. Parrot's doctrine, that rickets was a late stage of syphilis. He thought it might with greater truth be argued that the rickety lesion in bones predisposed to the syphilitic, in the same way that a blow not unfrequently seemed to develop the tubercular diathesis in a subject in whom it had previously been latent, or even unsuspected. There were points of contact between mollities ossium and rickets which rendered it impossible to ignore them, and he was pleased that the President had introduced that subject into the debate.

Sir WILLIAM JENNER.—Sir, I published three lectures on rickets in 1860, and I have nothing to add to or take away from them this evening, and I can therefore have no objection to any reference being made to those lectures in this debate; indeed, I wish there had been fuller reference to them. Contrary to the views of Dr. Fagge and Dr. Eustace Smith, I see no reason to regard rickets as other than a diathesis. Dr. Smith quotes a passage from Dr. Aitken as a definition of diathesis, and then shows how rickets differs from this definition, but I cannot allow that the question is thereby settled. By a diathesis I mean a certain disposition to disease. The child of an ill-nourished mother is disposed to become rickety when placed under unfavourable circumstances after birth, or even under favourable circumstances in some cases. I do not see how that differs from tuberculosis or scrofulosis—for I still recognise a difference between these—or congenital syphilis. A father acquires syphilis and begets a child with congenital syphilis, a mother gets weak and bears a rickety child; or the parents are tubercular, and their children if in unfavourable circumstances develop tubercle. I know that a word is nothing, but still I think we want a word to group these conditions all together. In reference to pigeon-breast, I would say that it very often arises from other diseases than rickets, but the two varieties are very easily distinguished. In rickets the deformity is due to the softening of the bones which yield at their growing ends and push forward the sternum as a rounded prominence, and the outline of the chest is a double curve. In pigeon-breast from non-rickets causes the yielding of the ribs takes place where there is a natural maximum bend, at their angles, the sternum is pushed straight forward, and the outline of the chest is angular. The tenderness of muscles has been referred to to-night; that is an old observation, and in my lectures I spoke of the tenderness being as great in the abdomen as in the thigh; I could not say more. At that time I examined the muscles in many non-acute cases, but did not find any special and distinct changes. The weakness of the muscles was one argument used years ago against Rokitsansky's view of the mode of production of pigeon-breast. Dr. Fagge has referred to the excretion of excess of uric acid as a possible cause of rickets; in my experience this is a very common condition in children whose health is disturbed, and I imagine it has little bearing on the disease. With reference to the question of syphilis, which is very important, I may observe that twenty years ago I pointed out one strong argument which I believe still holds good. If a person is syphilitic the first child often escapes from the continuance of the influence of the antisyphilitic remedies in the parent, but it is the early children who suffer from syphilis. In rickets, on the contrary, it is the latter ones that suffer, and among the poor, if one child has rickets, all the later ones are rickety. In the upper classes

this is not such an absolute rule, as the mother often ceases to bear children for a time, leaves home, and re-establishes her health before another pregnancy. Another strong argument is, that all of us know persons, whose word we can trust implicitly, who are incapable of deceiving us, who assure us that they never had syphilis, and yet they have rickety children. I could quote several such cases, and, for my part, I hold that syphilis and rickets are quite distinct. Dr. Gee's argument in this matter is very strong, but it is open to M. Parrot to assert that rickets in animals differs from the disease in man. With reference to the cranium, I think it has been stated that the bones of the skull are not much affected. On the contrary, I have found that they are often very seriously affected in rickets, and the change is found in front, often there is quite a depression over the suture between the two frontal eminences, the condition being identical with that in the ends of the long bones. Many rickety children are exceedingly fat, and I do not regard emaciation as due merely to rickets, but to the changes in the internal organs, especially in the lymphatic glands. Similar changes in these glands lead to emaciation in older children. I cannot think that what Dr. Dickinson has stated to-night about the changes in the internal organs explains what one sees. I have seen the liver like glue, and the spleen, when cut into thin slices, transparent, and these appearances cannot be explained by hypertrophy of the cells and fibrous structures of these organs. We see great development of fibrous tissue in cirrhosis of the liver, but the appearances to the naked eye and common lens are totally different from those of the rickety liver. True, it does not absorb iodine, nor does it show the characteristics of the amyloid or lardaceous degeneration of these viscera. I have seen a large number of spleens after ague and various Indian fevers, and the cut surface has not appeared to me identical with the structure of the rickety liver. With regard to the shape of the head, it has been stated by one speaker that if you flatten down the head from the top you get the head of rickets: my observation tells me that while the hydrocephalic head is increased in both its antero-posterior and transverse diameters, the rickety skull is long and narrow, and the forehead is unduly prominent in proportion to the breadth of the head; this is due to the development of much albuminoid substance in the white matter of the anterior lobes of the brain. As to the chemical characters of rickety bones I am no authority, and we have not heard much to-night from others on this part of the question; one speaker has examined two bones—that is not much. But there are two or three points which ought to be referred to; one is the statement of Lehmann, that on boiling rickety bones they do not yield ordinary gelatine, but an animal matter resembling that of malignant bony growths; he observed also an enormous quantity of lime excreted in the urine, even as much as six times the normal amount; such statements are well worthy confirmation or refutation. Is the yielding in cranio-tabes the result of the pressure of the brain or of the pillow? I always thought it was the pillow. I have seen rickets begin in children seven and eight years old.

Dr. BARLOW exhibited a tabetic cranium from a child who died of meningitis, at the age of seven months, the mother was a healthy woman with abundance of good milk, there were no signs of rickets whatever, and the fifth and sixth ribs—those specially liable to beading—were shown, there was no proliferation of the epiphyseal line, and they were quite healthy; if rickets were going to develop it would surely have shown itself by seven months. There was a pretty conclusive evidence of syphilis, and the cranium showed the development of a layer of very fine bony deposit following sinuous lines, as described by M. Parrot. Cranio-tabes is rarely seen earlier than three months, and by that time the early evidences of syphilis—the rash and catarrh—have disappeared, but a child was shown with marked cranio-tabes, who still exhibited a syphilitic rash over the body. In new-born children the bones of the skull are very firm and compact, and the tabetic condition is certainly an acquired one. No doubt many tabetic children become rickety, but his assertion was that very many of them have signs of congenital syphilis at some period; syphilitic children are, perhaps, specially exposed to the influences which produce rickets. There are three factors in the production of cranio-tabes—first, marked softening of the bone; second, weakness in the child; third, the pressure of the brain and the pillow on the softened bone.

Dr. TURNER exhibited anatomical and microscopical specimens of rickety bones.

Dr. DREWITT showed microscopical specimens of rickety bones.

The meeting then adjourned.

MEDICAL SOCIETY OF LONDON.

The Clinical Features of Pleural Effusions.

At the meeting on the 6th instant, F. J. Gant, Esq., President, in the chair—

Dr. DOWSE brought forward two patients suffering from nervous disease, in both of whom the eye symptoms were the most marked of the objective signs. *Case 1.*—A man, aged forty-nine, suffering from locomotor ataxy, who had been in good health with the exception of fulgurant pains up to two years ago. Defective vision and right ptosis came on in July, 1879. There was double optic atrophy, and the other signs of tabes were marked; and there was altered sensation in regions supplied by the fifth nerve. *Case 2.*—A man, aged forty-five, the subject of intra-cranial tumour. Four years ago he first complained of occipital headache and vomiting; there was optic neuritis with commencing atrophy.

Dr. BROADBENT then read a paper upon "Some Points in the Clinical History of Effusion into the Pleural Cavity." He first enumerated and explained the relative importance of the physical signs of pleural effusion, and pointed out that the curved line of dulness was due to the manner in which the lung shrinks around its root, and as the fluid rises the vocal resonance and vibration become exaggerated over that part of the chest-wall where the lung is still in contact. When the cavity is full of fluid the respiratory murmur may be conducted for a short distance across the back from the unaffected lung. Sometimes, however, the lung was prevented from collapsing by adhesions, by consolidation, or congestion; and he believed the persistence of bronchial breathing in such cases was due to imperfect collapse of lung, although the fluid was in large amount. The chief point he wished to urge was that while the ordinary signs of effusion into the pleural cavity—dulness, extinction of vocal fremitus, diminution of vocal resonance, and limitation of bronchial breathing to the region of the root of the lung—show that the lung retreats and shrinks before the fluid, loud tubular breath sounds at the base of the lung posteriorly and over the lateral and anterior aspect of the chest show that the lung has not entirely retreated, but that it retains a certain volume, and is more or less deeply immersed in the fluid. The patency of the bronchi and the partial condensation of the lung favour the transmission of sonorous vibrations. It is in these circumstances that egophony is heard most distinctly and widely—from the thin layer of fluid intercepting some vibrations and transmitting others—conditions which ordinarily exist only in the earlier stages of effusion. In some of these cases there may occur some degree of vocal vibration at a period when the amount of fluid is sufficient to give dulness on percussion over the entire lung. Paracentesis would be of comparatively little value in such conditions, for the quantity of fluid is small, and the consolidation of the lung would persist after its removal; and most cases of this sort get well without resort to paracentesis. In one such case only 30 oz. of fluid could be withdrawn. The conditions are met with in the pleural effusion of renal disease, often accompanied by congestion, and partial consolidation of the lung preventing its collapse; also, in effusions which rapidly became purulent, as in empyema in children. Apart from these cases, the signs indicative of a large congested lung deeply immersed in the fluid are prognostic of rapid absorption, and Dr. Broadbent had seen this now in a sufficient number of instances to enable him to predict with considerable confidence the recovery of the patient without paracentesis and in a comparatively short time. One of the first steps towards recovery is a rather sudden disappearance of the tubular breathing and the substitution of the more ordinary signs of simple effusion; and it is probable that the congested lung has relieved itself by diffusion of serum into the pleural cavity, and that the amount of fluid there is actually increased. In conclusion, Dr. Broadbent stated the rules which guide him in recommending paracentesis. It should be resorted to at once when there is serious con-

tinued or paroxysmal dyspnoea; but in the absence of urgent symptoms a week or ten days may be given after one side of the chest is full, on the chance that absorption may set in, and a longer period still when the lung has not greatly shrunk. Old age, phthisis, or a phthisical tendency, are reasons for early tapping, as also is the existence of disease of the kidneys. The spot for puncture is the eighth space, in a line with the angle of the scapula, and he had come to prefer the common trocar and cannula, with antiseptic precautions to the aspirator. The whole of the fluid should never be removed, or attempted to be. Where the effusion has lasted some time frequent partial emptyings are to be preferred.—Dr. C. T. WILLIAMS referred to a case of pleural effusion with presence of marked bronchial breathing and vocal vibration, and alluded to the valuable aid in diagnosis rendered by the use of a hypodermic syringe.—Dr. DE HAVILLAND HALL mentioned a case of sarcomatous growth filling the pleural sac and collapse of lung, yet with presence of vocal fremitus. In one case he had withdrawn 107 ounces of fluid, and he asked the author as to the amount he would recommend to be withdrawn.—Dr. MUIR asked for information as to other modes of treatment.—Dr. HABERSHON spoke of the various forms of pleural effusion—e.g., in renal and in cardiac disease, secondary to pneumonia or due to primary pleuritis. He recalled a case of Dr. Addison's where a small area of bronchial breathing existed, surrounded by complete dulness and absent breath-sounds. The autopsy revealed a portion of lung adherent to the chest-wall at that spot. He pointed out that many cases recover if left alone. If there were high temperature, hectic fever, and tendency to tubercular disease, and if dyspnoea were present, he would advise paracentesis, especially if empyema were suspected.—Dr. HARE said the physical signs were often misleading, especially in children; the presence of vocal fremitus and respiratory murmur on the affected side was only to be accounted for by conduction from the healthy side, through the compressed lung and fluid.—Dr. WHARRY asked how far vocal fremitus and tubular breathing were indications of the existence of uncollapsed lung in the fluid. He had seen at least one such case where these signs were absent. What were the author's reasons for assuming that exudation took place from the lung into the pleura in certain cases.—Dr. GILBERT SMITH agreed with Dr. Hare as to the difficulty of diagnosis in children. He instanced a case where the lung was wholly collapsed, notwithstanding presence of fremitus and tubular breathing, and asked whether a purulent effusion did not conduct vibrations better than a serous one. He also asked whether the disappearance of these signs would not be better explained by an increase in the effusion and pressure on the lung than by an exudation from the lung itself.—Dr. BROADBENT, in reply, said he had not seen cases of vocal vibration and bronchial breathing with collapsed lung, nor could he explain such. The persistence of vesicular breathing implied the existence of a non-collapsed lung. He did not consider that increase of pressure explained the disappearance of bronchial breathing, for almost invariably improvement quickly followed—ushered in by returning apical resonance. He had not practised injections into the chest in serous effusions, but had frequently and with benefit employed solutions of iodine in cases of empyema. He now preferred to use the simple trocar inserted near the angle of the scapula; this allowed of the withdrawal of the right amount of fluid, while the entrance of air did no harm. If the aspirator were used it was his practice to stop as soon as the patient became distressed or attacked with cough. Eighty-four ounces was the largest amount he had ever drawn off.

ASSOCIATION OF SURGEONS PRACTISING DENTAL SURGERY.

Serous Cysts—Cases of Neuralgia dependent upon Non-erupted Teeth.

ON Wednesday, November 17th, 1880, A. W. N. CATTLIN, Esq., President, in the chair, brought forward a case of two separate Serous Cysts, complicated with an alveolar abscess, all in different parts of the superior maxillary bone, and each unconnected with the antrum. The palate on the right side was enlarged, and the first right upper molar and the right and left upper lateral incisors had been removed.

Over this latter spot were two small openings in the alveolar process through which flowed a clear serous fluid. Prior to the patient's leaving England Sir James Paget was consulted, who considered the case to be one of extremely rare cystic disease, and recommended the immediate extraction of the lateral teeth and further treatment deferred until his return from abroad. The President remarked he did not ever remember having seen a case in which the discharge from the cyst passed by a pulsating movement in jerks as it did on both sides in this particular instance.

Mr. AUGUSTUS WINTERBOTTOM then read a paper "On Cases of Neuralgia dependent upon Non-erupted Teeth," and stated that the diagnosis of the true seat of nerve pain is sometimes attended with extreme difficulty, and often (notwithstanding our utmost endeavours) its real cause remains buried in obscurity. The author then narrated three cases as bearing upon the subject:—Case 1 was that of a young woman, aged twenty-one, suffering from neuralgic paroxysms affecting the left side of the face. On examination a second bicuspid was found carious, which was extracted. The patient was not again seen for a year, when she returned and stated that she had suffered continuously more or less since the operation. A small fistulous opening was discovered in the position lately occupied by the bicuspid, and on probing there was a sinus about one inch and a quarter in depth, with a substance closely resembling dead bone at the bottom. The sequestrum, however, did not appear movable, but an offensive fluid could be pressed out from the antrum. Its solution was attempted, unsuccessfully, by means of sulphuric acid, and at length an operation was imperative. Under ether, Mr. Winterbottom introduced into the sinus a long, narrow-bladed pair of forceps, and succeeded in grasping a small roughened semi-detached fragment, which, on withdrawal, was found to be the partially developed germ of the second premolar tooth. The wound healed rapidly, and the pain did not return. Case 2 was that of a lady, age forty, with persistent neuralgia affecting the left upper jaw. The left upper central incisor, being loose, was extracted and the pain subsided. The patient returned in about eighteen months, having been free from suffering in the interim, but annoyed by a continual discharge proceeding from a small fistulous orifice over where the tooth had been taken out. On probing a piece of apparently carious bone could be detected, seemingly immovable. On dislodgment with strong stump forceps it was found to be a carious upper canine tooth; and the patient recovered her health.—Case 3 was one of greater severity, and demonstrates the fact that removal of the first cause does not always permanently cure the disease. D. B., aged forty, was admitted into St. George's Hospital suffering from intermittent facial neuralgia; and medical treatment failing, he was referred to the author prior to resorting to nerve-stretching. The disease had been active for twelve years, and the patient had to throw up his employment. On examining the mouth nothing abnormal presented itself, the gums being healthy, with the exception of a small fistulous orifice (which required a magnifying mirror to discover), no larger than a pin's-head, over the position of the right central incisor. On pressure a little glairy fluid could be squeezed out; and the sinus, some half an inch long, on probing a smooth round body could be felt. Mr. Winterbottom divided the tissues down to the bone, and excised a small portion of the alveolar process, and grasped what on examination proved to be a partly disorganised canine tooth, lying with its long axis parallel to the lower margin of the jaw. At the end of three weeks he was discharged cured, and for nine months remained free from pain, when his former symptoms recommenced. About a year from the date of his previous admission he re-entered St. George's Hospital, when Mr. Pollock removed a piece of bone from the superior maxilla, comprising that portion corresponding to the interval between the left central and canine teeth inclusive, leaving a chasm in the mouth some one and a half inches long and half an inch wide, with its deeper portion opening up the floor of the nares and interior of the antrum. The excised mass revealed nothing abnormal, and the man's condition was in no way improved. At this stage he again saw the patient and endeavoured to ascertain whether another buried tooth existed, but no resisting material was met with. The next step consisted in an operation for nerve-stretching, performed by Mr. Pollock, who cut down upon the second division of the fifth in the position of its emergence from the upper jaw, and, seizing the main trunk, applied considerable traction. This treat-

ment availed nothing, and the patient returned home in a worse plight than when he set out; Mr. Winterbottom had since been unable to gather any further particulars. In conclusion, the author remarked that often an exciting cause may be overlooked, and its removal, as in Case 3, be insufficient to establish a cure; that, as a rule, he could not too strongly insist upon the necessity of eradicating the source of mischief at the earliest opportunity; that often great difficulty is experienced in determining whether diseased bone or a carious tooth lies at the bottom of the sinus, and that it is sometimes advisable to cut down upon foreign bodies and attempt their extraction, even if not movable. The deductions to be drawn from these cases are, that careful microscopical examination should always be made of the mouth and gums, and that the presence of diseased bone alone does not usually produce persistent neuralgia; that when we find in the mouth a sinus leading down to exposed roughened material (coincident with continually-recurring neuralgic paroxysms), our suspicion should be aroused, and that it is our duty to cut down upon and investigate the true state of affairs.—The PRESIDENT, on behalf of the Fellows, thanked Mr. Winterbottom for his instructive paper, and stated that in these cases he always used and preferred trephines (of various sizes) to cutting forceps. A discussion ensued, in which Mr. Hamilton Cartwright, Mr. Edgelow, Mr. E. Bartlett, Mr. Keene, &c., took part.

Reviews and Notices of Books.

Croonian Lectures on some Points in the Pathology and Treatment of Typhoid Fever. By WILLIAM CAYLEY, M.D., F.R.C.P. London: J. & A. Churchill. 1880.

THOSE who attended these lectures when they were delivered will be glad of the opportunity given for a perusal of the many suggestive facts and reasonings which they comprise. Dr. Cayley has constituted himself the champion of the cold-bath treatment of typhoid fever. He is almost the first among modern English physicians to advocate this treatment in the thorough and systematic manner in which it is carried out by Brand of Stettin and many others abroad; and the whole drift of his argument tends in this one direction: that by the use of antipyretic measures (of which none is more reliable or certain in its action than the cold bath), a very palpable effect is produced in lessening the mortality from typhoid fever. The distinction which he draws between the primary fever following upon the taking in of the poison and the secondary fever due to the processes of intestinal ulceration and sloughing is one of the main arguments in favour of the early adoption of these measures, and he claims to show that the good effects of such treatment are better marked, and success more certain, when the febrile process is controlled almost from the beginning. So far as statistics go, and with due allowance for fallacies, it would certainly seem that the adoption of such measures has lowered the rate of mortality; but in order to get the best results it is necessary that every case should be submitted to the treatment, for no one can predict at its onset whether a case of typhoid fever will be severe or not. It seems hard to accept this, knowing that from past experience at least 80 per cent. of the cases of typhoid fever will recover under careful nursing, diet, and "expectant" treatment; but if it be true that at least a further 10 per cent., if not more, will be rescued from death, there should be no shrinking from the employment of a method, however irksome in its application, that leads to such a result. As to the dangers of the treatment itself, these seem to be comparatively few. Chronic pulmonary and cardiac diseases contra-indicate the method; so also does intestinal hæmorrhage—not, Dr. Cayley thinks, because the application of cold causes increased vascular turgescence of the abdominal organs, but because of the absolute

necessity for complete repose to favour the arrest of the hæmorrhage.

The lectures, however, are not limited to this one subject of treatment, although that forms the main topic to which the others lead up, but they detail valuable facts in the etiology and pathology of the disease, and place the whole subject in so clear a light that they will have a permanent value for reasons other than those involving the advocacy of a particular line of treatment.

General Paralysis of the Insane. By WM. JULIUS MICKLE, M.D., M.R.C.P. London: H. K. Lewis. 1880.

THE elucidation of the true nature of the morbid conditions resulting in "general paralysis of the insane" has long been attempted by writers on mental pathology. The subject is one of the most difficult in medicine; the views propounded have been most varied; the lesions described most numerous. To collate all that has been written on the subject, and to combine therewith the fruits of his own experience, has been the effort of the author of this book. As a solid contribution to the subject, the book is one of considerable value; but it is far too heavily laden with doctrines which have long been abandoned to be serviceable; and the author's style is not attractive in itself. It testifies to a profound acquaintance with the literature of the subject, and will be mainly valued as a work of reference. Nothing seems to have escaped his observation, and in the chapters on symptomatology, etiology, diagnosis, and morbid anatomy, the facts that he has accumulated are detailed with a degree of care that is at once commendable and painful. The book, however, is not intended for the student; and the very features which would render it unsuitable for him will make it more acceptable to the mental physician.

Space will only permit us to state briefly the views to which the writer has been led upon the pathology of this disease. It is primarily (in the majority of cases at least) an affection of the cerebral cortex, the meninges being more or less involved at the same time. In many cases the morbid change is partial at first, in others it is more widely diffused, and the parietal and frontal regions chiefly suffer. The change affects the nerve-cells; it underlies their functional derangement and exhaustion; and in so far as it involves those elements which are most concerned in mental operations, and those which have to do with motor and sensory functions, so in proportion do mental, motor, or sensory derangement follow. This, in brief, is the sum and substance of a long argument filling several pages. No doubt there is a definite and special lesion underlying the phenomena of general paralysis, but these phenomena are so varied and complicated, involving, too, the most as well as the least complex of the cerebral functions, that a satisfactory pathological interpretation is a matter surrounded by the greatest difficulty. It would be desirable, doubtless, to introduce a system of classification and nomenclature whereby the different forms of this disease could be more clearly differentiated. This may be possible some day; and the data contributed by Dr. Mickle will be found of service to whomsoever undertakes the task; and when this is done for general paralysis a great step in advance, as regards the pathology of insanity in general, will be made, for in its manifestations this complex disease reproduces the characters of many of the forms of insanity. Dr. Mickle pushes the theory of cerebral localisation to its extreme limits, applying it to account for mental disorder as for motor; and in so doing he has given an impetus to inquiry [which may result in great gain to knowledge.

The volume concludes with full notes of several cases illustrative of the various forms of the disorder.

Conspectus of Organic Materia Medica and Pharmacal Botany. By L. E. SAYRE, Ph.G. Detroit: George S. Davis. 1880.

THE present time is scarcely opportune for the appearance of a work, intended for medical students, which deals only with the botanical and pharmaceutical relations of organic drugs. It is not, indeed, too late. Botany and commercial pharmacy still constitute subjects on which the student has to exhibit a knowledge in his professional examinations, and to which, therefore, he has to devote a portion of his too scanty time, acquiring at infinite pains an acquaintance with botanical facts and with commercial characteristics of raw samples, which, as Dr. Michael Foster said in his address at Cambridge, "might admirably qualify him for a situation as buyer to a wholesale drug-house." But signs are to be discerned that a change is not far distant. On all sides is heard a protest against useless knowledge acquired at pains which are only equalled by the ease with which the knowledge is lost. Into the mind of the student of average capacity there can only be packed, in a limited time, a limited number of facts, and the unessential knowledge displaces that which is important. The changing conditions of practice are fast removing all practical reason for retaining, among the subjects of compulsory study, the facts which constitute the subject of the work before us. When the motive of practical utility is gone, the retention of these subjects cannot be justified on the ground of the mental training which they afford. This is equally and better furnished by other subjects, which cannot be dispensed with. It is true that these objections to such a treatise are of less weight in the country in which it is published than here. The business of the chemist and the doctor is less widely separated in America than in England, at least if we are to judge by the appearance of a journal which we lately noticed, which is intended to be a common organ for druggists and physicians. In this country a treatise on such a limited subject may be useful to the student of pharmacy, but scarcely to the student of medicine.

A "conspectus" is always a more or less uninteresting work, suitable for reference rather than for perusal. This quality may reasonably be expected to be specially marked in a work which deals only with the driest of dry subjects. Such an expectation is not falsified by the work before us. Written throughout in a terse and condensed style, while even abbreviations are employed to economise space, it comprehends only an outline of the bare facts of botany and the chemistry of drugs. It commences with a chart of the materia medica which is obtained from the organic world. Here, in successive columns, are described the natural order, officinal name, botanical name, common name, habitat, part used, constituents, medical properties, dose, and officinal preparations of each drug. The seventh of these columns includes the only facts of direct medical interest contained in the work. We have next a table of the geographical grouping of the organic materia medica. The facts given in this table are probably entirely useless for practical, and even for examinational, purposes; for we trust that no examiner is yet, or will be, so cruel as to expect a candidate in medicine or pharmacy to enumerate all the drugs which come from the shores of the Mediterranean or from Central America. The next chapter is occupied by a brief outline of structural botany, too condensed to be of service, by an explanation of various botanical terms, and by an outline of the various natural orders. The rest, and chief part, of the volume is occupied by an account of the characteristics, constituents, adulterations, &c., of the various drugs of organic origin. These are arranged, not according to the natural orders from which they are derived, or according to their action, but according

to the part of the plant from which they are obtained. Thus we have successive descriptions of those which are obtained from roots, rhizomes, tubers, bulbs, stems, wood barks, leaves, herbs, flowers, &c. Hence jalap and aconite, turmeric and ginger, mustard and Calabar bean, lemon-peel and pomegranate bark, colocynth and capsicum, are severally described in juxtaposition, and opium is classed with india-rubber and gutta-percha. On the other hand, forty pages intervene between the descriptions of the leaves and root of aconite. It is evident that a work on such a plan can be useful to druggists only, and not very useful to them. A conception of the character of the information given may be gained from an extract. We take, at random, that of *Pilocarpus*, which is described under the section "Leaves," subsection "Nearly sessile, lance oblong, retuse, base unequal."

"*Pilocarpus pinnatifolius*—Jaborandi leaves are nearly sessile, pinnate with a terminal leaflet, general outline ovate. The leaflets, which are from two to five in number, joined at the axis by short petioles, are uneven at the base, about two inches in length, lance-oblong in outline, apex marginate or retuse, veins quite prominent, always parallel near the margin, and unite near the apex, covered with oil-cell; coriaceous, aromatic. *Pilocarpia*, an alkaloid, and a vol. oil are its constituents."

But although the general scope and style of the work render it scarcely suitable for medical students, the design is executed with care and precision. The descriptions of plants and of drugs and their adulterations, although not fuller than is to be found in most standard text-books of materia medica, are accurate as far as they go. The work is well printed, and we can only regret that so much care and pains have been bestowed on a work which must be of limited utility.

OUR LIBRARY TABLE.

Ringworm: its Diagnosis and Treatment. By ALDER SMITH, M.B. (Lond.), F.R.C.S., Resident Medical Officer, Christ's Hospital. London: H. K. Lewis. 1880.—This little book, which is a reprint with many additions of the excellent observations contributed by Mr. Smith some little time back to the columns of THE LANCET, deserves to meet with wide acceptance at the hands of those members of the profession who from time to time have to treat cases of ringworm. It does not profess to be an elaborate treatise on vegetable parasitic diseases, but it is a short, thoroughly practical, and sound exposition of the diagnosis and treatment of the several kinds of common ringworm, with especial reference to ringworm of the head (*Tinea tonsurans*). On this subject Mr. Alder Smith is peculiarly able to speak from his large experience amongst the candidates for admission to Christ's Hospital, and such experience has taught him, and in this all who have had much to do with ringworm must agree, that a very great number of medical men, from one cause and another, fail to make themselves thoroughly acquainted with the method of growth of the fungus and its consequences, and so do not appreciate sufficiently the desirability of an early treatment and the extreme difficulty in curing chronic cases, and that they are, more or less, in the dark as to when a case is really cured. It surely ought to be the duty of every medical man to be thoroughly acquainted with an affection so common amongst young children of all classes, and so apparently trivial, yet so productive of worry and annoyance, and we can cordially recommend the guidance offered by Mr. Smith. A special feature of the work is the advocacy of an undoubtedly effective plan of treatment for *very small inveterate patches of chronic ringworm*. This consists in the artificial production of kerion, chiefly by means of the careful application of croton oil, a remedy much favoured in France, but rather

for the production of pustules around the hair-follicles than real kerion. The class of cases in which this treatment is desirable, and explicit directions for carrying it out, are described with great clearness and care. A further useful plan for eradicating the diseased hairs in "disseminated ringworm" is suggested—viz., the thrusting of a gold needle dipped in the croton oil into the follicle itself. The concluding chapter on Ringworm in Schools, including the questions of "certificates" and "isolation," ought to be of great value, coming from one in Mr. Smith's position. In any future edition we should be glad to see discussed the management of that not uncommon and troublesome class of cases in which ringworm flourishes over a head attacked by eczema or seborrhœa.

Clinica Oftalmologica del Dr. PEDRO F. ROBERTS. pp. 282. Buenos Ayres: Coni. 1880.—Dr. Roberts's clinic is conducted for the present in the Hospital de Mujeres, and in the course of the year 1879, 582 new patients were under treatment, with 25,550 attendances and 102 operations. The number of the affections of the orbit and lacrymal apparatus treated amounted to 31; of the eyelids to 74; of the conjunctiva 273, of which no less than 83 were cases of trachoma; of the cornea 211; of the iris 21; of the sclerotic, choroid, and vitreous humour 16; of the optic nerve and retina 11; of the lens, including cataract, 15; of strabismus 9; of the whole eye 6; of amblyopia from alcohol 2; ciliary neuralgia 1; and of errors of refraction 15. Besides these Dr. Roberts gives the numbers seen in his own private clinic, the total of which was 411, with 64 operations. Dr. Roberts states that he has made much use of jaborandi as a means of producing sweating in acute iritis, in some cases employing its active agent, pilocarpin. The dose in which this was employed was ten drops of a solution containing forty centigrammes of pilocarpin chlorhydrate dissolved in twenty grammes of water. In the course of three minutes the patient begins to experience a sensation of heat in the skin; the forehead then becomes moist, and sweating soon becomes general, with abundant discharge of saliva. It sometimes produced a sensation of tenesmus, and a painful feeling in the perineum. He finds scrofula a very common affection in Buenos Ayres, as elsewhere. His cases of cataract he treats with the linear incision and iridectomy, and he seems to have obtained fairly good results. He has practised with success the operation of canthoplasty in several cases of granular lids. A considerable portion of the book is occupied with a series of lectures, giving a general account of ophthalmic diseases and their relation to medicine. We hope that next year Dr. Roberts will find both his public and private clinic increased in numbers, and that we will be able to give an equally good account of his cases.

Elements of Astronomy. By ROB. S. BALL, LL.D., F.R.S. pp. 459. Longmans. 1880.—The editing of the Text-books of Science of Messrs. Macmillan has been committed to very good hands, as the "Electricity and Magnetism" of Professor Jenkins, the "Theory of Heat" by J. C. Maxwell, and the "Structural and Physiological Botany" by Thorne, amongst others, testify. The first chapter of the work is devoted to a consideration of the instruments employed in astronomy, without going more deeply into their construction than any ordinary reader can easily follow. The earth is then briefly described, with the diurnal motion of the heavens, and the means at the disposal of the astronomer for determining it. The several luminaries are successively described, as the sun, moon, planets, comets and meteors, stars and nebulae. The last chapter treats of "Astronomical Constants." Many of the facts mentioned are very interesting. Amongst others, the following may be mentioned:—The heat from the moon has been found to be equal to one-third of a candle

placed at a distance of 4.75 metres, and by Lord Rosse to be the same as if its surface were at a temperature of 360° F. = 182° C. The mean distance of the earth from the sun, as concluded from the observations of the transit of Venus made by the astronomers sent out in 1874 by the British Government, is 93,300,000. From this the diameter of the sun may be calculated to be 860,000 miles, or about 110 times the diameter, or 1,330,000 times the volume, of the earth. The spectroscopic characters of the sun's rays are discussed. The work is illustrated by a large number of diagrams and sketches. Those of the spots on the sun are particularly well executed.

The Mouth and the Teeth. By J. W. WHITE, M.D., D.D.S.—This little work is one of a series of health primers edited by Dr. Keen of Philadelphia. The author deals with the subject of which he treats in a simple and popular style. His book cannot, as we assume it does not pretend to be, a scientific work upon diseases of the mouth and teeth, and consequently we are disinclined to criticise its pages. But as it has been brought prominently before us, we feel compelled to caution the student against trusting to such an imperfect treatise as a guide to practice. The book, however, contains some good advice as to the care and preservation of the teeth in childhood and adult life. Had the author confined his attention almost exclusively to the subject matter of the seventh and eleventh chapters of his book (the former treating "Of the Care of the Temporary Teeth," and the latter "Of the Food in its Relation to the Teeth") and regarded his remarks as being addressed to nursing women, we might probably have been able to write in approval of his labours.

Cottage Hospitals. By H. C. BURDETT. Second Edition. London: J. & A. Churchill. 1880.—The benevolent founders of village hospitals are very often entirely ignorant of the principles upon which such institutions should be constructed and managed. Mr. Burdett's book contains a mass of information, statistical, financial, architectural, and hygienic, which has already proved of great practical utility to those interested in cottage hospitals, and we can confidently recommend this second edition to all who are in search of the kind of information which it contains. The chapter which touches upon hospital mortality is, we believe, entirely misleading, and we could wish it had been omitted, for so difficult a subject is manifestly beyond the province of one who is not a member of the medical profession. Chapter 15, which gives plans and details of some of the best cottage hospitals, is perhaps the most useful in the book, and should be carefully studied.

London Smoke and Fog. By FREDERICK EDWARDS, jun. London: Longmans. 1880.—This little pamphlet about the "burning question" of the hour is written in a lively style, and the author criticises, not without justice, many of the grates and stoves which have of late been introduced to public attention. The grate which the author recommends is provided with a brick bottom, perforated, not solid. He further provides a valve in the chimney, which can be worked by a handle over the mantelpiece, to regulate the draught. There is further an arrangement, similar to that in Galton's grate, for admitting heated fresh air into the room.

A STRANGE OUTRAGE.—The following paragraph appeared in *The Echo* of the 8th inst. A gentleman, named Rosslyn, residing at Reigate, Surrey, having sent a servant who was ill to the hospital to be nursed, incurred the indignation of a number of roughs, some twenty of whom surrounded his house late at night, broke several windows, and did other damage, causing great alarm. The men left in a noisy and riotous manner, threatening to repeat the outrage. The affair has created considerable indignation.

THE LANCET.

LONDON: SATURDAY, DECEMBER 11, 1880.

In the *Gazette* of the 3rd inst. a Royal Warrant was published, establishing rules for the future promotion, relative rank, and allowances of the officers of the Indian Medical Service. These have now been assimilated to those in force in the Army Medical Department, and thus one of the just causes of complaint to which we recently called attention (*THE LANCET*, October 2nd) has been removed. Among the benefits conferred by the Warrant is the institution of the grade of Brigade Surgeon; and to remove any feeling of injustice arising from the delay which has occurred in the promulgation of this measure, it is ordered "that the promotions to the rank of Brigade Surgeon, made in the first instance under this our Warrant, shall have effect from the 27th of November, 1879." By this clause the Surgeons-Major, who would have been promoted with those of the Army Medical Department, had the Warrant been extended in the first instance to the Indian Medical Service, will regain the position on the seniority list to which they would then have been entitled. The invidious distinction of keeping the Surgeon-Major of twenty years' service in the position of *junior* Lieutenant-Colonel has been abolished, and he will henceforth take relative rank according to the date of his commission, with the single reservation that he cannot sit as *president* of a court-martial, an exception existing also in the Army Medical Department. The Surgeon is also to have the relative rank of Captain, according to the date of his commission; and a step of honorary rank to medical officers on retirement is sanctioned after twenty years' service instead of after twenty-five, as under the late regulations. All promotions from the rank of Surgeon-Major to that of Brigade Surgeon, from that of Brigade Surgeon to Deputy Surgeon-General, and from the latter to Surgeon-General, "shall be given by selection for ability and merit," and in the case of the two senior grades the grounds of selection are to be stated in writing and recorded in the office of the Secretary of State for India in Council. This definition of the manner in which promotions are to be made appears to us to prevent the possibility of the recurrence of the promotion of a Surgeon-Major to be Surgeon-General, overstepping the intermediate grade, a proceeding which recently gave rise to much, and we are bound to say justifiable, discontent.

The Warrant further introduces into the Indian Service the regulation now in force in the Army Medical Department, of compulsory retirement of Surgeons-Major and Brigade Surgeons at the age of fifty-five, and of Deputy Surgeons-General and Surgeons-General at the age of sixty. But in the case of executive officers who entered the service before January 13th, 1860, and who have not been promoted to the administrative grade before reaching the age of fifty-five, power is given to retain them in the service for three years more on their perfect competency and fitness being

certified to the satisfaction of the Secretary of State for India.

We congratulate the Indian Medical Officers upon the promulgation of this Warrant. There are still some grievances which call for redress, such as the examination of surgeons for promotion, the time spent on sick leave at home not being allowed to count for retirement, and the inadequate rates of retired pay, but these are not of a nature to have been included in the new Warrant. They will require careful consideration on the part of the Indian authorities, and will, we have no doubt, receive due attention from the Marquis of RIPON. The steps already taken by the Government may be accepted as evidence of their intention to act in a liberal spirit towards this important branch of the service, and to remove, as far as in them lies, all just causes of complaint.

THE Warrant regulating the appointment, promotion, and retirement of the medical officers of the Household Troops, which was understood to be ready in May last, but the issue of which was for some reason suspended, has at last been promulgated. It provides, as might have been anticipated, that the medical officers may be borne on the establishment as regimental officers, and that the grades, the relative rank, and the rates of pay, temporary half-pay, and non-effective pay shall be the same as laid down by the Warrant of 1879 for the Army Medical Department. The promotion is to be by seniority in the medical establishment of the brigades of cavalry and infantry respectively, without limit as to length of service, but only on a vacancy occurring in the senior ranks. To meet the case of surgeons who may complete fifteen years' service before such an event occurs a special rate of pay of 17s. 6d. per diem is granted them until promoted. The nomination of medical officers will remain, as at present, in the hands of the colonels of the regiments, but must be made either from the successful candidates at the army competitive examination, from those nominated by the Secretary of State under the provisions of the Warrant of 1879, or from surgeons already serving in the army; all surgeons thus nominated must have passed through the course of instruction at Netley before being gazetted. In the case of officers transferred from the Army Medical Department, the seniority in the brigade for promotion will be reckoned from the date of being gazetted to the regiment. Exchanges with army medical officers are to be permitted, provided that in the case of those above the rank of surgeon the conditions as to foreign service required by the Warrant of 1879 have been complied with. There is nothing special laid down in the Warrant as to brigade surgeons, but in the Secretary of State's instructions it is stated that "the brigade surgeon of the brigade of Guards will be an executive officer, though available for administrative charge." We infer from this that the senior surgeon-major of the Guards will be promoted to be brigade surgeon, and will be considered the head of the Guards' medical officers, and the recognised adviser in all professional matters of the general commanding the brigade. The Warrant appears to have been well considered, and removes in a satisfactory manner those grievances to which we lately called attention (*THE LANCET*, May 22nd and June 12th), while it at the same time affords an opportunity of establishing within the brigade itself an efficient supervision in sanitary matters.

WE are within a month of the meeting of Parliament for the "despatch of business," and it is of great consequence to the medical profession, and still more to the public, to know whether this comprehensive expression is to include the settlement of long-pending questions connected with the efficiency of the medical art. There are many who talk as if Parliament had nothing else to do than to discuss the troubles of Ireland, and to devote an occasional evening to the sins of Turkey and the unfulfilled clauses of the Berlin treaty. People who talk so are guilty of the greatest disparagement of Parliamentary work, which has to do primarily with everything affecting the security of life. Care for the efficiency of the medical profession is one of the prime duties of the State, inasmuch as such efficiency has the most obvious bearings on the mitigation of human suffering and the protection of human life. It has been shown before a Select Committee of the House of Commons that some of the principal examining bodies of the country—in virtue of possessing whose diplomas men practise in all branches of the medical profession—do not examine men at all, or examine them very inadequately, in one or two of the great departments of medical duty. It has also been shown that large numbers of men who commence the study of medicine never succeed in entering the profession, and that many of those who do enter do so only after one or more failures. Much proof has been adduced that this unsatisfactory state of matters is largely due to the inefficiency of the General Medical Council, which has shown itself more tender towards the pecuniary interests of the numerous corporations of which it is principally composed, than to the medical students whose education it was meant to supervise and to improve. These facts have been more or less admitted by two Governments and two Parliaments, and by the Medical Council itself, and they are matters of universal belief in the medical profession.

The question is, What is to be done? Some say, Nothing. The wish is father to the thought. Corporations that notoriously think themselves perfect see no justification for change. Half diplomas have existed from time immemorial. Half diplomas require two Corporations, with two sets of officers and two sets of fees. Why should one examining body do its work thoroughly, when by half doing it excuse can be found for two? What does the medical profession exist for but to keep up its Corporations and to magnify the men who manage the affairs of these ancient bodies, and look after their interests in the General Medical Council? If such arguments prevail with the present Government it will be the first instance in history in which a Government whose boast it is to adapt institutions to the times, and so to preserve them, has refused to effect a reform indicated alike by those who demand it and by those who oppose it. The Government has an opportunity of passing a measure which will really benefit the public and be approved by two-thirds of the medical profession. It is inconceivable that if this fact is clearly brought home to the Government it should hesitate to reappoint the Select Committee and complete the investigation already so far advanced. One thing is certain. The Government must not excuse itself from initiating medical legislation by alleging any serious want of unanimity in the medical profession. Barring the Corporations, or a few of them, whose opposi-

tion is always forthcoming, and, indeed, to be expected, the profession is most harmonious in demanding the abolition of half diplomas, of competition in medical licensing examinations, and the reform of the General Medical Council, by which it shall have more will and more power to initiate and carry out improvements in the medical schools and in the Medical Register. Even the Scotch Universities, which have shown, as we think, unnecessary and unworthy fear of medical legislation, have made proposals which show that they will not finally stand in the way of a great measure of reform if it be brought on earnestly by a strong Government. They have expressed their willingness to have examiners appointed by the Conjoint Board on the Medical Council, associated with their own examiners, or to have it enacted that candidates for their degrees shall not be licensed till they have passed the examination in clinical subjects of the Conjoint or State Boards which it is proposed to appoint. This question touches England much more largely than Scotland, inasmuch as we want 15,000 practitioners in England, and have little help from English universities, whereas in Scotland there are less than 2000, and the majority of Scotch students are educated in the Scottish universities. But the concessions above referred to are enough, with a distinguished representative of the Scotch Universities in the Government, to justify us in concluding that terms can become to with them. Under these circumstances the medical profession will be disappointed, and will blame the Government, if another session passes over without such an amendment of the Medical Act as will abolish for ever half diplomas, and create a Medical Council that the profession and the public can respect.

NURSING is not a craft; still less can it be regarded as a profession. There are specialties in cooking and other departments of domestic work; and there may, therefore, be professed cooks, and waiters, and housemaids, and washerwomen; but there ought to be no specialty in nursing, and there can be nothing professional in the work. The sole qualifications required for tending the sick are kindness, gentleness, and quiet cheerfulness of manner, patience, physical strength, a light and dexterous hand, and the sort of intelligence which renders it easy to take in ideas of work quickly, and to pick up ways of doing what has to be done in a cleanly fashion and decently. For the rest, the nurse ought to be the servant of the doctor, and should carry out his instructions.

If our younger brethren do not themselves know how to direct the making and application of poultices, the snipping and dressing of blisters and bedsores; if they are unacquainted with the details of bandaging, of bathing and changing their patients,—they have not mastered one of the most important branches of their profession. When an engineer commences the study of his business, he works in the pattern-shop and perfects his knowledge of the practical parts of his profession before he essays the higher branches; so that in after-years he not only directs but supervises, and if occasion needed he could with his own hands do what he requires from those who serve under him. We of the medical profession adopt a different course. We begin at the top, and as it is not pleasant working downwards, it too

often happens that the physician who has never been a general practitioner, and the surgeon who has "shirked" as much as possible of his dressing, can *only direct*, and must depend on the assistance of a "professed nurse" for the carrying out of his remedial *intentions*. Instead of knowing, from having himself handled, every rope in the ship, he is a quarter-deck seaman, who can shout scientific orders through a speaking-trumpet, but could not himself execute one of them properly even at a pinch. It may seem rough on our profession to write thus plainly, but it is the truth we are telling, and a little plain speaking now and again can harm no one, and may perchance do some good. The fact is, the practical training of physicians and surgeons, to which we have alluded, lies at the root of the supposed, or rather the assumed, need for "professed nurses."

The "trained nurse"—that is, the woman trained to nursing as a specialty—is an anomaly. Every scrap of information she possesses beyond the mere routine service of sick-tending is not merely useless, but mischievous. It is almost sure to be brought to bear on the patient, to the injury of the case and the disadvantage of the medical attendant. A trained nurse is a half-educated woman, who has acquired just enough knowledge to make her dangerous. The sick person is regaled with reminiscences of other "cases" attended by the trained nurse, *with this or that* physician or surgeon. She is the chief and the prominent figure in the pictures painted for the edification of the patient and the friends. The "doctor" occupies a subordinate place, and is changeful. Sometimes it is one, and sometimes another practitioner, and the nurse does not scruple to state her preference, which is generally for the medical attendant who most defers to her judgment and leaves the patient practically in her hands. She has no scruple in forming an "opinion" of the case, and little, if any, hesitation in expressing it. In reply to the very natural question, "What do you think, nurse?" she delivers her dictum as a skilled authority, and both patient and friends are much impressed by what she has to say on the subject. Not a few of these intruders into the sick chamber employ their own methods, and even administer their own remedies. The sick are wholly at their mercy. They are trusted and obeyed because they are "trained nurses." The medical profession is keeping up and extending this evil by recognising the trained nurse. The policy adopted is opposed alike to the best interests of the sick and of the profession. If practitioners either lack the knowledge or the inclination to give personal and explicit directions for the "nursing" of their cases, they must at least understand that by entrusting the duty to trained nurses they are jeopardising the lives or the health of the patients who confide in them, and sacrificing their proper professional influence.

The remedy for this state of matters is simple, but we fear it will rarely be found easy to carry it into effect. The more independent and *experienced* of practitioners should set their faces against the employment of "nursing helps" and "professed nurses" who lay claim to any special knowledge or *profess* to have studied nursing as a craft. The "sisterhoods" are, in fact, organisations for the propagation of special religious views, and to extend the influence of particular ecclesiastical schools and systems.] The sick chamber

seems to them a "field" or "vineyard" for this work. They cannot so easily get into private families or hospitals as by assuming the *rôle* of nurses, and with them the end justifies the means. We must take it for granted that no self-respecting medical practitioner would aid in this underhanded mission by recommending the employment of a member of any sisterhood except in a family of her own way of thinking. There is no lack of respectable women who are not professional, and who are well qualified and willing to obey implicitly the instructions of the medical attendant. It would be well if the names of such persons were duly recorded in the Visiting List for 1881, so that no embarrassing need for a nurse should compel the practitioner to fall back—as often happens—on the aid of a "professed nurse" in the emergency. Another matter of interest to which we are anxious to call attention is the expediency of employing male attendants for male patients. It is a mistake to suppose that women are necessarily the only good nurses. In the opinion of some persons who claim to be judges of the question, they are neither so quiet, so self-possessed, so precise, nor so strong as men. It is alleged that no man who has been nursed by a gentle-handed male servant would desire, in any subsequent illness, to be attended by a female. It is said that whatever element of the female character or influence is desired in the sick-chamber, can be best contributed by the presence of a mother, a wife, or a sister. When the circumstances exclude these forms of the luxury it can seldom be a necessary. If the employment of men to nurse men were encouraged a great difficulty would be surmounted, and a good social reform begun. The whole subject is one of pressing interest, and the hints we have now thrown out are intended to state the question rather than to discuss it. There is urgent need to uproot growing prejudices, and to amend grave errors and misconceptions to which special circumstances have given rise.

IN a recent epidemic of relapsing fever at Königsberg Dr. LUCHHAU has investigated the frequency of ear and eye complications. Since no less than three hundred cases were treated in the town hospital, the field for observation was unusually favourable. Only one hundred and eighty cases were specially examined as to the existence of ear complications, and these were found in fifteen only, and in all the middle ear was the part affected. In most cases there was suppuration, and the pus was evacuated through the tympanic membrane. In most cases of disease of the middle ear in acute maladies the inflammation appears to arise by extension from the throat; but it was found that, in relapsing fever, pharyngeal catarrh is absent, as a rule, in the cases in which the middle ear suffers, and there was no evidence of disease of the Eustachian tubes. The prognosis is not unfavourable if prompt treatment is adopted.

Only six cases presented eye symptoms out of the hundred and eighty examined (3½ per cent.) In three there was iritis, which was unilateral in every case. All these cases did well. In one case, however, some weeks later the patient complained of failure of sight, and opacities were discovered in the vitreous. In two other cases optic neuritis occurred. In one the affection was discovered in the first relapse. The second relapse was severe, and some time afterwards there was atrophy of the optic nerves, and vision was reduced to $\frac{1}{16}$.

In the other case the neuritis also occurred during the second febrile attack; a few days after it had ceased the swelling of the optic papilla was discovered, dirty-red in colour, with arteries narrowed, and veins distended and somewhat tortuous. Vision was reduced to $\frac{1}{2}$ in one eye and $\frac{1}{3}$ in the other. Another patient came into the hospital during the first relapse with iritis and hypopion. The ocular trouble healed completely, but after the relapse the patient insisted on leaving the hospital, and passed through the second relapse at home, under very unfavourable conditions. When it was over he returned to the hospital with double iridocyclitis. Numerous thick flakes were seen in the vitreous, the fundus was very indistinct, but the papillæ were seen to be red and swollen, and there were numerous retinal hemorrhages. The account of these cases is published in the October number of Virchow's *Archiv*.

THE Registrar-General of Jamaica has somewhat recently issued a report upon the vital statistics of that island for the period from 1st April, 1878 (the date on which civil registration commenced) to 30th September, 1879. This report, which is the first that has been published for Jamaica, is on that account the more interesting. It is, however, to be seriously regretted that the report was not made up to the end of the year, in order that future reports might relate to the natural year; reports for other and irregular periods being to a considerable extent useless for comparative purposes. One of the most interesting features in the report is that which deals with certification of causes of death in the island, and the information which is furnished bearing upon the number and proportion of medical practitioners. It appears that in only 1608 of the 13,011 deaths registered in Jamaica during the year ending September, 1879, was the cause certified by registered medical practitioners; in 9565 cases the cause was supplied by the person registering the death; and in the remaining 1838 cases no satisfactory cause was assigned. This large proportion of uncertified causes of death is in great measure attributed to the difficulties of travelling, which prevent the general attendance of the sick by medical men, but the Registrar-General calls attention to the fact that in some of the chief towns, where skilled aid is at hand, there is also a marked excess of uncertified causes of death. At Morant Bay so many as 304 out of 339, at Port Antonio 89 out of 102, at Annotto Bay 224 out of 242, at Chapelton 232 out of 253, at Lucea 233 out of 269, and at Montego Bay 263 out of 283 were uncertified. Even in Kingston itself 46 per cent. of the deaths registered during the year under notice were "non-medically attended cases"; it is, however, noted with satisfaction that during the seven months ending April last this proportion declined steadily from 40.1 to 18.4 per cent. It is, however, beyond doubt that the medical profession is very inadequately represented in the island, and that a large accession to their numbers must be made before medical aid is brought within the reach of all classes. The report states that there are in Jamaica 66 registered medical practitioners, or one to every eight or nine thousand of the population. In Kingston there is a medical man to each 3000 inhabitants, while in the remainder of the island exclusive of Kingston there is but one medical man to more than 11,000 persons. It may be stated that according to the last issue of the Medical

Register the proportion of medical practitioners in the United Kingdom averaged one to every 1532 persons. More than twenty-five years ago, the scarcity of medical men in Jamaica was the subject of an elaborate report drawn up by the Central Board of Health, the result of which was the establishment of the dispensary system, with provision for the establishment of district medical men. It is now, however, proposed to extend the dispensary system, and the subject of a further supply of medical aid throughout the island is under further serious consideration.

Annotations.

"Ne quid nimis."

THE YORK-ROAD LYING-IN INSTITUTION.

FOR some time this institution has been passing through a severe crisis. We have forbore to discuss the personal questions raised, as we cherished the hope that ultimately the troubles which beset the management might be surmounted. It is now, happily, possible to believe that this desired consummation has been reached. The lately vexed question has been settled, and two good men have been appointed to fill the responsible posts of physicians. Dr. John Williams and Dr. F. W. Champneys have been elected unanimously. We hail the selection of these gentlemen as a promise of good management in the future. They are men of high repute among their brethren, and the interests of the hospital and of the profession are safe in their keeping. We heartily wish them success.

MEDICAL "INDULGENCES."

IT is amusing to notice how, as the season of festivity approaches, the advertising columns of the newspapers, and more particularly of those essentially modern luxuries the illustrated Christmas annuals, teem with testimonials to the efficacy of divers remedies for the effects of excessive indulgence in "the pleasures of the table." It seems as if the main body of the nation—men, women, and children—must needs consume the largest possible quantities of the delicacies of the season, and the art of the drug-compounder is taxed to provide what may be described as "indulgences." It is not the church that grows rich at this Christian festival, but the vendors of curiously devised potions having, or at least claiming to have, virtues available for the cancelling of debts contracted with Nature in the shape of indigestion, gastric disturbances, bilious fevers, and the like, entailed by over-eating and too free drinking. This is a very silly business. Why cannot people be sensible in their enjoyments? If plum-pudding disagrees with them, why, in the name of common-sense, do they eat it? If punch, heavy wines, and spirituous beverages upset the system, how comes it to pass that "the season" is held to excuse the folly of taking these things and daring the consequences? It is too much to expect that any English household will have the moral courage to dine without a plum-pudding on Christmas-day, nor is it to be desired that any should do so, but the conventional dish might at least be made digestible. It is not necessary to stint the proportion of sound fruit in the concoction. The way to render the mass less injurious than it is wont to be to the consumer is to boil it longer and to leave out of the composition some of the more hard and irritating ingredients—for example, the lumps of candied peel that no amount of boiling will soften; and to make and serve it without the ale, spirits, and rich sauces which, however appetising, are not essential, and probably do the worst of the stomach-disturbing and blood-heating.

Then, again, as to beverages, surely there might be a little more than common caution observed in imbibing unaccustomed drinks and regaling children with liquors which do not form part of their ordinary diet, and are essentially exciting. It is a wrong practice to injure the health at Christmas, trusting to the aid of remedies at once nauseous and debilitating for the relief which, it is foreseen, will be surely needed afterwards. It may seem strange to write thus, but there are considerable sections of the community among whom there is a steadily growing demand for these medical indulgences.

SUFFICIENT ASYLUM-ACCOMMODATION FOR LUNATICS.

THE mania—for such it must assuredly be—which impels the justices of counties to persevere in the chase of that will-o'-the-wisp “sufficient asylum-accommodation for lunatics,” is still one of the most noticeable evidences of the alleged “increase of lunacy.” It does not seem to occur to the justices of any one county that it might be worth while to try the experiment of establishing a small hospital in each district, through which all occurring cases should be passed, remaining not longer than six months, before adding these fresh units to the ever-accumulating population of registered lunatics. This plan of procedure has been again and again recommended, and we venture to predict that it would lead to a saving of thirty per cent. in the total expenditure for the maintenance of lunatics in any county where it was properly tried. The essential conditions are that the hospital should not contain more than three hundred beds, that it should be worked as a hospital in every respect, receiving only “recent cases” being supplied with every convenience and appliance for the cure of insanity, that it should be served by nurses, male and female, instead of “asylum attendants,” versed in every trick of their trade, and that the establishment should be under the direct and responsible management of a medical committee composed not exclusively of specialists, but including general physicians and surgeons, as well for the purposes of administrative control as the direct treatment of the inmates. Let this plan, which was strongly urged by our Commission in 1876, be adopted experimentally, and we can have no doubt of the beneficial result. It is a simple waste of public funds to go on building huge asylums which are refuges and nothing more.

THE SURGICAL AID SOCIETY.

THE annual meeting of the Surgical Aid Society was held on the 3rd instant, under the kindly auspices of the Lord Mayor, who evidently does not wish to judge severely any of the institutions of the country, from the House of Lords down to the Surgical Aid Society, which, however, is by no means the worst institution in the country, and would be a very valuable one indeed if surgical aid were not a necessary instead of being a mere luxury. The committee resent the criticisms that are constantly passed on them on account of their regulation requiring a number of letters, expressing in money value the cost of the particular appliance needed. It can be easily understood that this is a very irksome rule to persons who, with ruptures, or with the loss of one leg or of two legs—as in an instance quoted a few days ago—are greatly disabled for travelling over London to get the requisite number of letters. So great was this scandal that the Hospital Sunday Fund has had to go somewhat out of its way to do the work of the Surgical Aid Society in a more direct and easy manner, to the great delight of all cripples. The Surgical Aid Society think the charges against them sufficiently answered by saying that they have given their surgeons and secretary discretion to deal promptly with urgent cases, without waiting for the full complement of letters. Having done this much in the direction

of public opinion, they proposed somewhat warmly to decline any further “communication with the parties referred to.” At the instigation of the Lord Mayor these words were left out of the resolution expressing the confidence of the society in the administration by the committee—wisely, because “the parties referred to” are pretty synonymous with the public. We sincerely hope that the Surgical Aid Society will come to the conference arranged to be held in the spirit of the Lord Mayor, and of willingness to make such changes in its rules as common sense and humanity dictate.

THE WEATHER.

ALTHOUGH snow has been eliminated from the paraphernalia of an English Christmas, so effectually that even in the annuals snow scenes are sketched as in Russia or Canada, it must not be assumed that the weather is wholly unseasonable. We are just now subjected to a process even more trying than the ordeal by cold. On the whole, the temperature is warm, but the atmosphere, in London at least, is enervating. The weakly are tempted to run risks of exposure and fatigue, which may by and by produce a startling crop of evil consequences. It is not a gracious task or a thankful duty to prophesy disappointment and disasters, but we greatly fear that after this spell of “green weather” has past there will be more than the customary amount of heavy sickness, of an exhaustive type, in the community, and more especially in families and among individuals who, counting themselves healthy and the weather exceptionally genial, have not observed the usual precautions either as to the amount of exercise they take, the food they consume, or the avoidance of unduly late hours, and reckless exposure.

PUBLIC CONVENIENCES.

A REQUIREMENT which has long been felt by London pedestrians, especially those of the female sex, has been attempted to be supplied by a company formed for the purpose of providing public lavatories and retiring-rooms. The census of 1871 showed that some 300,000 women were engaged in pursuits which involved the necessity of being much out of doors. To this number, now largely increased, must be added those who, for purposes of shopping or of recreation, are frequently, and sometimes for considerable periods, away from home. To such the accommodation offered by the chalet supplied by the company referred to will often be most welcome. It is described as a light and handsome structure in wood, iron, or brick, of Swiss rustic style, and will include lavatory, retiring-rooms and other needed conveniences. There are obvious difficulties in the way of carrying out with efficiency a plan to meet the want indicated above, and previous attempts have resulted in failure, but it is absurd to suppose that the idea is impracticable.

THE HEALTH OF THE VICEROY.

WE trust repeated statements that the Marquis of Ripon is ailing first with “fever,” then with “sunstroke,” do not portend serious illness. He has thrown himself into his work with more than common energy, and it is quite possible that, relying on a robust constitution, his vigorous will may impel him to a course of action which must needs be hazardous. Even strong men require to observe moderation in their expenditure of brain and nerve force in India. It will be a cause of sincere regret in England if Lord Ripon, for whom we all feel much respect, and from whose official work in India we expect great and permanent results, should endanger his success by unwise zeal and too great enterprise. It would be better far to put the drag on a little than to risk a breakdown at this conjuncture.

ALLEGED POISONING BY CHLORODYNE.

THE death of Thomas Pash, aged sixty, of Oxley-street, Bermondsey, with all the symptoms of narcotic poisoning, after taking several doses from a bottle marked "Dr. J. Collis Browne's Chlorodyne," and the verdict of the jury of "Death by misadventure from an overdose of chlorodyne," open a very important question. Chlorodyne, it is alleged, contains morphia in very large quantities (according to Dr. Browning some varieties contain as much as ten grains to the ounce !), and yet it is not included under the provisions of the Poisons Act, and is sold indiscriminately to the public with the pseudo-guarantee of safety and value which the Government stamps afford. The infant mortality, directly or indirectly, due to so-called "soothing remedies" is probably enormous, and no one can say how many adults owe their death to the ignorant use of patent narcotic remedies. Now that we have a Public Prosecutor such questions certainly ought not to be allowed to rest, and we should hope that the sale of any of the articles mentioned in the Poisons Act, without compliance with the terms of the Act, will be looked upon as a contravention of the Act, and be punished accordingly. This vending of secret preparations is a condition of things which calls for instant remedy, and the only remedy, we believe, is to absolutely disallow the sale of any articles of consumption (whether dietetic or therapeutic), the composition of which is not fully and accurately stated on the bottle or packet.

RABIES.

A *RABID* retriever (according to the *Leeds Mercury*) committed terrible ravages in the neighbourhood of Leeds a few days ago, in the early morning when people were going to work. It was still dark, and the movements of the dog could not be well distinguished; most of those bitten were attacked unawares. The animal approached one man from behind, jumped up to the back of his head, but failing to get a hold there it sprang at him a second time and seized him by the thigh. The dog then rushed on, snapping and biting everyone whom it approached. One man was walking down the street when the dog rushed at him from behind with such violence as to throw him on his face, and in that position commenced to worry him, and the poor fellow was severely bitten on his legs before he could make his escape. One man obtained a bar of hot iron with which to kill the dog; but while he hesitated to strike, being in doubt as to whether it was the same animal, the dog rushed at him, and bit him severely in the finger and thumb. At least twenty persons had been bitten when a policeman, who had been pursuing the dog, attacked it with his staff, and ultimately succeeded in killing it with a poker. During the last month the borough police captured in Leeds no fewer than 287 stray dogs.

PULMONARY REFLEXES.

ACCORDING to Dr. Sommerbrodt of Breslau every increase of the intra-bronchial pressure, in loud speaking, singing, cough, exertion, or the inhalation of compressed air, causes stimulation of sensory nerves of the lung. From this there results a reflex depression of the vaso-motor nerves, shown in a diminution of the vascular tone, dilatation of the vessels, and fall in the blood-pressure. There is also a reflex depression of the cardiac inhibitory nerve, which is the cause of the increased frequency of action of the heart. Both these effects lead to an increase in the rapidity of the blood-current, and a consequent increase in the secretion of urine. The effect of these reflex actions is to over-compensate for the obstruction to the circulation which the increased intra-pulmonary pressure causes, and to provide an increased supply of oxygen, &c., to the muscles which

are in functional activity, and also to the central nervous organs. The stimulation of these nerves will, moreover, alter the rhythm of the heart's action. Knoll found that in animals increased arterial pressure was capable of causing a retardation in the action of the heart, and a bigeminal pulse; according to Sommerbrodt, the same effects are demonstrable in man.

SEA-WATER BATHING IN LONDON.

ONE of our humorous contemporaries a few days ago depicted a London backyard arranged with all the appliances of a sea-coast bathing station barring the beach and the sea, and the family, accurately appraised in bathing-costumes, going gravely through the various procedures of bathing according to their taste and fancy, while paterfamilias, enjoying himself with the rest, was further rejoicing in the fact he need no longer take his family to the sea, but that the sea by a much less costly process was being brought to him. The burlesque threatens to become in some sort a truth, for notice has been given of a Bill being brought before Parliament for the incorporation of a company to bring sea-water in pipes, &c., from Lancing, in Sussex, to Victoria-street, Westminster, with branches that will admit of its distribution in many parts of London.

SECONDARY MUSCULAR CONTRACTION.

ACCORDING to M. Ch. Richet, if the fresh muscle of a crayfish is taken and extended by a slight weight, and the muscle is then stimulated for one or two seconds by strong and frequent induction currents, the muscle relaxes as soon as the stimulation ceases. But this relaxation is not final. After some seconds, although there is no fresh stimulation, the muscle contracts afresh, and returns more or less completely to its previous tetanic contraction. This lasts nearly half a minute, and at the end of one or two minutes it is finally and completely relaxed. In favourable cases it may be noted that this secondary contraction comes on by successive rhythmical and progressive waves. It does not occur if the stimulation has been slight, if the muscle is fatigued, or if the weight is too great. It is probable that this secondary contraction always occurs, but cannot be registered unless it is of a certain degree of intensity. It explains how it is that successive stimulation renders the muscle more and more sensitive.

ON December 5th, 1880, Mr. Hughes, of Plymouth, amputated at the right hip-joint in a girl, aged seven, for extensive disease of the head and shaft of the femur. The girl could ill afford to lose any blood, as the disease had existed for eighteen months, and her urine was albuminous. Dr. A. H. Bampton, house-surgeon to the South Devon and East Cornwall Hospital, controlled the hæmorrhage with the greatest ease by means of Davy's lever; only three ounces of blood were lost, principally venous, and what was necessary to enable the operator to see where the arteries were. The operation was not performed under the spray, on account of the sinuses. The abdominal aortic tourniquet was quite inapplicable in the present case. Mr. Jackson, F.R.C.S., and Mr. Edlin assisted. The girl is progressing favourably.

IN consequence of the general and strong feeling among the friends of Mr. G. D. Pollock that the occasion of his retirement from the position of Senior Surgeon to St. George's Hospital is an appropriate opportunity for some public recognition of his eminence in the profession and the kindness and rectitude of his character, a meeting of Mr. Pollock's colleagues and some other friends has been held, at which it was decided to call a public meeting, the date of which will shortly be announced for the furtherance of this object.

AT the final meeting of the Dublin Mansion House Relief Committee, held last Tuesday, a resolution was adopted that a grant of £150 each be made to the families of Drs. Donovan and Robinson, of Skibbereen, and Greely, of Oranmore, who died of fever in the discharge of their duty as dispensary medical officers. We understand that Mr. Gladstone has recently forwarded £150 from the Royal Bounty Fund to the family of Dr. O'Donovan, and £250 to the family of Dr. Robinson.

A SERIOUS defect in the construction of the building of the Woodford Convalescent Home has come to light. Owing to some accident connected with the pipes, dry-rot has, it seems, gone far to destroy the beams supporting some of the ceilings. The timely discovery of the damage done, the repair of which will involve considerable expense, has probably averted a terrible calamity. The home shelters nearly 160 patients.

A COMPLETE return of the collections for the Dublin Hospital Sunday Fund has not yet been issued, but from the amount already acknowledged, a considerable falling off may be expected as compared with the preceding year. The depression in trade and the land agitation are causes, however, which will sufficiently explain decrease in the sums to be distributed among the Dublin Hospitals on this occasion.

At a meeting of the members of the Brixton Medical Book Society, held on Friday, Dec. 3rd, it was unanimously resolved:—"That this meeting desires to express its sympathy with Dr. Habershon and Mr. J. Cooper Forster in their retirement from their positions on the staff of Guy's Hospital, and their appreciation of the self-sacrifice which they have shown in support of the dignity of their profession."

At a large and representative meeting of the students of Queen's College, Cork, the following resolution, we learn, was unanimously adopted:—"That we, the students of Queen's College, Cork, do hereby express our disapproval of the conduct of Dr. Charles in requesting medical students of Dublin University to withdraw from the dissecting room, which they had been invited to visit by the Cork medical students."

THE death of Mr. Robert Thomas, L.S.A., medical officer of health for Rawdon, is announced in the local papers. The deceased was seventy years of age, and had been a great part of the night of Dec. 1st in attendance on a patient. In the morning his housekeeper found him sitting in a chair in his surgery quite dead.

WE learn that Dr. S. O'Sullivan, of Cork, has been appointed by the Government to the vacant Chair of Surgery in Queen's College, Cork. Dr. O'Sullivan is a graduate in Medicine and Surgery of the Queen's University in Ireland, and the appointment made is one which may be regarded with satisfaction.

A CASE of some importance was decided this week in the Oldham County Court. Dr. Thomson sued a party for professional attendance. The judge, looking at the bill, observed that no items were furnished, and, in consequence, allowed only one-half of the amount claimed.

At a meeting of the Medical Society of the College of Physicians in Ireland held last week, a resolution of condolence with the family of the late Dr. Hudson was adopted. Dr. Hudson was an honorary member and ex-president of the society.

It is stated that Dr. Grimshaw, Registrar-General for Ireland, recently received a letter threatening his life unless he dismissed a gardener whom he employed, and that he is now under police protection.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Gravesend.—Dr. J. H. Gramshaw's report on the health of Gravesend for the year 1879 shows an exceedingly healthy condition of the 24,000 inhabitants who are estimated to have occupied this highly favoured locality, "dear to the hearts of vagrant Londoners, during the period in question. The death-rate for the year barely exceeded 15 per 1000 of the population, and only five deaths from diarrhoea occurred in the twelve months, a remarkable falling off in the mortality of this disease, which Dr. Gramshaw attributes to the efficient sanitary administration which now obtains in the place. "Those who remember the town ten years ago," he says, "must readily bear witness to the improvements which have taken place, not only in the main streets, but in those close, ill-paved, and badly-ventilated purlieus where disease always abounded." The town also now possesses an abundance of pure water, that its refuse is more efficiently removed, and that it is more systematically cleansed. If it were only systematically drained and freed from the stinks from heaps of London manure brought into its vicinity for the convenience of farmers, Gravesend, according to Dr. Gramshaw's account, need not blush even if it were next door neighbour to Hygeiaopolis.

Islington.—In his report for 1879, as medical officer of health for this metropolitan district, Dr. Meymott Tidy has happily little more to do than present a formal statement of its healthiness, as measured by the mortality. The death-rate for the year is estimated at 19.1 per 1000 population—a death-rate not varying from that of the previous year. Measles was the principal epidemic during the year, 219 deaths from this disease being recorded; while small-pox, "more or less prevalent throughout London," caused only 7 deaths. But on these deaths Dr. Tidy observes:—"Although it is true the deaths recorded in the table from small-pox are few, nevertheless it is important to bear in mind that the prevalence or not of small-pox in any given district cannot be accurately gauged by the mortality alone. And the reason of this is obvious—viz., that it is the one disease where so soon as it makes its appearance patients of the poorer, and even middle classes, are removed to hospitals. Thus a parish may apparently be, so far as death returns indicate, actually free from the disease, whilst all the time patients are being removed to the various hospitals fitted for their reception. No more important sanitary question can occupy the minds of our legislators at the present time than the paramount necessity of not only registering deaths, but of registering cases of sickness as well. It is the absence of this information that makes sanitary work difficult; and the public cry of the neglect of sanitary authorities most often means that they do not possess the necessary information on which they can act, because our laws have given them no power to obtain it. And, in illustration of this, the hiding up of local outbreaks of infectious disease affords the best possible illustration."

Whitechapel.—Mr. John Liddle's report for the quarter ending Oct. 2nd shows that in his district the weekly average of births was 45.3 and of deaths 42.7, as compared with 50.6 and 40.9 in the corresponding quarter of the previous year. The deaths of children under one year of age formed 24.8 per cent. of the total mortality. Differing from most medical officers of health, Mr. Liddle expresses an opinion that the discrimination of typhus from typhoid fever is of less importance in sanitary than in medical practice. He holds, moreover, that the privies in the poorer neighbourhoods of Whitechapel should be provided only with pans and traps, and should be flushed by hand—that is, by pails of water thrown into the pans once or twice a day. He objects to fixed apparatus for flushing (service cisterns, &c.) on account of

the destructiveness of the people in the poorer neighbourhoods; but he says nothing of the sort of inspection required to keep the paucers reasonably clean with a system of hand-flushing, although elsewhere such a system has been found an unmitigated evil unless regularly supervised by the sanitary authority.

THE HEALTH OF NORTH ORMESBY.

At a recent meeting of the Ormesby Local Board, the medical officer of health, Dr. Sleightholme, presented a special report on the health of the place, in which he formally contradicted several statements prejudicial to it which had lately gained currency. He observed that these statements were entirely without foundation, and said that the mean annual death-rate of Ormesby during the last six years had been 19·5 per 1000 population, and during the last four years 16·7. Typhoid fever, once common in the district, is now a very rare disease. He concluded his report by the following summary statement:—"1st. That during the four years ending December 31st, 1879, the sanitary state of the district was highly satisfactory and the death-rate very low. 2nd. That in the present year, and in the last two months of the past year, a severe epidemic of scarlatina has been present in the district, and that this epidemic ceased early in September. 3rd. That there are no circumstances in the district which would induce me to think that in the next four years the mortality of the district will be above that of the four years immediately preceding the present year."

COMPULSORY NOTIFICATION OF INFECTIOUS DISEASES IN DUBLIN.

A number of medical gentlemen interested in this subject had a conference with the Lord Mayor and Corporation of Dublin on the 2nd inst. The matter had been previously before the Town Council, who had a difference of opinion as to whether the notification should be given by the householder or by the medical attendant. The Council of the Dublin Branch of the British Medical Association, who initiated the project, wished that the duty of declaring that an infectious disease existed in a household should not be thrown on the medical attendant but on the householder; but from the discussion which took place last week at the Town Hall, it is evident that the majority of the speakers consider that if the compulsory notification of infectious diseases is to be thoroughly successful it must be carried out by the practitioner in attendance, and not left to the head of the family where the contagious disease exists. A deputation from the Corporation of Dublin had an interview with the Chief Secretary on Wednesday, the 8th inst., on this subject.

THE HEALTH OF PRESTON.

"Why should it be that the proportion of infant deaths in Preston is nearly double that of a town like Oldham? What is there inimical to young life in the domiciliary arrangements and surroundings of Preston which causes 700 or 800 infants to die here in a year, who, if they had the luck to be born in Oldham, would not die?" So questions the *Preston Guardian*, and we think that we may safely promise our contemporary that if he will institute an inquiry, by a commission appointed for the purpose, into the intimate sanitary state of the town, and into the doings of the sanitary authority for a few years back, he will soon obtain a clue to the difficulties which now perturb it. If, moreover, he would give the report of such a commission freely and frankly to the public he would confer an incalculable benefit on the town.

A CONFUSED LOCAL AUTHORITY.

The District Board of Works of Woolwich is evidently under the impression that it rests with itself to appoint or not appoint a medical officer of health, or to use the Poor-law medical officers to do medical officers of health's duties, or to impose those duties on its inspectors of nuisances or other sanitary officials. Its doubt as to the law of the matter is an indication of its confusion with regard to the functions to be exercised by the several sanitary officers. If this be the condition of things at Woolwich with regard to so comparatively a simple matter as to the appointment and duties of officers, what must be the state of sanitary administration in the place?

INFECTIOUS DISEASE HOSPITAL PROVISION AT SALFORD.

It would appear from a recent report of the Corporation of Salford that they have made provision, partly in the borough and partly with the fever hospital belonging to the Manchester Royal Infirmary, for accommodation for no less than 220 patients suffering from infectious disease, the population of the borough being under 200,000. This is an admirable example to have set. The hospital within the borough, known as the Wilton hospital, had received during the year ending September 30th, 1880, 496 patients, of whom 254 had been sent by the Poor-law Guardians, the latter contributing £1138 to their maintenance.

SLIGO WATER SUPPLY.

The Sligo Corporation has received a communication from the Local Government Board (Ireland), stating that they have recommended a loan of £28,000 to be lent them as the sanitary authority by the Board of Works, for the construction of the proposed waterworks for that town.

Maidstone is evidently a remarkable place, sanitarily considered. Last week we had to announce that it had spent £50,000 in the production of two cases of typhoid fever; now we have to state that the local board is proposing to memorialise the Home Secretary (!) in favour of precautions being taken against the danger to the public health arising from the importation of rags which may contain the germs of disease, Maidstone being so favourably situated in its position and county, and so isolated from personal communication with the rest of the world, that several cases of "disease" (infectious, we presume) which have lately occurred there, notably small-pox, could only (it is locally believed) have come there by importation of the contagion in the rags brought into the neighbourhood for the paper manufacturers.

Sir Sydney H. Waterlow has written to the Home Secretary correcting a statement made in a memorial addressed to that Minister by several vestries and district boards in the metropolis, in which it is stated that the Improved Industrial Dwellings Company, Limited (of which Sir Sydney is chairman), had made no offer for any of the sites cleared under the Artisans and Labourers' Dwellings Improvement Act, 1875. Sir Sydney says that this statement is an error, and that his company has over and over again tendered for sites for workmen's dwellings under the Metropolitan Street Improvement Act, 1872, but that none of their offers have been accepted "although seven or ten sites set apart by Parliament are still uncovered, and, in addition to being a heavy loss on the rates, are dreary and unsightly wastes."

The difficulty of dealing with irregular practices in trade is curiously illustrated by a fact stated in the last report of the medical officer of health (Dr. Sedgwick Saunders) of the City of London to the Commissioners of Sewers. It appears to be the practice of the licensed salesmen in the Central Meat Market to allow the licensed porters of the market and journeymen butchers to sell meat of an inferior description—offal and odds and ends—to their own profit in the licensed shops after the legitimate business of the market is over. Thus a most discreditable trade in meat of dubious character has been established under the licensee's cloak.

Poplar, we learn, is congratulating itself on the prospect of its new infectious disease hospital being taken off its hands by the Metropolitan Asylums Board. The District Board of Works having sacrificed so conspicuously to sanitary virtue in building the hospital, and placed itself on the highest pitch of fame in this respect among metropolitan sanitary authorities, is now prepared to rid itself of the troublesome responsibility of maintaining the hospital, and is eager to seize upon the opportunity of turning a honest penny by it.

The Metropolitan Board of Works is about to discuss the question of selling the carcasses of animals affected with pleuro-pneumonia for human food. The *Metropolitan* anticipates the discussion of the Board, and settles, very much to its own satisfaction, and doubtless to that of, at least, one section of its readers, that "the evidence is conclusive that no harm arises from the consumption of the flesh of such carcasses, unless it exhibit signs of disease or degeneration in itself."

Dr. Rogers, the medical officer of health for Limehouse, reporting to his authority the reappearance of small-pox in the district, said that in one instance he found that the disease had appeared in a house where a laundress resided. At the time there were on the premises no less than 600 articles of clothing belonging to a school. He had impounded them, and after they were washed he proposed to pass them through the authority's disinfecting apparatus.

A very unpleasant report comes to us from Leicester of the discharge of a female patient suffering from "fever" from the Leicester (Corporation) Fever Hospital, while in a state of "insanity," and of her being removed first to a brother's home, and then to the lunatic asylum, into which she was admitted "covered with sores, and in a very filthy condition." As the case will be the subject of an inquiry, we suspend remark for the present.

A plan for the disposal of the sewage of the Rhondda Valley has, it is stated, received the approval of the Ystrad-yfodwg and Pontypridd Urban Sanitary Authority. The scheme is estimated to entail a cost of £10,000, a sum which has excited the alarm of the ratepayers of the district, and provoked active resistance to the proposal.

An inquiry is proceeding, conducted by Dr. Bridges, under instructions from the Local Government Board, into a disagreement which has occurred between the medical officer and assistant medical officer of the St. George's-in-the-East Workhouse Infirmary. We postpone an account of the inquiry until it is completed.

The Bethnal Green Sanitary Authority recently applied for, and obtained from, the sitting magistrate at Worship-street, an order to remove four children suffering from small-pox to the Homerton Hospital who were lying in a room occupied by six other persons, and whose parents objected to their removal.

The Kensington Board of Guardians, with the assent of the Local Government Board, have purchased, at a cost of £56,000, the premises belonging to the Vestry of St. Margaret and St. John, Westminster, adjoining their present infirmary, for conversion into a new infirmary.

A serious epidemic of measles is reported to be prevailing in Frome. A suggestion to close the schools, made at the last meeting of the board of guardians, was, however, not acted upon, on the ground that the crisis of the outbreak was past.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

English urban mortality showed a decline last week. In twenty of the largest English towns, estimated to contain in the middle of this year a population of seven and a half millions of persons, or nearly one-third of the entire population of England and Wales, 4968 births and 2961 deaths were registered last week. The births were 217, and the deaths 314, below the average weekly numbers during 1879. The deaths showed a decline of 214 from the number returned in the previous week; and the annual death-rate per 1000, which had been equal to 21·2 and 22·1 in the two preceding weeks, declined last week to 20·6. The lowest death-rates in the twenty towns last week were 13·6 in Brighton, 14·4 in Wolverhampton, 16·9 in Bristol, and 18·1 in Sheffield and Plymouth. The rates in the other towns ranged upwards to 24·0 in Nottingham, 24·3 in Norwich, 24·8 in Hull, and 25·5 in Sunderland. During the first nine weeks of the current quarter the death-rate in these twenty towns averaged 22·1 per 1000, against 22·9 and 22·1 in the corresponding periods of 1878 and 1879.

The deaths referred to the seven principal zymotic diseases in the twenty towns, which had been 367 and 405 in the two preceding weeks, declined to 358 last week; they included 139 from scarlet fever, 72 from measles, 58 from whooping-cough, and 40 from fever, principally enteric. The annual death-rate from these seven diseases averaged 2·5 per 1000 in the twenty towns, and ranged from 0·7 and 1·0 in Wolverhampton and Sheffield, to 4·8 and 6·7 in Salford and Sunderland; no zymotic death was recorded in Brighton. The fatal cases of scarlet fever, which had been 138 and 162 in the two previous weeks, declined again to 139 last week, and showed the largest proportional fatality in Sunderland, Leicester, Bradford, Liverpool, and Leeds. Measles fatality was largest in Salford, and that of whooping-cough in Hull

and Nottingham. The highest death-rates from fever, principally enteric, were recorded in Leeds and Leicester. The 15 deaths from diphtheria showed a further decline from recent weekly numbers; 10 occurred in London, 3 in Birmingham, and 2 in Portsmouth. Small-pox caused 10 more deaths in London, whereas no death from this disease was registered in any of the nineteen large provincial towns. The number of small-pox patients in the Metropolitan Asylum Hospitals, which had increased in the five preceding weeks from 77 to 210, further rose to 246 on Saturday last; and 67 new cases of small-pox were admitted to these hospitals during last week, against 99 and 57 in the two preceding weeks. The number of patients in the Highgate Small-pox Hospital had also further increased to 21 on Saturday last.

The deaths referred to diseases of the respiratory organs in London, which had been 332 and 367 in the two preceding weeks, declined again to 334 last week, and were as many as 170 below the corrected weekly average; 210 resulted from bronchitis, and 87 from pneumonia. The annual death-rate from lung diseases was equal to 4·9 per 1000 in London, and 7·6 in Liverpool.

In the twenty towns last week 60 deaths were registered without the production of the certificate either of a registered medical practitioner or of a coroner; these were equal to 2·0 per cent. of the total deaths registered. The proportion of uncertified causes of death did not exceed 1·4 per cent. in London, whereas it averaged 2·6 per cent. in the nineteen provincial towns. No uncertified deaths were registered last week in Brighton, Portsmouth, Norwich, Plymouth, Wolverhampton, or Nottingham, while the largest proportions occurred in Sheffield, Sunderland, and Newcastle-upon-Tyne.

HEALTH OF SCOTCH TOWNS.

In eight of the largest Scotch towns, having an estimated population of rather more than a million and a quarter persons, the annual death-rate last week averaged 22·1 per 1000, against 20·9 and 24·7 in the two preceding weeks, and was 1·5 above the average rate in the twenty large English towns. The rates in the eight Scotch towns ranged last week from 15·6 and 16·8 in Perth and Dundee, to 26·7 and 42·5 in Leith and Paisley. The deaths referred to the seven principal zymotic diseases in the eight towns, which had been 95 and 112 in the two previous weeks, declined to 95 last week; they included 34 from scarlet fever, 16 from diphtheria, 16 from diarrhoea, 12 from fever, 8 from measles, 8 from whooping-cough, and one from small-pox. The annual death-rate from these seven diseases averaged 3·8 per 1000 in the eight towns, and exceeded by 1·3 the average rate from the same diseases in the twenty English towns. In the eight Scotch towns the zymotic death-rate last week ranged from 1·0 and 2·0 in Aberdeen and Dundee, to 5·9 and 8·0 in Greenock and Leith; no zymotic death was registered in Perth. The fatal cases of scarlet fever in the eight towns, which had been 53, 45, and 37 in the three preceding weeks, further declined last week to 34, of which 14 occurred in Glasgow, 12 in Edinburgh, and 7 in Leith. The 16 deaths referred to diphtheria exceeded the numbers returned in recent weeks, and included 4 in Glasgow, 4 in Edinburgh, and 3 in Greenock. The 16 deaths from diarrhoea again showed a marked excess for the season; 7 occurred in Glasgow, 3 in Edinburgh, and 3 in Paisley. The total deaths from fever showed an increase of 2 upon the number in the previous week, and included 5 in Glasgow, 3 in Edinburgh, and 2 in Greenock. Seven of the 8 fatal cases of measles, and 5 of the 8 of whooping-cough, were returned in Glasgow. The death from small-pox was recorded in Greenock; this is the first fatal case of this disease that has occurred in these eight Scotch towns since the middle of July. The deaths referred to acute diseases of the respiratory organs (bronchitis, pneumonia, and pleurisy) in the eight towns, which had been 137 and 166 in the two preceding weeks, were 155 last week. The annual death-rate from these lung diseases was equal to 6·3 per 1000 last week in the eight Scotch towns, against 4·3 in London; the highest death-rates last week from these diseases in the Scotch towns occurred in Paisley, Greenock, and Glasgow.

HEALTH OF DUBLIN.

There was a considerable decline in the excessive death-rate in Dublin last week. The annual rate of mortality from all causes in the city, which had been equal to 39·6, 33·3, and 37·8 in the three preceding weeks, declined last

week to 29·8, a lower rate than has prevailed in any week since the end of July last. During the past nine weeks of the current quarter, however, the death-rate in the city has averaged no less than 34·3 per 1000, against 21·3 in London, and 22·3 in Edinburgh. The 180 deaths in Dublin last week showed a decline of 48 from the number in the previous week, and included 28, or 16 per cent., which were referred to the seven principal zymotic diseases, a decline of 14 from those returned in the previous week; 10 resulted from fever (including typhus, enteric, and simple), 7 from scarlet fever, 4 from measles, 3 from whooping-cough, 2 from diarrhoea, 2 from small-pox, and not one from diphtheria. The annual death-rate from these zymotic diseases was equal to 4·6 per 1000 in Dublin last week, against 2·6 in London and 5·2 in Edinburgh. The deaths referred to fever, which had been 10 and 17 in the two preceding weeks, declined again to 10 last week; but the death-rate from this cause was no less than six times as great as the average rate in the twenty English towns last week. Fever, mainly typhus and enteric, has been especially fatal in Dublin since the beginning of this year. The 7 deaths from scarlet fever in the city last week showed a decline of 4 from those in the previous week, while the fatal cases of small-pox and measles corresponded with the numbers then returned. The deaths of infants in the city were fewer than in any previous week of the year, while those of elderly persons were again excessive.

HEALTH MATTERS GENERALLY AT HOME AND ABROAD.

BACKERGUNGE GAOL.

Backergunge Gaol has a sort of horrible reputation in Bengal for unhealthiness, especially for cholera and dysentery. The sanitary advisers of the Indian Government and the Army Sanitary Commission have been much exercised with the place, and have advised the expenditure of considerable sums of money in the reconstruction of barracks, and no little ingenuity has been exercised in accounting for the unwholesomeness of the gaol by its geographical position. But it would appear that while measures were ineffectually based upon vague speculations as to occult causes, probable causes lying under the nose were unheeded. A correspondent of the *Pioneer*, under the familiar signature of "Scrutator," tells us that in 1878 drinking-water was ordered to be brought from the Burrisal river, but on close examination it was found that it really came from the mouth of a small tidal nullah just at the point where it discharged into the Burrisal river. The town of Burrisal stands on this nullah, and the water for the prison was taken a couple of hundred yards below the town. This nullah is, in fact, the sewer of the town. When the water reached the interior of the prison, it underwent filtration through chatty filters, and this process was evidently superintended with constant and unremitting attention. But the result was only partially successful, for a very considerable amount of opalescence remained in the water. But there soon appeared reason to doubt whether the convicts really used this elaborately filtered water at all, for a large party of them were seen coming into the prison by a side door, each provided with a *lotah* of water, which proved on inquiry to have been taken from a tank on the gaol premises in which the convicts bathed, and which communicated with the tidal nullah before mentioned, or in other words the sewer of Burrisal. The convicts said that the tank water was very good, though every tide must have washed quantities of impurities into the tank. Such was the water-supply which official reports, written by men of ability, the clearness of whose mental vision had been obscured by old Indian prejudices, described as good. "This case conveys a warning," says "Scrutator," "as the defects of the Backergunge Gaol water-supply—the worst I have ever seen in the course of a pretty wide experience—have been so long overlooked, notwithstanding the earnest efforts of the Government at any cost to abate the unhealthiness of the prison. Is there not reason to apprehend that less obvious defects in the water-supply arrangements of the European troops may have escaped notice, and that to those defects, as surmised by the theorists against whom the Army Sanitary Commissioner lately warned the Government, may be due the calamities which have lately occurred at Allahabad and other places, and in which cholera proved destructive to a greater portion of our gallant soldiers than fell under the bullets of the Afghans throughout the late war."

"ACUTE ANÆMIC DROPSY."

We have received a copy of a supplementary official report on "Acute Anæmic Dropsy," from Mauritius. The report contains a copy of Surgeon-Major K. McLeod's report, as Health Officer of Calcutta, on the subject of the "new disease" that has lately appeared in that city, which has been held to be "beri-beri," and believed to be similar to the so-called "acute anæmic dropsy" of Mauritius. The additional information contained in this supplementary paper goes far to traverse this notion, and tends to the conclusion that the disease in Mauritius is not beri-beri, and to throw doubts upon the "new disease" in Calcutta being beri-beri; also that "acute anæmic dropsy" was introduced into Mauritius probably by emigrant coolies from Calcutta, and that it is a contagious affection. Judgment, however, must still be suspended on these questions, and we wait further and fuller information.

PLAGUE IN RUSSIA.

A rumour has been current in Vienna that plague had appeared in the neighbourhood of Moscow. A similar rumour obtained during the outbreak of the disease in the Lower Volga in 1878-79, and we trust that the rumour may prove as unfounded now as it did then. The disease, whatever it may be, is said to be highly contagious, and not improbably true typhus may be in question, a disease which has been recently somewhat widely distributed in Russia, we believe. The dearth of medical men is so great in the country districts in Russia, that it may be some time before the actual meaning of the rumour is brought to light.

St. Lucia and Gaudaloupe are now stated to be free from yellow fever, and the quarantine restrictions, which have been very detrimental to the interests of trade in the Antilles, have been removed.

THE SERVICES.

ARMY MEDICAL DEPARTMENT.—Brigade-Surgeon Wm. Carden Roe has been granted retired pay, with the honorary rank of Deputy Surgeon-General; Surgeon-Major James Watson is granted retired pay, with the honorary rank of Brigade-Surgeon.

Brigadier-Surgeon Wolseley, Surgeon-Major Graves, and Surgeon Smythe, of the Army Medical Department, have taken passage to Bombay to join their respective corps.

MILITIA MEDICAL DEPARTMENT.—Surgeon Major Wm. Ord Mackenzie, the Highland Rifle Militia, resigns his commission; also is permitted to retain his rank, and to continue to wear his uniform on retirement.

ADMIRALTY.—Surgeon Henry Beaumont, to be staff Surgeon, with seniority of the 1st of December, 1880; Surgeon William Tait, M.B., to the *Téméraire*, when commissioned; Staff-Surgeon James H. Martin to the *Indus*, in lieu of a surgeon; Staff-Surgeon Eugene V. de Méric, to the *Boscawen*, additional, for sick quarters at Portland; Surgeon Henry R. Guppy to the *Royal Adelaide*, additional, for temporary service; Surgeon H. L. Crocker to Plymouth Hospital.

Correspondence.

"Audi alteram partem."

ON MEDICAL EDUCATION.

To the Editor of THE LANCET.

SIR,—Mr. Savory's letter opens a question for discussion which cannot fail to interest every teacher in our medical schools. I can scarcely yet bring myself to admit the necessity of an extension of the students' hospital work for seven years, and chiefly on these two grounds:—

First, because it does not appear that the advantages held out to medical men and the incomes derived from their profession are sufficiently great to justify a lengthening of study so extreme. Nor is there any reason to believe that the public would be prepared to pay more highly for even

decidedly better practitioners than are supplied to it at present.

Second, because I do not fear to challenge that army of champions which Mr. Savory predicts will rise when a proposal is made to remove or limit any single subject of medical study. I have never yet understood why the study of botany is compulsory in our schools. Nor do I know why it is thought essential that practitioners should be acquainted with the histology of all the tissues and organs of the body. I should be glad to see the first of these subjects removed from the curriculum, the second strictly limited. I would suggest, too, a limitation of the range of anatomy, physiology, and chemistry, and the publication of a syllabus stating the exact amount of each required by the student. Further, I have hitherto failed to comprehend the precise advantage which students are supposed to gain by having learned in lectures or from a book how to prepare the various salts, and, worse still, the alkaloids employed in medicine.

If the object of medical education is to produce good average medical practitioners, and the time now bestowed upon the work is insufficient, the first direction which reform should take is to sweep from the curriculum all work which does not tend *directly* to that object. I leave it to those who teach these subjects to prove how far they are essential, and remain, Sir, yours obediently,

HENRY T. BUTLIN,

Assistant-Surgeon and Demonstrator of Surgery,
St. Bartholomew's Hospital.

Dec. 7th, 1880.

To the Editor of THE LANCET.

SIR,—Mr. Savory's cry, "Give us more time," will be echoed by every teacher who has the welfare of the student at heart; but, as he says, the obstacle is the increase of expense which will be necessary were the curriculum prolonged. I wish to point out, however, that the difficulty would be greatly met were the council of the College of Surgeons to modify its regulations, and require two full years to be passed in the study of medicine, surgery, and midwifery *between* the first and second examinations.

Theoretically this is the case at present, and a hard-working student who passes his primary or anatomical and physiological examination at the end of his second winter has then two winters and three summers for the study of the practical subjects of his profession before he goes up for his diploma. But the majority of students do *not* pass the primary examination in their second year at all; many go on to their third, some to their fourth, and a few to their fifth year before they scrape together enough anatomy and physiology to pass. In the meantime their lectures on medicine, surgery, and midwifery are all duly sat out, and by a pleasant fiction their hospital practice and clinical study run on contemporaneously, so that, six months, three months, or even only a week, after passing the primary examination, a candidate (who has completed his four years' study and got his schedule in due order) may present himself for two diplomas, and possibly obtain them!

A regulation that two years *must* elapse between the first and second examinations would prevent this scandal, and if permission were given that six months of this time might be spent in a country hospital, or with a qualified practitioner, the regulations allowing such attendance before entry at a medical school might be advantageously revoked.

Yours obediently,

CHRISTOPHER HEATH.

Cavendish-square, W., Dec. 7th, 1880.

To the Editor of THE LANCET.

SIR,—In a letter on the above subject Mr. Savory seems to think that the lack of knowledge possessed by many members of our profession is due to want of time spent in study and hospital practice. He is, I believe, right to a certain extent, but our examinations and the so-called higher ones are responsible for very much practical ignorance of ordinary duties. There are many men in London who give six, seven, or more, years to acquire a competent knowledge of their profession, and, naturally wishing to have some diploma to show they have done so, turn their attention to the F.R.C.S. or the London University. But what is necessary to pass either of these boards? A gigantic system of cram-

ming—taking the Fellowship, and speaking of so-called Surgery only. Each candidate who wishes to pass takes care to make himself as familiar as possible with the pet questions of the examiners, and as there are several gentlemen at the college, and their whims various, much time is wasted. Thus one examiner is fond of asking the structure of a lymphatic gland; another thinks highly of the treatment of lacrymal stricture by styles; certain laugh at a good deal of the "antiseptic treatment," whilst others like to hear it praised. The examination itself is, to a certain extent, a lottery; for I have known good house-surgeons and demonstrators of anatomy, &c., rejected. The operative surgery this last time bears the chance character of the examination out; for I was told, on very good authority, that about twenty-four candidates had each two operations, and as there were only two bodies such a trifling operation as an amputation of a finger could obtain the same number of marks as a colotomy! Judging by the results of the last few examinations, it has been a rule to reject about half of those who presented themselves. What effect has this upon the unfortunate ones, and so upon the profession? An extremely bad one in the majority of cases, for rejection only serves to them as a stimulus to obtain the diploma. They study afresh those minute points which please their examiners and carefully give their undivided attention for at least a whole twelvemonth to this single subject, surgery, and most limited surgery too—in fact, to that part of it represented by their examiners; for if we leave out two very recent gentlemen added to their body, both of whom are engaged in ophthalmic work, and one of these two, who is an authority on skin diseases, would any general practitioner venture to consult any one of them on such ordinary matters as ulceration of the vocal cords, inflammation of the membrana tympani, disease of the choroid, or psoriasis? I say nothing about craniotomy, which I suppose is not a surgical operation. It is very certain that scarcely any "hospital surgeon in London" would be called in to do it. Thus failure at the examination almost forces a candidate to tie himself for a long time to a very small branch of his profession. What does success lead to? Often good hospital appointments. I will take those attached to one of our largest and most famous metropolitan hospitals. For years past I have constantly noticed that a physician has to be called in to see if the presence of tubercular diseases of the lungs negatives an operation, an ophthalmic surgeon to diagnose hypermetropia after receiving an injury of the head, an obstetric physician to help with an uterine fibroid, &c. Thus failure or success often means wasted time and but a very small knowledge of the "healing art." What should be the remedy? Students who have successfully passed such examinations as the M.R.C.S. should be encouraged to remain longer at our hospitals by the prospect of obtaining some higher diploma without being obliged to ruin such valuable time by cramming for examinations.

I am, Sir, yours obediently,

Dec. 7th, 1880.

Z. Y. X.

CHIAN TURPENTINE AND THE MIDDLESEX HOSPITAL.

To the Editor of THE LANCET.

SIR,—There is, perhaps, nothing remarkable in the medical board of the Middlesex Hospital adopting a resolution in the following terms: "That as the results of a prolonged and careful trial of Chian turpentine in the treatment of cancer prove the drug to be quite useless as a cure for that disease, directions be given to the dispenser not to obtain any more of the drug for the cancer patients." But as the resolution has been extensively published in the medical press, I must be allowed to say that it seems to point to a prejudice against the Chian turpentine treatment, not justified by the facts disclosed in the cases recorded in the last two numbers of the LANCET by Mr. Morris, who is the honorary officer of this department at the Middlesex Hospital. Mr. Morris heads his paper "On Chian Turpentine and its uselessness in Cancer," and, therefore, goes further than the resolution of the medical board, who have only declared the drug useless as a cure. The uselessness of the drug is the point at issue, as I have never yet affirmed it to be a positive cure for cancer, but have simply expressed my belief that it is possible by its

aid to formulate a plan of treatment for the removal of cancer in certain forms of that disease in the uterus.

To do Mr. Morris justice, no fault probably can be found with the manner in which he has executed the task of publishing his cases, for the honesty and candour he displays cannot but be commended; but it would have given greater satisfaction to myself, and I think also to the profession, if the cases selected by him for experiment had been worthy of equal approval, so that the experiments could have been conducted on a purely scientific method, and perhaps more in accordance with the "tradition" of the Middlesex Hospital trust. From such a selection of cases as Mr. Morris gives no one could be surprised at the results obtained. It was never contemplated by me that the remedy should be used in the treatment of cases verging on death, as five of the uterine cases reported by Mr. Morris evidently were; nor did I ever suggest or imagine that Chian turpentine would build up a new uterus, or repair a cancerous fistula of the intestines, or patch up a great cavity into the bladder, or restore a large recto-vaginal fistula with the fundus of the uterus extensively destroyed. Yet several of the cases described by Mr. Morris were of this character; and in these and in other cases of the same extreme gravity the remedy might well be deemed useless. I venture to suggest that in order to give the remedy a "prolonged and careful trial" it should not have been employed in such cases as those just described from Mr. Morris's report, but that three or four cases of uterine cancer should have been selected in which the destructive agency of the disease had not involved any other vital organs, and in which in all probability an extended trial of the remedy could have been secured.

Referring to my own experience—and it is abundantly confirmed by the published statements of other practitioners, as well as by numerous private communications in my possession—Chian turpentine, in cancer of the uterus, does relieve pain in the majority of instances; hæmorrhage is arrested; in some cases there is a marked diminution of the cancerous mass; and in others there is an apparent entire disappearance of it, as well as a marked improvement of the general health. In nearly all the cases which I have had under treatment for some time there has been a notable absence of glandular and secondary complications. Two of the cases, originally reported in THE LANCET, which came under treatment respectively fourteen and thirteenth months ago, are known to be still living, and in them there is no sign of a return of the disease, although one of the patients suffers from a difficulty in defecation from a stricture of the rectum; and a large number of cases have been under treatment at the Queen's Hospital during the past eight months which fully justify the previous observations as to the relief from hæmorrhage, &c., by the administration of Chian turpentine. These results have been so uniform and constant that I cannot understand Mr. Morris saying that "I am not able to report that there is a single symptom over which the drug seems to exercise even frequently, not to say constantly, an influence. It cannot be relied upon to assuage pain, to diminish or alter the character of the discharges, to check hæmorrhage, or promote the destruction of the growth by ulceration or sloughing." Relief has been afforded in cases of cancer in other parts of the body under observation, but then Mr. Morris would attribute this to a temporary arrest of the disease, of the possibility of which I have not been able to thoroughly satisfy myself.

I think I am justified in coming to the conclusion that Chian turpentine is far from being "useless" in the treatment of cancer, and that as no other drug administered internally has hitherto been equally efficacious in relieving pain, arresting hæmorrhage, and causing the disappearance of the growth—thus showing that it does "touch" the disease—it is the duty of the profession to ascertain and determine its properties thoroughly by beginning the treatment early, and continuing it patiently, and to record the results; for I am fully convinced—leaving the ultimate results out of the question, as time can alone determine them—that, if only for affording relief, the Chian turpentine is of inestimable value in the treatment of many cases of cancer.

No apology is necessary for treating this question in a general way; consideration for your space, and the fact that I intend shortly to bring the results of my experience before the profession, make it needless for me now to enter into details.

I append the following extract from a communication to the November number of the *Medical Brief*, an American journal, from Dr. A. V. Banes, who has employed the

Chian turpentine in seven cases of cancer of the generative organs. Dr. Banes writes:—"I have been waiting for some abler pen than mine to start the ball rolling and proclaim to the medical world that even if we have not a specific for that dread disease, we have at least an agent that palliates symptoms and affords relief to the victim, which had never been secured before the remedy was exhibited."

I am, Sir, yours obediently,
Birmingham, Dec. 7th, 1880. JOHN CLAY.

TREATMENT OF PHTHISIS.

To the Editor of THE LANCET.

SIR,—Dr. G. H. Mackenzie's interesting letter in THE LANCET of November 27th seems to me to give very valuable hints for the treatment of phthisis. Tar, or its derivatives, have been found useful not only in phthisis, but also in bronchitis, by Sidney Ringer and others. I myself have used creasote inhalation a good deal in phthisis, and tar internally in chronic bronchitis and chronic phthisis, and, I believe, with benefit. I have no doubt Dr. Mackenzie's inhaler will be found to be an important addition to our therapeutic resources, though a very similar appliance has been invented by Dr. William Roberts of Manchester.

I must, however, object to the statement "that it is generally accepted that phthisis is a parasitic disease." I think there are still some who believe, with Niemeyer, Virchow, and others, that phthisis, in many, if not most, cases, is the result of catarrhal pneumonia following upon an ordinary bronchial catarrh, and who do not think it necessary that the catarrhal discharge should form a nidus for a parasite.

If we admit that in catarrhal pneumonia there is a rapid production of cells which take on a particular character, why should we not go a little further, and infer that these cells, when discharged from the body, may retain a certain amount of vitality sufficient to cause them to take root in a healthy lung, and reproduce their kind? Such a process would be similar to that seen every day in skin-grafting, only that in the latter case the cells are in their normal condition. I am inclined to doubt that caseation is any more rapidly fatal to vitality and reproductive power on the one set of cells than the natural development and induration of cell-wall are in the other. That cells in an abnormal condition can reproduce themselves very rapidly is seen in cancer, &c.

I, for one, think that the introduction of the parasites into the theory of causation of phthisis is quite unnecessary. I also think that there is a danger of being misled in our treatment by such a theory. Processes of a septic or quasi-septic nature, no doubt, enter largely into the clinical history of phthisis, and antiseptics are useful; but I think we should be careful not to have our eyes blinded to even more important indications.

I, who am myself a Scotch Highlander, can assure you that there are many other changes in the social condition of my countrymen besides the absence of peat-smoke that affect their tendency to phthisis.

I am, Sir, yours respectfully,
DUNCAN J. MACKENZIE, M.D.
Glossop, Derbyshire, Nov. 30th, 1880.

ALL SAINTS CONVALESCENT HOSPITAL AND THE HOSPITAL SUNDAY FUND.

To the Editor of THE LANCET.

SIR,—Kindly allow me to inform all who are interested in this hospital that we have been compelled to return the grant lately made us by the Hospital Sunday Fund, on the ground that the conditions imposed upon its acceptance are such as to preclude the possibility of our availing ourselves of it. We have arrived at this conclusion after much lengthy and earnest consideration, and not without the co-operation and counsel of very influential friends, well able to assist us by their advice.

The "conditions" I refer to are that we give to the Hospital Sunday Fund 250 "letters" in return for the 500 guineas. The grant would thereby be reduced in value to 250 guineas, or, at the rate of thirty shillings, which is paid

by each patient not having a subscriber's "letter" and which is hardly sufficient to defray the cost of a patient for three weeks, to £150.

First, by such an act we should be contravening two of our rules, and be dealing unfairly towards our numerous subscribers. Secondly, the issue of 250 "letters," in such a wholesale way, would involve a demand upon the hospital accommodation with which it would be unable to cope, even with its present dimensions. Thirdly, this stipulation was not laid before us when making the application, or it certainly would not have been made. These are some of our reasons for thus acting.

We are preparing, as speedily as possible, for the enlargement of the hospital in two of its departments, which will increase the number of our beds to over 300, and this additional accommodation is necessitated by the present applications for relief, many of which we are compelled to refuse, simply for want of room.

A free gift of £500 to our funds would be a most invaluable help at any time, especially just now, but if all our subscribers and donors were to impose the terms of the Hospital Sunday Fund, this institution would have to be immeasurably enlarged, while the question of maintaining its efficiency would become a very serious problem.

I am, Sir, yours faithfully,

EDMUND IBBOTSON, Chaplain.

Eastbourne, Dec. 6th, 1880.

* * It is quite intelligible that the Eastbourne Convalescent Hospital should object to give so large a number of letters for the grant awarded to it by the Hospital Sunday Fund. But it is greatly to be regretted that the authorities of this hospital did not acquaint themselves with the conditions of the grant before asking for an award. The Fund cannot be expected to give a grant unconditionally to any hospital, and certainly not to the Eastbourne Convalescent Hospital. The rule of the Fund on this subject has been generally accepted, we believe, by other Convalescent Homes, and the Council should not make any special exception in favour of this hospital without grave consideration. It looks as though this hospital could not bear the restrictions of an ordinary public institution.—ED. L.

PARIS.

(From our own Correspondent.)

PROFESSOR BROWN-SÉQUARD resumed his lectures on Medicine at the Collège de France on the 7th inst., taking as his subject the Dynamic and other changes arising in the Animal Organism from Distant Irritation. The Professor was received with a hearty welcome from a select but sympathetic audience. The lectures will be continued on the Tuesday and Thursday of each week.

At the Society of Surgery a paper was read a few weeks since by M. Verneuil, on the Impropriety of Medical Treatment of Cancer of the Tongue. The only remedy which can give a good result is thorough extirpation of the diseased structure, which can but be aggravated by topical applications or general treatment. Other members of the Society were unanimous in subscribing to the same views.

An interesting discussion is expected next Friday at the Société Médicale des Hôpitaux, when Dr. Debove will give details of a case of, and read a paper on, Sciatic Nerve-stretching for Locomotor Ataxia. A report of the meeting will be found in a subsequent number of the *Gazette Hebdomadaire*.

A decision of some interest to the medical profession, and still more so to dispensing chemists, was given last week by the Tribunal Correctionnel of Paris, in a case of accidental poisoning. A prescription for a certain quantity of hydrobromate of quinine was given by a physician to one of his patients, a *conciérge*. The chemist to whom it was taken to be dispensed weighed out the drug from a bottle labeled "quinine," but which turned out to contain sulphate of morphia. In consequence of the mistake the patient lost his life, and legal proceedings were instituted by his widow against the *pharmacien*, who endeavoured to shift the responsibility upon the wholesale druggists with whom he dealt. The Court, considering both equally culpable, sentenced each to a week's

imprisonment and to a fine of 600 francs, and at the same time awarded as damages the sum of 4000 francs and an annuity of 900 francs a year.

The same tribunal has had also to deal with a case which has excited great indignation both in and out of the profession. A young man suffering from typhoid fever with symptoms of mild delirium was taken to the Hôpital St. Antoine. He there fell into the hands of a brutal and irritable *infirmier*, who, disturbed by the patient's agitation, applied a strait-jacket to keep him quiet. According to the evidence of the other patients the circumstances of the case were peculiarly atrocious. After tying the unfortunate young man hand and foot, the attendant appears to have used the utmost violence to his victim, whom he finally left almost inanimate on the bed, remarking as he went away from the scene of action, "Il est cuit"—literally, "He is cooked." The patient died the following day, and Dr. Dujardin-Beaumetz considered that, if not due to the ill-usage, his death had at any rate been accelerated by it. In defence it was maintained that the hospital attendants were in the habit of applying the strait-jacket at discretion in the interest of the other patients, and, strange to say, the director of the institution endorsed this statement. A year's imprisonment was the decision of the judge, and considering the inadequacy of the sentences which are always passed in France for the punishment of homicide, the offender may be said to have got his merits.

The *Gazette Hebdomadaire* in its *feuilleton* of the 3rd of December relates a case of ovariectomy, where the operator met with three ovaries. All three were extirpated, and the patient recovered.

The first number of a new review, the *Archives d'Ophthalmologie*, has just appeared. It is published by Professor Panas with Drs. Landolt and Poncet, and will certainly become the leading journal on that subject in Paris.

It is also rumoured that another serial publication is forthcoming on Mental and Nervous Medicine. It will be directed by Professor Ball and Dr. Luys, and will borrow its title from an English contemporary *Brain*, figuring in French as *L'Encéphale*.

Paris, Dec. 7th, 1880.

SKETCHES IN CONTINENTAL HOSPITALS.

(By our Special Correspondent.)

LYONS.

LYONS, the second city of France, is well supplied with hospitals, and they are all in active operation. The larger consist of the Hôtel Dieu, with 1061 beds; the Hospice de la Charité, with 1217 beds; the Hospice des Incurables, with 205 beds; the Hospice Antiquaille, with 1893 beds.

The Hôtel Dieu dates from the sixth century, having been founded by King Chilbert and Queen Ultrogotha, statues of whom decorate the façade of the hospital. The present building, which is of great size, and is built in the classical style, was begun in 1737, and finished in 1842. It faces the broad and rushing river Rhone, and presents an imposing stone front of great length. Squares separate the various blocks of wards from each other, and in these squares both flowers and shrubs grow and flourish. In one of them is a monument to M. Bonnet, the former distinguished surgeon of Lyons, and in another there is a statue of Eliza Lee, the Narcissa of our poet Young.

The hospital comprises 929 free beds (*gratuits*), 130 beds for patients paying two francs each per diem, and two special wards to accommodate patients who are able to pay twenty francs a day. To attend to the sick there are eight physicians, with six assistants (*suppléants*), one surgeon-major, one aide major, and one major titulaire; besides these principal officers there are 42 pupil house-surgeons, 200 *sœurs de charité*, and 50 *frères de charité* (Anglican hospitalers or nurses). Children are not supposed to be admitted, although this rule is not strictly adhered to; patients with mental diseases, including epilepsy, are also excluded, and skin diseases and syphilis are treated at the Antiquaille Hospital.

One of the best known officers of the Hôtel Dieu is M. Ollier, whose subperiosteal resections have made his name famous throughout Europe. He is an admirable clinical

teacher, and is listened to with marked attention by a large class of students, to whom his instruction is given in a most courteous and winning manner. His hospital visit occupies from 8.30 to 11.30 A.M., and during that time he operates as well as teaches at the bedside. His wards seemed crowded, some of the male wards having as many as 42 beds, while those for females were less crowded, averaging from 20 to 25 beds. I propose to give a short account of some of the more interesting operative cases I saw under M. Ollier's care at the time of my visit:—

CASE 1. Resection of shoulder-joint.—Done six weeks previously; the wounds were united and the movement considerable. One incision had been made along the front of the deltoid, and another, smaller and shorter, inwards along the outer end of the clavicle. M. Ollier always preserves the periosteum in this as in all other resections. In the Museum are numerous specimens showing his experiments upon rabbits, to illustrate the power of the periosteum in reproducing bone. Probably the good results obtained were due, as Goodsir pointed out ("Anatomical and Pathological Observations," 1845), to the adherence of some osseous granules to the periosteum; but there is no doubt about the fact of M. Ollier having given great attention to this subject, and of his having by his writings established this as a new department of conservative surgery.

CASE 2. Strumous disease of the head of the humerus in a boy, which had been treated advantageously by the application of the thermo-cautère to the interior of the carious cavity, and by free drainage right through the bone.

CASES 3 and 4. Resection of elbow-joint.—One was a man of middle age, for whom the operation had been done the previous day, and in whom there had been secondary hæmorrhage, consequent upon the use of Esmarch's bandage. M. Ollier makes a bayonet-shaped incision, and dresses the wound antiseptically.

The second case had been done two months previously, and there was free movement at the elbow, with a very useful arm.

Lister's dressing is in general use, and since its introduction M. Ollier avers that erysipelas and septicæmia have disappeared.

His method of applying the dressing differs slightly from that of Lister. The carbolic spray is used, many drainage-tubes of various sizes, both large and small, being introduced instead of one or two main tubes; then he applies six layers of dry carbolised gauze, and over them the protective, which is cut larger than the gauze, so that it covers every part of it, and keeps in all discharge. He then fixes the whole with gauze bandages. The excision of the elbow done two months ago had had the arm slung to the head of the bed in a semi-flexed position by a pulley, and to this slinging M. Ollier attributed the free mobility which had resulted.

CASE 5. Genu valgum.—This condition had been treated by simply fracturing the lower end of the femur by bending the thigh forcibly across the edge of a table. Is not Ogston's plan or McEwen's better than this? I inquired; but M. Ollier said he had achieved some very good results by his plan of treatment.

CASE 6. Resection of ankle in a man for compound fracture of the lower ends of the tibia and fibula, done a month ago, with antiseptic precautions; an inch and a quarter of the bones had been taken away by two lateral incisions; there had been no constitutional excitement, but there was not much evidence of bony consolidation.

CASES 7, 8, 9. Excision of the wrist.—In these cases a single long incision had been made from the base of the first finger to a point midway between the lower ends of the radius and ulna, and a second short incision on the ulnar side of the hand, chiefly for drainage purposes, the carpal bones having been all extracted through the larger wound. In each of the three cases motion of the fingers had been begun early, and all were after the lapse of some weeks showing signs of recovery with useful hands.

CASE 10.—*Syme's amputation of foot*, in a boy, done twenty-four days ago, with an excellent result, the periosteum over the os calcis having been left. This modification has been practised by M. Ollier for the last sixteen years with good results, a sort of false joint forming which enables the patient to move the stump slightly. He prefers Syme's operation to Pirogoff's, only adopting the latter in traumatic cases.

I have occupied so much space in the description of the surgery of the bones and joints, that being M. Ollier's

specialty, that I must not attempt to detail any other of the lines of practice which he has introduced. I will therefore content myself with calling attention to his method of treating bronchocele, which is both novel and efficacious. He dissects off carefully all the coverings of the tumour, and then applies to its surface an oval piece of Canquoin's paste, a quarter of an inch thick, and just the size of the exposed part of the tumour; after the paste has been on four hours, it is removed, and the tumour dries up and shrivels away, without constitutional disturbance or pain, the cure being effected in from three to four months.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

At an ordinary meeting of the Council, held on Thursday last, the minutes of the preceding meeting (held on the 11th ultimo) were confirmed. It was proposed that the portion of the minutes relating to Sir James Paget's motion (see THE LANCET, Nov. 20th, p. 822) be not confirmed, but, after some discussion and a division, the minutes were confirmed. Accordingly, Sir James Paget's motion was carried, and a committee was appointed to consider the resolution and the regulations relating to the several preliminary examinations recognised by the College, whether for the Membership or Fellowship, and to report thereon to the Council.

On the recommendation of the Committee on Examinations in Anatomy and Physiology, the following Fellows were elected members of the Board of Examiners in Anatomy and Physiology:—For Anatomy: Messrs. A. E. Durham, Walter Rivington, John Langton, T. P. Pick, and Edward Bellamy. For Physiology: Messrs. W. Morrant Baker, B. T. Lowne, J. McCarthy, and F. Gerald Yeo. There were ten other candidates. Mr. Butlin and Mr. Frederick Treves were appointed Erasmus Wilson Professors for the ensuing year, the former to deliver two lectures on the Structure and Nature of certain Tumours; and the latter one lecture on the Pathology of Scrofula. A letter from Dr. Haldane, a member of the General Medical Council, suggesting the institution of a compulsory preliminary scientific examination, was referred to the Committee on Preliminary Examinations. Mr. Holden's motion that the Annual Report of the President on the affairs of the College be discontinued was carried, with the following modification and addition:—"That an abstract of the proceedings of the Council and of any documents presented to the Council relating to matters not otherwise contained in the Calendar be prepared by the Secretary; and, subject to the approval of the President, be published annually in the Calendar of the College; and that the abstract be headed 'Secretary's Report.'"

Obituary.

ROBERT CEELY, F.R.C.S.

ROBERT CEELY has gone to the grave full of years, but far fuller of the honour which the personal regard of his profession and the affection of the people among whom he lived have attached to him. He was a noble illustration, happily not by any means a solitary one, of what the *general practitioner* of medicine may be, can be, and ought to be. No field of life, not even excepting the clergyman's, offers such opportunities for the development of all that is best in man as that of the general practitioner of medicine. He has his cares, his anxieties, his responsibilities as other men, and it may be that some of these responsibilities are of a nature which tell more severely upon the mind than upon the body. But he has opportunities for the scientific and practical study of his profession which fall to his lot almost alone among his brethren if he care to cultivate them; and above all, he alone has the opportunity of exercising his profession under such circumstances as tend to develop to the fullest extent the holiest aspects of humanity in its relation with his fellow-men and the highest gifts of charity. Of all this Robert Ceely was a grand illustration; and we hope the biographer will be forthcoming who will set forth in details the events of his life for the instruction of the younger

members of the profession, who have their lives before them, and who may gather from his example how large the opening for a great, good, nay, famous life exists in what is coxcomically held to be the *lower* ranks of the profession (Heaven save the mark!). Here, within the limits at our command, it is possible to glance only at the leading features of Robert Ceely's life.

He had already been several years in the practice of his profession at Aylesbury (having been diverted there from a project and hope of entering the East India Company's service) when the great outbreak of cholera of 1832 occurred. Aylesbury suffered in this outbreak, and Mr. Ceely displayed qualities of head and heart in contending with the disease that left a mark among the community ever after, and endeared him to rich and poor. It is reported that Lord Hardinge, the then Commander-in-Chief, in admiration of his conduct at that time gave Mr. Ceely's nephew a commission in the 42nd regiment. The year after the outbreak of cholera Mr. Ceely interested himself in the establishment of the Bucks General Infirmary, which has proved so inestimable a boon to the county, and to which he continued attached to the end of his life. Soon after he began those series of researches on vaccinia and variola with which his name will be imperishably attached, and respecting the author of which Mr. John Simon said he "has done more to advance the natural history of vaccination than any other individual since the days of Jenner"; and at a later date Dr. Seaton said, "The natural history of vaccinia in the cow has been studied more or less by various observers, but by none so accurately or so comprehensively as by our distinguished countryman Robert Ceely." His interest in this subject was maintained, and the accuracy of his judgment in regard to it appreciated, to the last day of his life. Many will remember his venerable presence at the medical conferences on "Animal Vaccination" a short time ago, and just before his death his advice was sought by and freely given to the Government in respect to cases of suspected natural cow-pock in Essex. There, in his eighty-third year, he was to be seen bringing his unequalled experience and skill to the assistance of the public in an Essex byre.

In 1865 he was associated with Earl Spencer, Mr. Robt. Lowe (now Lord Sherbrooke), Dr. Lyon Playfair, Dr. Parkes, Dr. Quain, and others in the Royal Commission on the Cattle Plague.

The principal works he published were as follows:—"Observations on the Variolæ Vaccinæ, with an Account of some Recent Experiments" (1840); "Further Observations on the Variolæ Vaccinæ" (1842); "Account of Contagious Epidemic Puerperal Fever" (1835). He also contributed articles to the *Med. Times and Gazette* "On the Vaccine and Equine Diseases" (1841); "Case of Malignant Fungoid Disease of the Tongue" (1847).

He was surgeon to the Bucks General Infirmary and County Gaol, and a member of both the Epidemiological Society and of the British Medical Association, at the last meeting of which, at Cambridge, he was present, and exhibited and described many of his exquisite drawings relative to vaccinia and variola.

Such, briefly, is an indication of the work he did from the scientific side of his character—work which will never be forgotten. But who will tell the history of his relations with the people among whom he lived for the threescore years of his active and useful medical life? Let the crowd at the grave, and their emotion as the coffin was placed there, and the flowers which covered it, suggest this phase of his existence—a phase, perhaps, which no pen can ever trace, but which, passed, has left an irreparable gap in the life at Aylesbury. The simple inscription on the coffin-plate will best end this notice:—Robert Ceely, died Sunday, November 28th, 1880, aged 83 years.

Medical News.

UNIVERSITY OF LONDON.—The following is a list of the candidates who have passed the recent B.S. Examination for Honours:—

SURGERY.

FIRST CLASS.

{ Day, Donald Douglas (Gold Medal), St. Barthol. Hospital.
{ Money, Angel (Gold Medal), University College.

SECOND CLASS.

Sheppard, Charles Edward, St. Thomas's Hospital.
Pollard, Bilton, University College.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—

The following members having passed the Final Examination for the Fellowship on Nov. 25th, 26th, 27th, and 29th, were, at a meeting of the Council duly admitted Fellows of the College:—

Black, James, M.B. Cantab, Aytoun-road, Stockwell; Membership dated Jan. 1875.
Clippington Samuel Dodd, M.C. & M.D. Aberd., Church-street, Kensington; July, 1875.
Dunn, Hugh Percy, Guildford-street, Russell-square; Jan. 1876.
Greenish, Robert Wm., L.R.C.P. Lond., New-street, Dorset-square; July, 1875.
Lammiman, Cleland, L.R.C.P. Lond., Mount Ephraim, Tunbridge Wells; July, 1875.
Lloyd, George Jordan, L.S.A., Coventry-road, Birmingham; July, 1878.
MacDonnell, Jas. O'Malley, M.D. Queen's Univ. Irel., H. M. Indian Army; Nov. 1880.
Miles, Walter Jennings, L.R.C.P.L., Wynham-place, Bryanston-square; July, 1877.
Newby, Chas. Henry, L.R.C.P. Lond., Adelaide-road, Regent's-park; July, 1873.
Turner, Geo. Robertson, L.R.C.P.L., Sussex-gardens, Hyde-park; July, 1877.
Weiss, Hubert Foveaux, L.R.C.P. Lond., Church-row, Fulham; Jan. 1876.
Whitehead, Hayward Reader, L.R.C.P. Ed., Cadogan-ter.; Nov. 1877.
Young, Alfred Harry, M.B. Ed., Sankey-street, Warrington. (Not a member.)

Of the 25 candidates examined on the above-mentioned days, 12 failed to reach the required standard, and were referred for one year further professional study.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Dec. 2nd:—

Cooper, Richard Gilpin, Park-road, Southport.
Everard, Horace Nathaniel, Leicester.
Field, Cornelius, Fortress-road, Kentish-town.
Jerome, John William, St. Heliers, Jersey.
Orton, Arthur, Queen's College, Birmingham.
Osborne, Harold Rochester, St. Ives, Huntingdon.
Unsworth, Francis Henry, Derby.
Willis, Arthur, Soham, Cambridgeshire.

The following gentlemen also on the same day passed their Primary Professional Examination:—

William B. Baker and John Holroyde, London Hospital; H. William Campbell, Guy's Hospital; David William Jones, University College; Montagu Williams, Middlesex Hospital.

THE PARKES MUSEUM OF HYGIENE.—The Executive Committee of this Museum have, in response to a suggestion made by the Nineteenth Century Building Society, arranged for a course of lectures in the museum to the members of Building Societies. The subject of the lectures is to be "Dwelling-houses," and the first lecture of the course will be given next Saturday by Mr. Edward C. Robins, F.S.A., on "Situation and Construction." Free tickets for the lectures are being distributed by the several Metropolitan Building Societies. Captain Douglas Galton, C.B., F.R.S.; Mr. Robert Rawlinson, C.B., of the Local Government Board; and Mr. E. C. Robins, F.S.A., have just been elected members of the Museum Committee.

INSTRUCTION IN NURSING.—The first class of soldiers' wives for instruction in nursing under Lady Strangford's scheme, which has been approved by the Duke of Cambridge and by the Secretary of State for War, met yesterday at Woolwich, at 29, The Common, Lady Strangford superintending. The instruction was given by Mr. H. Crookshank, F.R.C.S., one of the lecturers for the St. John Ambulance Association, and author of a work on "Nursing and Hygiene." Great interest was shown by the pupils.

THE following are the disbursements of the different coroners of the Middlesex sessions, as presented on Wednesday:—Mr. Humphreys, for 175 inquisitions, from Oct. 1st to Nov. 10th, £307 2s. 8d.; Dr. Hardwicke, for 156 inquisitions, from Oct. 1st to Nov. 9th, £318 9s. 6d.; Dr. Diplock, 69 inquisitions, from Oct. 1st to Nov. 10th, £127 18s.; Mr. Bedford, 30 inquisitions, from Oct. 1st to the 29th, £65 18s.

GUY'S HOSPITAL REFORM.—We are informed that the Committee (chiefly of Vestrymen and Guardians of Southwark) formed for the purpose of dealing with this subject will meet to-day (Friday); and that a public meeting will be convened at eight o'clock on Wednesday evening, 15th December, at the Bridge House Hotel, Southwark, Arthur Cohen, Esq., M.P., Q.C., in the chair.

THE Bread Reform Association, with the permission of the Lord Mayor, is about to hold a Conference at the Mansion House.

ROYAL MEDICAL SOCIETY, EDINBURGH.—At a meeting of the above Society, held on the 26th ult., the following gentlemen were elected Presidents for the ensuing year:—W. Henry Dobie, M.B., C.M.; R. A. Lundie, M.A., B.Sc., M.B., C.M.; A. H. Barbour, M.A., B.Sc., B.M., C.M.; and A. L. Macleish, M.A.

THE managers of the Charing-cross Hospital, St. George's Hospital, St. Thomas's Hospital, and the Dreadnought Hospital, Greenwich, have received from the Prince of Wales and the Duke of Edinburgh presents of game for the use of the patients in the respective charities.

THE medical officer of the Bow Infirmary has received a gratuity of £50 from the City of London Union, the sum he had expended in preparing his defence in the case of the murder of Alfred Harris.

THE amount of the Hospital Saturday Collection at Wolverhampton, on the 4th inst., so far as is yet ascertained, is £900; but it is expected that when the accounts are complete, the sum realised will be at least double.

MR. T. COLLINGWOOD, M.R.C.S. Eng., late Medical Officer for the Wardleworth District and Workhouse of the Rochdale Union, has received a superannuation allowance of £75 a year.

VACCINATION GRANT.—Dr. Lionel A. Weatherly has been awarded a Government grant for efficient vaccination in No. 6 District, Bedminster Union (second time).

SIR GEORGE B. OWENS, M.D., J.P., has been appointed High Sheriff of the County of the City of Dublin for 1881.

A NEW chapel, affording accommodation for 200 persons, has just been opened in connexion with the Clewer Convalescent Hospital.

LAST week a concert was given at the Royal London Ophthalmic Hospital, Moorfields, for the entertainment of the inmates of the institution.

MR. W. H. BENNETT, F.R.C.S.E., has been elected a member of the Royal Institution.

Medical Appointments.

Intimations for this column must be sent DIRECT to the Office of THE LANCET before 9 o'clock on Thursday Morning, at the latest.

ANDERSON, J. W., M.B., C.M., has been appointed Resident House-Physician to the Royal Infirmary, Edinburgh.

BALFOUR, J. C., L.R.C.P. Ed., L.R.C.S. Ed., has been appointed Resident House-Physician to the Royal Infirmary, Edinburgh.

CAMPBELL, J. P., M.B., C.M., has been appointed Resident House-Surgeon to the Royal Infirmary, Edinburgh.

CROSSLEY, C. R., M.R.C.S.E., L.S.A.L., has been appointed a Medical Officer to the Leicester Provident Dispensary.

FLINN, D. E., L.K.Q.C.P.I., L.R.C.S.I., L.M., has been reappointed Medical Officer of Health to the Brownhills Urban Sanitary Authority.

GODFREY, A. C., L.R.C.P. Ed., L.R.C.S. Ed., has been appointed a Surgeon to the Southampton Dispensary and Humane Society.

GOLDING, J. P., M.D., L.M.K.Q.C.P.I., M.R.C.S.E., has been appointed Medical Officer to the Munster Lodge of Odd Fellows, vice Cremen, resigned.

GREASLEY, J., L.R.C.P. Ed., L.R.C.S. Ed., M.R.C.S.E., has been appointed Medical Officer for the Knighton District, in connexion with the Leicester Provident Dispensary.

HARDIE, R., M.B., C.M., has been appointed Resident House-Surgeon to the Royal Infirmary, Edinburgh.

HARGITT, H., M.D., L.R.C.S. Ed., has been appointed Medical Officer for the Humberstone District, in connexion with the Leicester Provident Dispensary.

HARRISON, E., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for the Hordley District of the Ellesmere Union.

HORNE, J. F., F.R.C.S. Ed., L.F.P.S.G., L.S.A.L., has been appointed Honorary Surgeon to the Beckett Hospital and Dispensary, Barnsley, vice Stanman, deceased.

JARDINE, A. M.B., C.M., has been appointed Assistant Medical Officer to Longmore Hospital, Edinburgh.

JONES, Mr. A. E., has been appointed a House-Physician at the London Hospital, vice Hardy, resigned.

LOGAN, J. R., M.B., C.M., has been appointed Resident House-Physician to the Royal Infirmary, Edinburgh.

LUNDIE, R. A., M.B., C.M., has been appointed Resident House-Physician to the Royal Infirmary, Edinburgh.

MOORE, C. A., M.B., M.R.C.S.E., L.S.A.L., has been appointed a Medical Officer to the Leicester Provident Dispensary.

MORTON, S., M.B., M.R.C.S.E., has been appointed Surgeon to the W Division of Metropolitan Police at Croydon, and Examiner of Recruits for the Militia and Regular Army in the Croydon District.

O'REILLY, J., M.B., C.M., has been appointed Resident House-Physician to the Royal Infirmary, Edinburgh.

OSWALD, H. R., M.B., C.M., has been appointed Medical Officer at the Royal South London Dispensary.

PALK, H., M.D., M.R.C.S.E., L.S.A.L., has been appointed a Surgeon to the Southampton Dispensary and Humane Society.

PARKINSON, C. H. W., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer of Health for the Wimborne and Cranbourne Sanitary District, Dorsetshire.

PARRY, R., M.R.C.S.E., L.S.A.L., has been appointed Assistant Medical Officer and Dispenser to the Central London Sick Asylum, Cleveland-street, vice Hewett, resigned.

POTTS, L., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for the Leatherhead and Fetcham District of the Epsom Union, vice Owen.

ROBIE, H. W., M.B., C.M., has been appointed Resident House-Surgeon to the Royal Infirmary, Edinburgh.

ROSE, J. M., M.B., C.M., has been appointed Resident House-Surgeon to the Royal Infirmary, Edinburgh.

ROWLAND, J., M.D., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer of Health for the Lower District of the Tregaron Union, vice R. Rowland, resigned. £35 per annum.

SCOTCHBURN, A., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer of Health for Great Driffield Urban Sanitary District.

SMYTH, S. J., L.R.C.P. L., F.R.C.S.E., has been appointed Consulting Surgeon to the Infirmary for Sick Children, Sydenham-park, upon resigning as Honorary Surgeon.

SNOAD, E. H., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for the Aylestone District, in connexion with the Leicester Provident Dispensary.

TOWNSHEND, C. B., M.D., L.K.Q.C.P.I. & L.M., L.R.C.S.I., has been appointed a Surgeon to the Southampton Dispensary and Humane Society.

TURNER, R., M.B., C.M., has been appointed Resident House-Physician to the Royal Infirmary, Edinburgh.

WADE, A. B., M.B., C.M., M.R.C.S.E., L.S.A.L., has been appointed a Surgeon to the Southampton Dispensary and Humane Society.

WATERS, J. L., M.B., C.M., has been appointed Resident House-Surgeon to the Royal Infirmary, Edinburgh.

Births, Marriages, and Deaths.

BIRTHS.

BROWNE.—On the 2nd inst., at the Royal Naval Hospital, Great Yarmouth, the wife of Dr. Thomas Browne, of a daughter.

COCKELL.—On the 5th inst., at Forest-road, Dalston, the wife of Frederick E. Cockell, jun., M.R.C.S.E., of a son.

GAIRDNER.—On the 28th ult., at Bridge-street, Stratford-on-Avon, the wife of John Gairdner, M.R.C.S.E., L.S.A.L., prematurely, of a son (stillborn).

GROSVENOR.—On the 2nd inst., at Ladbroke-grove, Kensington-park, Notting-hill, the wife of George Fox Grosvenor, M.D., of a son.

MAY.—On the 26th ult., at Moreton-Hampstead, South Devon, the wife of Albert E. May, L.R.C.P.L., of a daughter.

PHILIPPS.—On the 1st inst., the wife of Alfred Philipps, M.R.C.S.E., of Maitland-park, of a son.

MARRIAGES.

BAIRD.—WINTER-WOOD.—On the 1st inst., at St. George's, Hanover-square, William James Baird, M.D., Fleet-Surgeon, R.N., to Edith Elina Helen, daughter of T. Winter-Wood, Esq., of Mariestead, Netley Abbey, Hants.

COX.—CROWLE.—On the 7th inst., at St. Mary Abbott's Church, Kensington, by the Vicar, Frederick Augustus Cox, M.R.C.S.E., of Dean-street, Park-lane, to Elizabeth Patience (Bessie), only daughter of the late T. R. Crowle, of Kensington. No cards.

FISHER.—TABOR.—On the 2nd inst., at Christ Church, Streatham, Frederick Bazley Fisher, M.R.C.S.E., L.R.C.P.L., of Dorchester, fourth son of Stephen Fisher, of Tiverton, Devon, to Cecilia Metcalf, third daughter of the late William Tabor, of Rose Mount, Brentwood, Essex, and Mrs. William Tabor, of Heathfield Lodge, Queen's-road, Clapham-park.

KERR.—FIELD.—On the 9th inst., at St. John's Episcopal Church, Edinburgh, by the Rev. Canon Sandford, LL.D., Incumbent, Surgeon-Major Kerr, M.D., to Katharine Burch, younger daughter of the Rev. Edward Burch Field, of Moreland, Kinross-shire.

KIBBLER.—LEECH.—On the 4th inst., at St. John of Jerusalem, South Hackney, William Ambrose Kibbler, M.B., of Mordaunt House, Mare-street, Hackney, to Rosina, youngest daughter of the late William Leech, of Terrace Lodge, South Hackney.

MOXON.—TUCKWELL.—On the 1st inst., at South-street, Exeter, by the Rev. F. Bosworth, M.A., assisted by the Rev. J. Tuckwell (brother of the bride), Dr. William Moxon, of Matlock, Derbyshire, to Julia, youngest daughter of Henry Tuckwell, Esq., of St. Leonard-road, Exeter, Devon. No cards.

DEATHS.

GENET.—On the 4th inst., at Hollywood-road, Frederick James Genet, M.R.C.S. and L.S.A.L., in his 61st year.

JONES.—On the 29th ult., after a long illness, at his residence, Waterloo-place, Leamington, Richard Jones, F.R.C.S., in his 81st year, deeply lamented.

TAYLOR.—On the 2nd inst., at Holland-road, Kensington, Henry Taylor, M.D., H.M.'s Indian Army (retired), aged 78.

WEEKES.—On the 3rd inst., at Carey Hall, Hurstpierpoint, Sussex, George Weekes, F.R.C.S., Deputy-Lieutenant for the County, aged 63.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET OFFICE, December 9th, 1880.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radiation in Vacuo	Max. Temp Shade	Min. Temp	Rain fall.	Re- marks at 8.30 A.M.
Dec. 3	30.36	W.	44	42	..	51	34	...	Foggy
" 4	30.51	S.W.	49	47	..	53	41	..	Overcast
" 5	30.52	S.W.	50	48	..	53	45	..	Overcast
" 6	30.48	S.W.	51	49	..	54	47	..	Overcast
" 7	30.60	N.W.	50	49	..	53	47	..	Overcast
" 8	30.65	S.W.	49	48	..	52	46	..	Overcast
" 9	30.44	W.	50	48	..	53	46	..	Overcast

Medical Diary for the ensuing Week.

Monday, Dec. 13.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS. — Operations, 10½ A.M. each day, and at the same hour.
 ROYAL WESTMINSTER OPHTHALMIC HOSPITAL. — Operations, 1½ P.M. each day, and at the same hour.
 METROPOLITAN FREE HOSPITAL. — Operations, 2 P.M.
 ROYAL ORTHOPÆDIC HOSPITAL. — Operations, 2 P.M.
 ST. MARK'S HOSPITAL. — Operations, 2 P.M.: on Tuesday, 9 A.M.
 BROWN INSTITUTION (in the Theatre of the University of London). — 5½ P.M. Dr. W. S. Greenfield (Professor-Superintendent): "Further Investigations on Anthrax and Allied Diseases in Man and Animals."
 MEDICAL SOCIETY OF LONDON. — 8½ P.M. Dr. Allchin, "On a Case of Gastric Ulcer." — Dr. Habershon: "Notes of a Case of Obstruction of Colon from Contraction of Calibre of Intestine."

Tuesday, Dec. 14.

GUY'S HOSPITAL. — Operations, 1½ P.M., and on Friday at the same hour.
 WESTMINSTER HOSPITAL. — Operations, 2 P.M.
 WEST LONDON HOSPITAL. — Operations, 3 P.M.
 ROYAL MEDICAL AND CHIRURGICAL SOCIETY. — 8 P.M. Ballot. — 8½ P.M. Dr. Bantock, "On Hyperpyrexia after 'Listerian' Ovariectomy." — Mr. Lawson Tait, "On Hydatids of the Liver treated by Abdominal Section and Drainage." — Dr. Thin will show the subject of an unusual form of Skin Disease.
 ANTHROPOLOGICAL INSTITUTE OF GREAT BRITAIN AND IRELAND. — 8 P.M.

Wednesday, Dec. 15.

NATIONAL ORTHOPÆDIC HOSPITAL. — Operations, 10 A.M.
 MIDDLESEX HOSPITAL. — Operations, 1 P.M.
 ST. BARTHOLOMEW'S HOSPITAL. — Operations, 1½ P.M., and on Saturday at the same hour.
 ST. THOMAS'S HOSPITAL. — Operations, 1½ P.M., and on Saturday at the same hour.
 ST. MARY'S HOSPITAL. — Operations, 1½ P.M.
 KING'S COLLEGE HOSPITAL. — Operations, 2 P.M., and on Saturday at 1 P.M.
 LONDON HOSPITAL. — Operations, 2 P.M., and on Thursday and Saturday at the same hour.
 GREAT NORTHERN HOSPITAL. — Operations, 2 P.M.
 UNIVERSITY COLLEGE HOSPITAL. — Operations, 2 P.M., and on Saturday at the same hour.
 SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN. — Operations, 2½ P.M.
 BROWN INSTITUTION (in the Theatre of the University of London). — 5½ P.M. Dr. W. S. Greenfield (Professor-Superintendent): "Further Investigations on Anthrax and Allied Diseases in Man and Animals."
 ASSOCIATION OF SURGEONS PRACTISING DENTAL SURGERY. — 7½ P.M. Council. — 8½ P.M. Mr. Edmund Owen, "On Maxillary Abscess and Necrosis in Childhood."
 SOCIETY FOR THE ENCOURAGEMENT OF ARTS, MANUFACTURES, AND COMMERCE. — 8 P.M. Mr. E. Price Edwards, "On the Use of Sound for Signals."

Thursday, Dec. 16.

ST. GEORGE'S HOSPITAL. — Operations, 1 P.M.
 ST. BARTHOLOMEW'S HOSPITAL. — 1½ P.M. Surgical Consultations.
 CHARING-CROSS HOSPITAL. — Operations, 2 P.M.
 CENTRAL LONDON OPHTHALMIC HOSPITAL. — Operations, 2 P.M., and on Friday at the same hour.
 HOSPITAL FOR WOMEN, SOHO-SQUARE. — Operations, 2 P.M.
 HARVEIAN SOCIETY. — 8½ P.M. Second Harveian Lecture, by Dr. J. E. Pollock, "On the Prognosis and Treatment of Chronic Diseases of the Chest in relation to Modern Pathology."

Friday, Dec. 17.

ST. GEORGE'S HOSPITAL. — Ophthalmic Operations, 1½ P.M.
 ST. THOMAS'S HOSPITAL. — Ophthalmic Operations, 2 P.M.
 ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL. — Operations, 2 P.M.
 BROWN INSTITUTION (in the Theatre of the University of London). — 5½ P.M. Dr. W. S. Greenfield (Professor-Superintendent): "Further Investigations on Anthrax and Allied Diseases in Man and Animals."

Saturday, Dec. 18.

ROYAL FREE HOSPITAL. — Operations, 2 P.M.

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Local papers containing reports or news-paragraphs should be marked.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

Lectures, original articles, and reports should be written on one side only of the paper.

We cannot prescribe, or recommend practitioners.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET to be addressed "To the Publisher."

SEAWEED AS A SUBSTITUTE FOR JAM.

AMONG the few serious political papers published in Paris, we note that the *Temps* occasionally renders good service by describing, in popular language, frauds that gravely compromise public health. Thus on the subject of jellies we have some startling disclosures. We should remark that in France fruit preserves are generally sold as jellies, and not as jam, in which the seed, stones, and sometimes the outline or skin of the fruit itself can be discerned. Falsification is, therefore, more easy. For this purpose gelatine made from fish naturally suggested itself, but was found too expensive. Of late years, however, since the importation on such a large scale of Chinese and Japanese porcelain, &c., a new solution has been found to the problem. The objects imported are generally packed with a common maritime plant that is used instead of straw. This seaweed possesses, however, peculiar properties. When placed in a tumbler of water, it absorbs the water in a few minutes; then a number of shoots grow, and constitute a jelly nearly as transparent as the water from which it is made. This plant, the *Arachnoidiscus japonicus*, only costs the trouble of bringing it over. The jelly it yields is easily sweetened with glucose, and cochineal or other colouring matter is added with equal facility to imitate the colour of the fruit. The perfume and the taste were the only real difficulties that remained to be overcome. After considerable study it was discovered that by mixing four parts of acetic ether and tartaric acid with four parts of glycerine and one part of aldehyde, formic ether, benzoic, butyric, amylic, acetic, cyanhydric, mythal-salicylic, nitrous, reberythric, and succinic, a perfect imitation of the odour of raspberries was produced. By putting a little of this essence to the seaweed which has been allowed to develop itself in water, a substance is obtained which has the consistence of fruit jelly, though no fruit has been used, which is sweet, though no sugar has been employed, and which has the colour and fragrance of raspberries, though altogether destitute of that fruit. When this ceases to please, another very good fruit flavour is produced by treating castor oil with nitric acid! Fortunately, though wonders are wrought with the *Arachnoidiscus japonicus*, the result is not absolutely perfect. The jelly still retains a little of the fibrous nature of the plant, and has a tendency to split and fall to pieces, instead of forming adhesive lumps. Examined with the microscope, it has no resemblance to the jelly made from fruit. Then, as the jelly must be coloured, it is easy enough to discover the presence of an artificial dye. Without resorting to the laboratory, it suffices to dissolve a little of the suspected jelly in some tepid water, and dip a white silk ribbon in the solution. If it is a natural jelly, the ribbon will simply be a little soiled; but if the jelly has been artificially coloured, the ribbon will also be coloured. By giving publicity to all these details, the frauds practised will be constantly discovered, and the perpetrators brought to justice. We fear also that the falsifications the French have contrived, the English will not be slow to imitate, unless it is generally known that the public are on the *qui vive*.

FEES TO INSURANCE AGENTS.

Mr. T. Cawley Eager. — We entirely agree with our correspondent, and will take some pains to represent the system to the directors in its true light.

W. X. Y. — Dr. George Wilson's "Handbook of Hygiene," published by Messrs. Churchill, will probably meet our correspondent's wishes.

M.D. — We believe not; but the question should be addressed to the Clerk of the Union or the Local Government Board.

A HARDSHIP IN THE POOR-LAW MEDICAL SERVICE.

Mr. Charles Cooper, (Needham Market).—The case submitted to us we have no hesitation in saying is against the spirit of the Poor Law, although it may appear to carry out the letter. We have some doubts whether the Local Government Board would regard it in this sense. We should strongly advise our correspondent to submit the correspondence to the Local Government Board. If he hesitate to do this, it should be possible in part, in his district, to protect himself from the hardship of which he complains of by insisting on some who are paupers, and expecting confinement, and who look for his attendance, applying for an order to the guardians two or three weeks before the time the confinement is due, as recommended by the Local Government Board.

THE NAVAL MEDICAL SERVICE.

A Tanner.—We do not think the publication of our correspondent's letter would in any way be advantageous to the department. On the contrary, it might possibly exert a prejudicial influence at a time when the question of modification of the service is under the consideration of the authorities. Other subjects of at least as much importance as increase of pay must be dealt with if the existing state of discontent is to be remedied.

SANITARY WORK.

To the Editor of THE LANCET.

SIR,—Just as a red flag waved before the eyes of the tortured and tired bull will always madden him for fresh exertion, so I think whenever the questions of milk, sanitary regulations, and medical etiquette as connected with the duties of medical officer of health are brought prominently before the medical world, as in the late case at Surbiton, a great many of us will feel inclined to growl out complaints, and that must be my excuse for breaking a lance in the following lengthy letter.

It is now some years since a great stir was made in the outside as well as in the medical world concerning the health of the nation, and how much it might be improved by arranging a more perfect code of sanitary laws, and appointing officers to see them enforced. Boards of health sprung up in every town, medical officers were appointed, inspectors of nuisances created, and additional salaries and additional duties given to surveyors. Has the result justified the expenditure? Much honest work has been done; many evils removed; good men have sacrificed their time, health, and lives in their very eagerness to discover the causes that give rise to the disease germs. The work is still going on; but is it fast enough, cannot more be done to rescue this thickly-populated land from the spread of the devastating zymotic diseases? I think it can, but not under the present regulations. Whilst medical men and their patients are allowed to cover up these diseases with the blanket of secrecy, zymotic diseases will flourish like and deadly in our midst. Amongst small communities, some small town I would say, especially where the medical men of the place are on friendly terms with the medical officer of health, many precautions can, and are, taken that it is hopeless to look for in large towns under the present regulations. Could anything be more ridiculous than the present regulations made to guard our homes from invasion by contagious and infectious diseases? For instance, let scarlet fever lie dead, or, better still, let it in imagination be entirely blotted out from amongst us in London for a few months, then reintroduce it in single cases in a few crowded districts. If such could be, are our sanitary laws stringent enough, are our medical officers of health numerically strong enough and sufficiently on the watch to grasp the nettle on its first appearance, and destroy it? With such a disease as the plague, &c. &c., when everyone is frightened, they would get every assistance from the populace; but with the common fevers of the land, familiarity, if it has not bred contempt, has at least made many careless; and whilst there is no regulation, no law that every case shall be reported, secrecy will do its work. Our sanitary authorities possess much power, and they use it wisely and well; but whilst they have to fight in the dark until they are able to grapple with the foe, "Secrecy," many of their best efforts will be defied and barren. Now, the knowledge of how fever frequently spreads amongst us is patent to all, and yet without raising a finger, without striking the smallest of blows in defence, we receive the enemy—in fact, run open-handed to him. We bully the builder, we worry the house-agent, we vex the landlord to get our drains &c. put into working order; we write long letters, and abuse the water we drink—in a word, we shut up three sides of our castle, but on the fourth we leave wide open the port; we throw wide open the gate without even placing a sentinel on guard; for do we not unhesitatingly buy at any shop whatsoever our tastes are pleased with and our purse will allow? and yet what a large proportion of goods exhibited are made by the working classes in their own homes—homes not unfrequently visited by some infectious and contagious disease at long or short intervals. As an example, I would cite one solitary case out of the many that come under my notice:—A woman, who earns a large sum weekly as a furrier, has two children down with scarlet fever; to give up work means little better than to be reduced to a state of pauperism. Then comes in the alternative; either the medical attendant must countenance a great wrong, or he must inform the medical officer of health, and get his authority, and so doing risk offending the patient, her friends, and perhaps a wider connexion, or he must be content with threatening, and risk the work being done in secrecy.

Your obedient servant,

CLEMENT E. PRIESTLEY.

St. Agnes-terrace, Victoria-park-road, Dec. 1880.

EXAMINATIONS AT THE ROYAL COLLEGE OF SURGEONS.

The following were the questions on Anatomy and Physiology submitted to the twenty-two candidates at the half-yearly examination for the Fellowship of the College on the 19th ult., when three out of the four questions were required to be answered:—

1. Describe the veins of the head and neck, including those of the spine, but omitting those within the cranium.
2. Describe the convolutions and fissures seen on the outer surface of one hemisphere of the brain.
3. Describe the dissection necessary to expose the whole length of the thoracic duct. Give its course, relations, and tributaries.
4. Give the dissection required to display the parts concerned in inguinal hernia. Describe fully the inguinal canal and its contents in both sexes.

The following were the questions on Physiology:—

1. Describe the development of the internal ear in mammals.
2. Describe the microscopic appearance of the cells of the parotid and sublingual glands as seen in sections made from glands which have been at rest, and in sections from corresponding glands which have been subjected to prolonged excitation. What inferences may be drawn as to the action of such cells from these appearances, and by what experiments may these inferences be corroborated?
3. Give the structure of one of the large serous membranes, and describe its relations to the lymphatic system. State the modes in which lymphatics arise, and the forces by which the movement of the fluid in them is maintained.
4. Describe the extrinsic and intrinsic innervation of the heart.

The following were the questions on Pathology, Therapeutics, and Surgery at the written examination for the Fellowship on the 25th ult., when they were required to answer all four questions from 1.30 to 5.30 P.M.:—

1. Mention the several effects, immediate and remote, of severe contusions of the perineal region in the male.
2. In a case of popliteal aneurism, what methods of treatment would you consider? Describe fully the conditions by which you would be guided in the choice of any particular plan.
3. Discuss the pathology of erysipelas. State the evidence upon which your view of its nature is based.
4. Mention the several morbid products which may be found in the urine. How are these to be distinguished, and what diagnostic inferences may be deduced from their presence?

Enquirer—Iodoform, five grains; oil of eucalyptus globulus, ten minims; dissolved in cacao-butter, and cast in a bougie four inches long.

Dr. Prickett.—The paper is marked for insertion.

"THE CHLOROFORM DEATH-BILL FOR TWELVE MONTHS."

To the Editor of THE LANCET.

SIR,—Dr. Jacob's letter in your issue of Nov. 27th is an advance upon his paper. He tells us that chloroform is, "at the most, fatal once in 3000 cases." This is wonderful success if we consider how often it is given in defiance of the necessary precautions, and how often accidents and other circumstances render its use necessary without any preparation at all. This remark applies also to ether. What is the difference between the last two decades? From my point of view, a vastly more general use of anaesthetics and a vast increase in the number of trained administrators would render the comparative statistics of deaths merely somewhat unsatisfactory. There is also the question of the sample of chloroform. Fifteen years ago, as students, we were taught that chloroform was practically free from danger if properly administered. A few years since ether was reintroduced as absolutely free from danger; but the first death disproved this statement, and left the question of comparative safety to be settled. With limited opportunities I could not unaided reach a conclusion satisfactory to myself; but a small experience was adverse to ether. On making inquiries concerning the practice of my former teachers and others, in whose judgment I have every confidence, I was told that, without exception, they had gone back to chloroform. Although this does not accord with Dr. Jacob's statement, I do not doubt that he speaks fairly of his own experience and neighbourhood; but older men must be permitted to attach some value to a previous lengthy and satisfactory experience of chloroform.

Dr. Sandby's paper on Anaesthetics in your issue of Nov. 20th is very welcome as a temperate estimate, and suggests one question which seems to me important: How much both of the safety and danger of ether depends upon the large amount given? It is given in enormously larger quantity than chloroform, and therefore the limit of safety in dose is probably less easily overstepped. On the other hand, how much of its danger depends upon the effect on the respiratory tract of the large quantity required? If this be true, it ought to be an objection to its prolonged administration; but I put the question to elicit information.

I am, Sir, your obedient servant,

Guernsey, Nov. 1880.

J. AIKMAN.

A Combatant Officer.—We sympathise with our correspondent in his disappointment; but a careful inquiry has satisfied us that the detention was an unavoidable result of the state of matters in Afghanistan. We understand that steps are being taken to relieve officers whose time of service has expired with as little delay as possible consistently with the necessities of the service.

E. M. S.—We have no recollection of the article mentioned.

THE CLIMATE OF MANITOBA.

It may seem strange, says *The Colonies and India*, but it has been proved beyond a doubt, that the Canadian north-west enjoys a milder temperature in winter than the region to the south of it, in the United States. Continued observation proves that Manitoba frequently escapes the severe winter storms or "blizzards" which sweep over Minnesota and Dakota, and render travelling and outdoor work almost, if not altogether, impossible.

Mr. S. H. Harris.—The reply appeared in our impression of Sept. 25th, p. 523.

Tentator.—We do not see that there would be anything unprofessional in A. putting himself forward as a candidate.

HIGH-HEELED BOOTS AND SHOES.

To the Editor of THE LANCET.

SIR,—Will you kindly let me say a few words on the consequences of the present fashion of high-heeled boots and shoes, and especially of the unnatural situation of the fashionable heel?

I have at present under my care two serious cases of "sprained ankle," solely arising from their use. The parties tripped, and losing their balance, were unable to recover themselves without falling, which, in the one, resulted in partial laceration of the internal, and in the other of the external, ligaments of the ankle-joint, and both threaten to end in permanent partial disability.

Again, about a month since, I was consulted respecting a young lady, aged sixteen, whose parents were greatly alarmed at a supposed spinal affection under which they believed their daughter to be suffering. After an ordinary walk, but more especially after ascending the hills in the locality, she experienced a distressing feeling of nausea, and an amount of pain and heat over the dorsal and lumbar regions, extending, more or less, through the whole lower extremities, and followed by an amount of painful weariness that wholly disabled her for days after, the more muscular parts being painful on pressure. My professional knowledge of both parents and child guided my diagnosis and prognosis of the case. That the spine was all right, and the means of cure simple, I felt no doubt. I ordered the boots she generally wore to be brought to me, and found the heels raised *two* inches, tapering to the size of a shilling, and, to make matters worse, instead of corresponding to the situation of the natural heel, they were situated immediately under the arch of the foot. I recommended rest in the horizontal position for two or three days, and shoes with half-inch soles, of the breadth of the natural heel, and the toes broad in proportion, to be substituted for those previously worn. The cure was complete. No nausea, no weariness, no pain or discomfort, after a four-mile walk, have been experienced since.

In walking under the previous condition every intention of nature—anatomically speaking—was frustrated, and the symptoms complained of precisely those to be expected. Not only were the firmness of step and ease in walking lost, through the natural spring and muscular action of the foot being destroyed, but every muscle whose tendon extended to the foot must have been abnormally strained, the upright position of the body preserved under difficulties, and the centre of gravity and adjacent nerve-centres seriously irritated—a state of things which, I need not tell my professional brethren, if perpetuated from youth to womanhood, must inevitably end in permanent mischief of some kind, and the sooner the voice of the profession is raised against such an absurd and pernicious practice the better.

It certainly does not redound to the credit of our good sense or intelligence to see introduced and patronised what became a term of reproach to our ancestors a century and a half since.

I am, Sir, yours, &c.,

THOS. H. S. PULLIN, M.D.

Sidmouth, Nov. 1880.

Subscriber.—Lectures on Orthopædic Surgery and Diseases of the Joints, delivered at Bellevue Hospital Medical College. Published in London, 1876.

Mr. Stocken (Upton) had better apply to the Secretary of the Association, St. John's-gate, Clerkenwell.

POROPLASTIC JACKETS.

To the Editor of THE LANCET.

SIR,—I have a patient, aged about forty, with lateral curvature of the spine to right side. She has been using for the past five months, with some benefit, the poroplastic jacket, with, of course, the extending apparatus; but this is defective in one essential point at least—viz., that whilst compressing the bulging or projection of right side below and posteriorly, it at the same time equally compresses the left side, already contracted and drawn in. This of necessity it must do, being simply an encircling force, pressing equally on all points. What is wanted is an appliance which, whilst pressing directly upon the projecting curve below, would at the same time so operate on the upper portion of the spinal column as to draw it outwards, and not at all to press on the opposite or contracted side. Now, it occurs to me that if there be any appliance tried, and found by the profession to be more efficient for the above purpose than the poroplastic jacket (as for the plaster-of-Paris bandage I have found it to be worse than useless), I should be most likely to come to the knowledge of it by the publication of this letter in your widely-circulating journal.

I remain, Sir, yours truly,

Dunkineely, Ireland, Nov. 1880.

ENQUIRER.

NURSES FOR THE SICK POOR.

The following observations made by Earl Cairns, who presided at the recent annual meeting of the Nurses' Home and Training School, Belfast, will be perused with interest:—

"There are various forms which Christian charity takes, and I own there is no form of it comes so much home to the heart and feelings of everyone as the form which seeks to relieve sickness and suffering. We are all of us subject to sickness, and it is in sickness that one feels that 'touch of nature'—and sometimes a very rough one too—which 'makes the whole world akin.' We should be glad, many of us—I dare say all of us,—if we had the time, the opportunity, and skill, to minister to the wants of those in sickness. We have not the time, nor the opportunity, nor the skill, and we cannot all of us do this; but we can, on the other hand, support those excellent, self-denying, and energetic persons who devote themselves to this great and holy work, by kindness, by encouragement, by good wishes, and by prayers; and we can support them by providing them with the means with which they must be supplied in order that the work may be effectually done."

Mr. G. Burton.—We are not aware.

GUY'S HOSPITAL.

To the Editor of THE LANCET.

SIR,—With reference to some of the remarks made by "Two Students" in your issue of Nov. 27th, I think, in common with most, if not all, of my medical friends, ample time has already been allowed for the Guy's authorities to make arrangements for the carrying on of the great charity which they control. Surely, after the prolonged forbearance displayed by the medical staff, the onus of providing for the welfare of the patients might now fairly be thrown on the shoulders of the governors entirely. They, no doubt in common with most other people, have anticipated the possibility, or even the probability, of the resignation of the whole staff, and, it is to be presumed, are prepared to meet such an emergency, otherwise the want of forethought in the interest of hundreds of suffering poor would be most reprehensible. No feeling of irritation could to such an extent blind any body of men such as they. "Tantænam animis coelestibus iræ?" Let the medical staff, then, not be hyper-solicitous. The position taken up by the governors necessitates their acceptance of all responsibility. Let us see how they propose to support it.

Dr. Habershon and Mr. Forster might, I think, justly complain of the present inaction of their late colleagues who joined them in their act (the much-complained-of letter), but now refuse to share with them the consequences of that act, at all events as the consequences have turned out.

Without doubt, were the Guy's school to be closed the students would be received with open arms by all the other hospitals. This disagreement at Guy's is but another example of the ingratitude with which our professional services are so frequently, nay, generally rewarded. We give lavishly and with open hand; the compensation we receive only too often through the clenched fist. To such treatment the poor and struggling country practitioner has often to submit for his bread's sake, but no such hard necessity exists in the case of men so highly eminent as the staff of Guy's Hospital. Let us, then, have "more light" as to "coming events." I enclose my card.

I am, Sir, yours faithfully and obediently,

Dec. 1880.

ESPRIT DE CORPS.

BRONCHITIS COMPLICATED WITH DIARRHŒA.

To the Editor of THE LANCET.

SIR,—In reply to your correspondent in THE LANCET of Nov. 13th, I would suggest that he administers to children with acute bronchitis complicated with diarrhœa during dentition, a mixture containing ipecacuanha powder, four grains; bicarbonate of soda, bromide of sodium, of each thirty grains; syrup and gum mucilage, of each two drachms: two teaspoonfuls to be given every three or four hours; aided by two or three doses of mercury-with-chalk, and a warm bath at bedtime, carefully administered. If the child is weaned, the nourishment should consist of mutton-broth with pearl barley boiled with it, a little milk and rice-water in about equal proportions, the temperature of the apartment being attended to. During convalescence a teaspoonful of cod-liver oil twice daily for two or three weeks completes the cure.

Yours truly,

Earl's-court-road, W., Nov. 23rd, 1880.

E. MAY, M.R.C.P.

TEMPERATURE IN RUBEOLA.

To the Editor of THE LANCET.

SIR,—I shall be glad if you will give me an opportunity of asking my medical brethren whether they have had any cases of rubeola in which the temperature has remained persistently high (say from 101° to 103°) a week after all the rash had disappeared; and also whether this high temperature has been accompanied by general tenderness in the lumbar region and in the wrist-joints. I should also like to know whether peeling has occurred frequently or not, and whether discharges from the ear have been noticed as one of the sequelæ.—Yours &c.,

Cardiff, Nov. 1880.

J. GARRETT HORDER.

ERRATUM—In our acknowledgment last week of the receipt of the pamphlet "Dress, its Sanitary Aspect," the name of the author was incorrectly given. It should have been Bernard Roth, F.R.C.S., not "Richard" Roth.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. S. Ringer, London; Mr. P. Hewett, London; Dr. Pye Smith, London; Dr. B. Yeo, London; Mr. T. Holmes, London; Dr. G. Johnson, London; Dr. G. Lawson, London; Mr. Baber, London; Dr. Davie, Dublin; Prof. Clay, Birmingham; Dr. Cook, Manningtree; Dr. Ridpath; Dr. Downes, Chelmsford; Mr. Craig; Mr. Faulker; Major Duncan; Mr. Butlin, London; Mr. Williams, Wigan; Mr. Hall, Swansea; Mr. J. H. Morgan, London; Dr. Pollock, London; Mr. M. Baker, London; Dr. Fussell, Brighton; Mr. Netherclift, London; Dr. Pollock, Glasgow; Dr. Shea, Reading; Dr. Kennedy, Dublin; Mr. Hitchins, Weston-super-Mare; Mr. Gaskoin, London; Mr. R. Parker, Liverpool; Dr. Lowe, Lincoln; Mr. Lloyd, Baxmouth; Mr. O. Pemberton, Birmingham; Dr. Waters, Chester; Mr. Mason, Pontypool; Dr. Ridge, Enfield; Mr. Kerswill; Dr. Boulton, London; Mr. Davy, Mountain Ash; Mr. Wales, Portsmouth; Mr. Purnell, London; Mr. Pain, London; Dr. H. Thompson, London; Mr. Walter, London; Mr. Paterson, Aldershot; Mr. Meeson, Manchester; Dr. Alexander; Mr. Jelley, Totnes; Mr. J. Ross, Manchester; Inspector-General Domenichetto; Mr. Ives, Portsmouth; Mr. King, Melksham; Mr. Davies, Brynolwg; Mr. Angove, Camborne; Mr. Fox, Lyynn; Dr. Young, Malton; Dr. Walker, Spilsby; Mr. Allen, Belper; Mr. Darke, Salisbury; Dr. Tuckwell, Oxford; Dr. Roper, London; Dr. Page, Netherfield; Mr. Porter, London; Mr. Simmons, Colchester; Mr. Sydney Jones, London; Mr. P. Wright, King's Lynn; Dr. Lownds, Egham; Mr. Dryland, Kettering; Dr. Woakes, London; Dr. Sturges, London; Dr. E. S. Thompson, London; Mr. Macnamara, London; Mr. Clay, Manchester; Mr. Burman, Wath; Mr. Burton, Seaforth; Mr. Johnson, Grasmere; Surgeon-Major Moutat; Mr. Gibbs, Aylesbury; Mr. Kent, Wrotham; Mr. Sellers, Radcliffe; Mr. J. Cook, London; Mr. Walters, Reading; Dr. Montgomery, Penzance; Dr. S. Moore, Aldershot; Surgeon-Major Tanner, Dover; Dr. Humphry, Cambridge; Surgeon-Major Randall, Woolwich; Mr. Weekes, Melksham; Dr. Chavasse, Birmingham; Mr. Brook, Lincoln; Mr. C. Heath, London; Surgeon-Major Wilson, Ipswich; Dr. Fosbrooke, Alcester; Mr. Pierce, Manchester; Dr. Ormerod, London; Dr. Thomas, London; Mr. Sutton, Sittingbourne; Dr. Lewins; Mr. Millican, Kineton; Mr. Priest, Waltham; Mr. Nunn, Maplestead; Mr. Harrison; Dr. Hogg, Netley; Mr. Shortridge, Greenock; Dr. Shearer, Liverpool; Dr. Gornall, Newton Heath; Dr. Jamieson, Portsmouth; Dr. Brabazon, Bath; Dr. Fasson, Aldershot; Dr. Nutter, Netley; Mr. Annandale, Edinburgh; Mr. Wright, Pendlebury; Dr. Vincent, Norfolk; Dr. Turle, Finchley; Sir W. Miller, Londonderry; Mr. Nettleship, London; Dr. Yeats, Manchester; Mr. Ashmead, Brierley Hill; Dr. Clifford Allbutt, Leeds; Mr. Syme, Egremont; Mr. Giles, Dublin; Mr. North, York; Dr. Lindsay, Mickleover; Dr. Burd, Shrewsbury; Dr. R. E. Thompson, London; Dr. T. Jones, Brecon; Surgeon-Major Robertson; Mr. Goldie, Leeds; Dr. Campbell, Liverpool; Dr. Mackintosh, Chesterfield; Mr. Reynolds, Dublin; Mr. C. R. Jones, Great Torrington; Dr. Goodhart, London; Mr. Hamilton, Liverpool; Mr. Ford, Stamshaw; Dr. Wicks, London; Dr. Coley, Newcastle-on-Tyne; Dr. MacLagan, Hexham; Mr. Plinn, Brownhills; Dr. Budd, Ashleigh; Dr. Wearn, Longton; Dr. W. Moore, Dublin; Dr. Gramshaw, Stillington; Dr. Mackinder, Gainsborough; Dr. Douglas, Newbury; Dr. Taylor, Scarborough; Mr. Oldham, Hayward's Heath; Surgeon-Major Taylor, Eastfield; Dr. Yeld, Sunderland; Mr. Pritchard, Teynham; Dr. G. Smith, London; Mr. J. Startin, London; Mr. Walsh, Worcester; Mr. Hamilton, Swadincote; Dr. Hickenbotham, Birmingham; Dr. Speas, London; Brigadier-Surgeon Chapple, Cork; Dr. Diver, Kenley; Mr. C. Roberts, Uxbridge; Mr. Hendley, Dover; Dr. A. Eddowes, Loughborough; Dr. E. Semon, London; Dr. Seaton; Mr. Willmore, Walsall; Dr. Reid, Newbiggin; Dr. Stephenson, Bradninch; Dr. Saundby, Birmingham; Mr. Dolan, Leeds; Mr. Swain, Devonport; Mr. W. J. Brock, Glasgow; Dr. Balfour, Edinburgh; Mr. Teale, Leeds; Mr. F. Treves, London; Dr. H. Snow, London; Mr. Wilson, Stockton; Dr. Murrell, London;

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Worthing Intelligence, Il Morgagni Giornale, Chicago Medical Times, Sanitary Engineer, Colonies, Cleckheaton Guardian, Bradford Observer, St. Louis Globe-Democrat, Cambridge University Reporter, Pontypool Free Press, Social Notes, American Musical Opinion, Revue Mensuelle, Archives de Médecine Navale, Bulletin de l'Académie de Médecine, Le Concours Médical, Monthly Homœopathic Review, L'Union Médicale, La Science Libre, Revue de Thérapeutique, Sanitary Journal, Cork Examiner, Cork Daily Herald, Midland Free Press, Australian Medical Journal, Rock, Egyptian Gazette, Bournemouth Visitor, Surrey Comet, Scotsman, Gardeners' Magazine, &c., have been received.

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The Brown Lectures.

FURTHER INVESTIGATIONS ON ANTHRAX
AND ALLIED DISEASES IN MAN
AND ANIMALS.*Delivered at the University of London on December 13th, 1880,*

BY PROF. W. S. GREENFIELD, M.D.

LECTURE I.

PROF. GREENFIELD commenced by stating that he had reverted to the subject of anthrax and anthracoid diseases because recent experiments were such as to throw an entirely new light on many of the problems relating to them, and to reverse views previously entertained, besides adding new, important facts. Anthrax had been investigated for many years; for it is the first disease in which a definite bacterial organism was found to constitute its specific contagium. If it can be brought under the category of epidemic diseases, the study of its specific organism is of the greatest value in the investigation of other like diseases; and the conditions of its propagation, of its maximum virulence, and of the influence whereby that virulence may be delayed or destroyed, become of the highest importance. The experimental study of anthrax has led to striking results in this respect, showing that the relative virulence of the disease, as propagated by inoculation or contagion, is identical in its properties with small-pox under like conditions; and if that is true the law holds good of nearly all contagious epidemic diseases—viz., that of natural recurrence, or recurrence in a modified form. The disease is more prevalent in man than is usually supposed, and although at present instances of it are confined mainly to woolsorters, it is yet widely prevalent where as yet its existence is unsuspected.

He would first describe experiments made during the past year which throw a new light upon its pathology. It was strange that so few attempts had been made at its prevention by protecting animals by inoculation. The striking results formerly obtained by small-pox inoculation had been obscured by the greater merits of vaccination in substituting a non-contagious for a contagious disease. It was only comparatively recently that any systematic attempt had been made to extend the principle of inoculation to other diseases; but there could be no doubt of its value in pleuro-pneumonia of animals, and now also as regards splenic fever. In his lectures last year he stated his intention to ascertain whether a bovine animal could be inoculated with a non-fatal form of the disease, so as to afford protection against any subsequently acquired or artificially produced attack. Dr. Sanderson and Mr. Duguid had shown that such inoculations could be practised; but their experiments, which had not been published, did not lead to the suggestion of protective inoculation, but rather negated this idea. Professor Greenfield then described his own experiments in detail. A cow (A) was inoculated with a second generation of anthrax bacillus, derived from the guinea-pig. There were no symptoms for twenty-four hours except slight swelling at the seat of inoculation. Forty hours after the inoculation the temperature rose to 104° (normal being 101°), and the animal became drowsy, stupid, and lost appetite. A slight evening fall of temperature to 102.4° was followed by a rise to 106.4° next morning, and for three days it ranged between 105° and 107°, the animal being seriously ill. There was very marked œdema at the seat of inoculation, subsiding on the sixth day. On the eighth day the temperature fell to 104°, on the ninth to 101°, and speedy recovery ensued. Six weeks later a second inoculation was performed, the fresh spleen of a guinea-pig dead from anthrax and swarming with bacilli being used. The temperature rose to 102.6° next day, but on the third day the animal was well. A week later a third inoculation was made on this cow, and at the same time another cow (B) was inoculated

for the first time. No result occurred in A, but in B there was rise in temperature on the second and third day, but no loss of appetite or local œdema; and on the fourth day the animal was found dead, and presented the post-mortem appearances of splenic fever, the blood swarming with bacilli. A fourth inoculation was performed on A three weeks later with the fresh spleen of a guinea-pig, swarming with bacilli, and again without result. Two weeks later a fifth inoculation from a sheep which had died of anthrax, resulted only in the formation of a local abscess. A calf (C) six months old was inoculated with the fifth generation of anthrax bacillus; nine days later it was reinoculated, this time with the first generation; local œdema, rise of temperature, and other symptoms followed, but recovery took place. Five months after a third inoculation produced no effect. Experiments were also made on two young heifers (D and E) about the same age and size; D was first inoculated by the cultivated bacillus of a third generation. Next day it was stupid and drowsy; and there was extensive local swelling; the temperature reached its maximum on the third day, when the constitutional symptoms were most severe; with the subsidence of the fever rapid recovery took place. Neither in this nor in other cases did any pustule form, nor had the local swelling any resemblance to the emphysematous swelling of "black quarter." The blood contained no bacilli. Ten weeks later an inoculation with the thirteenth generation of the cultivated virus produced no effect; and an inoculation with the spleen of a guinea-pig produced no symptoms beyond slight local swelling. E was inoculated five days after D with the eighth generation of bacillus. No symptoms occurred; nor after a further inoculation with the seventh generation, and one with the thirteenth, practised at the same time as the like inoculation on D. It being thought possible that protection might be conferred by inoculation with the very attenuated virus, each of these animals was, three months later, inoculated with half a drachm of blood from a man who had died of general anthrax (woolsorters' disease) thirty-six hours previously. The blood was still fluid and of natural colour, its corpuscles were natural, and it contained the characteristic bacilli, but no spores. Rodents inoculated with it speedily died. The heifer D, which had been successfully inoculated three months previously, suffered from no ill-effects after this severe test, beyond a slight rise of temperature the following day, and a small phlegmon. In E, however, very severe symptoms set in in twelve hours, and for some time life was threatened; but on the fifth day improvement set in, although the swelling was so considerable as to call for incisions to be made into it. The same two animals were submitted to another comparative test two months later, D being inoculated with the spleen, and E with the pericardial serum from a cow dying of splenic fever on a sewage farm near Bradford. No symptoms followed in either case.

It had been objected that, although such inoculation conferred protection against further inoculation, the animal might still be susceptible of the epidemic or epizootic disease. But there is ample evidence to show that animals insusceptible of inoculation do not spontaneously suffer from the disease, and that the disease in its epidemic form is really inoculated in some part of the mucous membrane. Striking confirmation of the protection by inoculation has recently occurred. Near Bradford the sewage of a mill and the adjoining village is carried almost directly to a small farm about a mile distant, and there distributed to some meadows on one side of a valley and stream, the fields on the other side not receiving any of the sewage. This sewage (containing as much as 2.6 per cent. of organic matter) is largely composed of the washings of wool from the mill, and that the wool contained anthrax poison was shown by the occurrence of four cases in the men washing the raw wool in April, one in May, and one in June. On May 1st the proprietor of the farm, who had procured twelve cows from Scotland, placed five cows (lot 1) upon the sewage farm, and the rest (lot 2) on the other field. On May 27th one of the lot 1 was found dead and two others ill. All the animals were now removed to the non-sewage fields, but on June 8th the eight were put on the sewage farm, and on the 30th the cow which had been ill was found dead. The rest were again taken off these infected meadows, but on July 2nd one of the second lot died suddenly from anthrax. Two sheep grazing on the sewage field also died. On July 13th the three animals above called A, D, and E were placed on these fields, and remained there, two of them till October 19th, and one till November 16th, quite free from disease. Meanwhile two

more sheep died from anthrax, and although the mills had been stopped the contagion still remained in these fields, for on November 23rd the proprietor placed some fresh cattle on them, having kept them on the other fields from the end of September. On December 2nd one of these animals died of splenic fever.

These facts are, of course, not absolutely conclusive, for it is difficult to obtain any absolute proof of the power of resistance acquired by any exposure to contagion; but there are few conditions which could have been more satisfactory in proof of the protection afforded by inoculation.

Professor Greenfield then described at length the researches arrived at in the same direction, and with similar results, by Pasteur, Chauveau, and Toussaint; and remarked that, to be of practical value, a method must be found to confer the maximum of protection with the minimum of risk to the inoculated animal. He had, therefore, instituted a series of experiments, on the modification of the anthrax poison, which he proposed to describe in the next lecture (and a note of which was read at the Royal Society on June 17th, some time before M. Toussaint made his method public at the Académie des Sciences).

Passing to the phenomena following inoculation, he remarked upon the constancy with which a local gelatinous oedema and rise in temperature (whether of fixed duration and degree observations were too few to decide) occur in the non-fatal cases; whilst in the fatal cases such symptoms were absent. They were also absent in the subsequent inoculations, so that the conclusion is that the swelling is not a mere inflammatory reaction caused by injection of irritant material, but as specific as the vesicle of vaccinia or the chancre of syphilis. It varies also with the intensity of the virus, and not with the material containing it, and its appearance may be looked upon as a favourable omen. He had failed to find bacilli in this gelatinous exudation in bovine animals as in rodents; and inoculations from the blood during the high temperature were inert, so that if bacilli were absorbed they must be destroyed. There was no definite information as to recurrence after mild attacks, nor on the question of individual proclivity and susceptibility. The resistance after inoculation is not complete, for it may be increased by further inoculations, and Chauveau has shown it may be overcome by enormous intra-venous injections. It cannot be that the pabulum for the maintenance of the life of the virus is exhausted, but it would seem as if the power of destroying the virus were intensified, and that a certain property innate in the system acquired increased activity by use. Chauveau shows that Algerian sheep, which have great natural power of resistance to the virus, have this increased by inoculation, and that if ewes are inoculated in the last months of gestation the lambs are insusceptible. The observations of Brauell and others, and in one case by Professor Greenfield himself—the blood and tissues of the foetus of an animal dying of anthrax were found not to contain bacilli, whilst those of the mother may swarm with them. So that immunity may be transmitted without contagion; and possibly this is due to a product of the virus, and not the virus itself being the factor capable of protecting by inoculation. If this be so, a new law of vast importance in contagious disease would be opened up. The fact of non-recurrence adds one more link between anthrax and the specific contagious diseases as distinguished from simple blood-poisoning; and gives encouragement to the investigation of its laws, in the hope of applying them in future to the less understood but more important and fatal human diseases.

GUY'S HOSPITAL. — The following is the reply of Dr. S. O. Habershon and Mr. Cooper Forster to the resolution sent them by the members of the Brixton Medical Book Society, a notice of which appeared in our last week's issue:—

“Dec. 6th, 1880.

“GENTLEMEN,—We sincerely thank the members of the Brixton Medical Book Society for the resolution passed at their meeting on Dec. 3rd. We highly appreciate the sympathy of our professional friends in the painful and difficult position in which we have been placed as seniors on the staff of Guy's Hospital. We could no longer remain in office without sacrificing the honour and the just claims of our profession.—We are, Gentlemen, yours very faithfully,

S. O. HABERSHON.
J. COOPER FORSTER.”

Clinical Lecture

ON

CARCINOMA OF THE SIGMOID FLEXURE.

Delivered at St. Mary's Hospital,

By ARTHUR T. NORTON, F.R.C.S.

A shilling and a sixpence arrested in the bowel at the seat of the stricture; perforation of bowel and escape of fecal fluid beneath the iliac fascia; pyæmic abscesses and secondary deposit of cancer in the liver.

GENTLEMEN,—R. L.—, a healthy-looking woman, aged forty-four, was admitted into the hospital on the 24th of January. She said she had enjoyed good health until the previous month. Owing to the symptoms exhibited at the date of admission the patient was entered as a medical case under the care of one of the physicians.

When first seen she complained of nausea and continual retching, but without vomiting; of great pain in the left lumbar and iliac regions of the abdomen, aggravated by pressure, and also of severe pain referred to a point midway between the tuberosity of the ischium and the great trochanter of the femur. For some days the symptoms remained unchanged. The temperature varied, being always above normal, sometimes 102°, and the variations were not regular, the highest point in the day being from time to time in the morning, occasionally in the afternoon and evening.

On the 13th of February there was detected deeply in the left iliac fossa, and reaching nearly as low as Poupart's ligament, a distinct swelling, excessively tender and somewhat fluctuating in character. This swelling could not be felt on a vaginal examination. On the morning of this day the patient had a distinct rigor lasting about a quarter of an hour. Retching and vomiting were continuous throughout the day, but the vomit was not stercoraceous.

On the 17th of February I examined the case again in consultation, and found what I described as an irregular, fixed, somewhat nodular mass on a level with the last lumbar vertebra three inches from above downwards, and an inch and a half from side to side. In the left iliac fossa was also an abnormal enlargement, tense and elastic, and of doubtful fluctuation.

On the following day the patient was put under chloroform, and the question of exploratory puncture was discussed, but I considered that the tumour with doubtful fluctuation lay so far away, and in itself was so slight in the elevation, that such a puncture would very probably prove a failure; whilst at the same time the necessity of making the puncture in very close proximity to the iliac vessels made the risk of the operation too great in comparison with any good results that might possibly be derived from it.

From day to day the patient suffered from severe rigors, followed by profuse perspirations. The tongue was brown, furred; the pulse 120; the bowels were open regularly, sometimes solid motion, and often diarrhoea.

On the 24th February the physician inserted a trocar, in order to ascertain the character of the fluctuating tumour, but only blood came away.

On the 26th I again saw the patient in consultation, and found the left side of the abdomen emphysematous, commencing around the seat of the puncture and extending some six or eight inches upwards. It was considered advisable to open down upon the tumour at once, and I therefore passed a knife into the point of the former puncture, and made an opening large enough to admit my finger. About ten ounces of frothy, yellow material, resembling typhoid fever stool, came away, and on inserting the finger within the aperture the cavity was traced under the psoas inwards as far as the pelvic cavity, and upwards as high as the last lumbar vertebra. The extremity of the cavity could not be reached by the finger, but as high as the finger could reach a somewhat extensive induration could be made out near the lumbar vertebra, giving to the finger a sensation such as an ulcerated surface. The wall of the cavity was

so greatly thickened by chronic inflammation that the outlines of the intestines could not be traced.

The fluid which escaped from the wound was not pus, though some pus was contained within it. It had the characteristic faecal odour, and was described by me at the time as the intestinal secretion mixed with finely divided aliment. On the following day the pulse was 135 per minute, feeble and fluttering, and the patient was in a state of extreme prostration. On the 5th of March, when last seen by me, her respirations were 40; she was unconscious and sinking. She died early on the following morning. At a post-mortem examination there was found chronic peritonitis in left iliac region, with considerable thickening. The lower part of the great omentum was adherent to the front and outer side of the sigmoid flexure, the medium of union being highly vascular. No general peritonitis; small intestine and stomach healthy. The sigmoid flexure was the seat of an indurated swelling, most marked in an annular manner, suggesting stricture of the gut at the centre of the swelling. A ragged aperture existed in the posterior part of the bowel, and this communicated with a huge abscess cavity occupying the whole of the iliac fossa, the upper part of the pelvis on the left side, and the lower half of the left lumbar region. This cavity contained a quantity of black sloughing debris, pus, and fluid faecal matter. The iliacus muscle was almost wholly destroyed, and the psoas was dissected out and surrounded by necrotic material, and its surface in great part destroyed. Beneath this muscle the abscess cavity had extended into the pelvis.

The calibre of the gut was diminished, admitting only the forefinger. The aperture leading from the gut to the abscess cavity was surrounded by an irregular and thickened margin, and for some three inches above the aperture the gut was both thickened and indurated. Contiguous lymphatic glands were enlarged, but whether from inflammatory exudation or new growth appeared doubtful. A shilling and a sixpence were found arrested by the stricture of the intestine, the two coins lying flat upon each other.

The liver was enlarged. At the under part of the left lobe was an irregular mass of cancer, two inches and a half in length by nearly the same in breadth. Another nodule, the size of a grape, was found in the substance of the right lobe. Scattered throughout the liver were scores of typical pyæmic abscesses, with sharply defined margins, without any surrounding induration, and containing a greenish-yellow material of creamy consistence. The size of the several abscesses varied from a pin's head to a small walnut. There were no pyæmic abscesses in any other organ.

Microscopical examination of the intestinal induration, and of the secondary deposit in the liver, proved them to be typical adenoid cancer. The alveoli were, in some parts, filled with cells, in others only lined by a single layer, the shape of the cells varying from round to well-formed columnar. There was a considerable amount of interstitial tissue, or stroma, in some places thickly set with very small cells, and others merely fibrous.

The above is the history of a case which, as you have perceived, is one of a very complicated character. My diagnosis at the first visit was cancer of either the vertebra or the sigmoid flexure, with adhesion of that bowel to the vertebra, but if the latter then not sufficiently altering the calibre of the bowel to promote any serious obstruction. Having come to the conclusion that the disease was malignant, it appeared clear to me, when a fluctuating tumour became defined, that ulceration of the bowel had taken place, with escape of faecal fluid. With my diagnosis I am called upon to say no other member of the staff agreed. It seemed to be the general opinion that an abscess was forming in connexion with the lumbar vertebra, but as there were many strange symptoms not usually coincident with that disease, the actual pathological change was considered obscure. I will enumerate to you the signs upon which I based my opinion that the disease was malignant, and explain my reasoning upon them.

1. A tumour could be felt located and measured, not even, but rather nodular, upon the surface. Those who considered the case to be an abscess looked upon this mass as an indurated extension of the disease.

2. The person had arrived at an age (forty-four years) at which an abscess in connexion with the spine is excessively rare, whilst cancerous deposits may be looked for.

3. The pain, although present in the left lumbar region, and aggravated by manifestations, was excruciating in the region of the hip-joint and in a point between the tuberosity

of the ischium and the great trochanter. The character of the pain had some weeks previously led the patient to apply to the hospital as a case of disease of the hip-joint. Now, this pain around the hip-joint is not at all such as occurs with abscess, but, strangely enough, it is precisely such as occurs in cases of malignant disease of the vertebra, verified now by me in five different cases, and it therefore acted as a strong incentive to me to examine carefully for cancer. In a clinical lecture given by me, and published in THE LANCET on Nov. 9th, 1878, I mentioned that in cancer of the vertebra or pelvis there is extreme pain in the hip, pelvis, and thighs. The pain has never, I believe, been referred to by other writers, and therefore no suggestion has been made as to the cause of this pain, but it must be remembered that cancer of the lumbar vertebra or of the sigmoid flexure, if attached to the tissues around, must implicate the lumbar plexus of nerves. In the instance now before us, when the bowel ulcerated and faecal escape took place, the cavity containing this fluid enclosed the main branches of the lumbar plexus.

4. The temperature variation was a prominent feature in my estimation in the diagnosis of cancer. The thermometer stood at normal on two or three occasions only, varying usually between 100° and 102°, but from time to time reaching 104°. The variations were irregular, sometimes high in the morning, sometimes in the midday or afternoon, and sometimes in the evening.

An abscess chart never assumes this form; if active and acute, it stands high persistently, and, if chronic, it is high in the evening and normal in the morning; whereas in cancer, as I have pointed out in former published lectures, the irregular elevations are often accompanied by pain, and are associated with exacerbations. Lastly, among the constitutional symptoms, retching and vomiting, and markedly severe rigors over many days, I could not look upon as signs of abscess. Retching and vomiting are common with cancer of the bowel, but concerning the rigors I could offer no explanation until at a later stage of the disease I determined that ulceration of the bowel had taken place with escape of faecal fluid in the connective tissue. Such an irritant, and I may almost add only such an irritant, could produce so severe a symptom, for in no disease have I ever witnessed rigors so severe, so lasting in each attack, and attacks extending over so many days, except in experimentation upon animals when putrid pus has been injected beneath the skin.

Now, if in this case an abscess had been forming either in connexion with the vertebra or as a result of pelvic cellulitis, the prominent symptoms to which I have referred would have differed very materially. I must at once put aside the question of acute abscess because of the absence of the sudden attack of inflammation, with accompanying signs—viz., sudden local pain, sudden elevation of temperature, and the constitutional signs of high fever, terminating rapidly in the formation of matter. Such was not the course taken by the disease under consideration. Again, I do not think it worth while to occupy your time in describing a case of caries of the vertebra in order to draw a comparison between that disease and the one before us. The age of the patient, the peculiar induration, or rather tumour, over the region of the vertebra, the position of the fluctuating tumour being beneath the iliac fascia, together with the temperature chart, were sufficient for me to withdraw my attention from the consideration of that disease. Now, there is a disease not uncommon in women—I mean chronic pelvic cellulitis—and which may be accompanied by secondary pyæmic deposits, and in such a case would closely resemble the case of the woman R. L.—. You may perhaps recall to mind two cases of pelvic cellulitis under my care—one in which the abscess made its way beneath the peritoneum up the front wall of the abdomen, and the other, in which suppuration extended through the left iliac fossa.

The former, when it came under our care, was already associated with pyæmic deposits and peritonitis, so that the rigors, retching, and vomiting forcibly brought to mind the case of R. L.—; but a careful examination accounted for every symptom. A vaginal examination detected a boggy mass between the vagina and rectum, extending upwards over the bladder to the front wall of the abdomen, over which its limit could be unmistakably delineated by percussion. A fine trocar inserted into the boggy mass referred to brought away fluid, but not pus. The cellular tissue, which had been slowly inflamed and thickened, was becoming gangrenous, afterwards proved by post-mortem examination.

It is interesting to compare these two cases, for certainly there was very great resemblance in their symptoms; but the diagnosis of the latter was rendered easy by physical examination, whereas in the former case physical examination exhibited a morbid condition, upon which opinions did not coincide.

The other case of pelvic cellulitis resembled the subject of our lecture, not in the symptoms, but only in the position of the tumour. The left iliac fossa was the seat of the abnormal enlargement—a disease which had commenced a few weeks after parturition, and which at the present time is suppurating. When she first came under our notice suppuration had not commenced, and we had to reason out the character of the somewhat hardened mass occupying chiefly the iliac fossa. The history of the case and the labour became the clue in which I found the diagnosis, whilst the character of the temperature chart, that of a chronic abscess—namely, high at night and low in the morning, without variation—left no doubt as to the exact pathological condition.

I have endeavoured to show you in this lecture that the case was an obscure one, on which there might well be different opinions expressed. That a comparison of the symptoms with those of caries of spine and with forms of cellulitis led me to doubt the probability of it being either of those two diseases, whereas a comparison with cases of internal cancer formerly under my care led me to decide it a form of that disease.

The peculiar coincidence of two coins being found imbedded in the cancer added somewhat to the difficulty of diagnosing the case, and also doubtless brought about an earlier fatal termination. It is probable that the margin of the coin was the cause of the ulcerative perforation of the intestine, and hence of the fluctuating cavity which threw the chief obscurity upon the case. How they came there did not transpire, or why they should have adhered together and permanently fixed themselves in the growth instead of passing away with the faecal excretion, which was not interfered with, is scarcely evident from the nature of the growth.

EYE SYMPTOMS IN LOCOMOTOR ATAXY.¹

By J. HUGHLINGS JACKSON, M.D., F.R.S.,

PHYSICIAN TO THE LONDON HOSPITAL AND TO THE NATIONAL HOSPITAL FOR EPILEPSY AND PARALYSIS.

THE author first alluded to the great number of very different symptoms in this disease, better called *tabes dorsalis*, since the gait might be normal. He referred to the fact that some of the symptoms were occasionally found in other diseases. At present we have to study the symptoms as they occur in association or in sequence. In this paper three well-marked non-ocular tabetic symptoms were taken and considered in connexion with certain ocular symptoms. Twenty-five cases in different stages furnished the material for the communication.

a. Non-ocular symptoms. (1) *The "lightning" pains.*—There is a succession of sudden, small, severe short pains in batches. As Pierret and Buzzard have pointed out, these pains may occur about the head, although they occur mostly in the legs, trunk, and arms. Charcot and others have observed eruptions in the parts seized by pains. Buzzard has published the case of a patient (whom he permitted the author to see) who, with every batch of pains, has a small crop of herpes; this patient has double optic atrophy and Westphal's symptom (absence of so-called patellar tendon-reflex), as well as the pains; he walks well. An interesting feature in this case is that the patient had for several years crops of herpes before batches of pain, and then always both together. It is most important to note that pains are denied by some patients, who, nevertheless, have them. Many patients see no relation betwixt their pains and their amaurosis or ataxy, especially if the pains come years before. This one patient strenuously denied having any pains, but it came out, as it were accidentally, that

he had had sciatica; really he had had true lightning pains. He had optic atrophy and Westphal's symptom. Many of those who deny pains will admit that they have long been subject to rheumatism or to neuralgia, or to "flying gout," and will describe these things so that it is certain they are lightning pains. It is often difficult to get a patient to fix his mind upon his pains. A patient, aged fifty-four, had recently continuous severe pain in the toes and sides of his feet. This he admitted to be one of the symptoms of his disease, but ignored lightning pains, which he had, on and off, for twenty years; those pains were, he would have it, "only gout." It was difficult to get him to attend to questions about them. He had had incontinence of urine nine years; difficulty in walking, according to his account, six months according to his wife, slightly for about eighteen months earlier; his gait was only slightly ataxic. There was Westphal's symptom. The ocular symptom was that his pupils, which were small, did not contract to light. It is to be insisted on that a patient may have for very many years the pains before any of the striking symptoms of *tabes dorsalis*. "I have recently seen a patient, about sixty years of age, who had pains which I concluded to be 'lightning' for about twenty years. His gait was normal; by most careful testing I could find nothing the matter with it. The patient had besides, of late years, attacks of what he called sickness, but really faintness, with intense depression for hours. That these were slight gastric crises I could not be sure; they possibly depend on derangement caused by very large quantities of opium he had taken for relief of pain. The narcotic taking was evidence of the severity of the pain; he began this practice many years ago. Hearing his account of pain, I looked for Westphal's symptom, and found it. He had an ocular symptom, too. The pupils did not contract at all to light, and, I thought, very sluggishly, during accommodation. I do not in the least doubt that this is a case of posterior sclerosis; Charcot and Bouchard report a case in which pain had been the only symptom; the necropsy showed commencing sclerosis of the posterior columns." (2) *Westphal's symptom* ("absence of knee phenomenon," "loss of patellar tendon-reflex").—"Everybody knows that smart tapping just below the knee in healthy people makes the leg jump up. As Westphal and Erb point out, this does not occur in the great majority of cases of *tabes*. There is no doubt of the correctness of this statement. The jumping up upon the tapping is usually called patellar tendon-reflex, but as this name involves a theory much disputed and not accepted by the discoverer of the symptom, I will call the loss of this so-called reflex 'absence of the knee phenomenon,' or Westphal's symptom. It is by no means easy to be sure of the absence of the knee phenomenon. We should bare not the knees only, but the legs, let the trousers down, and take off tight drawers; then we should make the patient sit on the edge of a table with his legs hanging loose, and hit carefully both with the hand and a hammer. I am quite certain that the knee phenomenon is said to be absent when it is not. It is admitted that in cases which are evidently not cases of *tabes*, Westphal's symptom is present. Thus in atrophy of the quadriceps the knee phenomenon cannot, for obvious reasons, occur. Buzzard has published a case of diphtherial paralysis, in which there was Westphal's symptom. On the patient's recovery from the paralysis the knee phenomenon returned. I have seen it absent in a case of diphtherial paralysis, but have not heard of the progress of the patient." (3) *The ataxic gait.*—Under this head the author gave briefly the explanation of the gait of *tabes dorsalis*, which he gave in THE LANCET, Jan. 30th, 1875, and the *Medical Times and Gazette*, July, 1873. He believes the so-called disorder of coördination to be a double condition—paresis of some movements and over-action of others. He illustrated by the duplex effects of paralysis of ocular muscles. A similar explanation has since been given by Pierret.

b. Three eye symptoms.—"One great question of interest is as to the frequency with which eye symptoms are the earliest symptoms. Since the Argyll Robertson's symptom does not inconvenience patients, it is hard to say whether it is ever first or not. I was never consulted for that symptom, although, as I shall mention shortly, I was once consulted for a condition somewhat like it. Excluding from consideration for the moment Argyll Robertson's symptom and Westphal's symptom, since we cannot learn anything of them from the patients' accounts, I found in nineteen cases that the earliest symptoms were as follows: in ten

¹ Abstract of a paper read at the meeting of the Ophthalmological Society of the United Kingdom, Dec. 9th, 1880.

cases pains, in six double vision, in one abnormal gait, in one optic atrophy, in one mental symptoms; probably the last was a case of general paresis. The pains are often neglected in taking note of the earliest symptoms; manifestly this puts all wrong; makes the case seem to begin months or years later than it really does." (1) *Paralysis of parts supplied by oculo-motor nerve trunks*.—Several cases were alluded to under this head. "A man aged sixty-three, who twelve months before had had paralysis of parts supplied by the left third nerve. I could find no symptom of tabes with one very important exception; this was Westphal's symptom. Not very long ago I should have had to say that he had no symptom of tabes. I could only have guessed tabes. Thanks to Westphal, I now feel sure that this patient is tabetic. It is important to say expressly that this patient's pupils acted well to light and during accommodation; he had no pains of any sort anywhere. He complained only of a heaviness in his head." (2) *Alterations of pupils*.—The common condition described is what is called the Argyll Robertson pupil; the pupil does not act to light, and does act during accommodation. This has been observed in tabes by Hempel, Vincent, Erb, Hutchinson, and others. It is a double condition, negative and positive, and in this way resembles the so-called disorder of coördination of locomotor movements. Erb calls the condition of inactivity of the pupil, "reflex pupillary immobility," and advances an hypothesis as to its fundamental community of character with Westphal's symptom. That hypothesis, however, had been previously made by Buzzard; he points out that both in Westphal's symptom and in the Argyll Robertson symptom there is loss of a reflex movement when the more voluntary movement is retained. Buzzard's hypothesis seems to harmonise with the explanation suggested as to the peculiarity of the gait. It must be remembered that we have not merely an affair of light and pupil. It is well known that brisk cutaneous irritations cause the pupil to enlarge; pinching a comatose man will often enlarge his pupils. Erb tells us that the pupils inactive to light in cases of tabes are not affected by such procedures; he says, too, that they are not affected during lightning pains. Frequently the tabetic pupil when inactive to light is myotic also. We have in all cases to consider the size as well as the immobility of the pupil; we must remember in this regard that the senile myotic pupil contracts to light. "Although much impressed by Buzzard's generalisation already mentioned I adopt no theory on the duplex condition of the pupil. I show a diagram copied from a paper by Erb (Seguin's *Archives of Medicine*, Oct. 1880) which gives that physician's view of the central conditions corresponding to the double pupillary condition. The following case is, in my experience, a very rare one. A woman aged twenty-six was sent to me simply because her right pupil was larger than the left. It had been so three years. The right pupil was dilated, and absolutely motionless to light, and also during accommodation. Yet her ciliary accommodation on this side was perfect. This was severely tested by Mr. Couper. She could read No. 1 Jaeger from fourteen inches up to five, or by effort to four. The field was perfect. The fundus was normal, except that the veins were large, and convoluted at the disc, probably physiological; the media were clear. Her sight with this eye was perfect. The pupil of the left eye was most active, and of normal size; the left disc was slightly paler than the right; the veins as on the right; macula normal; doubtful slight limitation of nasal part of field. She could read Jaeger No. 2 with the left eye, but the centre syllable of a long word seemed blurred. This case puzzled me. She seemed to be in perfect health except for the ocular abnormalities mentioned. It occurred to me to test her knees. Neither I nor Mr. Couper found the smallest trace of the knee phenomenon. Several times did I re-examine into this, and pertinaciously inquire for other symptoms of tabes; there were no other symptoms of any kind. Except for the two things mentioned she is in seemingly perfect health." It is not said of Argyll Robertson's symptom that it is peculiar to tabes. It may be found in general paresis of alienists, at least reflex pupillary immobility, less frequently is there myosis, and the size of the pupils is more often unequal. Erb has found the pupillary condition in patients who had no other nervous symptoms, as well as in nervous affections which could neither be classed as tabes nor as general paresis. Again, it is not said that the action to light may not be present in very well marked cases of tabes. A man sixty-five had, as he was told by Pagenstecher, paralysis of the right external rectus in 1874; there

was a return of double vision from some cause in 1876. He was subject to pains in his legs, his gait was ataxic; there was Westphal's symptom. He was obliged to carry a catheter to draw off his water. This patient's pupils do act to light. This was observed by Mr. Laidlaw Parves also, to whom the patient was sent for deafness. The following statement refers to cases from the pupil point of view. There were thirteen cases in which there was no optic atrophy. In ten of them the pupils did not act to light (in one case the pupil on but one side was inactive and was so in all ways). In nine of the ten cases of inactive pupils there was Westphal's symptom. Now as to paralysis of the oculo-motor nerves in the same thirteen cases. In one case with normal pupils and Westphal's symptom there had been paralysis of the third nerve. In one case of inactive pupils with Westphal's symptom there had been temporary double vision. In another case with inactive pupils and Westphal's symptom there was paralysis of one sixth nerve. (3) *Optic atrophy*.—Tabes dorsalis is a disease which, like general paralysis, rarely occurs in women. "When clinical assistant at Moorfields, about twenty years ago, I was struck with the fact that many of the men who had 'white atrophy' of the optic discs had also pains in their legs—the pains were lightning pains. Later on, making a distinction as to the kind of atrophy, I concluded that the pains were a symptomatic link betwixt 'uncomplicated amaurosis' and locomotor ataxy. This relation had been previously noticed. In the *Medical Times and Gazette* of Sept. 1st, 1866, I wrote: 'We have (1) amaurosis without pains in the legs; (2) amaurosis with pains in the legs only; (3) amaurosis with pains in the legs and difficulty in coördinating the legs; (4) pains in the legs and difficulty in coördinating the legs, without amaurosis; (5) amaurosis without pains in the legs and with difficulty of coördination. I could now put five patients in a room showing the above sets of symptoms.' The term 'amaurosis' meant then atrophy which did not follow neuritis. I mention what I observed not with any view to priority, having none, but because what I then said, some fourteen years ago, was denied, and the authority of Duchenne, that the amaurosis in locomotor ataxy presented quite the ordinary features of atrophy of the optic nerve as it occurs from other causes, was quoted against me." The atrophy is now more particularly described as grey degeneration, and is supposed by Charcot and others to be parenchymatous. The peculiar limitation of the field of vision in cases of the atrophy in tabes is significant when we consider that the developed disease is in great part one of the locomotor system. The limitation would seem to correspond roughly to certain ocular deviations from cerebellar disease, in the way that hemiopia does to lateral deviation of the eyes from cerebral disease. In all cases of optic atrophy we should inquire for the pains, test the knees whether gait be abnormal or not. The pains are often bridging symptoms, betwixt so-called uncomplicated amaurosis and tabes. Charcot says that so far back as 1868 he pointed out that the great majority of women admitted into La Salpêtrière for amaurosis have sooner or later manifestations of tabes. He mentions one case in which the amaurosis preceded the pains ten years. Gowers has seen a case of tabes in which optic atrophy preceded other ataxic symptoms twenty years. In the twenty-five cases mentioned there were twelve of optic atrophy. In two there were also ocular paralysis, and in one a history of it; in nine there was Westphal's symptom. In one of the three without this symptom there had been no pains; gait was slightly ataxic. In the second there had been double vision ten years ago; there is now paresis of the left third nerve; this patient had pains; his gait was normal. The third case was one of atrophy of one disc, with limitation of the field outwards and downwards; this patient saw green as grey, and red as reddish-brown; he had pains; his gait was good.

SOUTH LONDON SCHOOL OF PHARMACY. — The Medals and Certificates were presented to the following successful competitors for the first B. Course on Dec. 11th, 1880:—Medal, Senior Chemistry, Mr. Preston; Medal, Junior Chemistry, Mr. Cracknell; Certificates, Junior Chemistry, (equal), Messrs. Llewellyn and Haines; Medal, Botany, Mr. Fisher; Certificate, Botany, Mr. Frey; Medal, Materia Medica, Mr. Llewellyn; Certificate, Materia Medica, Mr. Cracknell; Medal, Pharmacy and Practical Dispensing, Mr. Haines; Certificate, Pharmacy and Practical Dispensing, Mr. Fisher.

A SUGGESTED IMPROVEMENT IN DUPUYTREN'S OPERATION FOR ARTIFICIAL ANUS, AND A SUCCESSFUL CASE TREATED BY IT.

By ARTHUR E. BARKER, F.R.C.S. ENG.,

ASSISTANT PROFESSOR OF CLINICAL SURGERY AND ASSISTANT-SURGEON AT UNIVERSITY COLLEGE HOSPITAL.

MY object in recording this case is twofold. Firstly, instances of cure of artificial anus by Dupuytren's method appear to be rare, if one is to judge by published cases in recent years. I may mention further that, among my surgical colleagues and friends, I have on inquiry heard of only one instance in which such a cure was attempted for this malady, and this attempt proved rapidly fatal. Secondly, I have in this case adopted a measure which, if it is to be regarded as having contributed to the perfect cure of the condition, appears to deserve trial in other similar cases.

No one who carefully reads Dupuytren's masterly essay upon the subject "Anus contre Nature," published with his "Leçons Orales de Clinique Chirurgicale," can fail to be impressed with the immense amount of labour and thought which he bestowed upon it, leaving but little to be done by others after him. But there is one point in his experience which, he frankly admits, shows a weak spot in his procedure. He tells us that though, by the use of his enterotome, it is easy in the majority of cases to restore the communication of the stomachal with the anal end of the gut so as to direct the flow of fæces into the latter, it is still a matter of extreme difficulty to prevent a certain proportion of fæces from escaping by the old opening in the abdominal wall, and yet more difficult to induce the latter to close thoroughly. I translate his remarks on this point:—

"It is something, no doubt, to have re-established a communication between the two ends of the intestine, and to have placed them in a position to bear without accident a compress which compels the contents to pass from the upper to the lower part of the gut. But something, I confess, remains to be desired. We have still to find a means of causing an opening in the skin, now become useless, to cicatrise in all cases. I am so impressed with the necessity of discovering some means of the kind that I do not hesitate to propose this as a study to the rising talent of our schools. . . . And I declare without hesitation that the discovery of some method which should finish promptly and without danger, and in every case, the cure of this disgusting malady, would be worthy of being considered one of the most important achievements of which the healing art can boast."

Dupuytren's statistics in regard to this operation are as follows:—He himself operated on twenty-one cases. To these he adds twenty more either published or communicated to him. Out of these forty-one three died and thirty-eight recovered without any grave accident. Of these thirty-eight, larger or smaller fistulæ persisted in nine in spite of all efforts to close them, and required the constant use of bandages to prevent a more or less abundant escape of gas, bile-stained fluid, or even fæces. But twenty-nine were completely and radically cured within the space of from two to six months.

In the treatment of the subjoined case a method was employed which appears to me to promise something at all events in the way of preventing the escape of feculent matter by these fistulæ, and as enabling the latter to close, and this without exerting that pressure upon the opening from without by pads, bandages, &c., which has hitherto been found ineffectual if not unbearable. It is impossible, of course, to say whether in this case the good result was due to this measure or not. My own impression is that it was contributed to, at all events, by it. The case is briefly as follows:—

S. L., aged twenty-five, labourer, admitted into University College Hospital on Feb. 3rd, 1880, for a fæcal fistula, the result of strangulated hernia more than a year before. He was here once before, fourteen months ago, but was discharged again in the hope that the fistula would close spontaneously. This it had not done up to three months ago, but since then it nearly closed, and for some six weeks he

only passed flatus by the opening, but no liquid. The latter, however, commenced to be discharged again from the opening on Dec. 28th, 1879, in varying quantity.

Feb. 5th.—Present state: There is a puckered cicatrix in the right groin below Poupart's ligament and well outside the pubic spine. In its centre is a fistula discharging light-yellow fæcal matter mixed with pus. When the abdomen is pressed upon the scar is dragged backwards as though by adherent intestines, and feculent matter is at the same time forced out in a jet to a considerable height. The bowels are opened on an average about three times a week.

16th.—A sea-tangle tent was passed into the opening on the 14th, and removed this morning. A finger can now be introduced. Patient feels quite well; has not passed a motion by the rectum for two days.

18th.—I examined the case carefully for the first time this morning. The little finger, passed into the fistula, entered as far as the middle of the second joint. Two constrictions were then felt, one at the skin opening, another about three-quarters of an inch deeper, or corresponding to the middle of the last joint of the little finger. The tip of the latter touches the usual "spur" of mucous membrane, which reaches as far as the latter opening. To the left of this "spur" the anal portion of the gut is felt passing almost directly backwards, but slightly inwards, and to the right of it the stomachal end passing towards the cæcal region. Catheters passed into the two portions of the gut demonstrate the same thing. After this examination some swelling and tenderness are noted about the opening, but the general health is good. No fæces pass now by the rectum, but flatus is still expelled that way.

27th.—To-day the first motion by the rectum for fourteen days was passed.

On March 3rd, hoping that a simple operation might be sufficient, I placed the patient under an anæsthetic, and pared away the old cicatricial tissue from around the fistula, making a wound of about two inches long, and one deep. I then passed five harelip pins deeply through the walls of the wound, and drew its edges together with figure-of-8 sutures. These were covered with collodion, and a sand-bag was laid over all. The next night after this the patient was rather restless, but nothing came through the wound, though flatus escaped by the rectum.

March 5th.—Bowels quite quiet; slight pain about the wound; flatus per anum.

6th.—Sleepless night; temperature 99·8°; complains of pain as the fæces force against the wound. He thinks that they pass it, and reach the lower part of the gut. On examination I found that a small quantity of watery fæces had worked out under the collodion. I therefore drew out all the pins, leaving the wound otherwise undisturbed, with the sutures and collodion *in situ*; bowels unaffected by opium in free doses.

8th.—Wound broke open yesterday morning, and fæces discharged as before. The gap is now three inches long and one and a half wide, and the opening into the gut freely exposed.

10th.—Had a small motion per rectum after an enema; also on 12th, 15th, 17th, 19th, and 23rd, but only after enemata, and very scanty, while large quantities of fluid matter escape constantly by the artificial anus.

27th.—For the last few days patient has been able to control the flow of fæces from the groin to some extent by an arrangement of pads, which reduce the size of the opening somewhat, not very much escaping, and as a consequence has passed a good motion per rectum this morning.

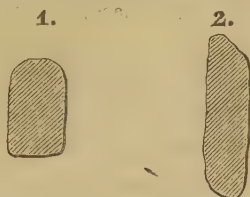
April 8th.—A small motion passed on the 4th, but nothing since, except after enemata. Wound smaller, but still discharging fæces.

On April 22nd I operated in the following way. The artificial anus was first enlarged by forcing the finger into it; then, feeling the "spur" of mucous membrane with the little finger, I passed a Wells's artery forceps into the opening, one blade into the anal, and one into the stomachal portion of the gut. The "spur" being now between the blades, as I assured myself, I nipped it tightly until the catch of the forceps was secure. A dressing of lint and carbolioil completed the operation.

26th.—Catch forceps came away this morning at ten o'clock, bringing away between their blades a piece of the tissue of the gut quite necrosed, and of the exact size given in the woodcut (Fig. 1). In the afternoon I again applied them in the same way, but this time taking up more of the "spur" in their grasp.

27th.—Slight tenderness in right iliac region. Temperature 99° 6'.

28th.—Some tenderness and some headache. Temperature 99° 3'. Forceps came away in the afternoon, bringing away



First portion removed
between blades of
forceps. (Nat. size
when dried.)

Second portion removed
between blades of
forceps. (Nat. size
when dried.)

a portion of mucous membrane between the blades, of the size given in Fig. 2.

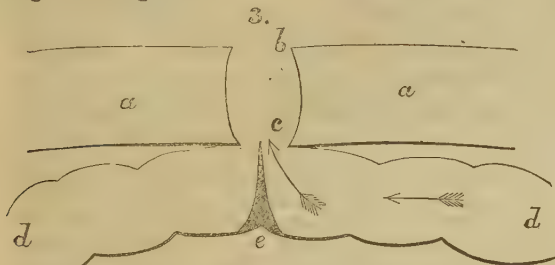


Diagram (about half natural size) showing condition of parts before operation. *a a*, Abdominal wall. *b*, External orifice of fistula in latter. *c*, Internal ditto. *d d*, Intestine. *e*, "Spur" in latter directing contents into fistula. Arrows indicate the direction of flow of feces.

29th.—Feels as yesterday.

30th.—Very well; all tenderness gone from iliac region; tongue clean. Temperature 98° 8'.

May 6th.—Yesterday afternoon, having patient under the influence of ethedene, I inserted an india-rubber valve (Fig. 4, *f*) within the intestine in such a manner as to lap

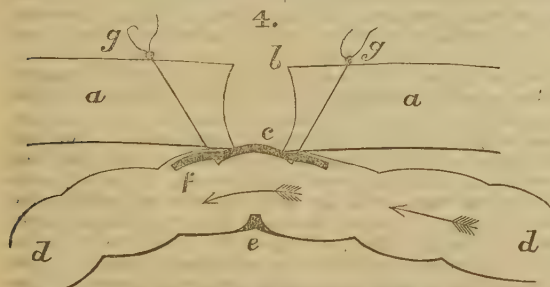


Diagram (lettered as Fig. 3) showing condition of parts after operation. *e*, Remainder of "spur" after removal by forceps. *f*, India-rubber valve *in situ*, closing internal orifice of fistula. *g g*, Silver stitches holding valve by both ends *in situ*.

up against the internal orifice of the fistula. It was fastened in this position to the skin by a single wire-stitch at each end (*g g*), passing through the latter in such a way as to secure it. The pressure of the feces against this valve was relied upon to make it fit still more closely to the curves of the opening. The valve itself was thin and flexible, about one and a half inches long by five-eighths of an inch broad, and was inserted with the double object of giving the fistula rest, on the one hand by preventing the feces from escaping that way, and, on the other hand, of keeping the newly-notched spur of mucous membrane from recontraction by directing the full stream of feces against it until it was soundly healed. The first of these objects was attained for several days, but at last a little gas and feces escaped under the lower edge of the rubber valve, and at the end of a week the fistula seemed to be enlarging a little at its lower border. I therefore removed the rubber slip through the opening. My intention had been to allow it to remain until the fistula had closed over it, and then simply to cut one

end of the wire stitches, draw them out, and so allow the slip of rubber to come away by the rectum with the usual motions.

A week after this the fistula is noted as "healing quickly," and a fortnight later as "nearly closed." After this it required to be touched two or three times with lunar caustic to stimulate its deeper parts, and twice with Paquelin's cautery. On June 29th, or within eight weeks of the last operation, the wound was quite closed. The patient now rose every day, and soon went to the country. He returned some two months later to show himself, when the scar was found by myself and colleagues to be perfectly secure, and he himself in rude health. He volunteered the remark that since the operation he had lost all that sensation of "internal straining" about the seat of interruption in the gut which had troubled him formerly as the contents forced themselves against the narrowed spot on their way to the anal portion. He also said that he felt as well as ever he had felt in his life, and had now no abnormal sensation at all in the abdomen.

It appears to me probable that whatever part this valve may have played in effecting this very complete cure of a very troublesome fistula, it may be found useful in other similar cases. I think in another similar case I should employ somewhat thinner rubber, and perhaps also modify the shape of the valve somewhat.

I cannot conclude without thanking my colleague, Mr. Berkeley Hill, for kindly transferring this case to my care.

Harley-street.

FURTHER OBSERVATIONS ON STERTOR; ITS PATHOLOGY AND TREATMENT.

By ROBERT L. BOWLES, M.D.

(Communicated by CESAR HAWKINS, F.R.S.)

In the forty-eighth volume of the Transactions of the Royal Medical and Chirurgical Society is a paper entitled "Observations on Stertor." Since the publication of that paper, if I except a paragraph in the article "Chloroform," in Holmes's System of Surgery, I know of nothing which has been contributed to medical literature on this subject.

In my first paper only three forms of stertor are defined, Palatine, Pharyngeal, and Mucous Stertor. Professor Lister refers to a "laryngeal stertor," as occurring during a certain stage of the inhalation of chloroform, but as it has no practical connexion, so far as I am aware, with the apoplectic and its allied conditions, we will at present dismiss it from further consideration.

The forms of stertor, then, which have a direct connexion with the apoplectic state are—the palatine, arising from the vibrations of the soft palate; the pharyngeal, from the gravitation of the tongue into the back of the pharynx, and the mucous stertor, from the presence of mucus or other fluids in the larger air-tubes. These three varieties, whatever their remote cause, are the immediate result of a local mechanical condition—a condition which may always and at once be changed, to the great relief of the patients, and sometimes to their permanent recovery. Since adopting this method of management many other points have developed themselves of the utmost practical importance both to the surgeon and to the physician.

CASE 1.—In October, 1863, Mrs. S— was seized with apoplexy. On my arrival there was a partial return to consciousness, and the left side was found to be paralysed. There was pharyngeal stertor when in the recumbent posture, and she appeared uneasy when placed on her right side, so she was placed on her left, when the stertor ceased. A blister was applied to the nape of the neck, and she remained in this position for nine days. She was now better, and spoke to me. Fearing a bed sore, I desired the nurse to change her position by turning her from her left to her right side. Soon after this was done she was distressed for breath, and the countenance became livid. On my arrival I found the difficulty of breathing gradually increasing, the blistered surface and the ear upon which she had lain of a dark purple hue, and the pulse, which had before been weak and irregular, full and bounding. There were large mucous râles

1 A paper read at the Royal Medical and Chirurgical Society, May 10th.

over the whole chest; she was quite unconscious, and death from suffocation was imminent. Finding that these symptoms supervened upon the change of position, I had her replaced upon her left side, and immediately the pulse sank, the mucous stertor ceased, the breathing was relieved, the lividity of countenance passed away, and the blistered surface, which had been almost black, resumed a bright cherry-red colour. This additional shock, however, proved too much for her, and she died the same day, peaceful and conscious.

The salient points of this interesting case are: (1) That pharyngeal stertor ceased when the patient was placed on her side; (2) that there was a slow but gradual improvement subsequent to this; (3) that mucous stertor and imminent death supervened when she was placed on the opposite side; (4) the instant relief on resuming her original position; and (5) that a return to consciousness was coincident with the cessation of stertor; in other words, on the removal of the respiratory difficulty.

On a careful examination of the chest after she became quiet, I found all râles slowly fade away from the right side, or that which was uppermost, and the natural breathing return; but the left lung, which had been dependent throughout, was dull on percussion and deficient in respiratory murmur. The explanation now became clear—viz., that the dependent lung had become filled with some mucous fluid, and that on changing the side the fluid, by gravitation, was finding its way across the trachea to the opposite lung, but in doing so it had been churned into foam by the ingoing air, giving rise to mucous stertor, and that this foam, by filling up the larger bronchial tubes, was quickly causing suffocation with all its usual results.

As a point of management, then, in a case of apoplexy, it would appear necessary to keep the patient on one side, and not to change it; but which side should this be? Healthy people when lying on their side breathe chiefly with the side which is uppermost; for the intercostal and other thoracic muscles of the lower side are fixed between the weight of the body and the bed, and the breathing of this side is almost entirely diaphragmatic.

CASE 2.—Dr. Fitzgerald during his attendance on a case of cancer of the brain finding the breathing much oppressed by mucus in the air-passages, at my suggestion placed the patient on his side, when he became suddenly so much worse that he thought he would have died instantly. Dr. Fitzgerald repeated the experiment with exactly the same results, and he found that the difficulty arose from mucus in the trachea and larger air-tubes. It was afterwards discovered that the paralysed side was placed upwards. Unfortunately, only the head was examined after death; but I have reason to believe that in hemiplegia from progressive disease of the brain a low form of inflammatory action takes place in the lung of the affected side from disturbed innervation of the pneumogastric nerves.

In a recent case of tubercular mass in the centre of the brain, which was under my care, this was the case, and precisely the same distress as above-mentioned occurred from mucus when the paralysed side was placed upwards. It must be remembered, too, that in placing the paralysed side downwards the injured side of the brain is upwards, and therefore relieved from congestion, a condition always liable to occur when an injured part remains dependent.

Apoplexy, with much mucous stertor, is, I believe, always of the most grave and dangerous character, for it indicates, as well as muscular paralysis, loss of function of such vital nerves as the pneumogastric, and, I believe, the time will soon come, now that cases can be so simplified by the removal of stertor, that by a careful consideration of the functions of the various nerves a very accurate diagnosis and prognosis will be arrived at even in the early stage of apoplexy.

CASE 3.—Mrs. W—— was found lying on her back breathing stertorously and with great difficulty; the trachea was filled with frothy mucus, and she was almost in a state of collapse. She was turned on her right side, when the stertor and difficulty of breathing ceased. Seventeen hours afterwards she was lying quiet and comfortable; the depending cheek was dusky and congested, the upper cheek pale. She was now turned on her left side; the difficult breathing immediately returned, and both sides of the face became highly congested; the breathing was shallow and large moist râles were present in both sides of the chest; on resuming the original position all difficulty ceased. She died the next morning.

The following case would, I believe, have terminated fatally but for the careful management of position.

CASE 4.—Mrs. S—— was seized on Sept. 24th, 1867, with left hemiplegia. She was unable to speak or to masticate, and could only swallow liquids with much difficulty; the pulse was 80, and very feeble. She was placed on her left side. On Sept. 28th (four days after) the respiratory murmur on the left side was shallow and feeble, there were some râles, and the percussion sounds were dull. She was turned on her right side, when immediately great distress of breathing and mucous stertor supervened; this gradually disappeared on replacing her on her left side. When turned on her back, for the use of the bed-pan, mucous stertor commenced, and it was noticed that in this position the intercostal muscles and the diaphragm acted more feebly than on the unparalysed side. On Sept. 29th there was a little more power, and she was less excitable. The respirations, which had been 56, were now 44. She was able to remain half an hour on the right side before the difficult breathing commenced. The following day she was still better; and the dribbling of saliva, which had been very great, ceased, but she still had no control over her bladder or rectum.—Oct. 6th: During the last week she has slowly improved. Several experiments of change of position have been made, and it was found that as her power returned she could remain longer on the right side before the difficulty of breathing commenced, and now can remain an hour and a half in this position. She speaks better, eats and sleeps better. Tongue is cleaning; bowels open, but she is still unable to retain her water. Pulse 80, respiration quiet and natural; on the right side the respiratory murmur is natural, on the left there are still a few râles, but the resonance is good, and the air enters more freely. Power is returning to the hand and face.—March, 1870: The patient is still alive and well, but has a good deal of weakness on the left side.

Remarks.—In its early stage this case was most critical; had a little extra strain been put upon her, she must have died, and no strain could have been worse than the persistence of a condition (stertorous breathing) which would indirectly cause obstruction in the jugulars. In the supine posture, from the paralysed and insensible condition of the pharynx, much of the saliva which dribbled away in the lateral position would have entered the trachea, and added to the trouble. Sir James Simpson, in writing of the treatment of phlegmasia dolens, says: "Position is one of the most powerful means in the treatment of many diseases; attention to this point is frequently of more importance, and affords more satisfactory results, than the use of any kind or quantity of drugs." In no case is this opinion of Sir James Simpson so aptly illustrated as in certain affections of the brain and air-passages. Dr. Bence Jones, in writing to me on this subject, says: "The case I mentioned to you was one of extreme hemiplegia of the right side, for the first few hours with perfect clearness of mind, passing in twelve hours into complete coma, with the most intense and distressing stertor, lasting for many hours. This was immediately stopped by changing the position of the patient to one side. But it had no known effect on the progress of the case. The total duration, I think, was not forty-eight hours. The gentleman was about sixty-two, pale and rather sickly, and had always feared apoplexy."

Mr. Reid of Canterbury, and many other of my friends, have reported to me cases of apoplexy in which, on the change of position, stertor has ceased, and the patients have died peacefully and quietly, to the great relief of the distressed and sorrowing relatives. I have never in my own practice failed to do away with stertor by position and management.

CASE 5.—At a medical meeting in May, 1862, after urging my views on stertor, Mr. Francis of Boughton stated that he had just left an old lady dying from apoplexy, who had been in a state of stertor for many hours. At the November meeting in the same year he informed us that the old lady was still alive and well. On his return home he found her just as he had left her, dying as he believed. He changed her position, the stertor ceased, and she gradually but perfectly recovered.

CASE 6.—Mr. Eustace Carver of Melbourne, a former house-surgeon at the Middlesex and Nottingham hospitals, and a careful observer, was called to Captain B——, in deep stertor and moribund. Life was evidently more a question of minutes than hours. The position was changed, the stertor ceased, and the old gentleman lived nine months.

CASE 7.—Dr. Lewis of Folkestone was sent for to Mrs.

F—, aged sixty-seven. He found her in bed in the apoplectic condition. There was total loss of consciousness, the pupils were fixed, but there was slight reflex action on touching the eyeball, the face was turgid, the cheeks were puffed out on expiration, and there was deep pharyngeal stertor. On being placed on her side the stertor ceased and she gradually improved. In twelve hours she had perfectly recovered consciousness, the respiration was normal, the face very pale, the pulse quick and feeble; there was no paralysis. The action of the heart was feeble, but there was no murmur.

CASE 8.—I was called in August, 1859, to a boy who had fallen on his head from a height. I found him lying on his back snoring, senseless, and collapsed; pulse irregular and pupils alternately contracting and dilating. The mouth was half full of vomited matter. On turning him on his side the snoring (palatine stertor) ceased, he was sick several times with comparative ease. Presently he began snoring whilst he was on his side, his chin was bent upon the sternum; on straightening the neck he was quiet. The boy slowly recovered. On three different occasions in my own practice I have been summoned to cases of apoplexy with stertor, in which the patients recovered, two with and one without paralysis.

Case 4 demonstrates that as power returns to the brain the pneumogastric and probably also the sympathetic regain their power, and effusion into the lung ceases; and, moreover, that the lung is not injured by remaining inactive and filled with mucus for a long period.

(To be concluded.)

NOTE ON THE DIAGNOSIS OF CAVITY IN THE LUNG.

By SOLOMON CHARLES SMITH,
SURGEON TO THE HALIFAX INFIRMARY.

I HAVE recently met with a peculiar physical sign of deep-seated cavity in the lung, of which I can find no mention in any of the books within my reach, and which seems worthy of being placed on record. It is a sound synchronous with the cardiac systole, not necessarily heard over the lung, but distinctly audible in the trachea, and even without the stethoscope when merely standing opposite the patient, and obviously produced by the impact of the contracting ventricle against a neighbouring cavity, expelling such a puff of air as to produce a sound in the bronchus and trachea.

My first patient was a man suffering from cough, expectoration, and shortness of breath. While watching the expansion of his lungs I heard a bruit synchronous with the first sound of the heart; it was short and soft, but plainly audible when we were about eighteen inches apart. On applying the stethoscope over the heart nothing abnormal was heard, but over the lung to the left the bruit was easily perceived. Systolic bruit over the left upper lobe is, however, no strange thing in phthisis, but on tracing it up it was loudly audible in the trachea, and on careful observation it was plain that the sound was conveyed outwards through the air-passages. Easy respiration did not interfere with its production, but on breathing deeply or quickly it was interrupted during inspiration.

The other physical signs were dulness, diminished respiration, and expansion, with moist clicks over the upper five inches of the left lung, and some tubular cough sound at the third interspace.

In my next case the physical sign I have described was not so well marked—that is, it was more easily interrupted by inspiration, and could not be heard quite so far from the patient; but, on the other hand, its connexion with a cavity was more completely demonstrated, the presence of a vomica being proved by a concurrence of many physical signs.

I do not at all wish to add another to the many sounds which have been described as occurring in cavities in the lung; if this were audible only over the position of the vomica it would be a matter of no great interest. Any importance it may possess arises from its being transmitted to the ear through the air-passages rather than through the chest walls, and thus being audible even when the disease is deeply placed. I may add that in auscultation of the trachea and larynx a flexible stethoscope is of great service.

Halifax.

AN UNUSUAL CASE OF CONGENITAL SYPHILIS.

By M. PRICKETT, M.D.

THE following case appears to me of so much interest both from its rarity and its importance as to deserve publication; especially so as I am unable to find any records of precisely similar symptoms.

Mr. — contracted syphilis three years ago; a chancre developed, and in due course of time mild secondary symptoms followed. These soon disappeared under treatment, which was continued for about six weeks, and the disease appeared eradicated. He remained in good health until his marriage a year ago; shortly after which, however, a skin eruption of doubtful nature developed itself. This was treated without avail by a large variety of remedies, amongst which were mercury and iodide of potassium; but I am unable to learn how long they were persevered with. As the eruption got considerably worse a specialist was consulted, who pronounced the disease to be psoriasis, but of a non-specific character. In spite of his treatment the eruption spread until, three months ago, his legs and arms were covered with it and patches also appeared upon the trunk.

About a year after his marriage Mrs. — was confined with a female child under my care; the labour was natural and easy and the mother recovered without developing any symptoms of syphilitic infection.

The infant appeared perfectly healthy and was suckled by its mother; it fed regularly, the motions were normal in colour and frequency, and it slept soundly. On the night of the fourteenth day after birth it refused the breast and was observed by the nurse to be drowsy and feeble; at 1 A.M. she found it cold, blue, and gasping for breath. When I arrived an hour later it was in a state of semi-collapse, dusky, pulse running and almost imperceptible, and so weak it could scarcely cry or move. The temperature was 99° 5'. It was ordered some brandy and a warm bath. Next morning a few mulberry-coloured spots were visible on the face, arms, and buttocks, which did not fade on pressure and were scarcely raised above the surface, but became as the day passed darker in colour and more prominent. Some fresh spots also appeared upon the legs. The temperature was now 102°; the child had been sick several times and the motions were somewhat slimy; otherwise the child appeared better; the pulse was stronger and skin less dusky. Suspecting that the child might be suffering from variola, it was weaned and separated from the mother for the next three days. The child rapidly improved in its condition, but the spots, about ten in number, grew hard, raised, and black, much resembling the spots of hæmorrhagic variola. In about three days time it appeared quite well, the spots remaining as before.

On the fifth day after the first attack it was seized in the same way again. It became rigid, cold, dusky, the respirations became gasping, and, according to its nurse, "it seemed convulsed." When I saw it about an hour afterwards it had partially recovered; the heart sounds were normal and so was the temperature. It fed as usual and the motions were healthy. It was ordered bromide of potassium and ammonia together with a little brandy at short intervals. In the night it had two or three similar attacks followed by much larger extravasations of blood beneath the skin. The next morning it was much weaker; it could scarcely cry, and did not take notice of anything about it, although it continued to take its food regularly and the motions remained healthy. The subcutaneous extravasations, three or four in number, took the form of bluish rounded lumps about one and a half inches in diameter, and there were also some small petechiæ upon the legs and buttocks.

From this time the child gradually sank; cerebral respiration supervened, and it died on the fourth day of the second attack.

No post-mortem examination was made. The child was never treated mercurially because the syphilitic character of the disease was not suspected, partly owing to my not being aware at the time of the father's previous history, nor of the existence of his skin affection, and partly to my ignorance of

¹ Careful examination of the heart elicited no signs of disease whatever.

this form of congenital syphilis. On ascertaining the father's condition I came to the conclusion that the symptoms were due to inherited syphilitic virus, but on turning to the literature of the subject at my disposal I failed to find such a case described by any English author. Lewis Smith, in "Diseases of Infancy and Childhood," speaks of hæmorrhage (especially umbilical hæmorrhages after separation of the cord), ecchymosis, and petechiæ as sometimes due to inherited syphilis.

Dr. West mentions a case of convulsions followed by melæna, but a specific cause is not hinted at. In no other work can I find mention of a case of purpura and subcutaneous hæmorrhages in the newly born except as resulting from infection by one of the eruptive fevers, under which category this case could not possibly be placed. I should add that I could obtain no history of hæmophilia in either the father's or the mother's family. The father has been placed under the influence of camomel baths for nearly a month, and the rash is disappearing.

P.S. Since the above was written, eight months ago, the father has completely recovered from his skin affection, and there has been no further return of it. A somewhat similar case is mentioned by Lanceraux in his "Treatise on Syphilis," vol. ii., p. 156 (New Sydenham Society). Effusions of blood into the serous cavities are mentioned by Hutchinson, Baresprung, and others, as the result of inherited syphilitic virus.

Albion-street, Hyde-park.

CASES IN SURGERY.

By T. HUGHES, M.D.,

SURGEON TO THE DINORWIC QUARRIES HOSPITAL, LLANBERIS.

STRANGULATED INGUINAL HERNIÆ.

As this case presents a certain amount of interest, I venture to publish the following notes:—

J. H—, aged eighty years, subject to double inguinal herniæ for several years. Never having worn a truss he had always been able to reduce both herniæ. On Wednesday, September 15th, he was attacked with violent pain in the left hernial tumour. He made several fruitless attempts at reduction. On the following day he sent for a medical man, who also failed to return the hernia. On Friday, the 17th, I was sent for, when I found the patient in the following condition. He had all the symptoms of strangulation—pain, vomiting, and obstruction of the bowels. The hernial tumour was of moderate size and tender to the touch; the skin even inflamed. Under these circumstances I did not make any forcible or prolonged attempt at reduction with the taxis, suggesting that an operation be made without delay, to which the old man objected. His advanced age, the unfavourable state of his general health, as well as the condition of the hernial tumour, did not encourage me to urge very strongly an operation. Explaining to him, however, that an operation was the only means of affording him any chance of recovery, after twenty-four hours' delay the patient consented. Having obtained the assistance of my excellent friend and neighbour Dr. Roberts, Clwtybont, I proceeded to operate in the usual way. The patient was placed under the influence of chloroform. The first incision was made by transfixion over the neck of the sac. The coverings were so adherent together as to render distinction impossible. When the bowel was reached it was found highly inflamed. The stricture was divided with some difficulty; the bowel was returned into the abdomen; the parts brought together by a few sutures, and the wound treated with the antiseptic dressing. There was some sanious discharge during the first two days; union by first intention; no suppuration (thanks to Listerism). The bowels acted spontaneously two days after the operation. The old man is now recovered and going about.

COMPLETE LATERAL DISLOCATION OF THE KNEE-JOINT.

A quarryman, working in the removal of some loose rock, having a rope fixed to his thigh, the rock to which the rope was fixed above gave way, causing the man to fall with a large quantity of rubbish to a depth of thirty yards. When extricated from his perilous position, it was found that there was hardly any part of his body free from injury, consisting

of extensive scalp wounds and fracture of nasal bones; the elbow-joint was also opened with extensive destruction of the soft parts, and fracture of the articular extremities of the bones entering into the formation of the joint. There were besides simple fracture of the left leg, a deep wound in the perineum, and a complete lateral dislocation of the knee-joint, so much so that the internal tuberosity of the tibia was resting on the lower part of the external condyle of the femur. The articulation of the tibia and femur had dissolved partnership; there was no loss of continuity of the skin, although so much on the stretch as to be nearly torn. I have consulted several surgical authors, and I find lateral dislocation of the knee spoken of as being "always partial." Under the circumstances, I think this case is worthy of record as a matter of clinical history. I need not say there was no difficulty in reducing the dislocation, as the ligaments must have been all ruptured. The poor man never recovered from the shock, and death put an end to his sufferings within twenty-four hours.

Llanberis.

A Mirror

OF

HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proæmium

WESTMINSTER HOSPITAL.

ILIAC ABSCESS TREATED ANTISEPTICALLY; CURE.

(Under the care of Mr. PEARCE GOULD.)

FOR the following notes we are indebted to Mr. Chas. Rooke, dresser.

H. L—, aged thirty-two, was admitted into Chadwick ward on Sept. 1st, 1880. She stated that when twelve years of age she suffered from abscesses over the right hip and ankle, and below the right angle of the lower jaw, where there was a depressed scar. She was married in 1873, and had had seven children, five of whom had died, two from hydrocephalus; the two living children she said were healthy. She was delivered of the seventh child early in June, and was four days in labour; the lochia ceased in three days, and a fortnight after she had a profuse purulent discharge which lasted a month. During the last month of her pregnancy the left leg was swollen and the veins big, but these symptoms left her after delivery. When she began to get about after her confinement she felt pain in her left hip, which she found was stiff. Soon after she noticed a swelling in the groin, and another above Poupart's ligament. These swellings, and the pain, stiffness, and weakness increased, and she then sought admission to the hospital.

On admission she was pale, very emaciated and weak. The pulse was small, compressible, 120-140; temp. 102.2°. The skin was perspiring, and there were profuse sweats at night. The tongue was moist, and covered with a thin white fur, the appetite fair, bowels loose, two or three and sometimes more loose motions a day. The left hip was flexed to a right angle and adducted; and any attempt at moving the thigh caused great pain. A large fluctuating swelling presented above Poupart's ligament, over which the skin was thin. There were two smaller swellings below the fold of the groin, one to the outer side of the femoral vessels, the other quite at the inner border of the limb; they fluctuated and evidently communicated, and could both be emptied into the belly by gentle prolonged pressure. There was no œdema of limb.

The skin around was well washed in carbolic lotion (5 per cent.), and an incision was made into the two lower pouches of the abscess under the carbolic spray; more than a quart of pus escaped, and when the iliac pouch was emptied by pressure, and the hand removed, air was sucked in. With his finger Mr. Gould made the communication between the inguinal and iliac pouches free, and passed in a drainage-tube; the usual carbolic gauze dressing was applied with a large oakum pad outside it. The dressing had to be removed the same evening.

Next day (September 4th) the dressing was changed twice, and a little thin sero-purulent discharge mixed with air was pressed out. A folded towel was placed over the iliac fossa and firmly bandaged on to keep the walls of the sac in apposition as far as possible. One-two-hundredth of a grain of atropia was ordered to be injected hypodermically every night to check the sweating. The appetite was improved, and the patient was placed on full diet with two bottles of stout a day.

The dressing was changed on Sept. 5th, and once a day up to the 11th, and then every two days. The discharge was turbid serum, odourless, and daily diminished in quantity. The drainage tube was shortened from time to time, and removed on Sept. 17th, the wound was quite closed on Sept. 30th, and the patient left the hospital on Oct. 3rd.

Her improvement after the opening of the abscess, without a single intermission, was very rapid, and on her discharge she had picked up flesh, and looked strong and well. The opening on the inner side of the groin made it rather more than usually difficult to keep the parts aseptic, and necessitated a more frequent change of dressings than would have been otherwise required. The dressing was greatly expedited and simplified by an elevator, the invention and present to the hospital of Mr. F. C. Sheppard, a member of the house-committee of the hospital.

The temperature, which was persistently pyrexial before the abscess was opened, quickly fell, and reached 98° F. on the morning of Sept. 5th, and never again touched 99°.

Remarks.—This puerperal iliac abscess must not be confounded with others resulting from caries of the spine or ilium, but its progress illustrates well the results obtained by Listerism in the treatment of large chronic abscesses. The daily constitutional improvement, absence of fever, and entire cessation of the secretion of pus when the cavity was well emptied, are the results that Mr. Lister has taught us to expect when his treatment is carefully carried out, even though air be freely admitted. Two other points are worthy of note—one is the necessity for securing a free opening into the abdominal pouch of the abscess, the track under Poupart's ligament is often very narrow, and an incision in the thigh then fails to drain the upper larger sac of the abscess, whether it be psoas or iliac; the other is the advantage derived from pressure applied to keep the walls of a large abscess in accurate apposition and immovable.

SOUTH STAFFORDSHIRE HOSPITAL, WOLVERHAMPTON.

SCIRRHUS OF THE PERINEUM, WITH CANCEROUS INFILTRATION OF THE SUBPERITONEAL GLANDS.

(Under the care of Mr. KOUGH.)

FOR the following notes we are indebted to Mr. W. H. T. Winter.

Isaac J—, aged seventeen, was admitted into the hospital on August 13th, 1880, with a tumour of the perineum. His attention had first been directed to it in June, when he had experienced pain while straddling across a bar. The tumour was then about the size of a walnut; it caused him no inconvenience, except in the sitting position, and there was no history of injury. He had noticed that micturition was not natural. At times the urine would come in a fair stream, and then again it would only pass drop by drop. Defecation up to the time of admission was natural, and was unattended by pain. The boy said that during the past month he had lost flesh, that his appetite had fallen off, and that he was sometimes kept awake by aching pains in the perineum. Before the present illness he had been a robust boy, proud of his physical strength, and an adept at athletic exercises.

An indefinite history was obtained of some wasting disease in the father's family.

On admission a tumour of stony hardness was felt in the perineum. It was nodulated, and its imperfect mobility gave the idea that it was bound down by a dense fascia. It was as large as a pear, and extended from the front of the anus to beneath the pubic arch, so that its front part occupied the back of the scrotum. Laterally it extended from one tuber ischii to the other, but nowhere did it seem to be in absolute contact with bone. On trying to pass a silver

catheter the point diverged to the right before it got to the membranous portion of the urethra, and it could not be got any further by manipulation. A bulb-pointed elastic catheter passed, however, with ease. Examining the growth through the rectum, a hard, brawny substance was felt anteriorly, extending for about an inch and a half along the front of the gut. Beyond this the trigone of the bladder was distinctly made out. A catheter could not be felt per rectum till it passed the prostatic portion of the urethra. No enlarged pelvic glands were made out. The glands in both groins were enlarged and hard. In the hypogastrium, inclining rather to the right side, was a tumour about the size of an orange apparently in the abdominal walls. It was fairly definite on palpation, firm, and somewhat movable. The scrotum was cedematous. Both testicles and spermatic cords felt normal. The right lower extremity was considerably larger than its fellow, the right thigh being seven inches and a half thicker in circumference than the left. The right thigh gave a brawny feel and the skin over the front of it was spotted by numerous small extravasations round the hair-follicles. The patient's appearance was somewhat waxy. The sclerotics were brilliant and the gums pale. The body was fairly nourished, the appetite was moderate, and there was no thirst. The urine varied in sp. gr. from 1010 to 1015, and contained a trace of albumen; it was acid on being passed but soon became alkaline. After his admission the patient felt pain in the hypogastrium during defecation. The pulse was soft and regular, the temperature and respiration were normal, there were no night sweats, and the patient complained merely of lassitude. On Aug. 18th the patient had some epistaxis. It came on at intervals on the 19th and 20th. On the 23rd the evening temperature was 103° 5' and the pulse 120. He had some epistaxis during the night and slept badly. On the 24th he looked waxy-pale. He had vomited a brownish fluid and felt very ill. The respiration was hurried; pulse 120; temperature 102°. The temperature in the evening fell to 99°, the radial pulse became imperceptible, the patient threw his arms about restlessly, and in a short time died.

A post-mortem examination was made by Dr. Hunt twenty-four hours after death. On opening the pericardium the heart was found thickly dotted with small petechiæ. It was normal, and weighed nine ounces. There were also petechiæ over both lungs. The left pleura contained about six ounces of blood-stained fluid. Both lungs were healthy, and there were no adhesions. On opening the abdomen the intestines were found to be congested, and there was some blood-stained fluid in the peritoneum. The viscera being removed, a row of extravasations was seen beneath the parietal peritoneum along either side of the spine, and there was a large effusion of blood over the sacrum. The lymphatics in the pelvis and along the spine were enlarged, hard, and nodulated. There was a mass of lymphatics on the right side of the pelvis as large as an orange. An incision was made along the right side of the scrotum, and the perineal growth dissected out, together with the urethra, bladder, and rectum. The growth was four and a half inches long, three broad, and two and a half inches in thickness. The greater part of its upper surface was beneath the urethra, and its posterior border lay in contact with the levator ani; it involved neither the urethra, the testicles, nor the gut. It was of stony hardness; its surface was nodulated, and it cut with a cartilaginous section. The cut surfaces became cupped, and, on scraping, they yielded but very little juice. There were hæmorrhages into the substance of the growth, as there were into the infiltrated glands into the pelvis. The tumour into the abdominal walls was found to occupy the lower quarter of the right rectus. It was hard and gristly, like the perineal growth, and muscle fibres ran in its substance. The bladder contained some urine, and on opening it one spot of extravasation was found on its posterior surface. The vesiculæ seminales and Cowper's glands were healthy. The kidneys were somewhat pale, especially the pyramids. There were no emboli or petechiæ. The capsules were not adherent. The right kidney weighed six ounces, and the left five ounces.

Mr. Terry has kindly examined the growth microscopically. He says it is a carcinoma of a scirrhous type. There were dense fibrous alveoli, containing epithelioid cells. In the central part of the tumour the fibrous tissue was predominant, the alveoli being shrunken, and containing some few epithelial cells.

Medical Societies.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

Hydatids of the Liver treated by Abdominal Section and Drainage. — Hyperpyrexia after "Listerian Ovariectomy."

THE ordinary meeting of this Society was held on the 14th inst., J. E. Erichsen, Esq., F.R.S., President, in the chair. It was remarkable for one of the most animated debates upon "Listerism" that has yet occurred in the Society, in which, however, time allowed but few to join, although the meeting was prolonged to a late hour. Dr. Bantock's paper, attributing many of the evil consequences, and especially the fever of ovariectomy, to the toxic effects of carbolic acid, was the means of evoking this discussion, Mr. Thornton and Mr. Spencer Wells supporting Listerism, and Mr. Lawson Tait, Mr. Savory, and Mr. Holmes speaking against the method and the theory on which it is based.

A paper was read on a case of Hydatids of the Liver treated by Abdominal Section and Drainage by Mr. LAWSON TAIT, F.R.C.S., of which the following is an abstract. Mr. Lawson Tait gave the details of a case of hydatids of the liver, in which he had performed abdominal section successfully. The patient was a lady, aged thirty-seven, under the care of Dr. Pike of Malton, with whom Mr. Tait saw her in consultation in August last. The diagnosis of hydatids had been made by Dr. Pike, and confirmed by Sir Wm. Jenner, who saw the patient a few days before Mr. Tait did. The tumour was of immense size, the hepatic dulness reaching from the third rib to the level of the umbilicus, and crossing the middle line. No air seemed to enter the right lung, and the patient's breathing was greatly interfered with. There was incessant vomiting, and great exhaustion. The disease seemed to date from 1872, but the history up till February, 1880, was not clear. Mr. Tait opened the abdomen above and a little to the left of the umbilicus, and found the liver tissue quite healthy in appearance, and not adherent to the abdominal wall at any spot. He made an incision into the liver about three inches long, and evacuated about two gallons of hydatid cysts, varying in size from a pea to an orange. The liver tissue at that spot was about half an inch thick. He then stitched the edge of the wound in the liver to the edge of the wound in the abdominal wall, and fastened in a wide glass drainage-tube eight inches long. The relief to the patient was immediate and complete. The cavity rapidly contracted, continuing to discharge cysts and pus, tinged with bile, for about eight weeks. She rapidly gained appetite and flesh, having now, ten weeks after the operation, only a small sinus remaining.—Dr. JOHN HARLEY urged the practice of free incision and evacuation of the contents of hydatid cysts in preference to the use of the aspirator or simple puncture, believing that in the latter case the cysts often subsequently enlarged.—Dr. ALTHAUS alluded to the means obtained by Mr. Durham in the electrolysis of hydatids, and thought the procedure was worthy of more frequent adoption. It was based on the theory that caustic soda was liberated by the current, and killed the parasite.—Mr. HULKE congratulated Mr. Tait on the issue of his case. He had no doubt of the cure of several cases of non-suppurating hydatids by simple puncture and evacuation of the fluid, and believed the good effects of electrolysis largely due to leakage of the fluid. Inflamed and suppurating cysts must of course be treated by free incision.—Mr. SPENCER WELLS also had seen hydatid cysts cured by simple puncture, and quite lately had removed as much as eighty pints of fluid from one.—Mr. HUTCHINSON had published cases of effectual cure by puncture several years ago, and had many similar cases since. The procedure adopted by Mr. Tait, although formidable, was justifiable in the case being one of unusual kind.—Mr. THORNTON had under treatment a patient who had been previously aspirated, and he proposed before making a free incision to endeavour to procure adhesion between the liver and parietes.—Mr. WILLETT asked Mr. Tait if the wound was

kept perfectly aseptic throughout.—Mr. LAWSON TAIT, in reply, said that no antiseptics were used; only absorbent wool and zinc lotion. The case was of that variety where the mother cyst was packed with scolices, differing from those cases where there was much fluid. Simple tapping was out of the question; indeed, aspiration had been performed two weeks before, and the patient had become rapidly worse.

Then followed a paper on "Hyperpyrexia after Listerian Ovariectomy," by Dr. GEORGE GRANVILLE BANTOCK, of which the following is an abstract:—Mr. Lawson Tait had already questioned, before the Society, the advantages attributed to the Listerian precautions in the operation of ovariectomy. The absence of pyrexia has been claimed as one of the best results following such precautions. In this paper the fact that pyrexia is absent in cases treated antiseptically is disputed on clinical evidence. In the author's own experience, the Listerian method in a series of thirty-six cases shows in its favour a difference of but 0.4°, compared with the same number of cases undertaken without complete antiseptic precautions; the very lowest temperature occurred after a non-Listerian ovariectomy. Volkmann admits a condition of poisoning from absorption of carbolic acid, and terms this accident "aseptic fever." Thiersch has encountered instances of great irritation from this agent, and now employs salicylic acid in its stead. Keith finds very little difference in the temperature of series of cases undertaken under the old and the new method. In three Listerian cases the temperatures were the highest he had ever seen. Before adopting antiseptics he never found the ice-cap necessary for the reduction of pyrexia, excepting in one acute case of septicæmia. On the other hand, Mr. MacCormac asserts that the rise of temperature in Listerian cases is slight, or absent, and when present is due to other causes; Mr. Spencer Wells has found that, contrary to Mr. Tait's experience, pyrexia is subdued by antiseptics. Mr. Thornton has observed no fever at all, as a rule, after antiseptic ovariectomy. When, however, an operator is disposed to support Listerism, he may readily attribute to other influences ill results, of which it alone can be the cause. It is easy to explain how pyrexia follows "antiseptic operations." Carbolic acid is an irritant; its great advocate introduced the "protective" to counteract its irritating qualities. It is also a poison. It has caused death when inhaled, and has produced very serious symptoms when absorbed; this is illustrated in cases related by Lister, Lightfoot, Hanhorst, and the author, who describes at length two cases of poisoning from prolonged action of carbolic spray in complicated ovariectomies. In both the kidneys were affected by this medium. Agostini relates a case of poisoning from carbolic acid solution injected frequently into an abscess cavity. Thomas Smith and others have noted the bad effects of this acid in operations upon children. The author observed albuminuria and temporary suppression of excretion of sulphates in the urine of a young girl after antiseptic ovariectomy. Sonnenburg, Lightfoot, and others have also found that sulphates disappeared from the urine in similar cases, whereas in the author's patient that excretion did not become dark. Hence carbolic poisoning is not always indicated and exposed by discoloration of the urine, as is generally believed. Keith admits that evil effects may result from prolonged action of spray. The hyperpyrexia which follows is due not solely to reaction, but also to carbolic intoxication. The whole merit of Listerism lies, not in the supposed good effects of carbolic acid, but in the cleanliness which it promotes. By greatly reducing the strength of the solutions used in operations, the author has gained excellent results with absence of pyrexia.—The PRESIDENT remarked upon the local anæsthetic effect produced by the carbolic spray. It produced a numbness of the hands, and he thought this showed that the carbolic acid had some action on the peripheral nerves.—Mr. KNOWSLEY THORNTON said, that no one had claimed that Listerism was never followed by pyrexia, unless it were Mr. Tait himself, who, in his paper published in the recent volume of the Transactions, says (page 133): "As the temperature and pulse-curve are uniformly admitted to represent the course of any case involving febrile action, if the antiseptic system makes its claims justly, ovariectomies performed under its precautions ought to indicate a more even and less febrile course of recovery than the non-antiseptic cases, and this should occur independently of all other details of the operation." Obviously more fever must follow a difficult operation than a simple one. In the debate on that paper Mr. Holmes remarked that the whole question was one of "impressions," and he (Mr. Thornton)

resolved now to state facts; and to contrast the temperatures of non-antiseptic and antiseptic ovariectomy. Of the former he had had twenty-five successful cases with an average stay in hospital after operation of 26·3 days, and of the latter 150 successful cases with an average stay of 20·5 days. In twenty-five non-antiseptic cases the ice-water cap was used seventeen times, or in 68 per cent.; in 150 antiseptic it was used thirty-one times, or 20 per cent. It was used to reduce temperature in twelve non-antiseptic cases, or 48 per cent., and in fourteen antiseptic cases, or 9 per cent. On this point he saw from a letter from Dr. Bantock in the *Medical Times* that he agreed with him. In the remaining cases the cap was put on to prevent high temperature—viz., 20 per cent. of the non-antiseptic cases, and in 11 per cent. of the antiseptic cases; but of late he had limited its use to the reduction of temperature only. In the non-antiseptic series the temperature never rose above 100·4°—i.e., there was no fever in but two cases, or 8 per cent.; in the antiseptic—forty-five cases, or 30 per cent.; and if the cases in which there was a slight additional rise of 1° or 2° for a few hours be included, the figures would be 32 per cent. of the non-antiseptic series, as against 75 per cent. of the antiseptic recovering without fever. Dr. Bantock should not have styled his cases as Listerian ovariectomies at all, and the number (thirty-six) was too small to draw such large inferences as he had done. Although he himself had practised antiseptic ovariectomy in 200 cases, he felt he had yet much to learn in the application of the method, and he generally found that when a case went wrong some detail had been omitted. In his last 100 cases, with a mortality of 7 per cent., three patients died from septicæmia, a result which he was sure would not have occurred had he thoroughly acted up to the theory of Listerism, and in Dr. Bantock's cases the drainage-tubes were often changed by the nurses during the night, a practice certainly *not* that of Listerism. Recently Dr. Bantock had (in THE LANCET) published statements of practice which he styled Listerism, but which only proved that he was not in a position to carry out that practice, so contrary were they to Lister's express teaching. The occurrence of nephritis could not be attributed to carbolic acid poisoning, for long before antiseptics were introduced into ovariectomy deaths occurred from suppression of urine, &c., and quite lately he had such a case, in which death took place within twenty-four hours after the removal of a tumour weighing 88 lb., there being chronic Bright's disease. Septicæmia, too, was often fatal from failure of the kidneys to act, and comparison of the post-mortem records of such cases before the days of antiseptics showed no difference in the lesions observed in them and in those cases attributed to poisoning by carbolic acid. A German surgeon had recently said that in his country they had become so convinced that septicæmia had been banished by Listerism that deaths formerly attributed to this cause were put down to the toxic effects of carbolic acid. It was one thing to use the method and another to act up to Lister's practice and theory, and it would be far better if those who did not accept the theory would cease to practise the method, since their failures were no proof of the falsity of the theory. When studying under Professor Lister, at Edinburgh, he had repeatedly seen the urine darkened by carbolic acid without any other effects. He failed to see on what principle Dr. Bantock used a 1 per cent. solution of the acid, which Dr. Bantock said was no longer germicide. If so, why trouble to introduce this 1 per cent. of an "irritant" and a "poison"? Was it done to increase the cleanliness of the water? Dr. Bantock's results at the Samaritan Hospital were the same as those obtained by Mr. Spencer Wells without antiseptics at all, and using chiefly the extra-peritoneal method. Mr. Tait says that the advantages claimed for Listerism are really due to the adoption of the intra-peritoneal method. But was this so? He had compared the statistics of the Samaritan Hospital for periods of six years with this result. Mr. Spencer Wells, from 1872 to 1877 inclusive, had 191 cases (extra-peritoneal) with a mortality of 20 per cent.; Dr. Bantock, from 1875 to 1880, inclusive, had 136 cases (intra-peritoneal and modified antiseptics) with a mortality of 17·64 per cent. Mr. Thornton in the same period had 181 cases (intra-peritoneal and antiseptics), with a mortality of 11·6 per cent. These differences were due to the more thorough use of the antiseptic method. In the present year, Dr. Bantock, using his *very modified* antiseptic method had had forty cases with a mortality of 12 per cent.; Mr. Thornton, with pure Listerism, had fifty-four cases with a mortality of 7·4 per cent., including two deaths from septicæmia,

which he attributed to failure in carrying out the method. Still, Mr. Wells in the last two years of his hospital practice had only a mortality of 10 per cent. in intra-peritoneal cases, a result largely due to the use of the ice-cap and drainage. In his own last 100 cases, Mr. Thornton had a mortality of 7 per cent., twenty-seven of these being private cases, with one death—a case of unusual difficulty. All this went to prove that with every case the mortality without Listerism could not get below 10 per cent.; and if by the adoption of the method the mortality could be lowered by three or four per cent., that end was alone worth the extra trouble and difficulty entailed by the method.—Mr. LAWSON TAIT was surprised that Mr. Thornton should have quoted the passage from his paper in the sense he did, and regretted that there did not seem to be a clear understanding as to the meaning of Listerism; since it had just been stated that it was no part of the Listerian theory to avert septic fever. Hitherto he had thought that the whole aim of the theory was to eliminate this surgical fever after operations. If this were not its aim, what was it? In fatal cases of ovariectomy the temperature rises steadily to the end. He could not then concur in any of Mr. Thornton's remarks. As to the duration of stay in hospital, there was a great difference between cases in which the clamp was used and those in which it was not.—Mr. THORNTON said he had excluded all clamp cases from this reckoning.—Mr. TAIT, proceeding, said that he had a series of 137 abdominal sections, in which 48 were done with *extreme* Listerian precautions, and the remainder successively by the elimination, one after another, of these precautions; so that after reducing the strength of the carbolic spray to 1 in 150, he had finally conducted the whole of the process under a spray of water alone! And so far as the temperature went, it had diminished in proportion as the amount of carbolic acid was lowered. In the 48 pure Listerian cases there were 5 deaths; in the 91 "modified" cases, 6 deaths; and he did not know if any better result could be obtained than that. With Listerian precautions the wounds never heal by first intention, but always with formation of pus; and Dr. Savage, who practises Listerism, remarked that in his cases the wounds did not heal so well as Mr. Tait's without it. Mr. Tait had had one case in a young woman, from whom he had removed both ovaries—no adhesions—in which the temperature rose to 112°, and remained at that height for forty-eight hours. She recovered perfectly, and there was nothing in the case but carbolic acid poisoning to account for the remarkable rise in temperature. The ice-cap could not be cited as a criterion; he himself had never used it. He once used Dr. Richardson's "collar," invented many years ago; but the case proved fatal, and he never used it again. Success depended more on personal care and experience than on anything else. Mr. Thornton had had the great advantage of being associated for many years with Mr. Spencer Wells, and this must be taken into account in comparing his statistics with those of others. He (Mr. Tait) lost nineteen out of his first fifty cases, and he did not think he would have had such a mortality had he had the opportunity of seeing, and assisting at, the operations of so distinguished a master.

The usual hour for adjournment having arrived, it was resolved to continue the debate.

Mr. DORAN having examined after death forty-one cases of ovariectomy, found that the kidneys were normal in only seven, and in one of that number death was due to tetanus, in another to pleurisy. Of the renal disease six were cases of dilatation of ureter and pelvis on one side. The rest exhibited various degrees of subacute and chronic Bright's disease. In many cases there were lesions of other viscera, mostly diagnosed before operation; but the renal disease was nearly always latent; and this fact should be borne in mind before pronouncing on the statistical results of operations by different methods; and until it became possible to ascertain the existence of such disease there must always be room for fallacy in the comparison of such statistics. Albuminuria alone would not contra-indicate operation, for it might be due to pressure, which the operation would relieve. Diminution in the quantity of urea might be due to diminished quantity of food; and sometimes in renal disease there was an excess of urea. Dr. Bantock had remarked upon the diminution of the sulphates as evidence of carbolic acid poisoning. Dr. Parkes has shown that thirty-one grains of sulphuric acid are eliminated by the kidneys in twenty-four hours. After a severe operation the call on the kidneys must be very great, and if they be diseased

great risk was added to the patient's chances of recovery.—Mr. SAVORY said that the only point on which there seemed to be agreement, was that as experience increased the mortality diminished. He asked if this did not point to the question being one of the man rather than the method; and did not such a reflection vitiate all conclusions derived from statistics of the first twenty cases compared with the second twenty, and so on?—Mr. SPENCER WELLS would meet Mr. Savory's argument by the experience of the same surgeon in a successive series of years. No doubt the mortality diminished with increasing experience, but after a time the mortality reaches a level below which it will not fall, until the introduction of a new method leads to further improvement in the results. It had so happened with him. At first the mortality gradually fell from 34 per cent. to 28, to 24, and so on, until it reached a level beyond which it did not fall, and the question came whether it was possible to reduce the mortality still lower. This caused him to adopt the antiseptic treatment, and at the beginning of 1878 he commenced to follow Listerian methods. To be sure, the cases in which he applied it were all in private patients, but he had when in hospital practice found no difference in the results of the two classes of patients; nor was it due to the intra-peritoneal method, for before he used antiseptics he had been less successful with this than with the intra-peritoneal. Since adopting Listerism he had had 131 cases, with 13 deaths—a mortality of 10 per cent.; which was precisely the same mortality he had in the last two years of his hospital practice—viz., 7 deaths in 71 cases. These figures alone might be quoted to show there was no advantage gained by Listerism. But there were very real advantages. He was surprised to hear Dr. Bantock, Mr. Tait, and Mr. Thornton find such rises in temperature after Listerian ovariectomies, for he never saw them; it was rare to see the temperature over 100°. The method did not involve trouble—it greatly saved it. Formerly a case had to be closely and personally supervised; but all this trouble and anxiety were saved in treating a case antiseptically. Again, in forty-nine cases out of fifty so treated the wounds heal by first intention; and it was quite a matter of surprise to him to find, as he did lately in a case, any pus in the wound. In that case its appearance was explained by the development of boils in other parts of the body.—In reply to Mr. Tait, Mr. WELLS added that when the pedicle was short he used the ligature in preference to the clamp.—Mr. HOLMES said that after all they had heard that evening from the advocates and opponents of Listerism he was ready to withdraw his former observation that the grounds urged in favour of the method were based only on "impressions"; and he would like to put it to the Society, whether, after these definite details, there were such characteristic differences between cases treated with and without the method, as would be the case were its theory true. Recalling the claims urged for the theory when it was first promulgated, he would ask whether it was at that time thought in 130 cases treated under the theory would show the same result as those treated otherwise? Whether, if one was not told, one would perceive any real essential difference between the cases which were treated on the basis of the germ theory and those without this basis? He was not a partisan of any one method. He had sat at the feet of Lister, and had tried to master the details of his method, which in the early days were far simpler than at present, for they had been so modified that he confessed he did not understand them; and he was sure Mr. Thornton did not understand them, since he attributes his fatal cases to a lack of mastery of these details. Did Mr. Lister himself even understand them? Was the theory itself understandable? When a case is lost, the failure is put down to failure to understand the theory; when a case is saved, then the theory is triumphant. If this were all it came to, and after the method had been so long in use there was still a quarrel as to its advantage in 1 per cent. of the cases, it might fairly be said that the theory was "not proven."—Dr. BANTOCK, in reply, said that the local anæsthesia produced by carbolic acid was well known to him. He quoted from a paper written by Mr. Thornton to show that that gentleman attributed two deaths from pleurisy to the chilling produced by the spray, and one from suppression of urine to the carbolic acid; and in another paper spoke of extreme congestion of the kidneys as due to carbolic acid. In his own practice he had treated thirty-six cases with true Listerian precautions, with eight deaths, one patient dying on the operating table. With a

solution of carbolic acid, 1 in 50, he had treated forty-one cases with a mortality of three, one of these cases was *in extremis* when operated on; another died from acute nephritis, and a third from tetanus, on the eighth day, and apparently independently of the operation. In two of these cases he had used the ice-cap, and he found that in proportion as the strength of the solution was reduced to 1 in 60, 1 in 80, to 1 in 100, the results improved, the ice-cap never being required since he had used the weaker solution. He had had many cases in which there was disease of the kidneys—a most unfavourable condition, owing to the little or no power of elimination. He quoted recent statistics of an Italian surgeon, showing that in his practice ovariectomy with Listerism in 100 cases gave a mortality of 37 per cent., and in a second series of 100 cases without Listerism a mortality of 36 per cent. Mr. Bryant had recently published facts showing that pyrexia in surgical cases was considerably less than supposed, without undue antiseptic precautions being taken. Mr. Spencer Wells had stated in his book that he never used the ligature when the clamp could be used, and it was not therefore surprising that the ligature should compare unfavourably with the clamp. The merit of using a solution of carbolic acid of 1 per cent. strength lay in its not causing hyperpyrexia; he had not once to use the ice-cap in cases treated with this solution, and out of twenty-nine cases had lost eight, two deaths being from shock. The great point was strict attention to cleanliness, and in this respect the modern practice differed from that formerly in vogue. Mr. Heath was the first to put this principle into practice, and, combined with free drainage, found that Listerism did not add to the measures, although it added to the risk of subsequent pyrexia. The dread of injuring the peritoneum had disappeared before Listerism was taught, for it was shown that fever decreased in proportion as effectual drainage was practised, and the causes of irritation of the peritoneum avoided. Patients still died even under the strictest Listerism. He would not follow Galezowski, who said that since he had used antiseptics (!)—viz., solution of carbolic acid of 1 in 1000—his operations on the eye were markedly successful; and, whilst according full measure of praise to Mr. Lister's teaching, he could not admit the truth of those exaggerated pretensions claimed for his method by his disciples with a zeal which outran discretion.

The Society then adjourned.

CLINICAL SOCIETY OF LONDON.

Retarded Signs in Pneumonia.—Left Hemiplegia, with Aphasia.—Radical Cure of Web-fingers.—Removal of Villous Growth from Bladder.

THE ordinary meeting of this Society was held on the 10th inst., Dr. E. H. Greenhow, F.R.S., President, in the chair. A paper by Mr. Tyson, calling attention to the frequency with which the physical signs are retarded in acute pneumonia, received confirmatory support by several speakers. A pendant to the interesting case of lesion of Broca's convolution, without aphasia, in a left-handed subject, read by Dr. Taylor at the last meeting, was afforded in a case related by Dr. Habershon, of destruction of the right frontal lobe, with aphasia, also in a left-handed subject; and elicited some suggestive remarks from Dr. Hughlings Jackson. Mr. Davies-Colley related a case of successful removal of villous growth from the bladder, probably the first in which cystotomy has been performed in this disease. A case of cross-legged progression was shown by Mr. Tyson.

Mr. TYSON (of Folkestone) read notes of cases of Acute Pneumonia, in which the usual physical signs of the disease appeared late in the case.—Case 1. A man, aged sixty-four, caught cold whilst driving on April 4th, 1880, and next day was compelled to give up work. He was seen for the first time on the 8th, when he complained of pain in the chest, and expectorated some tenacious mucus. There were no abnormal physical signs. Temperature 103; pulse 88; respiration 30; urine albuminous. On the 11th slight dulness appeared at the base of the left lung; fever was high. On the 12th (eight days after the chill) there was well-marked dulness,

bronchial breathing, and bronchophony. He was very feeble, and died on the 15th.—Case 2. A female, aged twenty-five, in Guy's Hospital under the care of Dr. Pye-Smith, taken ill three days before admission, when the temperature was 104°. Signs of pneumonic consolidation appeared on the sixth day, and death took place on the seventh. There was grey hepatisation of the right upper lobe.—Case 3. A male, aged fifty, in whom no dulness was discovered till the sixth day. Death occurred on the tenth day. In two other cases Mr. Tyson had marked the absence of physical signs until the fifth day. He referred to the statement made by Dr. Bowles, that in asthmatical subjects attacked with pneumonia dulness often did not develop till four or five days after the seizure. After quoting passages from Ziemssen's *Cyclopædia* and Trouseau's lectures to show that such a late development of physical signs was not generally acknowledged, he concluded by stating that this retardation of signs occurred more frequently than was generally supposed, and might be attributed to the central parts of the lung being primarily affected. In such cases the onset of the attack, the pyrexia, and the altered pulse-respiration ratio should be relied on as diagnostic points.—Dr. F. TAYLOR confirmed the author's statement as to the relative frequency with which the physical signs appeared late in the disease, and quoted a case which came to the out-patient department with a history pointing to pneumonia. The physical signs were not apparent, although it was about the fourth day; but the patient coughed up some rusty sputa and was admitted. Soon afterwards physical signs became developed. In another case the delayed signs appeared before the rusty expectoration.—Dr. ANDREW CLARK said the paper was an important contribution to the literature of the subject, for anomalous and capricious cases of pneumonia were imperfectly recorded; but he did not think it added much to the knowledge of experienced men. He was constantly meeting with cases in which the constitutional evidence of pneumonia long preceded the appearance of local signs. He would mention three such cases. One was a case of a gentleman he saw in consultation with Dr. Stephen. After a slight rigor the temperature rose to 101°, and for seven days there was no evidence of the disease, except the general distress, rapid breathing, and altered pulse-respiration ratio. The physical signs of pneumonia appeared on the eighth day. Another case was that of a gentleman, aged eighty, at Southsea, seen with Mr. Potts and Sir W. Gull. After a chill there was a period of ten days marked by irregular pyrexia, malaise, and hurried breathing. On the eleventh and twelfth day slight friction was heard below the angle of the right scapula, followed by dulness and tubular breathing. The patient recovered. A third case was one he saw with Dr. Buzzard, when the patient had been ill for six days with pyrexia without any local signs. He did not think it necessary to have all the physical signs present to diagnose pneumonia; and that in cases of central pneumonia the disease was too far removed from the surface to yield these signs. With a history of chill, with distress and prostration, with fever, and a disturbed relation between pulse and respiration, one may be absolutely certain that the case is one of pneumonia.—Dr. HABERSHON concurred that in some cases the general symptoms, with hurried breathing and rusty expectoration, without physical signs, must be taken as sufficient for diagnosis. No doubt such anomalies were explained by the disease being deep-seated, so that the physical signs are obscured, just as a severe pleurisy may involve the surface of the diaphragm without any friction being audible. When the physical signs do become manifest the pneumonia has probably extended to the periphery.—Dr. ANDREW CLARK added that pneumonia might be diagnosed from the general conditions; because in a large number of cases there is neither cough, nor expectoration, nor pain in the side.—Dr. DE H. HALL, some five or six years ago, had recorded two cases of apical pneumonia marked by severe head symptoms. One was a man, aged nineteen, who was comatose for six hours; the other a child, who had repeated convulsions; and it was only on the fifth or sixth day that distinct tubular breathing appeared. One reason for the severity of these cases, as compared with those which ran a more typical course, might be found in the greater amount of lung involved in central than in peripheral pneumonia.—Dr. BURNLEY YEO said that such cases suggested the question whether the lung condition was not secondary to a constitutional disorder.—Dr. GOODHART observed that the question was a

complicated one, so many conditions occurring under which the physical signs varied. In old people the late appearance of these signs was attributable to the presence of emphysema. At the same time he agreed with Dr. Yeo that blood-poisoning might be the primary condition to which the pneumonia was secondary. Some years ago he examined the body of an old man, who died three or four days after taking a chill. There was only a slight amount of pneumonia, and the only interpretation he could put on the case was that the chill, arresting the function of the skin, had caused blood-poisoning, and that sufficient time had not elapsed for true pneumonia to be fully developed.—Mr. TYSON replied, that all his cases ultimately developed the signs of ordinary pneumonia. The last case he had seen was in a child, five years of age, with high temperature for six days, without pneumonic symptoms. He had written the paper because all the authorities he had consulted did not mention the proportion of cases in which this delay in the development of physical rigors occurs; although many state that they have seen such cases.

Dr. HABERSHON read a case of Aphasia, with Hemiplegia on the Left Side, and Tumour on the right side of the Brain in the third frontal convolution. The patient was a man, aged fifty-two, who had had symptoms of languor for a year before admission. Seven weeks previously he had a sudden difficulty with his speech; he tried to say something, and could not speak the right word. This got worse until three weeks ago, when weakness of the left arm and leg was noticed. On admission there was partial left hemiplegia; the pupils slightly contracted, urine free from albumen, bowels confined. His wife stated that he had always been left-handed. He was treated with iodide of potassium and mercury, but in a few days he became unconscious; and though he rallied for a short time and appeared to understand questions, he became restless, trying to get out of bed, then comatose, and died thirteen days after admission. At the post-mortem examination a gelatinous-looking lobulated tumour was found on the right side of the brain, occupying the region of the island of Reil, and involving much of the lower part of the third frontal convolution. It measured an inch or more on the surface, and extended two inches into the brain substance, so as to reach the lenticular nucleus of the corpus striatum. The section had an orange tint, with numerous ecchymoses, and at the margin some yellowish gelatinous material. It was composed almost entirely of small round lymph-like corpuscles, but in some parts showed nothing but compound granular corpuscles. There was broncho-pneumonia at both bases, and atheroma and calcareous change in the cardiac valves and aorta. The kidneys were rather granular. Dr. Habershon drew attention to the case as illustrating the view that the faculty of speech is associated in the brain with the muscular education of the most used arm, since the patient was left-handed, and suffered from aphasia, when a tumour developed in his right third frontal convolution. Some points in the history of his children seemed to indicate a syphilitic origin for his complaint, but the result showed that the tumour was a glioma.—Dr. F. TAYLOR reminded the Society of the main facts in the case reported by him at its last meeting, when there was embolic softening of the region supplied by the left Sylvian artery, without aphasia (see THE LANCET, Dec. 4th, 1880, p. 896), and when it was subsequently elicited that the child had been left-handed from birth in consequence of some deformity of the right arm. It would have been impossible to have detected any old lesion of the left hemisphere had it existed, owing to the disorganisation produced by the embolism.—Dr. HUGHLINGS JACKSON had observed several cases of aphasia with left hemiplegia, mostly in left-handed persons, and had recorded such a case recently (THE LANCET, April 24th, 1880). Aphasia from cerebral tumour was rare; it might occur by hæmorrhage in cases of vascular tumour. There was temporary aphasia after some epileptic seizures, usually those beginning on the right side, in cases of disease of the cortex cerebri. It was a significant thing that aphasia usually went with right hemiplegia, and the cases recorded by Dr. Taylor and Dr. Habershon were valuable as exceptions proving this rule. Dr. Hughlings Jackson thought, however, that the thing of most significance was that disease of but one side of the brain might destroy speech. There was another thing of quite equal significance—viz., that disease of no part of either side alone caused "wordlessness." At any rate, in most cases of complete aphasia, uncomplicated by hebetude, due to very extensive cerebral disease, the patient who could not speak

could understand what was said to him—proof positive that, although *speechless*, he was not *wordless*. Dr. Hughlings Jackson believed that both sides of the brain serve in the automatic use of words; and the left in that least automatic or most voluntary use of them, which is speech.—The PRESIDENT mentioned the case of an aphasic whose only phrase was, "God bless my soul!" and stated that he had at present under care a lady who, whilst retaining full intellectual power, was unable to express herself in speech.—Dr. HABERSHON, in reply, said that his patient no doubt understood what was said to him during the few hours that he retained consciousness.

Mr. A. T. NORTON described a new method for the Radical Cure of Web Fingers, which he had performed in a few cases. It consisted in the reflexion of a tongue of integument cut from between the knuckles and another from the palmar surface of the hand. These flaps being raised, the "web" is divided, and the superabundant tissue being removed, the flaps are brought together. The flaps should be sufficiently thick to obviate shifting, which had occurred in one case, where three fingers were webbed; they should be narrow, pointed, and of sufficient length.

Mr. DAVIES-COLLEY read notes of a case of Villous Growth of the Bladder, successfully removed by Perineal Incision. Henry W—, aged thirty-two, a shipwright, had suffered from hæmaturia for eight years. At first blood was passed only occasionally, and in small quantities. Latterly the flow had increased, and he had become so weak that for sixteen months he had been unable to work. He was admitted into Guy's Hospital last March. His family history was good. He was strongly built and fairly nourished, but very anæmic. There was a continual desire to micturate, and a feeling as if something always remained behind in the bladder. Blood was passed, sometimes at the beginning, sometimes at the end of micturition. No stone could be detected, and all efforts to find villous masses in the urine failed. No tumour could be felt per rectum. On April 16th he was placed under ether. Mr. Davies-Colley then opened the bladder by the usual incision for lateral lithotomy. At first nothing could be felt. Then a slight projection was made out on the left side of the fundus, and a cord-like process running from it. In a short time the free end of this process, with a soft pinkish tuft of villi attached to it, was seen at the deeper part of the wound. This was seized with the forceps, drawn out, and the pedicle cut with a pair of scissors close to the wall of the bladder. No other growth could be felt. There was but little hæmorrhage during the operation, and some which occurred in the evening was readily arrested by the injection of iced water into the bladder. He made a rapid recovery. In two weeks the urine ceased to flow from the perineum, and soon afterwards the wound healed. When last seen, two months after the operation, there had been no return of the hæmorrhage. The irritability of the bladder had ceased, and he was in the enjoyment of perfect health. The tumour grew from the posterior wall of the bladder, at a point about three inches from its neck, and one inch to the left of the middle line. It consisted of a fibrous stalk one-sixth of an inch thick and two inches long, terminated by branching filaments from half an inch to three-quarters of an inch long. These filaments contained capillary loops, invested by many layers of epithelium of a cylindrical shape. Professor Humphry has recorded in the "Medico-Chirurgical Transactions" a case in which he successfully removed a fibrous polypoid growth from the male bladder. He mentions a similar success in Professor Billroth's practice. The chief difficulty in the male subject is to ascertain the presence of a tumour as the source of hæmorrhage. In the present case the diagnosis depended solely upon the long continuance of the bleeding and the absence of other causes. Perhaps the fact of blood passing sometimes at the beginning, at other times at the end of micturition, may assist in the detection of growth. No doubt the villi were in this case sometimes washed into the prostatic part of the urethra, where they were squeezed, so as to give rise to a flow of blood before the urine; while at other times hæmorrhage into the bladder was set up by the pressure of its muscular walls upon that part of the growth which lay in its interior.—Mr. CLEMENT LUCAS said that in these cases operative interference was justifiable and reasonable. He had thrice performed cystotomy in chronic disease of the bladder with great relief. The diagnosis of villous disease was not assured until a small portion of the growth could be obtained and detected by the microscope. These

cases often went on for years without much effect upon health. He had a case under his care for two years; astringent injections afforded some relief. Mr. Durham attempted the removal of a growth from the bladder a few years ago.—Dr. HABERSHON said that the patient on whom Mr. Davies-Colley had operated was very weak and prostrate on admission into the hospital, and it was evident that the hæmorrhage came from the bladder, and not from the kidneys. There was often great difficulty in the diagnosis of these cases. He remembered a case in which the symptoms were attributed by one to calculus in the bladder, by another to calculus in the kidney, and another to cancer. The patient suffered from hæmaturia, and at times intense pain in the penis. After three or four years' suffering a portion of a villous growth was passed per urethram, and all the symptoms ceased. Some pain returned after many years' interval. In other cases hæmorrhage continues; and in the presence of such cases it was a great advantage to know that operative interference might be undertaken with relief.—Dr. A. P. STEWART said that about twenty years ago he sent in to the Middlesex Hospital from the out-patient room a woman who had suffered for many months from intermittent hæmorrhage from the bladder, at times very profuse, then ceasing for weeks, and then returning. Mr. De Morgan made a digital examination of the bladder, but found nothing. The urine continued to contain blood at intervals, and ultimately the patient died. The bladder, with a pedunculated villous growth, is now in the hospital museum. The reason why it had not been detected by Mr. De Morgan was, that it was attached to the front wall of the bladder immediately under the pubes.—Mr. TEEVAN congratulated Mr. Davies-Colley on the case; the first and only case of successful removal of a villous growth by the knife. Civiale had removed one by the lithotrite. Villous growths were usually attached to the posterior wall of the bladder, whereas polypi were fixed to its neck. The diagnosis of such cases was difficult; and he mentioned one which he had lately seen with Dr. A. Clark, when in catheterism clear urine flowed at first, followed by pure blood and some shreds of villous growth. The patient was old and paralytic, so that attempt at removal of the growth was out of the question. Incision into the bladder for cystitis was done largely in America, and he himself had practised it four times, making the median incision. Perhaps an external urethrotomy would suffice; villous disease was not always fatal. He had seen a case where the mass was spontaneously extruded with recovery.—Mr. BARKER asked whether in the cases operated on by Professor Humphry and Professor Billroth the growths were as pedunculated as in Mr. Davies-Colley's case. In some cases the villous disease is distinctly sessile, and involves a large surface of the fundus of the bladder. Supposing a growth of that variety were cut down upon it would be difficult to know how to deal with it.—Mr. DAVIES-COLLEY, in reply, said that the tumours removed by Professors Humphry and Billroth were not of the villous kind, Prof. Humphry's was a case of polypoid fibrous growth from the mucous membrane. In his own case had the growth been sessile, no doubt great difficulty would have been experienced, but still, by tearing and scraping much might be removed, and the hæmorrhage checked at least for a time. It was generally possible to entangle a small portion of a villous growth in the eye of the catheter, and thus extract it for diagnostic purposes; and lately he had employed the washing bottle used in litholapaxy very effectually for the same purpose.

The Society then adjourned.

MEDICAL SOCIETY OF LONDON.

Gastric Ulcer.—Cancer of Liver invading Stomach.—Intestinal Obstruction from Contraction of Ileal Mucous Membrane.

At the meeting on December 13th, F. J. Gant, Esq., President, in the chair, Dr. ALLCHIN brought forward a case of Gastric Ulcer. Emily A—, single, age thirty-two, admitted into Westminster Hospital July 6th, 1880. Symptoms noticed only nine weeks previous to admission. She died on November 17th. Gastric ulcer on anterior wall, with pancreas for its base, three inches by one inch in diameter; edges clean cut. On admission there was

extreme anæmia, with pulsating tumour in epigastrium, rather to left of middle line. During the progress of the case the patient progressively emaciated, and finally died from hæmorrhage into the stomach. Absence of persistent vomiting was the only irregular symptom in the case, sickness only occurring on one or two occasions to a very slight extent. It is noticeable that this absence of marked vomiting was associated with an unusual portion of the ulcer—viz., in the anterior wall near to the greater curvature.—Dr. HABERSHON asked whether there were any more decided symptoms in the case. The ulcer could hardly have been on the anterior wall as its base was formed by the pancreas.—Dr. ROUTH referred to a case where the limited pain caused by a galvanic current to the epigastrium determined a diagnosis of ulcer, when other symptoms were deficient. The patient, a gentleman, died after profuse hæmorrhage, and the ulcer was found after death.—Dr. WILTSHIRE asked if melæna had been observed. It was a valuable symptom, and occurred often without hæmatemesis. Vomiting was more apt to occur when the ulcer was seated near the pylorus.—Dr. ALLCHIN said there was no history of hæmatemesis, but melæna occurred. Although mainly on the anterior wall the base of the ulcer adhered to the pancreas.

Dr. HABERSHON then showed a specimen in which a Cancerous Cavity in the Left Lobe of the Liver communicated with the Stomach, and an abscess between the liver and the diaphragm communicating with a second cavity in the right lobe of the liver. There was extreme anæmia, and a cancerous growth in the lung had produced local pleuropneumonia. The gastric symptoms were comparatively slight, the orifices were free, and the rest of the gastric mucous membrane was unaffected. The anæmia and the secondary affection of the lung masked the primary disease.—Dr. THOROWGOOD mentioned the case of a gardener who came under treatment in the morning, made a good meal; was afterwards taken with sudden collapse, and died the same evening. A large perforating ulcer of the stomach was found.—The PRESIDENT inquired as to the etiology of ulcer of the stomach, and whether this disease was so common as Dr. Brinton supposed.—Dr. HABERSHON, in reply, said these cases may be very slow in their progress, but when the ulcer is seated over a large vessel the case may be very quickly fatal. He mentioned a case where symptoms, after lasting forty years, subsided, probably from healing of the ulcer.

Dr. HABERSHON then read notes of a case of Obstruction of the Intestine from great contraction of the Mucous Membrane of the Ileum. The patient, aged thirty-five, was seen in consultation with Mr. F. E. Webb. He had been subject to attacks of colic and diarrhoea from boyhood, but had otherwise good health. In the autumn of 1878 he began to suffer from weakness, and paroxysmal abdominal pain recurring at shorter and shorter intervals; emaciation slowly taking place. The bowels were open but motions were pale. On August 3rd, 1879, there was great distension of the abdomen, visibility of coils of intestine, constant attacks of pain, especially in upper part; motions sometimes loose, sometimes forced. No tumour could be detected, and it was evident there was not complete obstruction. He died in December, and examination showed adhesion of a coil of small intestine to the transverse colon, with great narrowing of the ileum less by thickening of the mucous membrane, whilst above this point the coats of the bowel were much hypertrophied and ulcerated, but small and contracted below. This was no evidence of cancer. Dr. Habershon thought the contraction had existed for many years, and was probably of inflammatory origin—an intussusception in early life being suggested as an hypothetical explanation. He discussed the question of diagnosis, and reviewed the various causes of intestinal obstruction. The clinical history pointed to disease of the mucous membrane rather than to bands of adhesion, volvulus, or tumour; but it was thought probable that the disease had assumed a malignant character. The difficulty in distinguishing between obstruction of the large or small intestine was referred to, and in this case the symptoms pointed to the colon as the seat of disease. The adhesions to the colon probably caused the pain in this region. Prognosis was unfavourable from the first, and the treatment only palliative. Colotomy would have been of no use, but if the obstruction had become complete, an operation would have been resorted to, hence the importance of precisely localising the disease.—The PRESIDENT asked whether any attempt had been made to discover the seat of obstruction by means of abdominal

section. In all cases it was essential, if possible, to determine the nature of the seat of obstruction.—Mr. ROYES BELL alluded to the frequent impossibility of diagnosing the exact seat of an internal obstruction. He related a case where obstruction was thought to be due to an inguinal hernia which was operated on. The patient dying soon after a stricture of the small intestine was found a short distance above the hernia; and had it been detected at the time of operating an artificial anus might have been made in the bowel above the stricture.—Dr. DEHAVILLAND HALL related a case with symptoms of diarrhoea treated for several days with chalk and opium, when signs of obstruction set in, and he was admitted into the hospital in a sinking condition. Colotomy was performed at once, but patient died a few hours afterwards. The obstruction was due to cancer of the rectum.—Dr. HABERSHON agreed as to the obscurity of these cases. In the case he had read, the obstruction was not complete. Mr. Birkett had had a case under his care in which were three distinct sorts of obstruction. Dr. Habershon deprecated too early surgical interference, because in some of them all symptoms disappeared in the course of a few days.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.

Opacities in Vitreous Humour, following injury.—Retinal Hæmorrhages and Degeneration in Scurvy, and in Idiopathic Anæmia.—Congenital Absence of Eyeball.—Paralysis of Cranial Nerves with Hemiplegia.—Peritomy.—Eye Symptoms in Locomotor Ataxy.

THE ordinary meeting of this Society was held on the 9th inst., W. Bowman, Esq., F.R.S., President, in the chair. There was a good attendance, and many interesting cases were exhibited, and papers read by Mr. Critchett and Dr. Hughlings Jackson.

Mr. J. E. ADAMS exhibited and described a case of peculiar Opacities in the Vitreous Humour, following Injury. Within two weeks of receiving a blow on the right eye with a chestnut numerous minute shining bodies, like cholesterol, were detected in the vitreous. At first the pupil was weak and excentric, but it is now (two months after injury) normal, the vitreous remaining as before. The case was remarkable for the short time elapsing between the injury and the appearance of the bodies in the vitreous. Knapp had recorded a somewhat similar case.—The PRESIDENT thought it difficult to explain if it were due to the accident. Might not the bodies have been long present?

Dr. S. MACKENZIE described a case of Scurvy, with Retinal Hæmorrhages and Degeneration, in a young lad who had lived in Whitechapel, and had not been deprived of vegetable food. The gums were spongy; there were numerous purpuric spots on the skin; and whilst under observation hæmorrhages began to appear in the retina of both eyes, becoming more and more abundant, so that they now present the appearance of severe albuminuric neuroretinitis. He is very anæmic; there is no leucocythæmia.—Dr. BUZZARD doubted if the case were one of true scurvy, for if so it would be the first case he knew in which that disease had appeared whilst taking vegetable food. He had examined many cases of scurvy for retinal hæmorrhages, but without success. The case was rather one of purpura.—Dr. GOWERS asked if there was any considerable reduction in the number of red corpuscles.—Dr. MACKENZIE said the case was regarded by many as one of scurvy, although he admitted the force of Dr. Buzzard's arguments. He had hitherto failed to find retinal hæmorrhages in scorbutic cases. The red corpuscles were about twenty to thirty per cent. of the normal, and the hæmoglobin was very deficient. Dr. Mackenzie then mentioned a case of Idiopathic Anæmia in a man in whom retinal hæmorrhages were present, but had disappeared under treatment. It was usual for such hæmorrhages in anæmia to come and go. The corpuscular richness was at first only 20 per cent.

Dr. A. D. DAVIDSON showed a case of Congenital Absence of one Eyeball, a small rounded button lying beneath the conjunctiva at the bottom of the orbit, which was of natural depth. At birth there was a slight discharge from this orbit, but in answer to the President, Dr. Davidson said there was no appearance of inflammation.

Dr. ALLEN STURGE exhibited a man, aged seventy-two, who was admitted into the Royal Free Hospital five weeks ago in an attack of apoplexy. There ensued paralysis of both third nerves, partial paralysis of the levator palpebræ on the right side, slight on the left; dilatation of pupils, especially the left; right facial paralysis and deafness on the right side; and left hemiplegia. Recovery began in the arm first, and on the upper part of the arm before the hand. The facial paralysis, complete in degree but not in extent, improved in three weeks, and the ocular condition remained unaffected. There was a possibility of syphilis in the case (there was some old choroido-retinitis in the left eye), but the history pointed in favour of a hæmorrhage in the anterior part of the pons.

The following cases were exhibited, but for want of time not described. Mr. McHARDY: Case of Recent Rupture of the Choroid.—Mr. WORDSWORTH: Case of Rupture of both Eyeballs with subconjunctival dislocation of the lenses, by a single injury; recovery of good sight. Case of peculiar Granular Calcareous-looking Opacities upon the Iris after needle operations for soft cataract, in a boy.

Mr. CRITCHETT then read a paper on Peritomy, and gave the following reasons for introducing the subject to the notice of the meeting: First, that during a long career many cases of vascular opacity with granular lids had come before him in which the disease had remained for many years unrelieved, although the patients had been under treatment for considerable periods at various institutions; and secondly, because the operation of peritomy had fallen into unmerited neglect, and was seldom practised. He then proceeded to give a brief sketch of the leading symptoms of the disease, and alluded to the type of patient in whom it most frequently occurs, he having found that it is most prevalent in young adults who had been ill-nourished and neglected; and that it is frequently propagated by direct transmission, so that constitutional defects and local causes contribute in varying degrees to its development. It often exists in a more or less aggravated degree for many years; and the treatment is, as a rule, directed to removing the granular condition of the lids. This may be partially effected by the application of caustics and astringent lotions, but such treatment is rather palliative than curative, and not unfrequently during its progress the case will relapse and the symptoms become even more intensified. Mr. Critchett recommended—although it might seem contrary to the pathology of the disease—that curative treatment should in the first place be directed to the vascular web, which in these cases covers the upper third or upper half of the cornea, since he believed that the exciting cause of the relapses lay rather in this morbid condition, and that the granular state of the lids was kept in activity by the existence of the above-mentioned vascular membrane. He, therefore, in every case initiates his treatment by performing the operation of peritomy, since he finds that when sufficient time has been allowed (usually from four to six months) for the resulting cicatrix to become dense, white, and atrophied, thus cutting off the vascular supply to the partial pannus, the web gradually disappears, the cornea becomes transparent, and the granulations either take their departure or become much more amenable to ordinary treatment. He was anxious to dwell upon this last point, because for a certain period after the performance of the operation no benefit, but rather the contrary, would usually be observed, and it is only on the completion of the last atrophic stage of the cicatrix that the curative influence is established. He earnestly commended the operation to the attention of his colleagues. Three cases were shown illustrating the effects of treatment at different stages.—In reply to the President, Mr. CRITCHETT said that he extended the peritomy beyond the pannus—i.e., right round the eye.—Mr. HIGGINS had performed peritomy in many cases without result, and had therefore abandoned it. Possibly he had not observed the case long enough afterwards, and after Mr. Critchett's advocacy he would again perform the operation. Mr. STREATFEILD asked whether any treatment was adopted for the granular lids?—Mr. CRITCHETT said all the cases had granular lids, but he began by the peritomy, and in a large number of cases the granular condition subsides when the vascularity of the pannus is cured. In other cases the granular lids require additional treatment.—Mr. JAMES ADAMS had long been in the habit of performing peritomy, and was satisfied with the benefit resulting from it. He thought the cases should be selected. He had found that the pannus was not always dependent on granular lids, but the cornea was vascular from the first.

Dr. HUGHLINGS JACKSON then read a paper on the Eye-

Symptoms in Locomotor Ataxy, of which an abstract is given elsewhere. (See p. 968.)—Mr. SPENCER WATSON asked whether the optic atrophy of ataxies was peculiar and a special form.—Dr. JACKSON said that he had long ago pointed out its special features; and it was now generally admitted to be due to grey degeneration, and was characterised by limitation of the field of vision and loss of colour-perception.—Dr. GOWERS regretted that time had not allowed Dr. Jackson to read the whole of his paper. He had examined a number of cases of ataxy with myosis and loss of reflex action to light, and he could confirm Erb's statement that, in this condition the pupils did not dilate on stimulation of the skin. He thought, however, that we must hesitate in regarding this phenomenon as strictly analogous to the loss of other reflex actions in the disease, which were due to a lesion of the sensory structures or reflex centres. It might be the result merely of the motor paralysis of the sympathetic fibres for the dilator pupillæ. This view was confirmed by one case which he had seen, in which, although there was loss of reflex action to light, there was not myosis, and the pupils did dilate on cutaneous stimulation.

Reviews and Notices of Books.

St. Thomas's Hospital Reports. New Series. Vol. X. Edited by Dr. ROBERT CORY and Mr. FRANCIS MASON. London: J. & A. Churchill. 1880.

St. George's Hospital Reports. Vol. X. Edited by T. T. WHIPHAM, M.B., and T. P. PICK, F.R.C.S. London: J. & A. Churchill. 1880.

THESE volumes, which each contain full statistical tables and summaries of the cases treated in the hospitals during the year 1879, have appeared with commendable punctuality. They present certain points of difference in the manner in which they are drawn up, but each is excellent in its way. Far greater space is allotted to the actual "reports" in the St. George's volume, but we miss any general statistical table of the medical cases similar to that furnished in the St. Thomas's Reports. In the St. George's Reports each disease is treated separately, and references are given to the cases in the hospital registers. In the St. Thomas's volume some diseases are analysed in a tabular form, others by means of brief abstracts. But in both the amount of information is considerable, and the labour entailed upon the registrars in the compilation of the reports must have been very great. The medical report in St. George's is by Dr. Isambard Owen, in St. Thomas's by Dr. W. B. Hadden; the surgical in the former by Mr. W. H. Bennett, in the latter by Mr. H. P. Potter. The St. George's volume contains also two extended reports from the curator, Dr. Ewart, giving an account of the work done in the post-mortem room during the years 1878 and 1879. There are also reports from the various special departments, more or less full.

Preceding the analytical summary, and occupying the main part of the book in the St. Thomas's Reports, are several original memoirs by members of the staff. Dr. Peacock analyses critically 161 cases of rheumatic fever under his care from 1872 to 1876, in continuation of a previous paper dealing with cases before that period, and making a total of 394 cases, of which 205 were males and 189 females. Of this number 32.7 per cent. exhibited some form of recent cardiac disease; the total average of cardiac complications, old or recent, being 42.8 per cent. or one in 2.3 cases. The mortality was only 1.5 per cent. Mr. Nettleship writes upon Diphtheritic Ophthalmia and Congenital Day Blindness with Colour-blindness. In the first of these papers he includes all cases of membranous ophthalmia, which, he points out, is rare in association with pharyngeal diphtheria, but more common during, or after, measles and other exanthemata. Its greater prevalence in Vienna and North Germany is suggested to be due to the

greater prevalence of granular conjunctivitis there. A clinical lecture upon the operations for retention of urine dependent on stricture of the urethra, and delivered in 1852, is reprinted by Mr. Simon, in which the operation of external urethrotomy—opening the urethra by a puncture or small incision immediately in front of the prostate—was adopted. Dr. Ord contributes two papers upon Thoracic Aneurism, going very fully into the clinical features of the disease. Dr. Ord, in conjunction with Dr. Seymour Taylor, also contributes a detailed analysis of sixty-two cases of enteric fever treated in the hospital from August 1st, 1879, to March 31st, 1880. Dr. Stone has a paper on Hysteria and Hystero-Epilepsy, in the course of which he urges further investigation into the alleged efficacy of magnetism in the removal of the sensory disturbances met with in this neurosis. Dr. Sharkey has an interesting paper on a subject which has not hitherto received much attention, at least in this country—viz., the Initial Eruptions of Smallpox. These are erythematous or hæmorrhagic—the former simulating, but distinguishable from, the eruption of scarlet fever and measles. Amongst other papers may be mentioned that by Mr. Wagstaffe on lengthening of the limb as a result of knee-joint disease, and a paper by Dr. Cory upon some points in pathology and legal medicine derived from an examination of the bodies of fifty children born dead or shortly dying.

There are not so many original communications in the St. George's volume, in which the practice now is to subordinate this department to the reports. Surgical subjects predominate. There are three clinical lectures by Mr. T. Holmes. The first on a case of Ilio-femoral Aneurism, in which the iliac artery was tied with an animal ligature, after the failure of compression applied to the common iliac artery and during the progress of gangrene of the leg and foot. Amputation was performed—first of the leg, then of the thigh, and the patient eventually recovered in spite of an intercurrent double pleurisy and thrombosis of the other leg. The second lecture deals with a case of an old Fracture of the Patella reunited with wire sutures by the antiseptic method, after rupture of previously-existing ligamentous union. Mr. Holmes thinks that such an operation should only be resorted to very exceptionally, and shows from this case that it is one not unattended with considerable danger. His third lecture is on a case of successful Subperiosteal Resection of the Tibia (eight inches of bone being removed), the shaft being divided somewhat below the upper epiphysis. The abscess had made its way into the ankle-joint before the operation, and the patient was in a very collapsed state for a short time after its performance. Mr. Pick publishes a clinical lecture dealing with the Treatment of Wounds after Amputation during the past twenty-five years, an interesting historical survey, demonstrating the gains derived by the antiseptic method. Mr. Edward Stirling writes upon the Cutaneous Eruptions occurring after recent operations and injuries. His main thesis is "that the rash and febrile symptoms which occur frequently as the immediate sequel of an operation are often those of scarlet fever; that the fever is in some way, as yet undetermined, dependent on the presence of the wound; and that when scarlet fever occurs under these circumstances it undergoes certain deviations from the normal type of this disease." But he further advances evidence to show that sometimes an erythema occurs resembling scarlet fever, though independent of it; and that other eruptions of different type may similarly occur. Mr. Morgan contributes a paper on the diagnosis of Hip Disease; Mr. Gaskoin on Ichthyosis; and Mr. Howard Barrett on some cases of Tubercular Meningitis. Mr. Bertolacci records a case of Diabetes, illustrating the effects of codeia, carbolic acid, and salicylic acid; and also describes a modified method of the Quantitative Estimation of

Diabetic Sugar by Fehling's solution, and an ingeniously-contrived urinometer. A few other brief papers complete the volume, which also contains an interesting memoir of the late Mr. Thomas Tatum.

Thus it will be seen that these two volumes abound in the results of careful clinical observation, and that they are in every sense reports of much earnest and thoughtful hospital experience.

Surgical Enquiries, including the Hastings Essay on Shock, the treatment of Surgical Inflammations, and numerous Clinical Lectures. Second Edition. By FURNEAUX JORDAN, F.R.C.S., Surgeon to the Queen's Hospital, Birmingham, &c. London: J. and A. Churchill.

IN no way is the originality which marks Mr. Jordan better shown than in the form chosen for this work. It is a striking contrast to the encyclopædial and elaborate style that now so largely prevails, but is a simple record of many interesting cases which have come under Mr. Jordan's care, or of careful investigations he has made, and is still richer in ingenious suggestions and contrivances. It is essentially a personal book; it is Mr. Jordan, and himself alone, his experience, his views, his hopes, his fears; and as such it is a very valuable book. No provincial surgeon is better known than Furneaux Jordan, and his acknowledged practical skill is equalled by his scientific ingenuity. It is difficult where there is so much of interest to pick out any of the sections for special comment; many of the chapters have been read to various Societies, or already published in medical periodicals, and are therefore familiar to our readers, to whom we can honestly recommend the book as well worthy of study.

Analytical Records.

STEARINE PAPER.

(MULLARD BROS., PENN-STREET, NEW NORTH-ROAD.)

THIN, semi-transparent and perfectly waterproof paper, intended for wrapping drugs and other goods which might be injured by damp. The idea is an excellent one, and the paper will be particularly useful at Christmas time, when books and delicate articles are sent in such numbers by post and rail.

MALTED COCOA.

(J. S. FRY & SONS.)

This is an excellent preparation of cocoa and malt extract. It is dried at a gentle heat to avoid injury to the diastase; its dietetic and digestive value is beyond all dispute, and it is very agreeable in flavour.

GRANULAR EFFERVESCENT IODATE OF IRON.

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This new remedy was suggested by Dr. C. Cameron of Dublin, and is well worth a trial, as there are inconveniences in the use of the iodide. Messrs. Young and Postans have made the preparation with their usual skill.

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Light, sound, and pleasant ale, which many persons could drink who are unable to touch stronger beer. We fail, however, to perceive that it possesses any remarkable advantage over the English table ales now so commonly used in private houses. Many English brewers make such ale of excellent quality and of low alcoholic strength.

GUARANTEED PURE SOLUBLE COCOA.

(MANUFACTURED BY BENSCHDORF & CO., AMSTERDAM.—BRIESEN & HEYDEMANN, 13, COLEMAN-STREET.)

This is a very pure and strong cocoa of excellent flavour. It is well ground and mixes easily. We can have no hesitation in praising it highly.

THE LANCET.

LONDON: SATURDAY, DECEMBER 18, 1880.

MR. LISTER must feel—he may justly feel—a sense of gratification at the honours which accumulate upon him in his own country. Year after year one country after another has conferred upon him the highest proofs of its esteem, sometimes in a medical and sometimes in a larger scientific sense. Germany, Austria, France, Norway, the United States, all agree. But it is possible for a man to be satiated with foreign praise, and to be stinted of it at home. A prophet may not be without honour save in his own country.

This is not MR. LISTER'S case. In both Scotland and England he has held Royal Appointments. Royal Societies have done all they could to do him honour. The Philosophical Transactions and the Transactions of the Royal Society of Edinburgh have been open for the record of his original and important researches in physiology and pathology. The medical press—speaking for ourselves at least—has never felt more satisfaction than in being the medium of those papers on antisepticism which have made an epoch in surgery, and which imply a keen appreciation of the present state of biological science and of its application to great practical and surgical ends. Within the last few weeks two very conspicuous tributes have been paid to MR. LISTER. One of the medals of the Royal Society has been accorded to him, chiefly, according to the President's speech, on the ground of his work in regard to antisepticism, but generally with reference "to his numerous and valuable contributions to physiological and biological science during the last thirty years." This action of the Royal Society will be approved throughout the scientific world, and by the medical profession in this and all countries. It is not more creditable to MR. LISTER than it is to the Royal Society, which might do a little more than it does to recognise the claims of medical men as a very important part of the great body of scientific workers—claims which the State in this country is so slow to recognise. MR. LISTER will prize this compliment as one paid to him by men who view his work from the strictly scientific and biological standpoint.

But another honour has accrued to him within the last few weeks. He has been nominated by the Council of the Clinical Society as the next President. However much honour a man may receive from the outside, as it were, it is pleasant to have the praise of brethren, and we may be very sure that if within three or four years of his coming to London MR. LISTER is offered the chair of one of its most vigorous and thriving Medical Societies, there is no honour which medical men or societies in London can give which will be long withheld from him. We have spoken as if this last honour to MR. Lister were assured. It is a little premature to speak so, for, according to the rules of the Clinical Society, the election is in the hands of the members at the annual meeting, and all that has been done,

so far, is the act of suggestion or nomination by the Council. But even if this suggestion were not acted upon at the general meeting of members, it would not the less be a great honour to MR. LISTER. Those who criticise the nomination do so in no absolute sense. They point out that MR. LISTER has been but little identified with the proceedings of the Clinical Society, that he has never contributed a communication to its Transactions, and that his occupancy of the chair could easily wait for another turn of the wheel. There is a great amount of truth in such a view of the case, the more so when it is remembered that the Clinical Society has been favoured by the active participation in its proceedings of several of our foremost surgeons, and that no Society can afford to disregard those of its members who, though prominent and busy in practice, make time to attend its meetings. Our contention is that even if such views find expression at the annual meeting, a great honour to MR. LISTER must still remain. He has been nominated by the Council, which contains a very fair representation of the leading surgeons and physicians of London, and even if in this they may prove to have been a little premature, and perhaps unmindful of the strong claims of one or two of their own number, it will remain that they have paid a high compliment to the author of the antiseptic system of surgery.

THE Metropolitan Asylums Board is still much exercised as to the question of hospital accommodation for cases of small-pox. The available permanent accommodation for cases of small-pox in its hospitals is practically exhausted before even the disease can be declared to be epidemic. The reserve accommodation at Hampstead is, for the present, closed against them, and the counsels of the Board are divided. Some would follow the from hand-to-mouth principle, making such additional provision as the facts of the case showed to be necessary; in other words, copy the unavoidable policy of 1871-72, and endeavour to overtake the requirements as the disease surged on in front of them. Others would take time by the forelock, and make such provision at once as would enable them, while they may, to struggle on somewhat equal terms with the advancing malady; and this, we are glad to find, is the policy most in favour with the Board. But the Board is hampered with the undecided Hampstead hospital case, and is likely to be still more hampered with the public prejudices against small-pox hospitals. It is almost incredible that, notwithstanding the serious part this question of hospital accommodation, and the local influence exercised by small-pox hospitals, must play in any future extension of small-pox in the metropolis, we are still as far as ever from precise knowledge on this subject. The Local Government Board must be held entirely responsible for this grave neglect of their function of inquiry, and for whatever consequences may arise from it. It is no longer the public who are chiefly unsettled on this matter, for the medical profession themselves are becoming unhinged by this persistency of doubt. A significant evidence of this is afforded by a reported recent utterance of Dr. TRIPE, the medical officer of health for Hackney, to the District Board of Works. He is represented as saying to his authority, that a large proportion of the cases of small-pox which have taken place in his district "occurred within a comparatively short distance from the

small-pox hospital (Homerton)," and that "he is fully persuaded that an aggregation of 140 small-pox patients in so small a space must be a source of great danger, and is entirely opposed to the present state of medical knowledge on the subject." The vagueness of these statements (assuming them to have been made) in a matter admitting of precise knowledge of the facts is their own condemnation. Dr. TRIPE must settle with the college in Pall-Mall as to his right to pronounce on the general state of medical opinion on the subject, but we admit that the expression has a strong flavour of the sort and quality of opinion which may be expected to be found there. It is simply scandalous that the public should be left to the mercy of its own prejudices and of vaguely expressed opinion on this question; and for this, we repeat, the Local Government Board must be held responsible, for it alone has the necessary powers and means for making due inquiry. Meanwhile the practical difficulty of having to contend with the obstacles which arise from the want of the knowledge in question falls upon the long-suffering Metropolitan Asylums Board.

But this question of the influence of small-pox hospitals upon a neighbouring population is, after all, but a by-question in the more important subject of the real meaning of these recurrent outbreaks of small-pox in the metropolis—of the speciality in the culture of small-pox evidently existing in the metropolis. What are the precise defects in the administration of the vaccination and sanitary laws in the metropolis which permit, or contribute to, the exceptional prevalence of small-pox in the metropolis? We assume that there must be such defects; for big as the metropolitan population may be, it is difficult to conceive that either the amount of its migratory population, or the normal accumulation (so to speak) of unvaccinated children, is such as to place the metropolis at so great a disadvantage in this matter with the chief towns of the provinces. At any rate, the subject is one admitting of a definite explanation, and had the disease been any other than small-pox we should certainly have had this explanation long ago. But unhappily we have to look for it from the Local Government Board, who persistently regard it as wholly a Poor-law question. The Metropolitan Asylums Board is essentially a Poor-law body; vaccination is administered through the Poor-law guardians; and it would seem as if the Local Government Board could not look upon this question of small-pox as it looks upon the question of any other disease with which it has to deal. It begrudges neither time nor care in investigating outbreaks of typhoid fever, or diphtheria, or scarlet fever; but it appears to regard small-pox as a Poor-law speciality like itch or contagious ophthalmia. In view, no doubt, of the indifference, or failure of clear apprehension, which has been displayed by the Local Government Board in this matter, *The Times* suggests the appointment of a Royal Commission to inquire into the prevalence of small-pox in the metropolis. We should have preferred an inquiry on the exhaustive plan pursued by the Medical Department of the Local Government Board in such inquiries; but we must confess that the course pursued by that Board has probably so prejudiced it in the eyes of the public in this matter that a Royal Commission might for public purposes be the best thing to have recourse to.

UNDER the direction of VON RECKLINGHAUSEN of Strasbourg, an investigation into the condition of the minute arteries of the body in granular kidney disease has been made by Dr. SOTNITSCHESKY. The controversy between JOHNSON on the one hand, and GULL and SUTTON on the other, has excited much interest in Germany, and several investigations have been undertaken, with results which differ not less than those of the original observers. EWALD has confirmed in the fullest manner the conclusions of JOHNSON; and EWALD, BARTELS, and BUHL agree in regarding the renal affection as the primary change, the arterial disease as a secondary effect, while ZEIGLER regards the arterial sclerosis, which he finds, as a cause of the renal disease. The latest contribution to the controversy is that by SOTNITSCHESKY, contained in the last number of Virchow's *Archiv*. He has examined the minute arteries in seventeen cases of renal disease. Thirteen had genuine granular degeneration of the kidneys, all accompanied by hypertrophy of the heart. Three presented senile atrophy of the kidneys, and one presented "glomerulitis," with recent round-celled infiltration of the interstitial tissue, without contraction. Vascular changes were found in fifteen of the seventeen cases, and hypertrophy of the heart in fourteen. Among the latter were six cases, in which, besides the thickening of the small arteries, there were no other changes in the vascular system by which the hypertrophy of the heart could be explained. In two of the other cases, however, there was valvular disease, and in six there were atheroma and sclerosis of the aorta, so that the hypertrophy of the heart could not be with certainty ascribed to the changes in the minute arteries in these cases.

In no case could SOTNITSCHESKY distinctly see a hypertrophy of the muscular coat of the smaller arteries. In five cases this coat appeared normal; in other cases, in which the middle coat appeared thickened, the thickening was apparently due to a growth of connective tissue extending among the muscular fibres, from the outer or inner coat. In many cases the nuclei of the muscular coat appeared lessened in number or in size, and as if atrophied. In fresh preparations he found the appearance described as "fatty degeneration of the nuclei." Whenever there was obvious thickening of the walls of the smaller arteries, both the adventitia and the intima appeared to be thickened, and densely fibrous, and in some instances they appeared to be in contact, from atrophy of the muscular coat. In three cases there was a special change in the inner coats, which then consisted of two tolerably dense layers. The outer of these apparently corresponded to the inner elastic lamina, and consisted of a refracting translucent substance, containing, near the muscular coat, small nuclei of irregular shape, which looked like imbedded muscle-nuclei. The change was marked in the arteries of the kidneys, the pia mater, and the spleen. In all there was typical granular degeneration of the kidneys and hypertrophy of the heart, without any other vascular lesion to which the hypertrophy could be ascribed. The changes in the organs named were always greater than in the arteries of the liver, and were least in the lung.

The facts ascertained, while differing somewhat from those of GULL and SUTTON, support their views rather than those of JOHNSON and EWALD. The facts are too limited in range to

throw any light on the order of development of the changes in the kidneys and general system respectively. But the author indicates certain facts which seem to him to point in the same direction as to the character of the histological observations. In all the cases of typical granular kidney the changes in the small arteries were present. In six cases the alterations were combined with chronic endocarditis. Fifteen of the patients were over fifty years of age, at the period of life in which arterial disease is frequent, independent of renal changes. This is regarded as increasing the probability that the renal disease in these cases was only part of a general change. In three cases there was no distinct hypertrophy of the heart, although the thickening of the walls of the minute arteries was conspicuous. This does not confirm the view that the change in the vessels is in any way the result of the hypertrophy of the heart, but agrees with the theory that the hypertrophy of the heart is purely secondary, and it is not yet proved that similar degeneration can occur as a consequence of the hypertrophy of the heart which owes its origin to local valvular disease. Moreover, SOTNITSCHESKY has found in some old persons, without cardiac hypertrophy and without renal disease, a similar change in the small arteries. But, as he points out, none of these facts constitute evidence against the assumption that this arterial change may also occur as a consequence of the blood change which is due to chronic renal disease, just as it apparently occurs as a consequence of chronic alcoholism or gout.

It is probably the general belief of a benevolent public that no, or exceedingly few, instances of the secret detention of persons of weak or unsound mind could now be found throughout the country. It is unpleasant to have this comfortable persuasion disturbed. Nevertheless, it is better to know the facts, and there is reason to fear the full truth is only half suspected. Since the Lunacy Laws have been administered with discretion as well as vigour, there can be no question that the concealment of cases of idiocy and imbecility has been greatly reduced; but there is still a broad margin of doubtful area which has not been touched. When a member of any family shows signs of being, or becoming, weak-minded, if he or she—especially when the patient is a female—is quiet, there is great reluctance to put the sufferer away in an asylum, nor is there often any recognised need for so doing. The law does not require that a case of this class shall be reported to the Commissioners in Lunacy, unless those who keep the patient are in some way reimbursed for the expense they incur. Parents may keep their children, and children their parents, brothers their sisters, and the like. The result of this state of matters is that a course of secret detention begins in kindness and quite innocently. After a while the weak-minded person may either become weak of body or partially paralysed, perhaps with short paroxysms of excitement occurring at long intervals, or she may have fits, or in some way or other come to be unrepresentable. For various reasons, and with what seem to be excellent excuses, the sufferers of this class are in process of time relegated to the more private parts of a house and kept away from sight, until at length they sink out of the family circle and come to be burdens and reproaches. Unless some more than commonly strong-minded member of the household

moves in the matter, the mind-cripple is forgotten, or, as far as may be, hidden from view, until the changes, which must needs occur, place her at the mercy of those who shrink from the disgrace of confessing that they have an idiot in the family, and, unmoved by compassion, convert what was at first a retreat into a prison. It is to be feared there are still *many* such instances of unintentional cruelty, even in respectable and well-conducted households. The only sufficient remedy for this state of matters is the incorporation, in any Act which may hereafter be passed to consolidate or amend the Lunacy Laws, of a clause expressly requiring the registration of *every* person who is not in a state of mind to exercise full control of his or her own person and property. There should be no property-qualification for the privilege of protection, and no excuse for non-registration should be allowed to lie in the fact that those in charge of these weak-minded or insane persons do not benefit by their custody.

Annotations.

"Ne quid nimis."

MEDICAL EDUCATION.

THE bulky correspondence we have received on the subject of medical education testifies, on the one hand, to the prevalent opinion that the existing arrangements are defective, and shows, on the other, the difficulties that stand in the way of any satisfactory reform. Everyone allows that something should be done, but scarcely any two persons are agreed as to what ought to be done. Some of the suggestions that have been made are mutually destructive, and others impracticable, though ingenious. It is, however, something gained when a general interest has been awakened and the existence of growing evils recognised and acknowledged. The remedy may be hard to find and unpleasant in its operation when it is found; but it does exist, and must sooner or later be administered. If the time be not already come, it cannot be far distant when, to escape actual deadlock or disaster, all the regulations relating to medical education and examination will have to be revised and radically altered. Meanwhile the subject needs ventilation, and demands the consideration of all thoughtful men.

A PRESCRIBING CHEMIST.

IN commenting lately on the relations between doctors and chemists, we alluded to the practice of counter-prescribing, which has increased rapidly under legal protection, as not merely injurious to the medical profession, but also to the sufferers prescribed for. A striking illustration of this has been afforded by facts brought to light at a recent inquest at Topsham, Devonshire, which shows also that chemists do not mean to content themselves with prescribing at their counters. A man, who had often before suffered from an affection of the throat, found his throat again becoming painful on Friday, Nov. 26th. On the following Tuesday he sent for a chemist, named Ellis, who attended him, gave him some gargle for the throat and mixture to be taken, and ordered linseed-meal poultices. The following morning the chemist visited him again, and said that he was to continue the gargle and send for some more medicine. Between nine and ten the same night, Ellis again saw his patient and ordered him, as "some of the ulcers in the throat were broken," to discontinue the gargle and go on with the medicine. During the night the man became restless and was thought to be dying. The chemist was again sent for, but declined to go. Dr.

Bothwell was sent for, but before his arrival the man was dead. In examination at the inquest, the chemist stated that the man's uvula was white, and Dr. Bothwell expressed to the coroner his belief that death arose from diphtheria, although without an autopsy it was impossible with certainty to say. In answer to a jurymen, Ellis stated that his visits to the deceased were not professional ones, but simply "for his own satisfaction," and made this statement although the man had sent for him, he had examined the throat, and after each visit had directed the treatment. After a short consultation, the jury returned a verdict of "death from natural causes." There can be little doubt that if the man had been attended by a "herbalist," who would probably have possessed as much knowledge of disease as the chemist, and as much moral right to take charge of the patient, the verdict would have been one of "manslaughter." Whether death arose from "natural causes" or not, there can be little doubt that it was a "natural effect" of the system of prescribing by chemists, of the dangers of which it constitutes so striking an example.

"LISTERIAN" OVARIOTOMY.

THE opponents of "Listerism" are gathering their forces and showing battle in earnest. At the Royal Medical and Chirurgical Society last Tuesday the challenge was given in uncompromising terms, and facts, backed by statistics, were largely used both in opposition to and in support of the practice and of the doctrine underlying it. The battle-ground selected was a comparatively narrow one, but it was a field which years ago was the scene of much hot debate—viz., ovariectomy. In February last Mr. Lawson Tait was the first to bring forward facts tending to show that this operation was not rendered more expeditious or safe by the adoption of antiseptic precautions; and on that occasion he found himself almost alone, although many took part in the debate. This time it is Dr. Bantock, of the Samaritan Free Hospital (whose colleague, Mr. Thornton, is the chief supporter of "Listerian ovariectomy"), who leads the attack, advancing beyond the position taken up by Mr. Tait, and ascribing to the use of carbolic acid most of the pyrexial and other untoward symptoms that have occurred in cases of ovariectomy which he had performed under what he alleges were true "Listerian" precautions. It is not easy to reconcile the almost diametrically opposite conclusions arrived at by Dr. Bantock and Mr. Thornton in this matter. Take only the question of pyrexia. The first-named gentleman believes its severity due to the toxic effects of the carbolic acid used in the spray, and states that in proportion as he has reduced the strength of his solutions, there has been less and less pyrexia in his cases. The latter declares (and supports his statement by statistics) that the employment of strict antisepticism is accompanied by a marked diminution in the number of cases in which pyrexia follows the operation; although it does not entirely prevent it. Mr. Tait quotes from his own experience facts strongly confirmatory of Dr. Bantock's thesis; Mr. Spencer Wells, on the other hand, goes even beyond Mr. Thornton in averring that the occurrence of fever in antiseptic ovariectomy is of extreme rarity. It is hardly surprising, then, that in the face of such statements, Mr. Savory should remark, somewhat caustically, that the question was not one of the method in which cases were treated, but of the personal skill of the operator; or that Mr. Holmes should, with his accustomed judicial impartiality, pronounce that the case for Listerism was "not proven"; although he went rather far in stating that neither the theory nor the method was understood by those who believed in the one and practised the other. English surgeons are becoming on this question so distinctly divided into two camps that we fear the suggestion we are about to make likely to

be almost debarred from acceptance. Still it is worth some consideration—and it is that a committee composed as far as possible of those who have no strong bias either for or against the method, be appointed by the Royal Medical and Chirurgical Society to investigate thoroughly the comparative merits of the two methods of treatment as applied to ovariectomy; to minutely consider—not statistical results alone—but the circumstances of a given number of cases of each method from all points of view, and if possible to draw conclusions which may be accepted by all. There may be insuperable difficulties in the way of such an inquiry; but, at any rate, it is worth attempting, if it be only to decide whether the measures of Listerism are, as alleged, open to the grave objections urged against them.

WHOLE-MEAL BREAD.

IT is economically and physiologically desirable that the whole grain should be used in making flour for bread. It is more natural and better that the elements should be taken as they are found combined in nature than that any portion of the whole, which may have been eliminated in the process of preparing flour, should be supplied by addition. At the same time, if the natural article can only be secured at the cost of irritating the stomach by swallowing small pieces of unpulverised husk, we must consent to remain without the luxury of whole-meal. Why are these conditions forced on us? It is quite possible to grind the whole-meal as finely as the grain alone, and the flour, though less white in colour than that which is prepared solely from the grain of the wheat, may be as soft and delicately sifted. The public have a mistaken impression that bread made from whole meal must needs be like what is commonly called brown bread. In order to pave the way for a better and more digestible supply of bread made from finely or perfectly triturated whole meal, we would suggest that this erroneous and mischievous notion should be dissipated. The imperfectly ground meal produces painful diarrhoea by mechanically irritating the stomach. Let the meal be ground as fine as common flour, and sifted again and again until it is perfectly pulverised, and the sole objection to whole-meal bread will be removed.

NEURALGIA AS A "WARNING."

THE great prevalence of "neuralgia"—or what commonly goes by that name—should be regarded as a warning indicative of a low condition of health, which must necessarily render those who are affected with this painful malady especially susceptible to the invasion of diseases of an aggressive type. This is the season at which it is particularly desirable to be strong and well furnished with the sort of strength that affords a natural protection against disease. There will presently be need of all the internal heat which the organism can command, and a good store of fat for use as fuel is not to be despised. It is no less essential that the vital forces should be vigorous, and the nerve-power, especially, in full development. Neuralgia indicates a low or depressed state of vitality, and nothing so rapidly exhausts the system as pain that prevents sleep and agonises both body and mind. It is, therefore, of the first moment that attacks of this affection, incidental to and indicative of a poor and weak state, should be promptly placed under treatment, and as rapidly as may be controlled. It is worth while to note this fact, because, while the spirit of manliness incites the "strong-minded" to patient endurance of suffering, it is not wise to suffer the distress caused by this malady, as many are now suffering it, without seeking relief, forgetful of the condition it bespeaks, and the constitutional danger of which it is a warning sign.

THE PARKES MUSEUM.

THE efforts of the Executive Committee to disseminate a knowledge of the laws of health among the classes which are most in need of such knowledge, and upon whose proper instruction the safety and health of the community at large so greatly depend, are, we are glad to state, fully appreciated. It will be remembered that last year a series of demonstrations, attended by some hundreds of persons, were given to artisans, builders' foremen, and clerks of works, and this year a fresh series has been inaugurated, for the benefit of members of building societies. On Saturday last (Dec. 11th) between sixty and seventy persons assembled to hear a discourse from Mr. E. C. Robins, F.S.A., "On the Situation and Construction of Dwelling-houses." In the course of an hour, Mr. Robins reviewed some of the chief points to which attention must be directed by those who set about to build a house. He advised that, where possible, houses should face east or west; that ground "made up" of rubbish, &c. should be carefully avoided; that the whole area of the ground occupied should be concreted, and that damp-proof courses should never be omitted from any of the walls, and that external walls should never be less than fourteen inches, notwithstanding that nine inches was permitted by the Building Act. Details of construction were then dealt with, and Mr. Robins insisted that all engaged in house-building should endeavour to understand some of the principles of architecture. Materials for building and ornamentation were then passed in review, the lecturer's remarks being illustrated by many of the articles contained in the Museum. The next lecture, on Jan. 8th, on "Ventilation, Lighting, and Warming," will likewise be by Mr. Robins, and others will follow by Professor Corfield and Mr. Rogers Field. The Executive Committee has lately been strengthened by the addition of the names of Captain Galton, Mr. Robert Rawlinson, and Mr. Robins; so that now every branch of hygiene is thoroughly well represented, and in a committee of sixteen persons there are four physicians, three surgeons, two members of the Local Government Board, one professor of hygiene, three architects, two engineers, and one surveyor.

SPEECH FOR THE DEAF.

THE International Congress on the Education of the Deaf, held at Milan in September last, and of which the official report of the proceedings is now published, declared that, considering the incontestable superiority of speech over signs in restoring the deaf-mute to society, and in giving him a more perfect knowledge of language, the oral method ought to be preferred to that of signs for the education and instruction of the deaf and dumb. The Congress further declared that, considering that the simultaneous use of speech and signs has the disadvantages of injuring speech, lip-reading, and precision of ideas, the pure oral method ought to be preferred.

The papers read at the Congress in illustration of the method here approved were full of interest, as showing not only the mental, but also the physical advantages derived from it by the deaf and dumb. In this connexion a thoughtful paper included in the proceedings, on the Health of Deaf-mutes, by Dr. E. Symes Thompson, deserves the special attention of medical men. It shows that under the simple phrase "speech for the deaf," a system of bodily and mental regimen of the highest importance for the welfare of the unhappy deaf-mute is included. We are glad to find that the system approved by the Congress, which is popularly known as the "German" system, is gradually making its way in England. The oldest institution for the education of the deaf and dumb has recently determined to abandon their old system in favour of the so-called German or oral method. The education of the deaf and dumb may therefore be

said to have been completely revolutionised. The attention of the public in this country was, for the first time, directed to the oral system of the education of the deaf by Mr. Dalby, in a paper read at the Social Science Congress at Leeds in 1871. The subject gave rise to much discussion, and was met by considerable opposition on the part of those whose profession it was to educate deaf children, and who had followed the system then almost universal in England, termed dactylogogy, or talking on the fingers. Since then the oral system of education has been followed and propagated in an energetic manner by the Association for the Oral Instruction of the Deaf and Dumb.

UNIVERSITY COLLEGE HOSPITAL.

THE fine range of baths which were erected a few years back at this hospital by the public spirited energy of Dr. Tilbury Fox are henceforth to be thrown open for the benefit of patients recommended by members of the medical profession. The committee announce that Wednesday and Thursday in each week will be partially devoted to the needs of patients of medical practitioners. Wednesday will be set apart for females, and Thursday for males. Between the hours of 2 and 5 o'clock P.M. the charges will be 5s. for mercurial and sulphur baths and 3s. 6d. for other kinds of baths, and between 6 and 8 o'clock P.M. the charges will be somewhat lower. On payment of a fee of half-a-crown the patients of medical practitioners will be allowed to use the baths at times other than those specially set aside for private patients. Every patient will be obliged to bring a written recommendation from his or her medical attendant specifying the nature and number of the baths. This, together with the necessary fees, must be presented to the secretary or his representative, and no fees will be permitted to be given to the bath attendants under any consideration whatever. The baths thus rendered available for the general public are of every description; plain water, medicated water, Turkish, vapour, mercurial, sulphur, needle and douches of all descriptions; and we doubt not that the medical profession will be glad of the opportunity afforded them of giving their patients the advantage of such complete arrangements for balneo-therapeusis.

POISONING AT THE STANHOPE HOUSE INDUSTRIAL SCHOOL, BRISTOL.

ON the afternoon of Nov. 30th, several girls in this establishment were seized with sudden sharp griping pain in the region of the stomach; in some cases this was so severe as to cause a sudden fall to the ground. The pain recurred at frequent intervals, and was so intense that the patients writhed in bed. There was frequent vomiting, especially after any food (milk) was taken. There was no blood in the vomit, and it was not bilious. There was marked constipation. Next day, and on the succeeding (Dec. 1st and 2nd), more girls were attacked with the same symptoms. On the 3rd inst., Dr. Atchley, the honorary medical officer to the institution, directed that no food in the house should be used, and that the various articles required should be obtained from tradesmen other than those who ordinarily supplied the institution. On this day several fresh cases occurred. On the 4th, two other girls were seized with the same symptoms; these patients had complained of a little pain before the food-supply was changed. After this no fresh cases occurred. In no case were the symptoms so severe as to cause anxiety as regarded the result, and the patients have gradually recovered. At the present time there remains only one who vomits occasionally. The treatment adopted was the administration of ten-drop doses of laudanum every hour till the pain was relieved. Dr. Atchley is of opinion that the symptoms of poisoning were due to lead, from consideration of the following points: the severe

and persistent colic, the frequent vomiting, the marked *constipation*, and the presence in one case of a definite blue line, in three other cases of a more doubtful line, on the gums. All the articles of food in the house were analysed by the city analyst, and pronounced free from injurious matter, the water was also examined, after standing in the pipes, and was found to contain the small quantity of one-fiftieth of a grain of lead per gallon. It was, therefore, impossible to discover the exact nature and source of the poison. After the report of the analyst on the 7th inst., the food was again supplied from the sources from which it was obtained previous to the outbreak, and no fresh cases of poisoning occurred.

LONDON FOGS.

WE are glad to see that Dr. Alfred Carpenter, having regard no doubt to a well-known apophthegm, had a good word to say, on the 8th instant, at the Society of Arts even for London fogs. They are not wholly so black as they have been painted, and may prove, after a fashion, a certain set-off against the consequence of engineering blunders in our sewers. We shall leave Dr. Carpenter to settle this little by-question with the engineers themselves, but if he be right we are placed in the awkward position of seeking to do away with an intermittent good while maintaining a continuous evil. The point is a nice one for tender consciences which resent Dr. Carpenter's trenchant method of dealing with it. Fogs appear to have a peculiar charm for this gentleman, considering that he lives outside the true London fog area. The details into which he entered on the 8th betrayed this, but still they in several respects showed the experiences of the dilettante, not the experiences of the individual who had been duly suffocated with them, or who on Christmas day last (day of dreadful memory) lost his Christmas dinner with his friends, unable to go out in the fog, and found his larder unprovided with dinner at home. Dr. Carpenter's address served chiefly to show the difficulty of dealing practically with London fogs for purposes of amelioration. He confined his recommendatory observations to the means, present and prospective, of diminishing the smoke element, which gives the peculiar characteristic to the London fog. He dwelt upon the substitution of gas for coal for many purposes, and the use of slow-combustion stoves for the burning of coal. But he confessed general disbelief in any measures unless the Legislature stepped in and compelled certain things to be done, and particularly imposed a tax on smoke-producing grates. He would have a Royal Commission appointed to inquire into the whole subject as preliminary to legislation. And here he is obviously right, for the subject is too complicated to be met by Acts of Parliament, except we have a clearer knowledge on what lines legislation should run. Meanwhile, let us hope that Dr. Carpenter will continue his useful mission of irradiating the hitherto seemingly hopeless subject of London fogs.

THE PROFESSION AND MEDICAL LEGISLATION.

THERE is good reason to believe that if the real unanimity of the profession on the great points of Medical Reform could be shown to the Government no difficulty would be experienced in inducing them to proceed with medical legislation. That such unanimity exists cannot be doubted, and it is within our knowledge that some practical steps for making it apparent are under contemplation. Time is precious, and we would urge promptness and thoroughness in the matter. Large votes of the profession have been taken on at least two occasions; but some years have elapsed since, and the question has grown considerably in the interval. New points have arisen on which Government would much wish to know the feeling of medical men. It marks some progress when a Government thinks it desirable to have the views of the profession as well as the views of the Medical Council.

THE LATE MADAME THIERS.

THE following circumstances in connexion with the last illness of the late Madame Thiers have been communicated by our correspondent in Paris; they will be read with interest:— Since her husband's death in September, 1877, Madame Thiers had devoted herself entirely to the glorification of his memory. Besides an almost daily pilgrimage to his tomb when in Paris, and the promotion of statues to him in the provinces, at the inauguration of which she always played the prominent part, Madame Thiers was engaged in the publication of his speeches, ten volumes of which are already issued. In their preparation for the press she displayed an amount of literary acumen which astonished those who were entrusted with the work. The deceased lady was a good Latin scholar. During the progress of this publication Madame Thiers was careless of her health, working hard all day long, sometimes breaking her fast only at 5 P.M., eating anything that happened to be at hand, and refusing to leave her occupation in Paris for necessary change of air.

A few months since she was seized with pains above the umbilicus, and there were other symptoms, which seemed to point to localised peritonitis. Some weeks later a tumour was made out, located either in the epiploon or mesentery. Hitherto the appetite and digestion had been good, but the liver becoming secondarily involved (great hypertrophy and nodulations), complete anorexia supervened. Then occurred thrombosis of the veins of both lower extremities, vomiting of black blood, and stools containing altered blood, from the stomach becoming involved. A week before death, when apparently moribund, oxygen was administered, and caused a temporary improvement. Two days before death vomiting ceased, and the stomach was able to tolerate light foods and stimulants—an ominous symptom, showing gastric anæsthesia, from nervous prostration. Finally, after remaining pulseless for twenty-four hours, the illustrious patient expired.

POOR-LAW MEDICAL OFFICERS AND MEDICAL RELIEF.

THE question of responsibility is every now and again raised in connexion with the refusal of medical officers under the Poor-law to attend cases at the request of paupers who have not taken the trouble to provide themselves with orders for medical relief. It cannot be too clearly laid down that medical officers are not required to attend without an "order" or a card for "Permanent Medical Relief," and that they do wrong by rendering assistance without such credentials. Medical men are not justified in creating a moral debt where no legal debt can be created. They may do great harm by yielding to impulses which seem to be inspired by motives of humanity. The possibility of procuring the "doctor's" aid at the last minute makes poor parents delay their applications to the relieving officer or the overseers until the time for useful action is past. Again, abuses of the most irritating kind arise from the practice of giving medical services without an order. We strongly recommend Poor-law officers to act strictly according to the instructions embodied in the Consolidated Order in respect to this matter, and to refuse either assistance or medicine until an "order" is produced. When this comes to be known as the undeviating rule of a medical officer, the poor in his district will hasten to take measures to secure orders for the doctor sufficiently early in a case for his services to be of some avail. It is, of course, too obvious to need remark that when a medical officer first refuses his aid, and then gives a certificate of death, he stultifies his own policy. No medical man who has not seen a case during the lifetime of the deceased person can legally or rationally certify the cause of death.

THE MANCHESTER HOSPITAL SUNDAY FUND.

THE sum raised this year by the Hospital Sunday Fund is £6557 16s. 3d.; that by the Hospital Saturday Fund £1696 9s.; in all £8254 4s. 3d. This is a very respectable sum, which must materially relieve the minds of those who have to find ways and means in hospitals. Of course there is some criticism of details of distribution. One writer in particular, "Justitia," complains in the *Manchester Guardian* that half of the money collected is given to the Infirmary, having 20,000 patients; while the insignificant amount of £302 19s. 1d. is given to St. Mary's Hospital, having 15,000 patients. These awards seem so unequal that we do not doubt there is some inaccuracy or injustice in the statement of "Justitia." At the annual meeting of the Fund some discussion arose as to the operation of the law in regard to the recommendations allowed for the grants from the Fund. One institution complained that the recommendations exceeded in money value the amount of the award. A resolution was passed to the effect that in future awards be made on the condition that the recommendations issued to the committees of Hospital Sunday shall be equal to at least 75 per cent. of the grants made. "Justitia" thinks that even this rule might operate harshly; and undoubtedly the point is one that requires discussion.

THE DISSOLUTION OF THE QUEEN'S UNIVERSITY.

IT looks very much as if Mr. Gladstone, in addition to the heavy Irish problems with which he will have to deal, must reconsider the question of higher education in Ireland. *The Times*, of Dec. 10th, gives a long report of an interview at the Viceregal lodge, on behalf of the Prime Minister, between a deputation representing the Convocation of the Queen's University and the Lord-Lieutenant. The deputation dwelt especially on the erroneous statements of Lord Cairns to the effect that the university was only an examining body. On this misconception, it was maintained, the University Education (Ireland) Bill had been passed. The deputation begged that the clauses of the Bill abolishing the Queen's University should be altered. The Lord-Lieutenant promised consideration, and reminded the deputation that there was no immediate prospect of the extinction of the university, for after the granting of the charter for the new university in Ireland two years must elapse before the extinction of the Queen's.

THE SHEFFIELD POISONING CASE.

MARY ANNIE WILMOT, the nurse from the Sheffield Nurses' Home, who was lately charged before the magistrates with administering poison to Mrs. Eliza Booth, the wife of Mr. W. H. Booth, M.R.C.S., has been committed for trial. The bare facts of the case—the sudden and suspicious death of Mr. Booth, jun., and Miss Booth, on the 8th and 16th of October, and the dangerous illness of Mrs. Booth on the 21st, with all the symptoms of narcotic poisoning, and the discovery of morphia (which had not been prescribed by any medical man) in the contents of Mrs. Booth's stomach—are familiar to our readers. Comment upon these and other facts connected with the case is impossible while the trial is pending; and we therefore defer any remarks until the facts have been re-delivered and argued upon before a higher tribunal.

ANTI-VACCINATION.

PROFESSOR F. W. NEWMAN, writing at the request of his friends (?) to the recent International Anti-Vaccination Congress at Paris, begins a letter to the Congress by observing, "I have no special acquaintance with small-pox, or with what is called vaccine." He then proceeds to dogmatise on

both small-pox and vaccine in a fashion which should have rendered the first statement superfluous. But it is useful to have the professor's own authority as to the extent of his knowledge respecting matters of which he has not hesitated to speak so freely.

PATHOLOGICAL SOCIETY OF LONDON.

THE Debate on Rickets will be resumed and concluded on Tuesday next, December 21st. Dr. Barlow and Mr. Shattock will show specimens of so-called Fœtal Rickets, and among others Mr. Lucas, Dr. Baxter, and Dr. Longhurst are expected to take part in the discussion, which will be closed by Dr. Hilton Fagge. As on the two previous evenings, some living and other specimens will be exhibited.

IN reference to a paragraph which appeared in our last issue (p. 951), we are asked to publish the following:—"At a meeting of the medical students of the Queen's College, Cork, held on the 10th inst., Mr. H. Sinclair in the chair, it was unanimously resolved, 'That we, the medical students of the Queen's College, Cork, feel it our duty to contradict the statement contained in a resolution which appeared in the *Herald* and *Constitution* of the 6th inst. expressing disapproval of Professor Charles's conduct towards two graduates of Dublin University. We consider that the entire circumstances occurred through a misconception, for which Professor Charles was in no way to blame: and we hereby convey to Professor Charles the expression of our extreme regret that any misunderstanding should have arisen.'"

LIEUT. EDWARD E. BRADFORD, R.N., specially promoted in the *Gazette* of Dec. 10th for "gallant conduct in recovering the bodies of Lieut. Bower and five seamen of H.M.S. *Sandfly*, who were murdered by the natives of the Solomon Islands," is the eldest son of Edward Bradford, F.R.C.S., of Harrow, Deputy Inspector-General of Hospitals (army), Q.H.S., and member of the General Medical Council.

A DEPUTATION, headed by Dr. McClintock, President of the Royal College of Surgeons of Ireland, waited on the Lord-Lieutenant on Saturday last, to ask his Excellency to urge on the Government the advisability of establishing in Dublin a veterinary college for Ireland. The Lord-Lieutenant promised his assistance in the matter.

THE last advices report sporadic cases of cholera to be still cropping up at some stations in Northern India. At Peshawur, Jhelum, Lucknow, Fyzabad, and Lundi Kotah in the Khyber, a few cases occurred early in November. The cold weather having regularly set in, the authorities do not anticipate any extension of the disease.

By a run-away cab-horse in Plymouth, on Saturday last, Mr. E. M. R. Rendle, M.R.C.S., narrowly escaped serious injury, whilst a solicitor with whom he happened to be conversing at the corner of a street was unfortunately killed by a splinter of the cab entering the right eye and penetrating the brain.

IT is stated that attempts are about to be made to acclimatise the chinchona in Italy, so as to increase the supply and lessen the cost of its manufacture, which is an important branch of Italian industry, and has been carried on at Milan and Genoa since 1870.

AT the suggestion of Dr. de Lanessan, the Municipal Council of Paris have decided to establish a mortuary in each of the cemeteries, where the poor, who have insufficient lodging, will be enabled to place the bodies of deceased relatives.

AT Leicester another death from "woolsorters' disease" is reported. The workmen employed in dressing the fabrics are agitating to get imported foreign wools steamed at high temperatures before being submitted to manufacturing processes.

MR. BRIGHT, M.P., Lord Rector of Glasgow University, has appointed Dr. Cameron, M.P., as his assessor.

AT its last meeting M. Brouardel was elected member of the Academy of Medicine of Paris.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Finchley.—The medical officer of health (Dr. Jas. Thurle) for the urban sanitary district of Finchley sends us his annual report for 1879. It is a very elaborate document, and, being the first annual report, Dr. Thurle has held it desirable to enter at considerable length into the reasons which govern his advice to the Authority, and his own action in the execution of his duty. His report, therefore, forms a sort of treatise on sanitary work, as well as report of proceedings during the year 1879; and it will no doubt prove, as it ought to do, most instructive to the residents and rate-payers. He gives the birth-rate of the district during 1879 as nearly 31, and the death-rate as about 12½, per 1000 inhabitants. We shall look with interest for Dr. Thurle's further reports on the district.

Lewisham.—Dr. Wilkinson reports for the year 1879 in this district a population of 67,084, occupying 10,908 houses, a birth-rate of 31·39 per 1000 inhabitants, and a death-rate of 14·35—"a lower death-rate than that registered during the previous year, and a lower death-rate than the average of England and Wales or the metropolitan districts." No particular event appears to have disturbed the even course of the health-administration of the district during the year; but we are glad to learn that the Sanitary Authority possesses an infectious disease hospital, well situated, with a resident nurse, and ambulance-waggons stationed at Lewisham and Penge.

ENTERIC FEVER AT WORTHING.

The medical officer of health for Worthing, Dr. Charles Kelly, has recently presented to the Local Board of Health a report on the prevalence of enteric fever in that town since August last of exceptional interest. Two outbreaks of the disease have occurred within that period, each under widely different circumstances. In the first outbreak, which happened during the months of August and September, the cases occurred in a circumscribed locality under very defective local sanitary conditions, and at a time when a very heavy rainfall rapidly filled the sewers, driving the sewer-air back through imperfect places, there being no ventilators in the locality to relieve the pressure. In this way the sewer-air was forced into the infected houses, and to this is attributed the first outbreak. A second outbreak of enteric fever presently followed, beginning in October, but under entirely different circumstances. Neither defects of drainage nor of water-supply yielded any explanation of this second outbreak, but it was quickly ascertained that the victims were all consuming milk from one source. This clue obtained, Dr. Kelly was enabled to follow it until he lighted upon a clear explanation of the origin and spread of the disease. He traced it to the milk of a particular dairy, in which the water used for dairy purposes came from a well which had unquestionably been polluted with the discharges from a patient suffering from enteric fever, a sporadic case, shortly before the outbreak. The history of the outbreak, and of its relation to the milk-supply, and of this supply to the well-water and the pollution of the latter, is very complete, and forms one of the best of the more recent examples that have been recorded of the

dissemination of the infection of enteric fever through a milk-supply.

THE LOWER THAMES VALLEY SEWERAGE.

At a recent meeting of the Lower Thames Valley Sewerage Board a member observed that the Board had not got a spade, a pickaxe, or a drainpipe for the £30,000 it had spent. We are glad, however, to learn that each of the sanitary authorities represented on the Board will receive a copy of the evidence given at the late inquiry. The Chairman remarked that it would probably be the only value the authorities would get for their money; as if the *experience* gained went for nothing!

THE SEWERAGE OF GUILDFORD.

The Local Government Board has been writing to the Sanitary Authority of Guildford asking what they propose to do about the sewerage of the town. But the Authority objects to being hurried in considering the question, as it is only ten years ago since a Government engineering inspector pointed out the necessity for sewerage, and only twenty years ago that the local Authority began to think that it was time to begin to think about the matter!

The Chelmsford Rural Sanitary Authority have issued a series of regulations and suggestions, prepared by their medical officer of health, Dr. Arthur Downes, on "The Proper Construction of House Drainage," "As to House Fittings, &c., for Water-supply, &c.," and on "Preventing the Spread of Infectious Diseases," admirably calculated to effect the objects they seek to attain. It is astonishing the amount of useful, practical information which may be diffused in this manner, conveyed in a way which is brought home to the head of a family. Dr. Downes and his Authority are both to be congratulated upon the good example they have set in this matter.

It is the intention of the Hackney guardians to ask the sanction of the Central Board to the establishment of a sanatorium at the seaside for pauper children under the management of the Asylums Board. The cost of the proposed home is mentioned at £50,000, to be defrayed out of the Common Poor Fund.

The Local Government Board have signified their consent to a proposal to erect an infectious disease hospital for the use jointly of Rochester and Chatham. The site chosen for the building is, we are informed, situated not far from the military hospital at Fort Pitt.

Given a specimen of water which, the chemical analysis being accepted on both sides, and both sides consisting of medical officers of health and chemists, the one side says it is *unfit* for domestic purposes, the other side it is quite *fit* for domestic purposes, what is to be done?

A deputation of the Town Council of Edinburgh has recently visited Glasgow for the purpose of studying the arrangements made there for the isolation in hospitals of infectious diseases.

A public meeting held at Leicester has protested against the appointment of additional vaccination officers for that town, and thanked Mr. Taylor for his motion in Parliament against compulsory vaccination.

Deputations representing the alkali manufacturers of the United Kingdom and from Leicester, appointed by a public meeting concerning river-floods, had interviews on the 11th inst.

Richmond (Surrey) is contemplating making a new well, at a cost of £10,000, to add to the water-supply.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

Under the influence of the unseasonably mild weather, English urban mortality showed a further decline last week. In twenty of the largest English towns, estimated to contain in the middle of this year a population of seven and a half millions of persons, or nearly one-third of the entire population of England and Wales, 5125 births and 2882 deaths were registered last week. The births were 60, and the deaths 393, below the average weekly

numbers during 1879. The deaths showed a further decline of 79 from those returned in recent weeks; and the annual death-rate per 1000, which had been equal to 22.1 and 20.6 in the two preceding weeks, further declined to 20.1 last week, a lower rate than has prevailed in any week since the middle of July last. The lowest death-rates in the twenty towns last week were 15.9 in Sheffield, 16.7 in Plymouth, 17.3 in Leeds, 17.5 in Portsmouth, and 18.2 in Norwich. The rates in the other towns ranged upwards to 21.6 in Hull, 22.8 in Manchester, 24.3 in Liverpool, and 27.2 in the borough of Salford. During the first ten weeks of the current quarter the death-rate in these twenty towns averaged only 21.8 per 1000, against 22.7 in the corresponding period of the four years 1876-79.

The deaths referred to the seven principal zymotic diseases in the twenty towns, which had been 405 and 358 in the two preceding weeks, were 370 last week; they included 140 from scarlet fever, 70 from whooping-cough, 69 from measles, and only 33 from fever, principally enteric. The annual death-rate from these seven diseases averaged 2.6 per 1000 in the twenty towns; no death from any of these diseases was recorded either in Norwich or Plymouth, whereas in the other towns their death-rate ranged upwards to 4.5 in Sunderland and 6.2 in Salford. The fatal cases of scarlet fever in the twenty towns, which had been 162 and 139 in the two previous weeks, were 140 last week, and showed the largest proportional fatality in Sunderland, Bristol, Salford, and Liverpool. Measles fatality was again largest in Salford, and that of whooping-cough in Hull, Liverpool, and Birmingham. The highest death-rate from fever, principally enteric, was recorded in Leeds. Of the 12 deaths from diphtheria 8 occurred in London. Small-pox caused 12 more deaths in London, and one in Liverpool; whereas no fatal case of this disease was recorded in any of the other eighteen large provincial towns. Judged by the hospital returns, the prevalence of small-pox in London showed a further marked increase last week. The number of small-pox patients in the Metropolitan Asylum Hospitals, which had increased steadily from 77 to 246 in the six preceding weeks, further rose to 338 last week. The number of new cases of small-pox admitted to these hospitals, which had been 99, 57, and 67 in the three previous weeks, rose last week to 132, and exceeded the number of admissions in any week since May, 1878. The number of patients in the Highgate Small-pox Hospital also showed a further increase last week, and were 30 on Saturday last.

The deaths referred to diseases of the respiratory organs in London, which had been 367 and 334 in the two preceding weeks, further declined to 295 last week, and were no less than 202 below the corrected weekly average; 169 resulted from bronchitis, and 78 from pneumonia. The annual death-rate from lung diseases was equal to 4.2 per 1000 in London, and 5.4 in Liverpool.

In the twenty towns last week 69 deaths were registered without the production of the certificate either of a registered medical practitioner or of a coroner; these were equal to 2.4 per cent. of the total deaths registered. The proportion of uncertified causes of death did not exceed 1.2 per cent. in London, whereas it averaged 3.5 per cent. in the nineteen provincial towns. No uncertified causes of death were registered last week in Portsmouth, Norwich, or Plymouth, whereas their proportion was largest in Wolverhampton, Salford, and Oldham.

HEALTH OF SCOTCH TOWNS.

In eight of the largest Scotch towns, having an estimated population of rather more than a million and a quarter persons, the annual death-rate last week averaged 21.7 per 1000, against 24.7 and 22.1 in the two preceding weeks; it was 1.6 above the average rate in the twenty large English towns. The rates in the eight Scotch towns ranged last week from 15.6 and 19.1 in Perth and Dundee, to 23.4 and 28.7 in Leith and Paisley. The deaths referred to the seven principal zymotic diseases in the eight towns, which had been 112 and 95 in the two previous weeks, further declined to 91 last week; they included 33 from scarlet fever, 18 from diarrhoea, 13 from whooping-cough, 11 from diphtheria, 8 from fever, 8 from measles, and not one from small-pox. The annual death-rate from these seven diseases averaged 3.7 per 1000 in the eight towns, and exceeded by 1.1 the average rate from the same diseases in the twenty English towns. In the eight Scotch towns the zymotic death-rate

last week ranged from 1.7 and 2.0 in Dundee and Aberdeen, to 6.4 and 9.8 in Paisley and Leith. The fatal cases of scarlet fever in the eight towns, which had declined from 53 to 34 in the four preceding weeks, were 33 last week, of which 23 occurred in Edinburgh and Leith, and 9 in Glasgow. The 13 deaths from whooping-cough showed an increase upon the number in the previous week, and included 7 in Glasgow. Eight of the 11 fatal cases of diphtheria were also returned in Glasgow. The 18 deaths from diarrhoea showed a further increase upon recent weekly numbers, and a marked excess upon the average for the season; 7 occurred in Glasgow, 3 each in Edinburgh and Paisley, and 2 each in Aberdeen and Perth. The 7 deaths from fever (including typhus, enteric, and simple) showed a decline from those in the previous week, and included 4 in Glasgow, 2 in Edinburgh, and 1 each in Paisley and Leith. The deaths referred in the eight towns to acute diseases of the respiratory organs (bronchitis, pneumonia, and pleurisy), which had been 166 and 155 in the two preceding weeks, further declined to 128 last week. The annual death-rate from these lung diseases was equal to 5.2 per 1000 last week in the eight Scotch towns, against 3.6 in London; the highest death-rates last week from these diseases in the Scotch towns occurred in Leith, Paisley, and Greenock.

HEALTH OF DUBLIN.

There was a further considerable decline in the Dublin death-rate last week. The annual rate of mortality from all causes in the city, which had declined in the four preceding weeks from 39.6 to 29.8, further fell last week to 27.2, a lower rate than has prevailed in any previous week of this year. During the first ten weeks of the current quarter the death-rate in the city averaged, however, 33.6 per 1000, against 21.2 in London, and 22.2 in Edinburgh. The 164 deaths in Dublin last week showed a further decline of 16 from the numbers returned in recent weeks, and included 18, or 11 percent., which were referred to the seven principal zymotic diseases, or 10 less than those in the previous week; 8 resulted from fever (including typhus, enteric, and simple), 6 from scarlet fever, 3 from whooping-cough, one from diarrhoea, and not one either from small-pox, measles, or diphtheria. The annual death-rate from these zymotic diseases was equal to 3.0 per 1000 in Dublin last week, against 4.5 in Edinburgh. The deaths referred to fever, which had been 17 and 10 in the two preceding weeks, further fell to 8 last week, but still showed a marked excess compared with the proportional fatality of fever in the twenty large English towns. The 6 deaths from scarlet fever in Dublin last week also showed a decline from the numbers in recent weeks, while the 3 fatal cases of whooping-cough corresponded with the number in the previous week. The deaths of infants in the city were fewer than in any previous week of the year, and those of elderly persons also showed a decline.

HEALTH MATTERS GENERALLY AT HOME AND ABROAD.

SMALL-POX IN LONDON.

In London, according to the Registrar-General's Weekly Return, 12 fatal cases of small-pox were registered last week. This number is small, and it appears that it is 16 below the average number in the corresponding week of the last two years, in several of which small-pox was epidemic in the metropolis. When, however, we note the hospital returns, it is no longer possible to deny that there are grave indications of a very serious increase of small-pox prevalence in London. The Metropolitan Asylum Hospitals contained but 77 small-pox patients on 23rd October, to which number they had pretty steadily declined from 237 at the end of June. Early in November the small-pox admissions, and the cases under treatment began to increase, and after the middle of that month this increase became rapid. On Saturday the 11th inst. the cases under treatment in these hospitals had risen to 338, a higher number than on any day since May, 1878. The number of new cases admitted to these hospitals, which had been 99, 57, and 67 in the three preceding weeks, rose last week to 132, of which 61 were admitted to the hospital at Deptford, and 45 to that at Homerton. It is unsatisfactory to note that of the 12 fatal cases of small-pox registered in London last week, 5 were of children aged between one and five years, affording conclusive evidence of neglected or ineffi-

cient vaccination. The deaths of children from small-pox under our present compulsory vaccination laws speaks forcibly of evasion of the provisions of those laws, especially mischievous because this failure is used by anti-vaccinators as an argument against such laws. With regard to the naturally increasing proportion of adult victims of small-pox the remedy is not so simply provided, as revaccination at adolescence, however strongly recommended, is but very partially resorted to among the classes who are most exposed to infection during epidemic periods.

SEWER VENTILATION AT LEITH.

At a recent meeting of the Leith Town Council, Provost Henderson, *à propos* a memorial from certain inhabitants on nuisance said to be caused by the sewer ventilation in the streets, took occasion to address the Council on the principles and practice of sewer ventilation. He described the various means which had been resorted to in different towns to secure ventilation of the sewers, by in-draughts, by out-draughts, by furnaces, by screws, but thought experience had proved that the simpler the means adopted the more effectual the result. In fact, the more numerous and more direct the openings made in the sewers the better the ventilation and the less the nuisance (if any) from sewer air. He, as Mrs. Lirriper with the chimney-cowls and smoke, preferred the ventilation, and the means thereof, plain, and this was the general conclusion of competent observers on the subject. If the street ventilators of Leith stink, the evil must be sought, not in the ventilators, but in the sewers themselves.

THE PUBLIC HEALTH SOCIETY OF ST. PETERSBURG.

The general meeting of the Public Health Society of St. Petersburg was held on the 28th ult. Dr. Zdeckawer, the president, announced that the Minister of the Interior had granted 2000 roubles to the funds of the Society, and that sanction had been obtained for the establishment of branches at Odessa, Kazan, and Theodosia. General Count Loris Melikoff and others were elected honorary members of the Society. Professor Zdeckawer was re-elected president, and Professor Andrievsky was elected vice-president in place of M. Obroutchew, who retires. The Society has 296 members and an income of 1875 roubles. The expenses to the 12th November last had been 1868 roubles, of which sum 1600 roubles had been absorbed in rent, but there is hope of this expense being largely diminished by the Society obtaining permanent rooms.

The French Society of Hygiene passed a resolution at its last sitting, that it was desirable that a canal be constructed from Paris to the sea, in order to discharge on the coast the contents of the sewers, and that this should also receive the offal and night soil of the capital.

THE SERVICES.

THE AFGHAN GAZETTE AND DESPATCHES.

The following addendum has just been made to the Gazette publishing the despatches relative to the campaign in Afghanistan:—

"The names of the following medical officers having, through an oversight, been omitted from G.O.C.C., Oct. 14th, 1879, his Excellency the Commander-in-Chief, with the concurrence of the Viceroy and Governor-General in Council, is pleased to direct that, in recognition of the valuable services performed by those officers, their names be added to the list contained in Par. 6 of the above order:—*Kuram Field Force*.—Surgeon-Major G. Farrell, Indian Medical Service, in charge head-quarters staff; Surgeon-Major C. P. Costello, base hospital, Kohat, afterwards Kuram. *Southern Afghanistan Field Force*.—Surgeon-Major R. W. Cunningham, M.D., base hospital and charge of Commissariat, Kandahar Citadel; Surgeon-Major B. Thompson, M.B., Indian Medical Service, base hospital, Quetta.

Deputy Surgeon-General J. L. Jameson, Army Medical Department, has been appointed to succeed Surgeon-General Thompson as Principal Medical Officer at Cork. Deputy Surgeon-General Jameson has recently arrived home from India on promotion.

The undermentioned medical officers have retired from the army, and have been placed on retired pay:—Surgeons-Major Charles William Griffith, Hunter Alexander Colan, Benjamin Hinde, M.D., and John Alfred Illingworth, Medical Department, with the honorary rank of brigade surgeons.

The Indian troopship *Jumna* has arrived at Portsmouth from Bombay, which place she left on Nov. 8th. She brought home Surgs.-Major Tippetts, Palmer, Howard, and Nicholson, Surgeons Webb and Carter, of the Army Medical Department, and Surgeons Worgan and Earle, of the Indian Medical Department.

ADMIRALTY.—The following appointment has been made: Surgeon George C. Goding to the *Helicon*.

GUY'S HOSPITAL REFORM.

A PUBLIC MEETING was held on Wednesday night at the Bridge House Hotel, London-bridge, "To consider what steps are desirable to be taken with reference to the present unsatisfactory position of this great institution."

Mr. Arthur Cohen, Q.C., M.P., presided, and in opening the proceedings said that Guy's Hospital was, perhaps, the greatest and most important institution in the borough of Southwark, having been founded about 150 years ago. Since that time it had been enlarged and improved at an expenditure of something like half a million of money, and had afforded help and relief not only to the people of Southwark, but to those living in distant parts. In connexion with it a large and important medical school had been founded, a school of which the country was justly proud, and which formed a noble model for other countries to copy. He could not deny that there existed among the public at the present time a profound dissatisfaction at certain matters which had come before the public in connexion with this institution; and as the representative of the borough in the House of Commons he had felt it to be his duty to take the chair on this occasion.

Mr. A. Hawkins moved: "That this meeting deeply regrets the state of matters existing at Guy's Hospital, which has led to the resignation of two of its chief officers, and which must be most damaging to the interest of the sick poor, for whom this charity was instituted." It was because he felt that the intention of the pious donor was not being carried out at this hospital that he had ventured to join in a movement for calling attention to Guy's Hospital. Thomas Guy's idea was to found an institution where the poor and sick could be healed, but when he looked upon that grand institution at the present time he found that a large number of its beds were empty. What was the reason for this, but the fact that the funds Guy had left had been turned to an account which was contrary to his desire and expressed wish. Although Thomas Guy was a baptist, he had with the best of wishes appointed a clergyman of the Church of England to be the Chaplain of the hospital, little dreaming that the foolery of ritualism would thereby be introduced into the hospital. Such, however, had been the case. The institution was governed by a self-appointed body, and the matter must be looked into, and the light of public opinion brought to bear upon it.

Mr. John Berry seconded. There was a time when he had been glad to take his children when in sickness to receive the excellent advice provided at the hospital, but he should be sorry to do so now. Jealousies had been allowed to grow up to the injury of the poor; and a few were reaping the benefit of the institution to the detriment of the many. Such crying evils as now existed must not be allowed to continue.

The resolution was adopted.

Mr. Robins moved: "That Parliament be petitioned for the appointment of a Royal Commission to inquire into and report as to the present system of governing Guy's Hospital with a view to its being placed upon a more desirable and responsible basis, and that the Borough members be asked to support the petition." While admitting the propriety of establishing some one to act as chaplain to the hospital, he contended that the religious element was secondary to the

curing of the sick. A sisterhood had been introduced to the displacement of the old nurses, who were mothers in the hospital, and the garb of the former, he was assured, operated badly with the patients, for instead of being hopeful of recovery, they were impressed with the idea, created by the dress of this new order, that they were to be prepared for another world. He did not speak against the sisterhood, but they were out of place at Guy's Hospital. Forty years ago the Charity Commissioners inquired into the government of this charity, and they condemned the practice of so much power being given to one official—the treasurer. He could remember when two of the wards would have been shut up but for the subscriptions of the doctors, while at that very time no less than £3000 was spent in decorating the house of the treasurer. As a member of the Metropolitan Asylums Board, he might say that his board never thought of entrusting the management to any but the doctors in charge of the patients at their hospitals. They had full and absolute control. But at Guy's the doctors were pushed on one side, and the sisters interfered to such an extent that the former could not put up with it any longer.

Mr. J. Mitson seconded, and the resolution was agreed to.

The Rev. G. M. Murphey moved: "That in the opinion of this meeting it is desirable that every Board of Guardians, Vestry, and District Board in Southwark should have one or more representatives on the committee of management of this hospital." He contended that the affairs of the institution needed properly auditing by an independent and competent party.

Dr. Freston seconded. He was told that the institution was £17,000 behindhand; this needed looking into. As a medical man, he maintained that the sick poor of Southwark ought to have that which was their perfect right to enjoy.

Dr. Burton said that, as very kindly remarks had been made concerning the doctors, he thought the resolution ought to provide for a certain number of their profession being on the Board of Management—that an efficient physician and an efficient surgeon should be on the Board. That would be the least act of courtesy which could be extended to the medical staff.

The Chairman said he had spoken to many intelligent men and women upon this point, and they had said it was a most strange circumstance that not a single physician or surgeon was on the board of governors. He (the speaker) felt he should only be expressing the feeling of this meeting when he urged that the medical staff should be represented on the management.

The resolution, amended as suggested, was then unanimously agreed to.

Mr. Andrew Dunn moved that a deputation of the meeting should wait upon the Home Secretary, to urge him to present their petition to Parliament for a Royal Commission. This was adopted, and the proceedings closed in the usual manner.

Correspondence.

"Audi alteram partem."

ON MEDICAL EDUCATION.

To the Editor of THE LANCET.

SIR,—The question of medical education, which you have just reopened, deserves all the consideration which the profession can give to it. After the teachers, examiners, and other celebrities of the metropolis have spoken their word, may a provincial physician venture to relieve his mind upon a portion of the subject which, so far, has not attracted all the attention which, in my opinion, it deserves? I allude to the neglect of apprenticeship, or pupilage, in these days, especially in relation to our provincial hospitals. Your own comments upon Mr. Savory's letter (THE LANCET, Dec. 4th) contains the germ of what, with your permission, I would further develop. You have touched the question of apprenticeship or no apprenticeship very gently, as if fearing to arouse a controversy thereupon; but I would suggest that the question of the best mode of initiating our students into

medical life cannot be properly argued without hearing what apprenticeship has to say in its own behalf.

But going back for a moment to your comment upon Mr. Savory's letter, you say that the remedies for our present difficulties are threefold—first, diminution of the number of subjects studied; secondly, diminished proficiency in present subjects; thirdly, lengthened time to fulfil the present curriculum.

Admitting that it is out of the question to lower the standard of the pupil's knowledge, we are reduced to the first and the last as alternatives. I would suggest, however, that both of these are open to adoption—viz., lessened number of subjects, and lengthened period of study. No doubt the arguments of the teachers in behalf of their individual subjects are not easily assailable, yet there is one idea in connexion with them which I find seldom alluded to. Surely these various subjects, allowing each of them to be necessary to a complete medical education, must have relative degrees of importance, the dicta of said teachers notwithstanding. No one, not himself a teacher, will pretend that an extended acquaintance with botany, chemistry, materia medica, or even medical jurisprudence, is as indispensable to the student as a knowledge of anatomy, physiology, medicine, surgery, and midwifery—the five pillars of the temple of medicine! Why, then, should it be thought necessary that the examinations in each of these *two sets* of subjects should be equally stringent, and the student's acquaintance with them equally complete? In fact, is there not a fundamental error in the methods of examination as now conducted by at least some of our licensing bodies? The same cut-and-dried subjects being set for all, proficiency is expected in all of them from each candidate, for your examiner is as jealous as your teacher for the status of his own subject.

Now, medical students vary in the bent of their minds as much as in industry or ability; yet no allowance is made for this. We know that some young men have great difficulty in producing their knowledge, although they may be full of it, and keenly bent upon progress. Others, quick and shallow, may, by means of cramming and diligently studying the idiosyncrasies of examiners, make a much greater show of knowledge upon all subjects submitted to them. I contend that one object of all examinations should be to find out what there is in a man; in what direction his mind will develop—whether towards the steady and honest acquisition of sound knowledge, or whether it is set upon those flashy and taking subjects which he thinks will obtain for him the reputation of being a clever fellow. It would, then, follow that excellence in the greater subjects and an evident disposition to acquire knowledge honestly should excuse a somewhat deficient acquaintance with botany and kindred subjects. Yet there is no need that even these should not have their share of attention.

The extension of time, which, in one way or another, is generally allowed to be desirable, if not essential, to an improved education, will be the means of overcoming the difficulty. How shall that extension be made? I think by means of reviving apprenticeship, or at least pupilage, and making it compulsory upon all students except those who proceed to a university for their medical education.

The neglect into which the old-fashioned apprenticeship has fallen doubtless followed upon improvement in the means of communicating medical knowledge at the schools. The bottle-washing, shop-cleaning apprentice has gone the way of the old-fashioned apothecary. Forty years ago the apprenticeship of five years to an apothecary was in full force. To these five years were added two for "walking the hospitals"; in all seven. Afterwards attendance at the schools was extended to three years, and then the five years' apprenticeship was virtually reduced to three—making in all six. This is about the period Mr. Savory would have the student devote to medical study at the schools. But is there any prospect that a sufficient number of young men would or could devote this number of years, with its increased expenditure, to a medical education in a metropolis? The expense would deter most men, and in the few cases where the command of money might clear this obstacle, would not the possession of means result in the first years being spent in idleness or something worse?

Twenty years as physician to a county hospital have shown to me the grievous waste of educational means which such institutions display. What unrivalled opportunities of acquiring a general knowledge of disease and of patients, of nursing and dressing, are here neglected and despised! It

has fallen to my lot to see a good many young fledglings fresh from the schools. Not one in four of them, when brought face to face with the work of a hospital—the minor operations of surgery, the dressings and manipulations—has known how to draw a tooth deftly, pass a catheter safely, or dress a bed sore without torturing the patient. But they could talk glibly enough of the difference between tubular and interstitial nephritis, or antero, or postero, or insular spinal sclerosis, &c. &c. They are, in fact, alike ignorant of the value of what they have missed and incapable of remedying their loss.

It has been said that the time for acquiring this *practical* kind of knowledge is after the student has learned the *theory* at the schools. But not so. So soon as he has got the document in his pocket which, and not the mere acquisition of sound medical knowledge to guide him in after-life, has been the sole object of his endeavours, he is off to remunerative work—to an assistantship, to partnership, or perhaps the public service, and his defects are discovered when he is found to be unable to bleed a patient with safety, or set a fracture rightly.

Pupilage is an entirely different thing now to what it was in the days gone by. Our youths are now better educated, and would not submit to the drudgery of the surgery or the shop. Besides the various county hospitals, large work-house infirmaries, &c., many practitioners in large practice amongst the working classes, mines, unions, &c., are able to give the pupil invaluable opportunities of learning to *see* and learning to *handle*. Formerly large sums were paid for these advantages, now so unaccountably neglected. Three hundred pounds was frequently paid for the privilege of being considered the pupil of a hospital surgeon. Much more moderate sums now suffice, and I believe that the cheapest way of passing the first two years of the student's life would be to become the apprentice or pupil of a general practitioner.

But more than this. The most important point remains to be noted. We are all agreed that such subjects as botany, chemistry, and *materia medica* should be learnt, and an examination passed in them, *before* the commencement of regular hospital studies. These two years of pupillage would afford the best of all trials for these subjects. There is scarcely now a town of any pretensions which has not science classes and private teaching in such subjects as chemistry and botany. *Materia medica*, separate from therapeutics, can be taught in the surgery, or in the chemist's warehouse. Thus, the first batch of the student's work would be got over before all his energies are required for the graver studies at the schools. The work, too, under the supervision of his master, would keep the pupil out of idleness, and give him a zest instead of a disgust for his anatomy and physiology. To sum up, I would suggest that five years be made the minimum for the student's education; that two of these should be compulsorily passed as a pupil at a hospital, dispensary, or with a general practitioner in large practice; that the examination in botany, chemistry, and *materia medica* (also physics and zoology where they are required) should be passed absolutely before the commencement of the regular work of the medical school, for which three full years should be allotted.

I cannot imagine any real objection to this plan. It has the advantage of cheapness over what five years spent in the metropolis would cost. It lengthens the time for acquiring strictly medical knowledge, and keeps the pupil employed during the whole of it. But this or any other plan would fail of its object if the various boards will not recognise the necessity for agreement amongst themselves as to the requirements of medical education, and abstain from any of those arts by which it is sought to gain selfish advantage the one of another.

I am, Sir, your obedient servant,

WILLIAM STRANGE, M.D.,

Worcester, Dec. 13th, 1880. Physician to the Worcester Infirmary.

To the Editor of THE LANCET.

SIR,—I have read with considerable interest the letters on the above subject now appearing in THE LANCET, and, with your permission, I would make a few remarks on one or two of them, especially that of Mr. Butlin. Mr. Butlin cannot see the use of botany, and other subjects. Now, Sir, I do not agree with those examiners who seem to expect from

the student a profound knowledge of botany and zoology, &c., but I do not think that it requires much thought to arrive at the conclusion that these subjects are of use to the student of medicine. If our students were required to undergo a sound training in arts and the natural sciences before beginning their studies, botany, &c., might be eliminated from the medical curriculum. The study of botany, if it does no other good, at least trains the student to think, and to observe and arrange facts. If we were only to learn what *may* be of immediate use to us, how ignorant we should all become; but who knows what may be his future life? In my lectures, in reply to the question "What is the good of natural history?" I am in the habit of quoting the case of M. Bergeret (*Ann. d'Hygiène*, 2ème, sér. iv. p. 442), where a knowledge of the metamorphosis of insects led to the discovery of a case of infanticide. Mr. Christopher Heath's suggestion is most important. There are students here, as elsewhere, who waste their first two years of study, their great ambition being to get in their "cards" for lectures, and then at the last grind up for *all* the subjects. This state of things would be obviated if the suggestion of Mr. Heath were carried out. The cry of students of "no time" is only an excuse for idleness. I never knew an idle man who did not make the same excuse. The busiest men find time to write novels while carrying on the affairs of the country. I hope that Mr. Butlin does not wish to educate men *down* to the poor remuneration some of us receive for our services. His letter would lead one to think that the game was not worth the candle.

I am, Sir, your obedient servant,

H. AUBREY HUSBAND, F.R.C.S.E.,

Lecturer on Medical Jurisprudence and Public Health,
Medical School, Edinburgh.

Northumberland-street, Dec. 11th, 1880.

To the Editor of THE LANCET.

SIR,—There is some hope for the future of medical education when examiners, teachers, and students alike proclaim their dislike and distrust of the present system.

Whatever exceptions may be taken to Mr. Savory's proposal to extend the period of education to seven years, everyone must agree that the amount of work now prescribed cannot be properly mastered by the majority of students in four years. But I venture to suggest that a considerable part of our difficulties is the result of the deficient education of so many students before the medical curriculum commences.

It is not the student who has a first-class or even moderate education, be it classical or scientific, that finds a difficulty in passing his examinations. The main bulk of failures are to be found among such students as, after passing through a routine education, arrive at hospital unable to write or even spell their own language correctly, whilst their knowledge of Greek or Latin will not suffice to teach them the derivation of anatomy or to understand the meaning of the word "circumflex." As for their knowledge of natural science, it is absolutely *nil*; they do not know that bodies expand by heating, and such phenomena as atmospheric or fluid pressure, the force of gravity, the refraction of light, or the rudimentary truths of chemistry, are subjects they have barely heard by name, and can form no conception of. What wonder then, if the teacher finds it difficult to convey to their minds, in the short time which is allotted to him, a correct appreciation of such phenomena. As to the passage of ray of light into the eye, or the conversion of albumen into peptone, after months of work the teacher is told to his disgust that a ray of light passes into the eye *by the force of gravity*, and that peptone is a *stuff like broth*.

Improve the preliminary studies, and we shall be many steps nearer the goal of a good medical education. It is certainly not too much to ask that such phenomena of natural science as I have alluded to above should be taught the student before he commences his medical curriculum.

What part of the present medical bill of fare could with greatest advantage be omitted I will not take upon myself to say; but any omission, were it only the pisiform bone, would be welcome. It would relieve the student from the necessity of ridding himself, by a process of rapid evacuation, of the crude material which he has greedily swallowed from his teachers' lips, but which he finds

too much for his stomach when the trial of examination has passed, even if he is lucky enough to escape a violent attack of indigestion in the presence of his examiner, owing to frequent overdoses of touch corpuscles, muscle rods, or Malpighian bodies.

I remain, Sir, yours obediently,

W. BRUCE CLARKE,
Assistant Demonstrator of Anatomy,
St. Bartholomew's Hospital.

December 1880.

To the Editor of THE LANCET.

SIR,—Mr. Tindal has, undoubtedly, hit the right nail on the head in his remarks on this subject. It is the difficulty of attaining a knowledge of every minute detail of anatomy in the case of the ordinary student that is the grave obstacle, and that ruins his health and constitution. But, of course, if the acquirement of this accurate knowledge is indispensable to the usefulness and efficacy of the practitioner, there is no escape but to continue the struggle, risk his life, bear the stigma attached to repeated failure, and the sickness of heart caused by hope long deferred, until after the best years of his life have passed the Primary Examination is passed; or adopt the other plan, and, which under the circumstances appears the wisest, throw up the business at the onset. Of course, this picture represents only the case of the ordinary student, and it is only the requirements of the ordinary student that demand consideration. But what is the number of ordinary students, and who are they? Is it not a fact that they amount to three-quarters of the whole number who are registered as such? Is it not known that more than half the number ultimately are obliged to give up the attempt, and are unable to accomplish the too difficult task presented by the Primary Examination of the Royal College of Surgeons? The question is, whether this must be taken as a sign of their unfitness for practical medical work. My idea is, if a general knowledge only were required, with a special knowledge of those parts which disease and the necessity of surgical interference renders more important—such, for instance, as the relations and position of the arteries and the action of certain muscles—it would be found an efficient remedy.

I am, Sir, yours obediently,

Dec. 14th, 1880.

MEDICUS.

IRELAND.

(From our own Correspondent.)

THE Committee appointed by the Senate of the Royal University of Ireland had several meetings last week to consider the scheme for organising the new University.

On the 9th inst. a deputation of graduates of the Queen's University in Ireland waited on the Lord-Lieutenant (who was accompanied by the Chief Secretary for Ireland), for the purpose of making a protest against the proposed extinction of the Queen's Colleges in Ireland as intended under the Irish University Education Bill. Mr. Stoney explained their object, and stated that it was at the suggestion of Mr. Gladstone that they waited on His Excellency to place their views before the Irish Government. The Irish University Education Bill of last session was substituted for The O'Connor Don's Bill, and no communication had been made respecting it to the graduates or Senate of the Queen's University, a course entirely without precedent. Lord Cairns, in introducing the Bill, represented their University merely as that of an examining body, which was an entire misapprehension, as the Queen's was perhaps the most academical University of its character in the United Kingdom, and its examinations were framed so as to encourage sound learning. The Queen's University had rendered great educational services to the country, and it was submitted that it would be a very serious thing, in dealing with the education of Ireland, to blot out the work of thirty years, which had brought about a thoroughly sound system of education. The dissolution of such a university would involve great loss to its graduates, and the deputation thought it deserving of the careful consideration of the Government whether the clauses of a Bill introduced under misapprehension, and which would produce such grave effects, should be allowed

to pass. Various graduates, medical and other, urged the same views, and His Excellency, Earl Cowper, in reply said, that there was no doubt that the Queen's University had done good work, but, on the other hand, it would be very difficult for the new Royal University to exist side by side with it. He promised to communicate their views to the Premier, reminding the deputation that there was not a very immediate threat of dissolution, as they had a year and a half yet before them.

At a meeting of the Senate of the University of Dublin, held last Saturday, a grace was submitted from the Provost and Senior Fellows, that the degree of Doctor Utriusque Juris be conferred (*honoris causa*) on General Sir Frederick Roberts, G.C.B., and was passed unanimously.

At a monthly meeting of the Governors of Mercer's Hospital, Dublin, held last week, it was stated that in consequence of the larger number of patients maintained in the hospital since the opening of the additional wards in the new wing in 1878, the annual expenditure had exceeded the yearly income. The result is, that a balance is due to the bank of close on £900, and that the governors have been obliged to reduce the number of beds occupied.

On last Monday a deputation from the Dublin Obstetrical Society waited on the Lord-Lieutenant for the purpose of requesting His Excellency to influence the Crown, so as to appoint a representative of obstetrical medicine on the General Medical Council. A memorial was presented, which showed the great necessity for a thorough knowledge of obstetrics and diseases of women, and alleged that the present unsatisfactory state of affairs might be attributed to the fact that this branch of the profession had never been represented on the General Medical Council. Dr. Byrne, President, pointed out that the Council consisted of twenty members, which were elected by the universities and licensing bodies, and by the Privy Council, but not a single member representing the obstetrical branch of medicine had been elected. Earl Cowper, in replying, said that there was no doubt the department of medicine to which they had alluded was most important, and it did not require any medical knowledge to make one aware of the fact. If the education in that branch of the profession was so neglected as it appeared to have been from what the deputation had said, it was only right that that defect should be remedied. With regard to the filling up of the vacancy caused by the death of Dr. Hudson, he would lay what they had said before the President of the Council, but it occurred to him that it would be more advisable to elect for the appointment in question a man of high standing in the profession, having a full knowledge of all its branches than an expert in the one department to which they belonged.

A grand bazaar and fancy fair will be held in the Ulster Hall, Belfast, on the 16th inst. and two following days in aid of the Belfast Royal Hospital; and a large amount is expected towards the funds of this estimable charity.

Lady Harriet Bentinck has liberally helped the funds of the Cork Home for Incurables by a donation of £3000, of which £1600 will be devoted to the building fund, thereby freeing it from debt.

A deputation from the Corporation of Dublin had an interview last week with Mr. Forster, Chief Secretary for Ireland, in reference to the compulsory notification of infectious diseases. The deputation urged the necessity of providing that the medical practitioner in attendance on a patient suffering from an infectious disease should testify the existence of the said disease to the sanitary authority. The Chief Secretary said that if satisfied it was a desirable thing to have done, he was confident the Government would render every assistance.

Dublin, Dec. 14th, 1880.

PARIS.

(From our own Correspondent.)

ON the 10th instant Dr. Debove made an important communication to the Société Médicale des Hôpitaux on Nerve-stretching for the relief of Locomotor Ataxia, and exhibited a patient who had been submitted to this treatment. The operation is of German origin, and has been introduced here on the authority of Langenbeck, Esmarch, and Erlennmeyer, who have each of them practised it in a case of ataxia with more or

less success. The history of Dr. Debove's patient is as follows:—Louis A.—, aged fifty-six. No antecedent disease. In 1874 he felt pains in both legs, which were of a darting character. Six weeks after appeared symptoms of incoördination, and simultaneously with these darting pains in the upper extremities. In the beginning of November, 1880, the condition of the patient was the following:—Every day there occur attacks of the most severe pain in both upper and lower extremities. These come on with still greater violence at night, and for several years the patient has never passed twenty-four consecutive hours without them. They are calmed by repeated injections of morphia (sixteen centigrammes daily). Every week or fortnight there are gastric, urethral, and vesical paroxysms, which add to the sufferer's tortures, and generally last some days. The ataxy is limited to the lower extremities, but is so considerable that for eighteen months A.— has not left his bed. When he tries to rise he is unable to do so, and at once sinks to the ground; and when he endeavours to execute movements with his legs whilst lying on his back, there is evidence of motor incoördination in the highest degree. All knowledge of position is wanting, and it is only by sight or touch that A.— is able to find his legs in bed. The lower limbs are considerably wasted, and the patellar tendon-reflex is wanting on each side. In the arms the pains are the only trouble. Both pupils are myotic in an equal degree, but there is no defect of vision, and there has never been any paralysis of the extrinsic muscles of the eye. Cutaneous sensibility is deadened, especially in the legs, but there are no patches of anæsthesia on any part of the surface.

On Nov. 18th, M. Gillette, surgeon to Bicêtre, exposed the sciatic nerve in the posterior and middle part of the thigh, and stretched suddenly and violently twice. The incision was then dressed antiseptically. After the operation no motor or sensory paralysis was observed in the territory of the elongated nerve. The following day there had been no recurrence of the darting pains, only a few moderate pains in the neighbourhood of the wound, but very different to those from which the patient suffered habitually. There was also a sensation of formication, which began in the left limb, and afterwards extended to the other. On the 20th of November the pains had not returned, and cutaneous sensibility was normal. On the 1st of December a gastric paroxysm, with sensation of contraction, occurred, which lasted until the 4th, but, singularly, less severe than any preceding attack. Finally, on the 10th of December (three weeks after the operation), there had been no return of the darting pains, and there remained but little incoördination. The patient feels the position of his legs in the bed, their sensibility is normal, and he is able to execute some complicated movements with them. He can stand upright, and walk.

Medical News.

UNIVERSITY OF CAMBRIDGE.—The following have been examined and approved for the third examination for the degree of M.B.:—

FIRST CLASS.—Mackern, Caius.

SECOND CLASS.—Benthall, B.A., Pembroke; Brunton, B.A., St. John's; R. H. Clarke, B.A., Christ's; Colman, B.A., Corpus; Coxwell, B.A., Christ's; T. Finch, B.A., Caius; H. K. Fuller, B.A., St. John's; H. R. Hutton, B.A., St. John's; Jessop, B.A., Caius; Lapage, M.A., Magdelene; J. Mason, B.A., Pembroke; Pidcock, non-collegiate; Standert, M.A., Corpus; Wedmore, B.A., St. John's.

UNIVERSITY OF DURHAM.—At a Convocation held on Dec. 14th the following degrees and licences were conferred:—

M.D. (practitioners of fifteen years).—E. Selous, W. Lattey.

M.D.—J. B. Emmerson.

M.B.—T. G. Ainsly, T. Dutton, A. W. W. Dowding, T. C. Sqaunce, G. L. Pardington.

M.S.—A. W. W. Dowding, T. C. Sqaunce.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Dec. 9th:—

Barnes, William George Kynaston, Caversham-road.

Barrow, Lancelot Andrews, Camden-road.

Campbell, Henry William, Claverton-street.

Phillips, Lawrence William Kinglake, Brighton.

Taylor, Benjamin Robert Archer, Dalston.

Thomas, Walter Duncan, Heathcote-street.

The following gentlemen also on the same day passed their Primary Professional Examination:—

William Herbert Smith, St. Thomas's Hospital; William Tibbles, Charing-cross Hospital; Geo. John Wilson, Guy's Hospital.

PRESENTATIONS.—On retiring from the office of Resident Medical Officer at the Victoria Park Hospital for Diseases of the Chest, Dr. Orlebar was presented with a handsome inkstand and writing-case and a beautifully bound Bible; while the porters and servants of the Hospital have taken the opportunity to give as their present, a very complete letter paper case for the table. When the feelings that induce sisters, nurses, porters, and servants thus to mark their appreciation of the services of one who is leaving the hospital to the great regret, but with the sincere good wishes, of the whole medical staff, it cannot but speak well for the efficient and harmonious carrying on of all the work connected with the care of the patients in the wards of the institution.—On Dec. 9th Dr. Halliday Croom was presented with an illuminated address, clock and bronzes, by upwards of one hundred of his pupils in recognition of his clinical teaching at the Royal Maternity Hospital.

BEQUESTS AND DONATIONS TO MEDICAL CHARITIES.

Mr. William Thomson, late of Carden-place, Aberdeen, bequeathed £100 to the Royal Infirmary, and £50 to the Children's Hospital, Aberdeen. Mr. G. Pegley, of the same town, bequeathed £25, and Mr. G. Philip, of Rayne, £5, to the Royal Infirmary. The late Mr. R. P. Jones, of Rodney Wharf, bequeathed £500 to the Newport Infirmary. The Charing-cross Hospital receives £100 under the will of the late Mr. Robert Bell, of Wimbledon. Mr. J. Marshall, late of West Hesterton Hall, bequeathed £200 to the Bradford Infirmary, and £100 to the York County Hospital. By the will of Mr. J. Deverell, late of Purbrook-park, the Winchester County Hospital becomes entitled to £100.

BABY-FARMING.—The Brighton Town Clerk prosecuted on Tuesday in a case before the borough Bench, in which Ann Ascombe, the wife of a milkman, was charged with having for hire three infants under one year old, in an unregistered house. Detective Raggett proved the case, and said he had ascertained in the past twelve months three infants under one year old had died in the defendant's house. There had been no inquests, and though the defendant had obtained certificates, she had not produced them to the coroner—an offence for which the Bench said she was liable to six months' imprisonment. The defendant, who pleaded ignorance of the law, was fined £5, with two months' hard labour in default.—*The Times*.

ROYAL ACADEMY OF ARTS.—Professor John Marshall, F.R.S., will deliver his last lecture, a special one on the Horse, this (Friday) evening at Burlington House. His demonstrations on the Bones, Joints, Muscles, Forms and Movements of Man are given on Mondays, Wednesdays, and Fridays. The last takes place on Friday the 21st proximo.

THE HUNTERIAN ORATION.—This biennial address will be delivered in the theatre of the Royal College of Surgeons on Monday, February 14th, by Mr. Luther Holden, late President of the College, on which day both the library and museum of the institution will be closed.

ROYAL COLLEGE OF SURGEONS.—At a meeting of the Board of Examiners in Anatomy and Physiology for the ensuing year, on the 16th inst., Mr. Arthur E. Durham was elected the chairman in the vacancy occasioned by the retirement of Mr. Christopher Heath.

DR. R. J. LEE, last week, at the British Goat Society, advocated the use, by children, of goats' milk, on the ground of its being more easily assimilable than the lactic secretion of the cow.

THE Taunton Town Council, after many unsuccessful searches, have at length, it appears, come upon a copious source of water near Forches Corner, and the water difficulty may now therefore be regarded as solved.

MR. J. B. LEE, Medical Officer, North Wingfield District, Chesterfield Union, has received a vaccination grant of £20 14s. (second time).

SIR G. B. OWENS, M.D. Glas., has been appointed to be High Sheriff of the city of Dublin.

Medical Appointments.

Intimations for this column must be sent DIRECT to the Office of THE LANCET before 9 o'clock on Thursday Morning, at the latest.

- ADAMS, Mr. M. A., has been reappointed Public Analyst for the County of Kent.
- ALFORD, H. J., M.D., has been appointed Public Analyst for the County of Somerset, vice Stoddart, deceased.
- ATKINSON, F. E., L.R.C.P.L., M.R.C.S.E., has been appointed Medical Officer of Health for Craven Combined District (Skipton Rural), vice Dr. F. W. Barry, appointed Sanitary Commissioner for Cyprus.
- BLUNT, T., M.D., M.R.C.P.Ed., L.R.C.P.L., has been appointed Physician to the Leicester Infirmary and Fever House, vice Barclay, resigned.
- CARRE, G. E., M.B., L.R.C.S.I., Medical Superintendent of the Castlebar Lunatic Asylum, has been appointed Medical Superintendent of the Omagh District Lunatic Asylum.
- CLARK, A., M.D., F.R.C.P., has been appointed Consulting Physician to the Chelsea Hospital for Women, vice Lockhart Clarke, deceased.
- CLARKE, A., L.R.C.P.L., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer to the Fourth District of the Wells Union.
- CORBY, H., M.D., M.Ch., has been appointed Physician to the Cork Mechanics' Mutual Benefit Society, vice O'Sullivan, resigned.
- DAY, D. D., M.B., has been appointed House-Surgeon to the Norfolk and Norwich Hospital.
- EMMERSON, W. L., M.D., has been appointed Public Analyst for the Borough of Stamford.
- FRASER, G. B., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer of Health for Burnham, Somersetshire, vice Moore, resigned.
- HILL, A. B., M.D., has been reappointed Public Analyst for the County of Warwick for one year.
- HUMPHREY, L., M.A., M.B., M.R.C.S.E., has been appointed Resident Medical Officer to the City of London Hospital for Diseases of the Chest, Victoria-park, vice Orlebar, resigned.
- HUNT, E. A., M.R.C.S.E., L.S.A.L., L.R.C.P.Ed., has been appointed Resident Obstetric Assistant to St. George's Hospital.
- HUTCHINSON, J., F.R.C.S., has been appointed Consulting Surgeon to the Chelsea Hospital for Women, vice Curling, retired.
- LAIRD-COX, M.R.C.S.E., L.S.A.L., has been appointed Medical Officer to the Hopesay and Clun District of the Clun Union, vice Bailey, resigned.
- MORGAN, Mr. W., has been reappointed Public Analyst for the County of Cardigan, for one year.
- NORTON, S., M.D., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer to the Biddenden District of the Tenterden Union.
- O'CONNOR, M., L.K.Q.C.P.L., L.R.C.S.I., has been reappointed Medical Officer of Health for the Chatteris Urban Sanitary District.
- PIESSE, Mr. C. H., has been reappointed Public Analyst for the Strand District for one year.
- ROBINSON, F., L.R.C.P.Ed., has been appointed Assistant Medical Officer to the Lincoln Odd Fellows' Medical Institution.
- TAYLOR, T. P., M.R.C.S.E., L.S.A.L., has been appointed House-Surgeon to the Essex and Colchester Hospital.
- WALKER, H. B., L.R.C.S.Ed., L.R.C.P.Ed., has been appointed Junior Resident Medical Officer to the Hospital for Sick Children, Pendlebury, vice Sainsbury, resigned.

Births, Marriages, and Deaths.

BIRTHS.

- HERBERT.—On the 10th inst., at Harpenden, the wife of Jonas Travers Herbert, L.R.C.P., L.F.P.S.G., of Markyate-street, Beds, of a son (posthumous).
- LEACROFT.—On the 10th inst., the wife of J. W. Leacroft, M.B., of Feckenham, Redditch, of a daughter.
- NORTON.—On the 5th inst., at The Grove Lodge, South Tottenham, Middlesex, the wife of Ritchie Norton, L.R.C.P.L., M.R.C.S.E., of a son.
- POCOCK.—On the 14th inst., at The Limes, St. Mark's-road, Notting-hill, the wife of F. Ernest Pocock, M.D., of a daughter.
- SPEED.—On the 20th ult., at Amersham-road, New Cross, the wife of H. A. Speed, M.R.C.S.E., L.R.C.P.Ed., &c., of a daughter.

MARRIAGES.

- BURNETT-DAY.—On the 8th inst., at the Cathedral, Bombay, William Francis Burnett, Surgeon-Major, Army Medical Department, son of the late Robert Burnett, Esq., M.D., of Tullow, County Carlow, Ireland, to Annie Margaret Agnes, daughter of the late Lieut. Colonel John Curry Day, Madras Army.
- COX—CROWLE.—On the 7th inst., at St. Mary Abbott's Church, Kensington, Frederick Augustus Cox, M.R.C.S. Eng., of Dean-street, Park-lane, to Elizabeth Patience (Bessie), only daughter of the late T. R. Crowle, of Kensington.
- HUMPHREYS-ROGER.—On the 4th inst., at the Parish Church, Eagles-cliffe, Robert Humphreys, Fleet Surgeon, R.N., to Annie, daughter of the late Robert Roger, of Stockton-on-Tees.
- KING-STUBBS.—On the 9th inst., at St. Stephen's, South Kensington, by the Rev. E. Huth Walters, Chaplain of Christ Church, Oxon, assisted by the Rev. Joseph Walds, David Alexander King, M.R.C.S.E., of St. Bartholomew's Hospital, to Mary Manuella Stubbs, daughter of the late Charles E. Stubbs, Esq., and Mrs. Stubbs, of 6, Edinburgh-terrace, Kensington Palace, W.

DEATHS.

- CARVER.—On the 8th inst., at Fairlawn, Fulham, Henry John, son of E. J. Carver, aged 9 months.
- JONES.—On the 10th inst., of heart disease, at his residence, Castletown-road, West Kensington, Thomas Rymer Jones, F.R.S., late Professor of Zoology and Comparative Anatomy at King's College, London, aged 70.
- MACLEAN.—On the 3rd inst., at Cairo, Egypt, Thomas Edwin Maclean, M.B., B.S., London University, M.R.C.S.E., aged 29.
- WALTON.—On the 12th inst., after four days' illness, from diphtheria, caught in lodgings at Oxford, Herbert F. G. R. H. Walton, Undergraduate of Lincoln College, Oxford, and late of the Charterhouse (son of Haynes Walton, F.R.C.S., of Brook-street), aged 19.
- WILKS.—On the 14th inst., at Ryde, Alfred Garrett Platt Wilks, M.B. Trin. Coll. Camb., aged 44.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Medical Diary for the ensuing Week.

Monday, Dec. 20.

- ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.
- ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
- METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
- ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
- ST. MARK'S HOSPITAL.—Operations, 2 P.M.; on Tuesday, 9 A.M.
- BROWN INSTITUTION (in the Theatre of the University of London).—5½ P.M. Dr. W. S. Greenfield (Professor-Superintendent): "Further Investigations on Anthrax and Allied Diseases in Man and Animals."
- MEDICAL SOCIETY OF LONDON.—8½ P.M. Mr. Pierce Gould, "On a Case of long-standing Stone in the Bladder without any Kidney Disease." Dr. T. Lauder Brunton, "On the Action of certain Remedies in the Treatment of Chronic Bronchitis and Phthisis."

Tuesday, Dec. 21.

- GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.
- WESTMINSTER HOSPITAL.—Operations, 2 P.M.
- WEST LONDON HOSPITAL.—Operations, 3 P.M.
- PATHOLOGICAL SOCIETY OF LONDON.—8½ P.M. The following Specimens will be shown:—Rheumatism and Gout in the same subject; Diseased Kidneys in a Pig; Erythema-Lupus; Molluscum Fibrosum (living Specimens); Epulis containing Cartilage; Specimens of Ainhum. — The Discussion on "Rickets" will be continued by Mr. Lucas, Dr. Baxter, Dr. Barlow (on so-called Fœtal Rickets), Mr. Shattock (Osseous Lesions in the Fœtus), Dr. Longhurst, Mr. Spencer Watson, and Dr. Goodhart.

Wednesday, Dec. 22.

- NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
- MIDDLESEX HOSPITAL.—Operations, 1 P.M.
- ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
- ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
- ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
- KING'S COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at 1 P.M.
- LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.
- GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
- UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.
- SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.
- BROWN INSTITUTION (in the Theatre of the University of London).—5½ P.M. Dr. W. S. Greenfield (Professor-Superintendent): "Further Investigations on Anthrax and Allied Diseases in Man and Animals." Microscopic Specimens will be exhibited from 4½ P.M.

Thursday, Dec. 23.

- ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
- ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.
- CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
- CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.
- HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M.

Friday, Dec. 24.

- ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
- ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.
- ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, Dec. 25.

- ROYAL FREE HOSPITAL.—Operations, 2 P.M.

CONTRIBUTORS FOR 1881.

THE following Physicians and Surgeons holding Honorary Hospital Appointments, Principal Medical Officers in the establishments of the Army and Navy, and Medical Officers of Health, have intimated their intention of contributing to the columns of THE LANCET during the year 1881. In addition to the provision thus made, we have arranged for the publication of many special Lectures.

- ALDERSON, Sir JAMES, M.D. Oxon., Physician Extraordinary to H.M. the Queen, Consulting Physician to St. Mary's Hospital.
- ALEXANDER, R. GERVASE, M.B. Edin., Senior Physician to the Bradford Infirmary and New Fever Hospital.
- ALEXANDER, W., M.D. Edin., Senior Physician to the Halifax Infirmary and General Dispensary.
- ALLEN, R. G., M.R.C.S. Eng., Medical Officer and Public Vaccinator to the Belper and Heage Districts and Workhouse, Belper Union.
- ALLBUTT, T. CLIFFORD, M.D. Cantab., Physician to the Leeds General Infirmary and Leeds Fever Hospital.
- ALLCHIN, W. H., M.B. Lond., M.R.C.S. Eng., Physician to the Westminster Hospital, Lecturer on Physiology and Pathology to Westminster Hospital Medical School.
- ALLDEN, J. H., M.R.C.S. Eng., Medical Officer of Health for Shirley, Southampton.
- ANGOVE, E. S., M.R.C.S. Eng., Medical Officer of Health, District Medical Officer and Public Vaccinator, Camborne.
- ANNANDALE, T., F.R.C.S. Edin., M.R.C.S. Eng., Surgeon to the Edinburgh Royal Infirmary.
- APPLEBE, E. A., L.R.C.P. Edin., Medical Officer of Health to the Hay Union District.
- ASH, T. L., M.R.C.S. Eng., Medical Officer of Health to the Holsworthy and Okehampton Unions.
- ASHMEAD, G., L.R.C.P. Edin., Surgeon to the Brierley Hill Police, Medical Officer of Health to the Kingswinford No. 2 Stourbridge Union.
- BAKER, J. WRIGHT, M.R.C.S. Eng., Senior Surgeon to the Derbyshire General Infirmary, Surgeon to the County Gaol.
- BAKER, W. MORRANT, F.R.C.S. Eng., Assistant-Surgeon and Lecturer on Physiology at St. Bartholomew's Hospital, Surgeon to the Evelina Hospital for Sick Children.
- BALFOUR, G. W., M.D. St. And., Physician to the Royal Infirmary, Consulting Physician to the Royal Hospital for Children and Queensberry House of Refuge.
- BALKWILL, W. E., M.R.C.S. Eng., Surgeon to the Royal Orthopædic Hospital.
- BANTOCK, G. G., M.D., F.R.C.S. Edin., Surgeon to the Samaritan Free Hospital.
- BARKER, A. E., F.R.C.S.I., Assistant-Surgeon to University College Hospital.
- BARNES, E. G., M.D. Lond., Medical Officer of Health to the Eye Union and Hartismere Rural Districts.
- BARNES, R. M.D., F.R.C.P., Obstetric Physician and Lecturer on Midwifery and Diseases of Women, St. George's Hospital.
- BARR, J., M.B. Glasg., Visiting Surgeon to H.M. Prison, Kirkdale, Physician to Stanley Hospital.
- BARTLEET, T. H., F.R.C.S., Joint Professor of Physiology, Queen's College, Birmingham; Hon. Surgeon, Birmingham General Hospital.
- BLAND, G., L.R.C.P. Edin., Medical Officer and Public Vaccinator for the Eastchurch District and Workhouse, Sheppey Union, Sheerness.
- BOILLÉAU, J. P. H., M.D., Assistant Professor of Pathology to Netley School.
- BOULTON, P., M.D. Edin., Physician to the Samaritan Hospital.
- BRAHAZON, A. B., M.D. King's Coll. Aberd., Physician to the Bath Mineral Water Hospital.
- BRAKENRIDGE, D. J., M.D. Edin., Physician to the Royal Infirmary, Edinburgh.
- BRAITWELL, BYROM, M.D. Edin., Lecturer on the Principles and Practice of Medicine and Medical Diagnosis in the Extra-Academical School of Medicine, Edinburgh.
- BRITTON, T., M.D. St. And., Physician to the Halifax Infirmary and Dispensary.
- BROCK, W. J., M.B. Edin., Physician to the Anderson's College Dispensary, Out-door Accoucheur to the Glasgow Lying-in Hospital.
- BRASH, E. A., M.R.C.S. Eng., Surgeon to the Exeter Dispensary and to the Lying-in Charity.
- BRODHURST, B. E., F.R.C.S. Eng., Surgeon to the Royal Orthopædic Hospital.
- BROOK, C., M.R.C.S. Eng., Surgeon to the County Hospital, Consulting Surgeon to the Lincoln Lunatic Hospital.
- BROWN, COLVILLE, M.D. Edin., Berwick-on-Tweed.
- BROWN, G. A., M.R.C.S. Eng., Chief Surgeon to the Tredegar Iron Works, Certifying Factory Surgeon.
- BRYANT, T., F.R.C.S. Eng., Surgeon and Lecturer on Surgery to Guy's Hospital.
- BULL, W. H., M.R.C.S. Eng., Surgeon to Stony Stratford Cottage Hospital, Surgeon to St. Paul's College.
- BURD, E., M.D. Cantab., Senior Physician to the Salop Infirmary, Consulting Physician to the Salop and Montgomery Lunatic Asylum and Salop County Gaol.
- BURMAN, W. M., L.R.C.P. Lond., M.R.C.S. Eng., Medical Officer of Health to the Wath Union District, Medical Officer to the Wath District of the Rotherham Union.
- BURTON, W., L.R.C.P. Edin., M.R.C.S. Eng., Surgeon to the City of London Lying-in Charity.
- BUTLIN, C. H., M.R.C.S. Eng., Surgeon to the Camborne Dispensary.
- BUZZARD, T., M.D., F.R.C.P., Physician to the National Hospital for the Paralysed and Epileptic.
- BYERS, J. W., M.D. Irel., M.R.C.S. Eng., Physician to the Belfast Hospital for Children.
- CAMERON, H. C., M.D. Glasg., Surgeon to the Royal Infirmary, Lecturer on Surgery to the Royal Infirmary School of Medicine, Examiner in Surgery and Clinical Surgery to the Faculty of Physicians and Surgeons of Glasgow.
- CAMPBELL, W. M., M.D. Edin., Surgeon to the Northern Hospital, Liverpool.
- CARTER, R., M.D. Aberd., Surgeon to the Bath Mineral Water Hospital.
- CASLEY, R. K., M.D. Edin., Honorary Physician to East Suffolk and Ipswich Hospital.
- CHAPPLE, R. A., Surgeon-Major, L.R.C.S.I.
- CHAVASSE, T. F., M.D., F.R.C.S. Edin., Assistant-Surgeon to the Birmingham General Hospital.
- CHIENE, J., M.D., F.R.C.S. Edin., Lecturer on Surgery to the Edinburgh School of Medicine, Surgeon to the Royal Infirmary, Examiner in Anatomy to the University of Edinburgh.
- CLAPPERTON, J. B., L.R.C.P. & L.R.C.S. Edin., Medical Officer of Health to the Stockbridge Union, Medical Officer to the Broughton District of the Stockbridge Union.
- CLAY, C., L.R.C.P. Lond., L.R.C.S. Edin., Medical Officer of Health, Audenshaw.
- CLELAND, J., M.D. Edin., Professor of Anatomy to the University of Glasgow.
- COLEY, F. C., L.R.C.P. Lond., M.R.C.S. Eng., College of Medicine, Newcastle-on-Tyne.
- CORY, R., M.D., M.R.C.S. Eng., Assistant Obstetric Physician to St. Thomas's Hospital, Joint Lecturer on Forensic Medicine to St. Thomas's Hospital Medical School.
- COTTER, S. K., Surgeon-Major, M.B. Dub., Cork.
- COTTLE, W., M.B., F.R.C.S. Eng., Senior Assistant Surgeon to the Hospital for Diseases of the Skin, Blackfriars.

- COUPLAND, S., M.D., F.R.C.P., Physician to the Middlesex Hospital.
- COWELL, G., F.R.C.S. Eng., Senior Surgeon to the Westminster Hospital; Lecturer on Surgery, Practical Surgery, and Ophthalmic Surgery to the Westminster Hospital Medical School.
- CROCKER, H. R., M.D. Lond., Physician to Skin Department, University College Hospital; Assistant-Physician and Pathologist to the East London Hospital for Children.
- CURRAN, W., Surgeon-Major, L.R.C.P. Edin., M.R.C.S. Eng.
- CURNOW, J., M.D., F.R.C.P., Professor of Anatomy, King's College; Examiner in Anatomy, University of London.
- DALE, W., M.D. Lond., Physician to the West Norfolk and Lynn Hospital.
- DARBISHIRE, S. D., M.B. Oxon., M.R.C.S. Eng., Physician to Radcliffe Infirmary, Oxford.
- DARKE, F. P., M.R.C.S. Eng., Surgeon to the Salisbury Infirmary.
- DAVIE, G. S., Surgeon-Major, M.D., L.R.C.S. Edin.
- DAVIES, D., F.R.C.S. Eng., Medical Officer of Health, Aberdare; Certifying Factory Surgeon.
- DAY, W. D., M.D. St. And., Physician to the Samaritan Hospital for Women and Children, London.
- DICKINSON, E. H., M.A. Oxon., M.D., F.R.C.P., Physician to the Northern Hospital, Liverpool.
- DIVER, E., M.D. St. And., Divisional Surgeon to the Metropolitan Police; Consulting Physician to Reedham Asylum for Fatherless Children.
- DOMENICHETTI, R., M.D. Edin., Medical Officer of Health to the Rural and Urban Districts, Louth; Deputy Inspector-General of the Army.
- DONKIN, H. B., M.B., M.R.C.S. Eng., Senior Assistant-Physician to the Westminster Hospital; Physician to the East London Hospital for Children; Lecturer on Medicine to the London School of Medicine for Women.
- DOUGLAS, W. T. P., M.B. Cantab., M.R.C.S. Eng., Newbury, Berks.
- DOWNES, A. H., M.D. Aberd., Medical Officer of Health, Central Essex Combined Districts.
- DRYLAND, J. W., M.R.C.S. Eng., Medical Officer of Health, Kettering; Medical Officer to the Union House and No. 1 District, Kettering.
- DUNCAN, J. M., M.D., Mar. Coll. Aberd., Physician Accoucheur and Lecturer on Midwifery at St. Bartholomew's Hospital; Consulting-Physician to the Hospital for Women, Marylebone-road.
- DUNCANSON, J. J. KIRK, M.D. Edin., Lecturer on Aural Surgery at the Edinburgh School of Medicine; Surgeon to the Dispensary for Diseases of the Ear, Cambridge-street, and Assistant-Surgeon to the Eye Infirmary, Edinburgh.
- DYER, S. S., M.D. St. And., Medical Officer to the Ringwood Union and Workhouse.
- DYSON, W., M.D. Lond., Physician to the Public Hospital and Dispensary, and Lecturer on Physiology and Clinical Medicine at the School of Medicine, Sheffield.
- EADE, P., M.D. Lond., Senior Physician to Norfolk and Norwich Hospital; Consulting-Physician to Norwich Dispensary.
- EDDOWES, A. B. J., M.R.C.S. Eng., Honorary Surgeon to Loughborough Infirmary and Dispensary.
- EDIS, A. W., M.D., Lond., Assistant Obstetric Physician to the Middlesex Hospital; Physician to the British Lying-in Hospital and to the Dressmakers' Provident and Benevolent Institution.
- ELLIOTT, G. F., M.D., T.C.D., Physician to Hull General Infirmary.
- ELDER, G., M.B. Glas., Surgeon to the Hospital for Women, Nottingham.
- ERSKINE, J. L., Brigade Surgeon, M.D., L.R.C.S. Edin.
- FAIRBANK, F. R., M.D. Heidelb., Surgeon to the Doncaster Infirmary and West Riding Reformatory.
- FAYRER, Sir J., K.C.S.I., M.D., F.R.C.S. Edin., F.R.C.S. Eng., Honorary Physician to H.M. the Queen and to H.R.H. the Prince of Wales; Physician to H.R.H. the Duke of Edinburgh, and to the Secretary of State for India in Council; President of the Medical Board, India Office.
- FERGUSON, G. B., M.D. Oxon., Surgeon to the Cheltenham General Hospital, and to the Coburg Dispensary for the Diseases of Women and Children.
- FINLAY, D. W., M.D., Physician to the Royal Hospital for Diseases of the Chest.
- FLINN, D. E., L.R.C.S.I., L.R.Q.C.P.I., Medical Officer of Health to Brownhills Urban District; Senior Surgeon to Brownhills, &c., Collieries.
- FOOTE, H. DOYLEY, M.D. Edin., M.R.C.S. Eng., Senior Surgeon to the Rotherham Public Hospital and Dispensary; District Medical Officer and Public Vaccinator to the Rotherham Union.
- FORD, A. VERNON, L.K.Q.C.P.I., M.R.C.S. Eng., Medical Officer of Health to the Kingston District Portsea Island Union; Deputy Surgeon to H.M. Prison, Portsmouth.
- FOSBROKE, G. H., jun., M.R.C.S. Eng., Medical Officer of Health to the Rural and Urban Districts, Stratford-on-Avon, Evesham, and Alcester.
- FOSTER, BALTHAZAR, M.D. Erlang., Physician to the General Hospital, Birmingham; Consulting Physician to the West Bromwich District Hospital, and to the Ear and Throat Infirmary, Birmingham.
- FOULIS, D., M.D. Glas., Pathologist to the Royal Infirmary, and Lecturer on Pathology to the Royal Infirmary School, Glasgow.
- FOWLER, TREVOR, L.K.Q.C.P.I., Medical Officer of Health to the Epping, North Weald, Theydon Bois, and Theydon Garnon Districts, Epping Union.
- FOX, E. LONG, M.D. Oxon., Consulting Physician to the Bristol Royal Infirmary.
- FOX, J. MAKINSON, M.R.C.S. Eng., Medical Officer of Health to the Midland Cheshire Combined Districts.
- FOX, WILSON, M.D. Lond., Physician Extraordinary to H.M. the Queen; Physician in Ordinary to their R.I.H. the Duke and Duchess of Edinburgh; Physician to University College Hospital.
- FRASER, J. J., L.R.C.P. Edin., M.R.C.S. Eng., Medical Officer of Health to Clitheroe Borough, and Medical Officer to Clitheroe Workhouse.
- FUSSELL, E. F., M.B. Aberd., M.R.C.P. Lond., Medical Officer of Health for East Sussex; Physician to the Sussex County Hospital.
- GANT, F. J., F.R.C.S. Eng., Senior Surgeon to the Royal Free Hospital.
- GASKOIN, G., M.R.C.S. Eng., Surgeon to the British Hospital for Diseases of the Skin, Great Marlborough-street; Surgeon to the Artists' Benevolent Fund.
- GAYLOR, E., L.R.C.P. Edin., Medical Officer of Health to the Heage Urban District, Belper Rural District, and Alfreton and Ripley Urban Districts.
- GLYNN, T. R., M.B. Lond., M.R.C.S. Eng., Physician to the Royal Infirmary, Liverpool; Medical Officer to H.M. Customs; Physician to Cathcart Blind Asylum.
- GODWIN, C. H. Y., Surgeon-Major, L.R.C.P. Lond., M.R.C.S. Eng., Royal Arsenal, Woolwich.
- GOLDIE, G., M.R.C.S. Eng., Medical Officer of Health to the Borough of Leeds.
- GOODHART, J. F., M.D. Aberd., Assistant-Physician and Demonstrator of Morbid Anatomy to Guy's Hospital, Physician for Out-patients to the Evelina Hospital for Children.
- GORHAM, R. V., M.R.C.S. Eng., Admiralty Surgeon and Agent for Misner Haven and Dunwich.
- GOULD, A. P., M.S. Lond., F.R.C.S., Assistant Surgeon to the Westminster Hospital; Lecturer on Anatomy, Westminster Hospital Medical School.
- GOWERS, W. R., M.D., F.R.C.P., Assistant Professor of Clinical Medicine, University College; Assistant-Physician to the National Hospital for the Paralysed and Epileptic.
- GOWLAND, G. R., L.R.C.P. & L.R.C.S. Ed., Medical Officer and Public Vaccinator to the Third District of the Mansfield Union, Medical Officer of Health for Warsop.
- GRAMSHAW, F. S., L.R.C.S. Edin., Medical Officer, Medical Officer of Health and Public Vaccinator, Stillington District, Easingwold Union.
- GRAY, F. A., L.R.C.P. Lond., Medical Officer and Public Vaccinator to the Fourth District of the Honiton Union.
- GREEN, T. H., M.D. Lond., Physician and Lecturer on Pathological Anatomy at Charing-cross Hospital, Assistant-Physician to the Consumption Hospital, Brompton.
- GREENFIELD, W. S., M.D., F.R.C.P., Physician Superintendent to the Brown Institution.
- GUPPY, T. STOKES, M.D. King's Coll. Aberd., Admiralty Surgeon and Agent, Surgeon to Falmouth Dispensary and to Great Western Railway Provident Society.
- GUTTERIDGE, E. P., M.R.C.S. Eng., Medical Officer of Health to the Urban and Port Sanitary Districts of Maldon.
- HALL, J. G., M.R.C.S. Eng., Surgeon to Swansea Hospital and House of Correction.
- HAMILTON, J., F.R.C.S. Ed., Medical Officer and Public Vaccinator to the Gresley District, Burton-on-Trent Union, Medical Officer of Health to the Swadlincote Urban District.

- HANNAN, F. J., M.D., Medical Officer to the Downton District, and Medical Officer of Health to the Second Rural District of the Alderbury Union.
- HARDCASTLE, N., M.R.C.S. Eng., Surgeon to the Union Workhouse, Medical Officer of Health to the Benwell and Fenham Union Districts, Surgeon to H.M. Prisons, Newcastle-on-Tyne.
- HARLEY, J., M.D. Lond., Physician to and Lecturer on General Anatomy and Physiology at St. Thomas's Hospital.
- HARRIES, T. D., L.R.C.P. Lond., F.R.C.S. Eng., Honorary Surgeon to the Aberystwith Infirmary and Cardiganshire General Hospital.
- HARRISON, C., M.D. St. And., Physician to the County Hospital and to the General Dispensary, Medical Officer of Health to the Lincoln City and Rural District.
- HAVILAND, A., M.R.C.S. Eng., Medical Officer of Health to the Northampton Combined Districts, Lecturer on the Geography of Disease at St. Thomas's Hospital.
- HAWARD, J. WARRINGTON, F.R.C.S. Eng., Assistant-Surgeon, with Charge of Orthopædic Department, and Lecturer on Practical Surgery, at St. George's Hospital, Surgeon to Atkinson-Morley Hospital.
- HICKINBOTHAM, J., M.D., Ch.M. Heidelb., Consulting Obstetric Physician to the Birmingham Provident Dispensary, Physician to the Birmingham and Midland Hospital for Women.
- HILL, B., F.R.C.S. Eng., Surgeon to University College Hospital, Professor of Clinical Surgery and Teacher of Practical Surgery at University College.
- HIME, T. WHITESIDE, M.B. Dub., L.R.C.S. Ed., Medical Officer to the Sheffield Hospital for Women, Lecturer on Midwifery and Diseases of Women and Children at the Sheffield School of Medicine.
- HITCHINS, C. VERNON, M.R.C.S. Eng., Honorary Surgeon to the Weston-super-Mare Hospital and Dispensary, Medical Officer of Health to the Weston-super-Mare Urban District.
- HODGES, F. H., F.R.C.S. Edin., Ophthalmic Surgeon to the Leicester Infirmary.
- HOGG, F. R., Surgeon-Major, M.D. St. And., Netley.
- HOILE, E., Surgeon-Major, M.D., L.R.C.S. Edin., Aldershot.
- HOLDEN, J. SINCLAIR, M.D. Qu. Univ. Irel., Medical Officer of Health to the Sudbury Union and Borough, Medical Officer to St. Leonards Hospital.
- HOLMES, T., F.R.C.S. Eng., Chief Surgeon to the Metropolitan Police, Surgeon and Lecturer on Surgery at St. George's Hospital.
- HULKE, J. W., F.R.C.S. Eng., Surgeon and Lecturer on Surgery to Middlesex Hospital and the Royal London Ophthalmic School.
- HUTCHINSON, V., M.D. St. And., Medical Officer of Health and Medical Officer to the Bishop Auckland District, Auckland Union.
- JACKSON, J., L.R.C.P. & L.R.C.S. Edin., Medical Officer of Health for Denholmeate.
- JACKSON, J. HUGHLINGS, M.D. St. And., Physician to the Hospital for Epilepsy and Paralysis, Physician to the London Hospital.
- JACOB, E. H., M.B., M.R.C.S. Eng., Physician to Leeds Public Dispensary.
- JAMES, M. PROSSER, M.D. St. And., Lecturer on Materia Medica and Therapeutics at the London Hospital, Physician to the Hospital for Diseases of the Throat.
- JAMESON, J., Surgeon-Major, M.D. Glasg., L.R.C.S. Ed., Portsmouth.
- JELLEY, R., M.R.C.S. Eng., Medical Officer of Health to the Totnes Urban District, Medical Referee to the Life Association of Scotland, &c. Assurance Companies.
- JESSOP, T. R., F.R.C.S. Eng., Honorary Surgeon to the Leeds General Infirmary, Lecturer on Surgery at the Leeds School of Medicine.
- JOHNSON, G., M.D. Lond., Physician to King's College Hospital, Professor of Clinical Medicine at King's College.
- JOHNSON, METCALFE, M.R.C.S. Eng., Surgeon-Major, Royal Lancashire Militia; Surgeon to the Coastguard and the Borough Police, Lancaster.
- JOHNSTONE, A. A. W., F.R.C.S. Eng., Consulting Surgeon to the Brighton Hospital for Sick Children, and Brighton and Sussex Throat and Ear Dispensary.
- JONES, A. E., M.D. Edin., Assistant-Surgeon to the Manchester Royal Eye Hospital.
- JONES, H. MACNAUGHTON, M.D. Qu. Univ. Irel., Professor of Midwifery at Queen's College, Cork; Surgeon to the Cork Ophthalmic and Aural Hospital; Physician to the Cork Fever Hospital.
- JONES, SYDNEY, M.B. Lond., F.R.C.S. Eng., Senior Surgeon and Lecturer on Surgery to St. Thomas's Hospital, Consulting Surgeon to the Central London Throat and Ear Hospital.
- JONES, J. TALFOURD, M.B. Lond., Physician to the Brecknock county and Borough General Infirmary.
- KEITH, T., M.D., F.R.C.S. Edin., Physician to the Edinburgh Ear Dispensary.
- KENNEDY, H., M.B. Dub., F.K.Q.C.P. Irel., Physician to the Whitworth Hospital, Drumcondra; Physician to Simpson's Hospital.
- KENT, J. C., M.R.C.S. Eng., Medical Officer to the Third District of the Malling Union, Medical Officer of Health to the Wrotham Urban District.
- LAWSON, G., F.R.C.S. Eng., Surgeon to the Royal London Ophthalmic Hospital, Moorfields, and to the Middlesex Hospital; Lecturer on Surgery at the Middlesex Hospital.
- LAWTON, H. A., L.R.C.P. Lond., M.R.C.S. Eng., Medical Officer of Health to the Poole Urban and Port Districts, Medical Officer to the Poole Fever Hospital.
- LEE, F. F., M.B. Lond., F.R.C.S. Eng., Physician to the Salisbury General Infirmary.
- LLOYD, H. J., L.R.C.P. Edin., Medical Officer and Public Vaccinator to the Barmouth District, Dolgelly Union.
- LLOYD-ROBERTS, J., M.B. Edin., Medical Officer to the Denbighshire General Infirmary.
- LOW, R. BRUCE, M.D. Edin., Medical Officer and Public Vaccinator to the Helmsley District and Workhouse; Medical Officer of Health, Helmsley.
- LOWE, J., M.D. Edin., Medical Attendant to their R.H. the Prince and Princess of Wales at Sandringham, Consulting Surgeon to the West Norfolk and Lynn Hospital.
- LOWE, S., L.R.C.P. Edin., M.R.C.S. Eng., Surgeon to the Lincoln County Hospital, Medical Officer to the Eighth District of the Lincoln Union.
- LOWNDS, T. M., M.D. Edin., Egham Hill, late Professor of Anatomy and Physiology, Grant Medical College, Bombay.
- LUCAS, H., M.R.C.S. Eng., Surgeon to the County Gaol and County Hospital, Huntingdon.
- LUCAS, R. C., M.B. Lond., F.R.C.S. Eng., Assistant-Surgeon and Demonstrator of Operative and Practical Surgery to Guy's Hospital, Surgeon to the Evelina Hospital for Sick Children.
- LYSTER, C. E., M.D. St. And., Surgeon to the Toxteth Park Workhouse Infirmary, Liverpool.
- MACDONNELL, H., H., M.D. Dub., Surgeon to the Louth County Infirmary and County Gaol.
- MACKENZIE, STEPHEN, M.D., F.R.C.P., Senior Assistant-Physician and Lecturer on Pathology to the London Hospital.
- MACKINDER, D., M.D. St. And., F.R.C.S. Edin., Consulting Surgeon to the Gainsborough Dispensary.
- MACKINTOSH, A., M.D. Glasg., Medical Officer to the Chesterfield, &c. Unions.
- MACLAGAN, J. M'G., M.D. Edin., Medical Officer of Health to the Hexham and Haltwhistle Rural Districts.
- MACLAREN, R., M.D. Edin., Surgeon to the Cumberland Infirmary.
- MACNAMARA, C., F.R.C.S. Eng., Surgeon to the Westminster Hospital and the Royal Westminster Ophthalmic Hospital.
- MARSHALL, J., F.R.C.S. Eng., Professor of Surgery to University College, Surgeon to University College Hospital, Consulting Surgeon to the Brompton Consumption Hospital.
- MASON, F., F.R.C.S. Eng., Surgeon and Lecturer on Anatomy to St. Thomas's Hospital, Consulting Surgeon to St. Pancras and Northern Dispensary.
- MASON, S. B., L.R.C.P. Edin., Medical Officer of Health at Pontypool.
- MEADE, R. H., F.R.C.S. Eng., Consulting Surgeon to the Bradford Infirmary and to the Fever Hospital.
- MILLER, Sir W., M.B. Dub., Surgeon to the County Derry Infirmary, Medical Officer to the County Derry Gaol and Londonderry Post-office.
- MOFFAT, T., M.D. St. And., Hawarden.
- MITCHINSON, G., L.K.Q.P.I., M.R.C.S. Eng., Physician to the County Hospital and Lunatic Hospital, Lincoln.
- MONRO, C. E., L.R.C.P. Edin., Surgeon to the Montgomeryshire Infirmary.
- MONTGOMERY, J. B., M.D. Glas., Physician to the West Cornwall Infirmary and Dispensary.
- MOORE, SANDFORD, Surgeon-Major, M.B. Dub.
- MOORE, W., M.D. Dub., Physician to the Institution for the Diseases of Children; King's Professor of the Practice of Medicine, Trinity College, Dublin.
- MORGAN, J. H., F.R.C.S. Eng., Assistant-Surgeon to the West London Hospital and to the Hospital for Sick Children, Great Ormond-street; Surgeon to St. George's, Hanover-square, Dispensary.
- MORRIS, E., M.D. St. And., F.R.C.S. Eng., Surgeon to the Spalding Dispensary and Union Infirmary.

- MORRIS, J. A., M.R.C.S. Eng., Medical Officer to the Industrial Schools and Carleon District of the Newport Union, Monmouthshire.
- MUNRO, R., M.D. Edin., Surgeon to the Second Administrative Battalion, Ayrshire Rifle Volunteers.
- MURRAY, W. F., L.R.C.S. Edin., Medical Officer and Public Vaccinator to the Forfar Parochial District.
- MURRELL, W., M.D., M.R.C.P. Lond., M.R.C.S. Eng., Senior Assistant-Physician to the Royal Hospital for Diseases of the Chest, Lecturer on Practical Physiology at Westminster Hospital.
- MUSCROFT, H., M.D. St. And., L.R.C.P. Lond., Medical Officer of Health to the Pontefract Rural District.
- NAISMITH, W. J., M.D. Edin., Consulting Surgeon to the Ayr Fever Hospital and Dispensary, Medical Officer to the Ayr Industrial Schools.
- NESHAM, T. C., M.D. Edin., Lecturer on Midwifery to the University of Durham College of Medicine, and Physician-Accoucheur to the Newcastle-on-Tyne Lying-in Hospital.
- NETHERCLIFT, W. H., M.R.C.S. Eng., Resident Medical Superintendent to the Chelsea Infirmary.
- NETTLESHIP, E., F.R.C.S. Eng., Ophthalmic Surgeon and Lecturer on Ophthalmic Surgery to St. Thomas's Hospital.
- NEWTON, L., M.R.C.S. Eng., Medical Officer of Health and Medical Officer to the Alconbury and Sawtry Districts of the Huntingdon Union.
- NORTH, S. W., M.R.C.S. Eng., Surgeon to the York Union Workhouse and Fever Hospital.
- NOTTER, J. L., M.D. Dub., Surgeon-Major, A.M.D.; Assistant-Professor of Military Hygiene in the Army Medical School, Netley.
- NUNN, P. W. G., L.R.C.P. Lond., M.R.C.S. Eng., Honorary Medical Officer to St. Mary's Home for Invalid Ladies, and Honorary Surgeon to the Hospital for Diseases of the Hip in Childhood, Bournemouth.
- O'DWYER, T. F., M.D. Qu. Univ. Irel., Surgeon-Major, A.M.D.
- O'NEILL, W., M.D., M.R.C.P. Lond., Physician to the Lincoln Lunatic Hospital, &c.
- ORMEROD, J. A., M.R.C.P. Lond., M.R.C.S. Eng., Casualty Physician to St. Bartholomew's Hospital; Assistant-Physician to the City of London Hospital for Diseases of the Chest, and to the Metropolitan Free Hospital.
- PAGE, D., M.D. Edin., Medical Officer of Health to the Westmoreland, &c. Unions.
- PAGE, H. W., M.B., F.R.C.S. Eng., Assistant-Surgeon to St. Mary's Hospital; Lecturer on Practical Surgery in St. Mary's Hospital Medical School.
- PAGET, G. E., M.D. Cantab., F.R.S., Physician to Addenbrooke's Hospital, Regius Professor of Physics to the University of Cambridge.
- PARKER, R., M.B. Lond., F.R.C.S. Eng., Lecturer on Surgery and Teacher of Practical and Operative Surgery to the Liverpool School of Medicine.
- PARKER, R. W., M.R.C.S. Eng., Assistant-Surgeon to the East London Hospital for Children.
- PATERSON, H. F., Surgeon-Major, M.D. Aberd., F.R.C.S. Edin.
- PAULSON, W., L.R.C.P. Lond., Medical Officer to Rothley District and Workhouse, Medical Officer of Health and Public Vaccinator for Barrow Union, Loughborough.
- PEMBERTON, O., F.R.C.S. Eng., Surgeon to the Birmingham General Hospital, Professor of Surgery to Queen's College, Birmingham.
- PHILIPSON, G. H., M.D. Cantab., F.R.C.P. Lond., Senior Physician to the Newcastle-on-Tyne Infirmary, Professor of Medicine to the University of Durham.
- PHILLIPS, H. H., M.D. Dub., Surgeon to the Reading Dispensary.
- PICK, T. P., F.R.C.S. Eng., Surgeon and Lecturer on Anatomy to St. George's Hospital.
- PIERCE, F. M., M.D., Queen's Univ. Irel., L.R.C.P. Lond., Senior Surgeon to the Institution for Diseases of the Ear, Manchester.
- PIRRIE, W., M.D. Edin., Professor of Surgery to the University of Aberdeen, Senior Surgeon to the Aberdeen Royal Infirmary.
- POLLOCK, A. J., M.D. St. And., F.R.C.P. Lond., Senior Physician and Lecturer on the Principles and Practice of Medicine to the Charing-cross Hospital.
- POLLOCK, J. E., M.D. Aberd., F.R.C.P. Lond., Senior Physician to the Brompton Hospital for Consumption.
- POLLOK, R., M.B. Glasg., Surgeon to Anderson's College Dispensary, Glasgow.
- POORE, G. V., M.D., F.R.C.P., Assistant-Professor of Clinical Medicine, University of London; Physician to the Royal Infirmary for Children and Women, Waterloo-road.
- PORTER, J., M.R.C.S. Eng., Medical Officer of Health for Fleetwood Port and Urban District.
- POWER, H., M.B., F.R.C.S., Senior Ophthalmic Surgeon and Lecturer on Ophthalmology, St. Bartholomew's Hospital.
- PRATT, W., M.D. Liège, F.R.C.S. Eng., Surgeon to the Montgomeryshire Infirmary.
- PRICKETT, M., M.D., M.R.C.S. Eng., Physician to the Samaritan Free Hospital and to the Western General Dispensary.
- PRIEST, A., L.R.C.P. Edin., M.R.C.S. Eng., District Medical Officer to the Edmonton and Epping Unions.
- PRITCHARD, G. F., L.K.Q.C.P.I., M.R.C.S. Eng., Medical Officer of Health, Medical Officer and Public Vaccinator to the Fourth District of the Faversham Union.
- PURCELL, F. A., M.D., Surgeon to the Cancer Hospital, Brompton.
- PUZEY, C., L.R.C.P. Lond., Consulting Surgeon for the Liverpool District of the London and North-Western Railway, Honorary Surgeon to the Liverpool Northern Hospital.
- PYE, W., M.R.C.S. Eng., Assistant-Surgeon and Lecturer on Physiology to St. Mary's Hospital.
- QUIRK, M., M.D. Queen's Univ. Irel., Medical Officer of Health for Blaenavon, District Medical Officer and Public Vaccinator to the Abergavenny Union.
- RALFE, C. H., M.D. F.R.C.P., Lecturer on Physiological Chemistry, St. George's Hospital.
- REID, J. C., M.D. Glasg., Union Medical Officer and Medical Officer of Health to the Newbiggin Urban District.
- RIDPATH, D., M.D. Edin., Medical Officer of Health, Great Driffield; Medical Officer to the Driffield Cottage Hospital.
- RINGER, SYDNEY, M.D. Lond., Professor of Medicine to University College; Physician and Professor of Clinical Medicine to University College Hospital; Examiner in Materia Medica to the University of London.
- ROBERTS, C., M.R.C.S. Eng., Medical Officer of Health to the Uxbridge Rural District.
- ROBERTS, F. T., M.D. Lond., Physician to University College Hospital; Assistant-Physician to the Brompton Consumption Hospital.
- ROBERTSON, WM., Surgeon-Major, M.B. Aberd.
- ROBERTSON, W. H., M.D. Edin., F.R.C.P. Lond., Consulting Physician to the Devonshire Hospital and Buxton Bath Charity, Buxton.
- ROBINSON, T., L.R.C.P. Lond., Surgeon to St. John's Hospital for Skin Diseases.
- RODWELL, E. M., M.R.C.S. Eng., Medical Officer of Health to the Loddon and Clavering Union.
- ROGERS, G. G., M.D. St. And., Senior Physician to the West London Hospital, and to the Royal Hospital for Diseases of the Chest.
- ROPER, G., M.D. Aberd., Physician to the Eastern Division of the Royal Maternity Charity, and to the Royal Infirmary for Children and Women.
- ROSS, J., M.D. Aberd., Physician to the Manchester Southern Hospital for Diseases of Women and Children.
- ROUSE, J., F.R.C.S. Eng., Surgeon to, and Lecturer on Surgery at, St. George's Hospital; Surgeon to the Royal Westminster Ophthalmic Hospital.
- RYDING, G., M.D. St. And., Medical Officer of Health for the Neath Urban District.
- SANDFORD, V., M.D., Medical Officer of Health for the City and County of Hereford.
- SAUNDBY, R., M.D. Edin., Assistant-Physician to the Birmingham General Hospital.
- SAUNDERS, C. E., M.D. Aberd., Medical Officer of Health for the Hertfordshire and Middlesex Combined District.
- SAVORY, W. S., M.B. Lond., F.R.C.S. Eng., Surgeon and Lecturer on Surgery to St. Bartholomew's Hospital; Surgeon to Christ's Hospital; Consulting Surgeon to the London Fever Hospital.
- SEATON, E., M.D. Lond., Medical Officer of Health for the Borough of Nottingham; Physician to the Nottingham General Dispensary.
- SEMON, F., M.D. Berlin, Physician to the Hospital for Diseases of the Throat and Chest; Medical Officer (in reserve) of the Prussian Army.
- SHEA, J., M.D. St. And., Physician to the Royal Berkshire Hospital, Reading; Medical Officer of Health for the Reading and Wokingham Districts.
- SHELDON, E. M., M.R.C.S. Eng., Honorary Surgeon to the Stanley Hospital, and to the Industrial Ragged Schools, Liverpool.

- SHUTTLEWORTH, G. E., M.D. Heidelb., Medical Superintendent to the Royal Albert Asylum, Lancaster.
- SINCLAIR, R., M.D. Glasg., Physician to the Dundee Royal Infirmary.
- SKERRITT, E. M., M.D. Lond., Physician to the Bristol General Hospital; Lecturer on Medicine and Pathology to the Bristol Medical School.
- SLADE-KING, E., M.D. Edin., Medical Officer of Health for the Ilfracombe, Great Torrington, and Dulverton Districts.
- *SLEIGHTHOLME, J. P., L.R.C.P. Lond., Medical Officer for the Ormesby District of the Middlesborough Union; House-Surgeon to the North Ormesby Cottage Hospital.
- SMITH, F. P., M.B. Lond., M.R.C.S. Eng., Physician to the Shepton Mallet Hospital.
- SMITH, R. S., M.D. Lond., Physician to the Bristol Royal Infirmary; Lecturer on Physiology and Dental Anatomy and Physiology to the Bristol Medical School.
- SMITH, S. C., L.R.C.P. Edin., M.R.C.S. Eng., Surgeon to the Halifax Infirmary.
- SMITH, THOS., F.R.C.S. Eng., Surgeon to St. Bartholomew's Hospital, and Lecturer on Anatomy at the Medical School; Surgeon to the Children's Hospital, Great Ormond-street; Examiner in Surgery to the Royal College of Physicians of London.
- SMITH, T. G., M.D. Trin. Coll. Dub., Assistant-Physician to the London Hospital, Physician to the Royal Hospital for Diseases of the Chest.
- SMYTH, W. J., M.D. Qu. Univ. Irel., Medical Officer of Health at Shipley, Yorkshire; Medical Officer to the Seventh District of the North Bierley Union.
- SNOW, H. L., M.D. Lond., Surgeon to the Cancer Hospital, Brompton.
- SPEAR, J., L.R.C.P. Edin., M.R.C.S. Eng., Local Government Board, Whitehall.
- SQUIRE, A. J. B., M.B. Lond., M.R.C.S. Eng., Surgeon to the British Hospital for the Diseases of the Skin.
- STARTIN, J., M.R.C.S. Eng., Surgeon to St. John's Hospital for Diseases of the Skin.
- STEPHENSON, F. L., M.B. Glasg., Medical Officer and Public Vaccinator to the Bradninch and Butterleigh District of the Tiverton Union; Medical Officer of Health, Honiton.
- STRANGE, W., M.D. Edin., Senior Physician to the Worcester Infirmary.
- STREATFEILD, J. F., F.R.C.S. Eng., Surgeon to the Royal London Ophthalmic Hospital, Moorfields; Ophthalmic Surgeon to University College Hospital.
- STURGE, W. A., M.B. Lond., Assistant-Physician and Pathologist to the Royal Free Hospital, Lecturer on Pathology to the London School of Medicine for Women.
- *STURGES, OCTAVIUS, M.D. Cantab., Physician to, and Lecturer on Medicine at, Westminster Hospital; Assistant-Physician to the Hospital for Sick Children, Great Ormond-street.
- SUTTON, H. G., M.R.C.S. Eng., Medical Officer of Health for Sittingbourne and for the Milton Rural District.
- SWABY-SMITH, C., M.R.C.P. Edin., M.R.C.S. Eng., Honorary Surgeon to the Bootle Borough Hospital, Liverpool; Medical Officer to the Liverpool General Post-office.
- SWAIN, W. P., F.R.C.S. Eng., Surgeon to the Royal Albert Hospital and Eye Infirmary, Devonport.
- SYMMONS, R. F., M.R.C.S. Eng., Surgeon to the Essex and Colchester Hospital, Medical Officer to the Eastern Counties Asylum for Idiots.
- *SYMPSON, T., L.R.C.P. Edin., F.R.C.S. Eng., Surgeon to the Lincoln County Hospital, General Dispensary, and Lunatic Hospital.
- TAYLOR, J. W., M.D. St. And., Medical Officer of Health for the Scarborough Urban District, Surgeon to the Scarborough Dispensary.
- TAYLOR, W., Surgeon-Major, Army Medical Department, M.D. Glasg.
- THOMAS, LL., M.D. Brussels, Surgeon to the Central London Throat and Ear Hospital.
- THOMAS, W. R., M.D. Qu. Univ. Irel., Physician to the Sheffield Public Hospital and Dispensary.
- THOMPSON, E. C., M.B. Trin. Coll. Dub., Surgeon to the Tyrone County Infirmary and Gaol.
- THOMPSON, E. S., M.P. Lond., Physician to the Consumption Hospital, Brompton, Gresham Professor of Medicine.
- THOMPSON, R. E., M.P. Cantab., Senior Assistant-Physician to the Hospital for Consumption, Brompton.
- THOMPSON, Sir HENRY, F.R.C.S. Eng., Surgeon Extraordinary to H.M. the King of the Belgians, Consulting Surgeon to University College Hospital.
- THOMSON, W., M.D. Glasg., Consulting Surgeon to Peterborough Infirmary.
- THORNTON, J. K., M.B. Edin., Surgeon to the Samaritan Free Hospital for Women and Children.
- TIBBITS, E. T., M.D. Lond., M.R.C.S. Eng., Physician to the Bradford Infirmary and to the Fever Hospital.
- TOBIN, R. F., Surgeon-Major, L.K.Q.C.P. Irel., Netley.
- TREVES, F., F.R.C.S. Eng., Assistant-Surgeon to, and Senior Demonstrator of Anatomy at, the London Hospital.
- TUCKWELL, H. M., M.D. Oxon., Physician to the Radcliffe Infirmary, Oxford, Consulting Physician to Warneford Lunatic Asylum.
- TURNER, F., M.R.C.S. Eng., Honorary Medical Officer to the Buxton and Devonshire Hospital, Medical Officer of Health for Buxton Urban District.
- TWEEDY, J., F.R.C.S., Assistant Surgeon to the Royal London Ophthalmic Hospital, Moorfields.
- VACHER, F., F.R.C.S. Ed., Physician to the Birkenhead Fever Hospital.
- VEALE, H. R. L., Surg.-Major, Army Medical Department, M.D. Edin. Netley.
- WAHLTUCH, A., M.D. Kieff, L.R.C.P. Lond., Honorary Physician to the Hulme Dispensary, Manchester.
- WALKER, J. S., M.D. St. And., Medical Officer of Health to Hanley, &c. Rural Districts.
- WALKER, J. W., M.B. Lond., M.R.C.S. Eng., Medical Officer of Health for Spilsby Rural District.
- WALKER, T. H., L.R.C.P. & L.R.C.S. Ed., Medical Officer of Health for the Longtown Rural Sanitary District, Cumberland.
- WALSH, T. W., F.R.C.S. Eng., Surgeon to the Worcester General Infirmary.
- WALTER, WM., M.A., M.D., Obsteric Surgeon to St. Mary's Hospital, and the Manchester and Salford Lying-in Hospital.
- WALTERS, J. H., M.R.C.S. Eng., Assistant-Surgeon to the Royal Berkshire Hospital, Reading.
- WATERS, E., M.D. Edin., Consulting Physician to the Chester General Infirmary.
- WATSON, A., M.D. Edin., Honorary Surgeon to Hulme Dispensary, Manchester.
- WATSON, E., M.D. Glasg., Surgeon and Lecturer on Clinical Surgery to the Glasgow Royal Infirmary.
- WATSON, W. T., M.D., Medical Officer of Health for Tottenham.
- WEAR, A. T., L.R.C.P. Lond., M.R.C.S., Medical Officer to the Northern Counties Hospital for Diseases of the Chest, Newcastle-on-Tyne.
- WEAVER, J., M.D. St. And., Medical Officer of Health for Longton, Staffordshire.
- WEEKES, H., F.R.C.S. Eng., Medical Officer of Health for Melksham, Wiltshire, Urban District.
- WELLINGS, R., M.R.C.S. Eng., Medical Officer of Health and Medical Officer to Catherington Union, Hampshire.
- WHIPHAM, T. T., M.B. Oxon., F.R.C.P. Lond., Physician and Lecturer on Pathology, and Physician in Charge of Department for Diseases of the Throat, at St. George's Hospital.
- WHISTLER, W., McN., M.D. Pennsylvania, M.R.C.P. Lond., Physician to the Hospital for Diseases of the Throat and Chest; Honorary Physician to the National Training School for Music.
- WICKS, W. C., M.B. Edin., Physician to the Hospital for Sick Children, Newcastle-on-Tyne.
- WILLETT, A., F.R.C.S. Eng., Assistant-Surgeon and Instructor of Probationary Nurses to St. Bartholomew's Hospital; Surgeon to the Metropolitan Convalescent Institution, Walton-on-Thames, and to St. Luke's Hospital for Lunatics.
- WILLIAMS, A. WYNN, M.D., Physician to the Samaritan Free Hospital for Diseases of Women and Children.
- WILLIAMS, J., M.D., F.R.C.P., Assistant Physician and Assistant Professor of Midwifery, University College Hospital.
- WILLIAMS, W. E., F.R.C.S. Edin., M.R.C.S. Eng., Medical Officer of Health for the Bedwellty Rural District and Abertillery Urban District, near Newport, Monmouthshire.
- WILLIAMSON, J. M., M.D. Edin., Surgeon to the Ventnor Hospital for Consumption, Medical Officer to the Bonchurch Convalescent Home of the Royal Hants County Hospital.
- WILLMORE, F. W., M.R.C.S. Eng., Consulting Surgeon to the Walsall Cottage Hospital.
- WILL, J. C. O., M.D., C.M., F.R.S. Edin., Surgeon and Lecturer on Clinical Surgery to the Aberdeen Royal Infirmary.
- WILLS, C., M.R.C.S. Eng., Mansfield.
- WILSON, W. D., Surgeon-Major, Army Medical Department, M.B. Dub.

WITHINGTON, J. B., M.R.C.S. Eng., Medical Officer of Health for the Doncaster Urban District, Surgeon to the Yorkshire Institution for the Deaf and Dumb.

WOAKES, E., M.D. Lond., Consulting Physician to the Luton Cottage Hospital; Surgeon to the Metropolitan Ear Infirmary, Great Titchfield-street, London.

WOLFE, J. R., M.D. Glasg., Ophthalmic Surgeon and Lecturer on Oculistic Surgery to the Aberdeen Royal Infirmary.

WOOD, JOHN, F.R.S., F.R.C.S., Professor of Clinical Surgery to King's College, and Surgeon to King's College Hospital.

WOOD, W., M.D. St. And., Physician to St. Luke's Hospital, London.

WOODS, G. A., L.R.C.P. Edin., M.R.C.S. Eng., Honorary Surgeon to the Southport Infirmary and Dispensary.

YEATS, W., M.D. Aberd., Surgeon to the Ardwick and Ancoats Hospital and Dispensary, Manchester.

YELD, H. J., M.D. St. And., Physician to the Sunderland Corporation Hospital, Medical Officer of Health and Analyst for the Borough of Sunderland, and Medical Officer for the Port of Sunderland.

YEO, I. B., M.D. Lond., Physician to King's College Hospital, Assist.-Physician to the Brompton Hospital for Diseases of the Chest.

YOUNG, W., M.D. Durh., Honorary Surgeon to the Malton Dispensary.

Professor BALL, of the Paris School of Medicine.

Professor BROWN-SEQUARD, of the Paris School of Medicine.

Professor CHARCOT, of the Paris School of Medicine.

Dr. DAMASCHINO, Physician to the Paris Hospitals.

Dr. DIEULAFOY, Physician to the Paris Hospitals.

Dr. FERRIER, Surgeon to the Paris Hospitals.

Professor FOURNIER, of the Paris School of Medicine.

Dr. GALEZOWSKI, Paris.

Dr. GELLE, Paris.

Dr. GOMBAULT, Physician to the Paris Hospitals.

Dr. ALPHONSE GUERIN, Surgeon to the Paris Hospitals.

Dr. OSCAR JENNINGS, Paris.

Dr. KRISHABER, Paris.

Dr. LABBE, Surgeon to the Paris Hospitals.

Dr. MARTINEAU, Physician to the Paris Hospitals.

Dr. NOEL GUENEAU DE MUSSY, Physician to the Paris Hospitals.

Professor PANAS, of the Paris School of Medicine.

Dr. PEAN, Surgeon to the Paris Hospitals.

Dr. POZZI, Surgeon to the Paris Hospitals.

Dr. CH. RICHET, Agrégé de Faculté.

Dr. TERRILLON, Surgeon to the Paris Hospitals.

Dr. JULES WORMS.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET OFFICE, December 16th, 1880.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radiation in Vacuo	Max. Temp. Shade	Min. Temp.	Rain fall.	Remarks at 8.30 A.M.
Dec. 10	30.29	W.	52	50	..	54	45	..	Fine
" 11	30.34	WSW	41	40	..	48	37	..	Foggy
" 12	30.15	W.	48	44	..	51	38	..	Fine
" 13	29.93	N.W.	50	48	..	53	39	..	Dull
" 14	29.92	N.W.	44	43	..	46	42	0.11	Wet
" 15	29.61	S.	44	43	..	53	34	0.26	Wet
" 16	29.54	S.W.	47	45	..	49	41	0.19	Fine

Notes, Short Comments, and Answers to Correspondents.

BRITISH LAWS REGULATING MEDICAL PRACTICE.

Dr. O'Leary, (Boston).—The Medical Act was passed in 1858. It created a General Medical Council, in which most of the teaching and examining bodies are represented, but in which direct representatives of the profession are conspicuous by their absence. It left nineteen bodies to give one-sided diplomas, and to compete with one another. Much effort is now being put forth to get legislation in favour of a better constituted Medical Council, and a reduction in the number of licensing bodies, by compelling existing ones to combine, and to act under stricter supervision.

THE ZOOLOGICAL SOCIETY.

THE Zoological Society has vast capabilities both as a purveyor of rational amusement and as a popular instructor, wholly apart from, and in addition to, its proper scientific work. In the discharge of its functions as an entertainer there is nothing to be desired. The gardens are admirably laid out; the collection of live animals is excellent in itself, and well kept and exhibited. Meanwhile, however, little or nothing is done to popularise the study of natural history. Certain courses of lectures are given, but they are of a class to commend themselves to the learned, or at least to the "tolerably well informed," rather than the wholly ignorant. Might it not be worth while, in a pecuniary as well as a public sense, for the Society to empower some two or three competent officials to make special tours of the garden, as the warders go round the Tower of London, at stated times daily, or whenever a sufficient number of visitors had congregated at the entrance gates, in order to point out and explain the leading specimens of animal life and their special characteristics? We shall probably be told that the experiment has at some time been made, and abandoned; but if this be the fact it has escaped our memory, and it might be useful to try it again. Even at Christmas-tide multitudes visit the gardens, and it is really desirable that the public should be informed on a subject so interesting and important as "natural history." We commend the suggestion to the Society, and we hope to see it carried into effect.

THE letter of Dr. Wynn Williams will appear in our next.

"SEAWEED AS A SUBSTITUTE FOR JAM."

To the Editor of THE LANCET.

SIR,—On the principle that any error, however small, in a scientific journal, should be corrected, I think it right to refer to a statement in last week's LANCET on the manufacture of jam from seaweed, taken from the Paris Temps. The plant used is therein stated to be *Arachnoidiscus japonicus*. Now this is a beautiful circular diatom, well known to microscopists, and which grows on several seaweeds in China and Japan; it is much prized for making soup and jelly. The varieties employed in packing are *Enteromorpha* and *Zostera*—grass wrack and sea grass; these, as most other seaweeds, furnish a sort of mucilage, but are tough and stringy. In the north they are much used as a cheap substitute for hay for stuffing mattresses and pillows.

I remain, Sir, yours obediently,

Holland-road, Kensington, Dec. 13th, 1880. GEORGE C. KAROP.

MEDICAL BOOKKEEPING.

THE forms supplied to us, and which are published by B. Allsop, of Saltaire, Yorkshire, seem to be useful and sensible. We have long been of opinion that medical men spend an undue amount of time and trouble over irksome and complicated systems of bookkeeping. The account against patients can be greatly simplified, and the forms we notice are an illustration of one of many ways, the day book combining the advantages of a day book and a visiting-list.

M.R.C.S., &c.—Before successful legal action can be taken, the pretender must assume a false title, or attend cases and supply medicines after the manner of an apothecary. For the first offence he may be prosecuted under the Medical Act; for the second, under the Apothecaries Act.

Mr. Küner's paper will be published in an early number.

BRONCHITIS COMPLICATED WITH DIARRHŒA.

To the Editor of THE LANCET.

SIR,—Upon reading over my letter in this week's LANCET, I find there is an omission of water in the prescription, which should stand thus: Ipecacuanha powder, four grains; bicarbonate of soda and bromide of sodium, of each thirty grains; syrup and gum mucilage, of each two drachms; water to two ounces: two teaspoonfuls to be given every three or four hours, &c.

Earl's-court-road, W., Dec. 14th, 1880.

Yours truly,
E. MAY, M.R.C.P.

THE "MEDICAL ANNUAL FOR 1889, OR BRITISH MEDICAL ALMANACK."

A CORRESPONDENT desires an opportunity of referring to a copy of the above work, edited by Dr. William Farr, F.R.S., and reviewed in THE LANCET, December 1st, 1888. The "Annual" contains a history of the Medical Profession, and its influence on the Public Health.

Dr. J. J. Mackenzie.—The general rule at hospitals is to refuse admission to self-discharged patients, unless there are imperative reasons to the contrary—e.g., the patient may be too ill to have seen the folly of his conduct, and to readmit him would be acting in the spirit of charity, which should always govern the management of the institution. But readmissions should be under the same medical officer as far as possible.

L.R.C.P. should clearly decline to practise in the town if he is not prepared to purchase.

Dr. John Moore, (Belfast).—The resolutions have not come to hand.

A SANITARY INCIDENT OF THE WOOD-PAVING PROCESS.

Whether the globules of diluted carbolie acid shot into the atmosphere of an operating theatre, with the mitrailleuse-like spray apparatus, really hit and kill the minute "germs" supposed to be floating around, the dissemination of petroleum and tar in the general air of a thoroughfare in process of paving with wood by any of the several methods in use, can scarcely fail to be healthful. The atmosphere is pervaded with the vapour, and it finds its way into the air-passages of the passing multitude, while it impregnates their clothes and overpowers less innocent odours, if it does not neutralise the floating infection of disease. Anyone may be fumigated gratuitously at the cost of a few moments' lingering over the reeking vats to be found in most of our principal streets. Nor is the opportunity an exceptional boon. What with asphalt-paving and wood-paving, more particularly the latter, there are few populous neighbourhoods where an open-air fumigation may not be obtained. The perpetual repairing these pavements seem to require, gives promise of a perennial enjoyment of the luxury. The incident of these processes to which we have alluded has doubtless a sanitary aspect, which should be recognised. In the old days they burnt tar-barrels for health purposes; in these we pave our streets with a liquid disinfectant. Thus do modern improvements lead to public health.

Dr. Lewins is thanked for his interesting communication; but the subject, being of so purely speculative a nature, is one to which we cannot afford further space.

Great Driffield.—Our correspondent does not seem to have observed that the candidate possesses the necessary legal qualifications.

H. J. F. has forgotten to enclose his card.

"A NOTE ON INTENTION IN THE DETERMINATION OF SEX AND OF THE MENTAL AND PHYSICAL INHERITANCE OF CHILDREN."

To the Editor of THE LANCET.

SIR,—If I were less "confident" than I am of the substantial accuracy of the "statements" I have submitted in relation with this subject, I should have been glad to have elicited from Mr. Charles Roberts the excellent summary of the orthodox theory of sex-determination which appeared in your last issue. He has done ample justice to the topic within the limits of the view he takes. The only mistake he makes is in supposing his idea to be original. It is simply the accepted explanation of the phenomena, and the class of statistics from which Mr. Roberts draws his data are duly accredited and interpreted precisely as he states, and employs, them. The chief novelty in his argument is the extent to which he pushes the construction commonly placed on the figures he cites, and the emphasis he throws on the part played by the female. I will not attempt to follow his reasoning, but content myself by formulating a few further results of the investigation I have made, leaving Mr. Roberts, and others interested in the subject, to see how they bear on the received theories of sex-determination and heredity, and how far they support my own alternative conclusions. Obviously I can make no claim to originality for the conclusions at which I have arrived, because they are the necessary inferences derived from facts over which I and other observers have had no control. Time will show whether my interpretation of the facts is justified, and to time I will now leave the judgment.

1. Sex is the result of an arrest or repression of the force of development in the case of the female. The male of every family in the animal kingdom is the best and fullest specimen of development, having regard to the purposes and habits of life of the species, class, or family. In those apparent exceptions where the male is the smaller and less displayed animal, that is because it is an advantage in regard to the life and habits of the class to be small and unobtrusive.

2. The arrest in point of development which characterises the female has nothing in common with immaturity, and is therefore not a conclusive proof of inferiority. It is, as it were, a repression of the formative force, and the physical result of this repression is a perpetual effort to develop or reproduce. The force arrested in the individual gathers intensity, so to say, and expresses itself in a perpetual and characteristic longing to produce a perfect animal. The perfection denied or inhibited in the individual is sought in the progeny. Hence the natural tendency of the female to produce male children, and, as a necessary result, the majority of children born are males. It is not a question of the comparative amount of ardency in the two sexes, but of the direction of the force or intention—I do not now mean conscious intention, but the intention or purposiveness of Nature—in the case of the female. This direction will always be followed in sex-determination unless that force is neutralised by the male.

3. The function of the male is not one of production, but of fecundation. The tendency of what I have called *ardency* in the performance of this function is to neutralise or control the productive force of the female, and, thus, determine that *arrest* of development which results in female offspring. Here, again, there is no question of the comparative amount of ardency in the two sexes, because the ardency of the male may be so dissipated by the extent of its activity as to be in no instance domi-

nant; or it may be restrained and intensified, and, therefore, when it acts assert supremacy.

4. The way constitutional strength comes into play, as it undoubtedly does, in sex-determination, is by giving vigour to the natural action of the laws I have tried to lay down, not by so changing the operation of those laws as to make them non-natural.

The passage from the Talmud quoted by "W. O. J." is so far interesting, as it shows that the facts to which I have alluded have been long recognised; but the hypothesis I have assumed is not in any way illustrated by the passage itself, which is obviously founded on a misconception of the facts; and a confounding of the impulse I have designated "ardency" with animal passion. In my theory the two are wholly distinct, and have nothing in common, except as the power of self-control may be an indication of nervous force.

I am obliged to "A. G. P." for his reference; but I lay no stress on the question of the placenta or placentae, and only alluded to it incidentally. It does not affect my conclusions. This correspondent seems to attach greater importance to the accident of twin-births than I can admit. Twin-birth does not imply twin-conception.

The hereditary tendency to produce twins, to which Mr. G. Hodgson alludes, exactly accords with the remarks I have offered above. Twins are generally female, and argue an excess, or dispersion, of the force of development on the part of the mother. "A. G. P." will find ample proof that the rules on which I have founded my remarks do obtain in the development of stock. I have not studied the operation of the law among birds or small domestic animals.

In answer to Mr. William Story, I would suggest that an antagonism of equal forces might produce a neutral result; but the laws governing the development of monsters are obviously laws of development rather than of procreation, and they come into play after conception. The hereditary proclivity to the production of families of one sex generally lies in the female line, and exactly accords with the principles I have stated. As to general heredity, it must often happen that what I have called the underlying elements or forces descending or operating in the direct line are so strong as to resist the influence of the elements or forces descending or operating in the oblique. If this were not so, there could be no such phenomenon as family likeness following the family name, as I was careful to point out. The theory of reproduction propounded by Mr. Roberts is, of course, at variance with the experience of breeders in respect to the value of the sire.

I will only remark in conclusion, that the data on which my speculations are founded, and from which my inferences are drawn, are too numerous to adduce in your columns. Nor would it be worth while to adduce them. I have simply desired to throw out a suggestion for the consideration of observers, and I am well satisfied with the manner in which it has been received.

Yours obediently,

Welbeck-street, Dec. 1880.

JOSEPH MORTIMER GRANVILLE.

P.S.—In the title of my paper, and generally throughout the remarks I have offered, the word "intention" has been employed to signify human will and purpose; but in the passage above (marked) I have used it to indicate the purpose, or intention, of Nature—that is, the inner working of natural laws which it may, and as I think should, be the aim of the human will to call into operation by a careful and intentional arrangement of conditions and circumstances. With this explanation the discussion, so far as I am concerned, may now close.

J. M. G.

H. P.—We cannot believe that our correspondent really expects us to take up the question of what he considers an injustice inflicted by a Royal Warrant twenty-one years ago. At the time of its promulgation the department was perfectly satisfied with it, and believed it to have been framed in a liberal and enlightened spirit. It would be useless to enter upon a discussion of the subject with our correspondent. We shall merely remark that what he calls "identically similar circumstances" are, in our opinion, very different from those with which he makes the comparison.

A Victim will find such cases referred to in THE LANCET of Jan. 24th and Feb. 7th, 1880.

Dr. Irvine's letter will appear probably in our next.

PICTURES FROM IRELAND: A DISPENSARY DOCTOR

To the Editor of THE LANCET.

SIR,—Have you seen a work by Terence Magrath, called "Picture from Ireland"? A chapter in it, called "A Dispensary Doctor," is certainly worth reading. I see the book lying about the Club-tables. Taken in connexion with Tennyson's lines, "In a Child's Hospital," it does not give a flattering character to medical men. See also Ali Baba's "One Day in India" from *Vanity Fair*—viz., "The Civil Surgeon." Can all these pictures be true?

Dec. 1880.

Yours &c.,

C. R. V.

F. E. M.—The word "overseer" will also include an assistant-overseer, having the duties of an overseer delegated to him in his warrant of appointment under the 59th George III., c. 12, s. 7 (Glen's Poor-law Orders).

Old Subscriber.—It is a mistake to give the certificates without first settling the question of fees.

Dr. Lownds, (Egham).—It is a question entirely of choice and knowledge of the individual.

A Subscriber is referred to our article on Books in the Students' Number, Sept. 11th.

MEDICAL FEES.

J. A. W.—Our view of all such questions is that the practitioner is by far the most competent judge, as he is best aware of the time and trouble he has spent over cases, the means of patients, the general fees of the district, &c. But we have no hesitation in saying that in this case we think the charge of a guinea per visit was very reasonable indeed. Parents or patients are quite entitled to have a consultee at every visit of the medical man if they please; but this does not in any way diminish the right of the general practitioner to be paid for his services and his share in long consultations.

"NUTRICINE."

To the Editor of THE LANCET.

SIR,—Allow me to state in reference to the paragraph which, under the above heading, appeared in your issue of the 4th inst., that I am the inventor of the new chemical food described by M. Moride in the paper read before the French Academy of Sciences on the 8th ultimo, and which he calls nutritine.

The *Official Patents Journal* of July 2nd announced my application for provisional protection for a process for treating meat with farina and other ingredients. The proportions of farina to meat that I employ vary considerably, according to the object in view. That which I have found the most useful corresponds exactly with the water to be displaced. Thus, taking raw juicy beef, cut fresh from the carcase, free from bone, tendons, and fat, to contain 75 per cent. of water, I employ twelve ounces of whole wheat, or oatmeal, to each sixteen ounces of beef. The product after treatment is, within a few grains more or less, sixteen ounces. This product presents chemically and physiologically, minus water, one pound of fresh beef and 12 ounces of flour, or 14 ounces of bread. The patent was sealed in due course.

Further to prove the priority of my invention, if it be necessary, I may state that samples of nutritine were submitted to Mr. Jabez Hogg for microscopic examination, and subsequently by him to Mr. F. Woodland Toms, F.C.S., for chemical analysis, as far back as last May.

The value of this new organic compound—which contains within itself all the elements of a normal diet (perfect food), and its various applications in medicine,—I will not now stop to discuss, merely mentioning that I intend to make it the basis of various foods for hospital use, each having a definite physiological value. I believe it will not be the least interesting feature of this new compound of animal and vegetable substances, that it will supply the physician with a means of treating diet practically on scientific principles.

I remain, your obedient servant,

Beckenham, Dec. 15th, 1880.

E. A. KIRBY, M.D.

E. F. P.—Tasmania and New Zealand would probably be most suitable. If the patient is a good sailor, he should go round the Cape of Good Hope. He should follow an open air occupation.

ERRATUM.—One important and two minor errors crept into a short review of Mr. Ball's Elements of Astronomy, contained in last week's LANCET. The important error is that the work is published by "Messrs. Longman," and not, as stated, by "Messrs. Macmillan." The minor errors are that "Jenkins" should be "Jenkin," and the Physiological Botany, published by "Thorne," should be by "Thomé."

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Buzzard, London; Sir H. Thompson; Mr. Sreatfield, London; Dr. W. Williams; Sir Wyville Thomson; Dr. Skerritt, Clifton; Mr. B. Clarke, London; Dr. Wood, London; Mr. P. Boegner, Berlin; Mr. F. Moss, N. Kohala; Dr. Burnet, London; Mr. Rice, Southam; Dr. Ridpath; Mr. Karop, London; Mr. Myers, Dublin; Mr. Husband, Edinburgh; Dr. Strange, Worcester; Mr. L. Browne, London; Mr. Dunn, London; Dr. Wood, Liverpool; Mr. Harries, Aberystwith; Mr. T. H. Walker, London;

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East London Observer, City Press, Science, El Observador Medico, Driffield Freeman, Lincoln Gazette, Colonies and India, Warehousemen's and Drapers' Trade Journal, Specialist and Intelligencer, Nottingham Daily Guardian, Freeman's Journal, Nantwich Guardian, Sussex Daily News, &c., have been received.

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Tables of Contents, with the Index of Advertisements, for each Number can be had on application to the Publisher.

Agent for the Advertising Department in France—J. ASTIER, 66, Rue Caumartin, Paris.

SUBSTANCE OF A

Clinical Lecture

ON

CASES OF ACUTE ATROPHIC PARALYSIS IN
INFANTS AND ADULTS

(ACUTE ANTERIOR POLIO-MYELITIS).

*Delivered at the National Hospital for the Paralysed
and Epileptic, on Dec. 9th, 1880,*

By THOMAS BUZZARD, M.D., F.R.C.P.

LECTURE II.

GENTLEMEN,—Some thirty years ago Marshall Hall applied the term *cerebral paralysis* to that condition in which a lesion cuts off the cerebral influence, and *spinal paralysis* to that in which a lesion cuts off the spinal influence from the paralysed limbs. The first patient before you (a case of ordinary left hemiplegia) is an example of cerebral paralysis. He has but very small power of moving his left arm. His deltoid muscle, which is plump, responds readily, however, as you see, to induced currents of moderate strength. The other man (a case of acute anterior polio-myelitis affecting both arms, whom Dr. Jackson and Dr. Ferrier have kindly permitted me to show you) is an example of spinal paralysis. His deltoid muscle is wasted, and refuses to react to the strongest induced currents. When, however, I apply to it a current from twenty cells of Coxeter's battery, and slowly interrupt this, there is vivid contraction of the muscle. This, the "reaction of degeneration" is shown also by a certain qualitative change which I can demonstrate to you. In health the sudden closure of a voltaic circuit of moderate strength, whilst the kathode (or negative pole) is on a muscle, causes a slight contraction, which is represented, according to Brenner's formula, as KSZ (Kathode, Schliessung=shutting; Zuckung=contraction). When the current is increased a stronger contraction occurs, KSZ (represented by a large Z), and in addition a slight contraction now also takes place when the circuit is either opened or shut with the anode, or positive pole, on the muscle, AOZ, ASZ (Oeffnung=opening). But in this patient, as you see, the contraction when the circuit is made with the anode on the muscle is considerably stronger than that with the kathode. So we record the electrical reaction in this man's deltoid as $\text{Far.}=0$, Galvan. $\text{ASZ} > \text{KSZ}$.¹

This is a characteristic example of a qualitative change in the reaction of degeneration.

The *diagnosis* of this disease is not usually difficult. A febrile attack followed by rapid loss of power in one or more limbs points almost conclusively in children to acute anterior polio-myelitis if you find in the course of a week that many of the muscles paralysed exhibit lost or greatly reduced faradaic excitability. There is just the chance, however, that you may be concerned with a traumatic or other lesion of a single nerve-trunk. The child may have been exposed to cold, and a nerve of the lower or upper extremity may be affected, as the portio dura so often is from this cause. In such a case there would be paralysis, wasting, and loss of faradaic excitability exactly confined within the district of a certain nerve. But in anterior polio-myelitis muscles in the districts of different nerves are liable to be affected; and, again, all the muscles in a particular nerve-district are not equally affected. The possibility of pachymeningitis must also be excluded. This is more gradual in its progress, and will be attended by severe pains and cutaneous anæsthesia. Otherwise the symptoms resemble,

for there is paralysis, wasting, and reaction of degeneration. It is still more difficult to exclude disease of the anterior roots alone, which, however, is rare. The attendant circumstances will probably aid the diagnosis.

I saw some time ago a child, one year old, who was said to have lost the use of the right lower limb the day before, after a little malaise and fever. When stripped it was evident that the limb was powerless, and it was also tender, for the child protected it from being touched. The aspect was much that of infantile paralysis. There was no fracture. But its urine abounded in uric acid, and it seemed the child had been fed for a long while on a milk food which contained an enormous quantity of sugar. I thought it likely there might be some inflammation of the loose connective tissue between the muscles of the thigh, caused by the deposit in it of uric acid. (These collections of tissue, according to recent investigations, are really extensions of the lymphatic system.) A few doses of citrate of potash cured the child in a day or two. Such a cause is probably at the bottom of those cases of sciatica and lumbago which are rapidly cured by purging and alkalies. I owe to Dr. Burdon-Sanderson the idea that deposits in these extensions of the lymphatic system might lead to symptoms of this kind.

Arthur D—, aged eighteen, came here on account of nervous symptoms, from which he has recovered; but, as you see, he exhibits the results of a paralytic attack, which he describes as having occurred in infancy. There is want of power in the *left leg, right arm*, and, what is especially notable, the *right side of the face*. Now, if this were a case of alternate hemiplegia (from disease of the lower part of the pons Varolii), the left arm (not the right) ought to have been paralysed. Moreover, any wasting in the left lower limb as a result of disuse would have been proportionate above and below the knee. But you will observe that whilst the left thigh is three inches, the left calf is only a quarter of an inch less than its fellow. Moreover, the wasting involves the district of the anterior crural nerve and only a part of that of the sciatic. The patellar tendon-reflex is absent on the left side. The case is evidently one of acute polio-myelitis, involving not only the spinal centres for the left leg and right arm, but also the nucleus of the portio dura (for the right side) in the medulla oblongata, which, with certain other nuclei, is continuous upwards and homologous with the ganglion-cells in the anterior horns of the cord. It is, I think, extremely rare to find the complication of facial paralysis in this disease. May not this be because if the affection invades the medulla oblongata at all, it is liable to attack centres essential to life? I would suggest the possibility that some cases of rapid death in previously healthy persons (for which no explanation is found) may be due to acute polio-myelitis attacking the cardiac and respiratory centres.

B—, aged twenty (patient of Dr. Ormerod), came here for fits, but incidentally mentioned having been paralysed in the left leg in infancy. The other limbs, he said, had nothing wrong. You will see, however, now that he is stripped, that the right leg is really not much more developed than the left, and the patellar tendon-reflex is absent on that side as well as the other. A short time since I saw a young man who had been paralysed in the left leg from infancy, all four limbs having, according to his account, been at first affected, but the others having quite recovered. Examination showed the tendon-reflex absent in both legs, and the faradaic excitability (which was quite lost in the left leg) greatly reduced in the supposed sound limb. Helena M—, a child now attending, who was brought here on account of paralysis, supposed by her mother to affect the right leg exclusively, has no patellar tendon-reflex in *either* leg, and certain muscles in the left leg will not react to either current. I am disposed to think that monoplegia in this disease is far less common than is usually stated, and that, as in these cases, limbs are very frequently supposed to be sound which are, in reality, only comparatively so.

As regards *etiology*, the influence of cold and of injury to the back, as causes, is supported by evidence. Alcohol is probably not a cause. The disease occurs most frequently in those (infants and children) who have never taken any. Let me note also a curious fact as regards some adult cases. George B—, aged twenty-one, has totally abstained for eight years. Mary F—, aged sixteen, has taken little or none in her life. A young lady whom I saw lately in consultation, and of whom I asked the question, had taken no alcohol for five years.

The *prognosis* is very important. Duchenne's observations,

C C

¹ Let me appeal to English-speaking neurologists to adopt the German notation for these qualitative changes. If we use the word "shutting" instead of "closing" as regards the circuit, and accept the letter Z as an arbitrary sign implying contraction (and there is something in the form of the letter suggestive of it), records made by English and German will be mutually intelligible without the necessity of that kind of wearisome translation of which we have already quite enough in respect to thermometrical and mensural notation. The Germans have set us the example by employing the terms anode and kathode devised by Faraday.

and F. Müller's more recently, tend to show that all muscles in which faradaic excitability has disappeared entirely in the first four or five days are permanently paralysed. In all those in which some faradaic excitability is retained after from the eighth to the twelfth day, motility may be expected to return even though several months may be required. You cannot judge of the future from the existence of reaction of degeneration in the first stage, nor even, as it seems to me, from the disappearance of reaction to both currents. In the patient Mary F—, aged sixteen, who was attacked with polio-myelitis affecting both lower extremities nearly a year ago, four months after the attack the right quadriceps extensor showed no reaction to *either current*; it now reacts freely to twenty cells. In another, Geo. B—, aged twenty-one, whom I present to you, you have the opportunity of comparing his present condition with a note taken by Mr. Broster eleven days after his attack of polio-myelitis twenty-six months ago, when he came into the hospital. There was then no reaction to faradaism in any muscle of both *lower extremities*, except the left vastus internus. Those of the *left arm* acted to somewhat strong currents. The muscles of the lower limbs acted to slow interruptions of fifteen cells constant current. At that time, in the *left lower extremity* the only movements practicable were flexion of the thigh on the trunk and rotation of it inwards and outwards; in the *right limb* a very slight flexion of the toes. The left arm was weak and wasted. The patellar tendon-reflex, as well as the skin-reflex from the soles, was absent on each side. Three months later the *right lower limb* still remained motionless and wasted. He could now draw up the left leg and lift the left foot off the bed. The left arm had recovered. A month more and the wasting process had ceased; the thighs and legs had recovered two inches of girth, which they have never since lost. At this time the left quadriceps extensor reacted to faradaism. Thirteen months after the attack he could flex the *right leg* a little on the thigh, but could not extend it; could adduct but not abduct it. The patellar tendon-reflex had returned in the left leg, not in the right. More than a twelvemonth has passed since that observation was made. It is very interesting to see that he has still further, though but slightly, improved. He can now extend the right leg a little and flex it readily. There is no reaction to faradaism, however, in the quadriceps of the right side, and the contraction to a strong constant current is slight. In the left quadriceps there is still reaction of degeneration and ASZ>KSZ.

Were I called upon to treat a case of this disease from the first I should keep the patient in bed for many months. During the first few hours, if possible, ergot should be given frequently in large doses, but not continued after a week. The muscles should be tested electrically in the course of the second week, for purposes of prognosis. A mild constant current (stable) might be used for five minutes to the spinal cord three times a week, taking care not to give shocks. Any energetic electrical treatment should, however, be avoided. When any tendency to contraction and consequent deformity showed itself, I would let the patient wear in bed some light apparatus to compensate for the paralysed muscles, and I would particularly discourage strenuous attempts at voluntary movement of paralysed muscles, as tending to excite action in their antagonists, and thereby increase the deformity.

REMARKS ON THE PERITONEAL TUBERCULOSIS OF CHILDREN.

By GEORGE GARLICK, M.D. LOND.,

LATE REGISTRAR, HOSPITAL FOR CHILDREN, GREAT ORMOND-STREET.

THE disease which has as its essential lesion a deposit of tubercles in the peritoneum simulates in its different forms some other diseases. Thus at one time it may be quite latent throughout its course, at another produce a subacute peritonitis; now showing ascites as its most prominent symptom, and again feigning in its large tumours and nodules a case of malignant disease. Various classifications of it have been offered by different authors. Thus, Drs. Wilks and Moxon in their *Pathological Anatomy* describe three forms—1. Tubercular ascites, 2. Latent peritoneal tubercle,

3. Cases of inextricable union of the bowels and viscera to one another, and to the abdominal parietes. Dr. Bristowe, in "*Reynolds's System of Medicine*," separating those cases which present obvious indications of abdominal disease, gives two classes—1st. Acute, often resembling enteric. 2nd. Chronic, in which at some period ascites is usually present. In "*Ziemssen's Cyclopædia of Practical Medicine*," following Kanlich, three groups are distinguished—1st. Acute onset; fitful course; absence of effusion; diffused adhesions and points of resistance. 2nd. Latent onset; ascites the most prominent symptom, and causing others; tumours in the abdomen. 3rd. Like Class 2, but with temporary subsidence of symptoms. Dr. West, in his "*Diseases of Infancy and Childhood*," classifies according to their symptoms and rapidity of course. Other divisions of the subject have been made by the numerous writers, but they need not be here mentioned. The chief value of these classifications appears to be that they characterise and help to keep in mind the various forms of the malady; they do not aim at an exact scientific basis of division, partly on account of the difficulty that arises in diagnosing the frequently complex conditions, but also because of the doubtful position of cases which present large deposits of caseous material in the peritoneum, the point at issue being whether these ought to be considered as simple, or as tubercular peritonitis.

So as the subject labours under this difficulty the mode of division must be mainly clinical, and we may distinguish the following classes:—

1st. Latent cases of tubercle in the peritoneum—(a) part of a general tuberculosis, (b) secondary to tubercular ulcers but purely local.

2nd. Cases characterised by an ascites, which may mask all other conditions.

3rd. Those in which obvious, and often very large, tumours are found, and in a belly not otherwise markedly resistant.

4th. In which all the abdominal contents and abdominal wall are mutually and inextricably united, often with attendant intercommunication of different parts.

5th. Mixed cases, showing diffused adhesions and points of resistance, and running a variable course.

It might be thought that Classes 2 and 3 should be combined, as, indeed, they are in most classifications. They are separated here because a large collection of fluid will prevent the palpation of tumours, and also because some cases showing abdominal indurations have had no effusion throughout their course. The classes have been made strongly contrasting for the avowed object of showing the different aspects of the disease.

1st. The latent form is probably the most frequent, but has nothing to do with the cause of death. Its latency results either from the absence of inflammatory change, or from the obscuring of its symptoms by the more grave affections of other organs. The chief interest attaches to the question of the existence of tubercular ulceration. Pus can be demonstrated in the stools even when the area of ulceration is small, and occasionally the stool may be almost entirely composed of pus; but simple ulceration may yield stools quite identical in character with the preceding. The general aspect of a case of tubercular ulceration was found in another case, post-mortem, to have resulted from albuminoid degeneration of the villi of the small intestine, there being no such change in the liver and kidney. In this case the question arose, whether an ordinary catarrhal diarrhoea might not thus perpetuate itself. I am not aware that this possible cause of an intractable diarrhoea has been worked out.

2nd. Although most authorities state that some effusion of fluid is found during the course of most cases of tubercular peritonitis, this is said to be small in amount, the fact not being usually enunciated clearly that the amount may be so considerable as to produce symptoms of its own—as oedema of the feet and abdominal walls, enlargement of the veins of the abdominal wall, &c. This fact is mentioned by Murchison, who suggests that in these cases there may be a deposit in the portal lymphatics pressing on the portal veins. Be this as it may, a complete and rapid absorption frequently takes place, and it is quite remarkable to see how the child will pick up in health and strength. A little girl, aged six years and a half, who presented marked symptoms of ascites, with a tense and oedematous abdominal wall, had the abdomen reduced whilst under observation $4\frac{1}{2}$ inches in circumference—that is, from 29 to $24\frac{1}{2}$ inches, all signs of fluid

disappearing; and, as is frequently the case, an indurated band then became palpable; the child was then transferred to the country, and returned looking well, but with the band still existing. Sometimes the fluid thrown out is pus, and an abundant discharge occurs from the navel, this continuing for months.

3rd. Tumours are found—that is, well-defined masses, not mere local sensations of resistance. Their situation and shape varies greatly. What is most characteristic is a hard, transverse, ruler-like band, situated about or above the navel, sometimes stretching right across the abdomen, losing its definition at its extremities, or passing into other masses. I have measured one of these, more than eight inches in length. The abdomen in which they are found looks large, and with frequently well-nourished walls, yielding little or no resistance on pressure; and the readiness with which the hand rolls over the band, gives no idea to the touch of an obliterated peritoneal cavity, with closely adherent viscera, such as is found in the following class of cases. A tumour of this kind is usually due to a thickened and rolled-up great omentum; to produce this the process must be chronic and localised, else adhesions form and keep the membrane extended out when either a general resistance is felt or an irregular tumour in front of the abdomen. In the acuter cases, in which there is frequently an opportunity of making a post-mortem, the great omentum may be half an inch thick, with a mass having the granular aspect of aggregated tubercle. In one chronic case I have seen masses like congealed fat or suet and quite structureless, and situated in the omentum, mesentery, and retro-peritoneal tissue; whether these latter cases are to be considered as tubercular it is at present difficult to decide. In a case reported by Dr. Hilton Fagge, in which tubercular peritonitis was mistaken for ovarian disease and operated upon, the peritoneum was found strewn with tubercles and the intestines matted together, still recovery occurred, and six years later the patient was seen fat and well; this shows a power of recovery from extensive tubercular deposit which should make one slow in arguing against their tubercular origin from the mere recoverability of the case. A mass is found frequently in the right iliac fossa, due to thickening of the cæcal wall combined with some enlarged glands here, and general thickening and adhesions of the surrounding peritoneal covering; this is not an uncommon lesion, and results from the fact that a chronic and sub-localised tubercular ulceration is frequently found about the cæcum, and leads to few symptoms but wasting and fever. Enlarged mesenteric glands have been mentioned here as forming part of the tumour, and in fact they often cannot be diagnosed from other masses, but they are not very often felt and still less often demonstrated post-mortem after being felt; but this is due largely to the fact that these cases often recover. It is curious to see the disproportion often existing between the amount of tubercular disease of the bowel, &c., and the enlargement of the mesenteric glands; thus the peritoneum may be strewn with tubercle, and there may be deep ulceration of the cæcum and of Peyer's patches above, with only moderate enlargement of the mesenteric glands; the great enlargement also which occurs in some cases without any such origin contrasts strongly with the preceding. These cases have also to be diagnosed from cancer of the peritoneum and faecal accumulation.

The following case may be given as an example of this class:—

Alice C—, aged three years and a half, admitted on April 26th, 1878, into the Hospital for Sick Children, under the care of Dr. Gee. The mother's account was that another of her children had died of consumptive bowels. Alice was subject occasionally to attacks of vomiting and diarrhoea, and for the last three weeks the diarrhoea had been much worse, slime and blood being passed with much abdominal pain; at the same time the appetite was good, and there was no great loss of flesh. The bowel often prolapsed. On admission the child was pale, anæmic, and flabby, but with a fair amount of flesh. The stomach was remarkably large and inflated, but could be readily palpated, yielding no resistance anywhere, and had yielded at the navel, forming a small rupture. Liver about two inches below the ribs on right nipple line; spleen not palpable; the tongue was moist and clean, but pale. The bowels were moved frequently, the motions being offensive, pultaceous, and composed largely of curds with a little slime. Dr. Gee examined them microscopically, and found partially digested muscular fibres, with a few doubtful cells, probably mucous corpuscles. She

was dieted on Swiss milk, raw meat, biscuits and toast, and for medicine took one drachm of compound decoction of aloes three times daily. For three months treatment varied from time to time, was kept up most assiduously, but with little decided result, except that some days the motions were more solid and improved in colour, and the child's general condition was rather better. During this time the spleen enlarged, and towards the end a crop of boils appeared on the head, the child for the first time becoming febrile. Rather more than three months from admission a band appeared, transversely placed, a little above the navel. The child was then sent to Highgate, as it did not improve, the band remaining quite distinct. Part of the treatment employed may be mentioned here, owing to the marked success that it has in cases of chronic diarrhoea in which all else has failed; it was the constant wearing next the abdomen of a large piece of spongio-piline, moistened twice daily with a mixture of two drachms of tincture of iodine and eight ounces of camphor water; it is a most valuable agent.

4. Universal firm adhesions. This, when combined with perforations of the gut and intercommunication, converts the abdomen into a trabeculated cavity. It is amongst these cases we find the character of abdomen so often described—the pigmented, scaling, thin-walled belly, with its wasted, tendinous-feeling muscles, its hard subcutaneous points, and a feeling of tense resistance, due to the immobility of its contents, &c. This fixation of the contents may be felt also in the almost stationary lower edge of the liver during inspiration; this sign often fails from the elevation of that organ above the margin of the ribs. The elevation of the heart at the same time, combined with a retraction of the lung, may so elevate the cardiac dullness as to suggest the existence of enlarged mediastinal glands. Here, too, we have often the most marked symptoms, the extreme degrees of emaciation, with diarrhoea and attacks of severe abdominal pains, leading to a speedy death. The following is a good example of a case of this class:—

Henry G—, aged nine years, admitted Dec. 9th, 1876, under Dr. Dickinson, into the Hospital for Sick Children, Great Ormond-street. There was phthisis in the families of both parents, and two other children had died of tubercular disease. This child had been ill nine weeks with abdominal pain and diarrhoea (the motions pale, and fermenting like yeast), occasional vomiting, cramps in the legs and feet, wasting, and night-sweats. He was a pallid boy, with long, light hair, markedly wasted, and with an anxious, drawn face. The abdomen, in contrast with the rest of the body, was tumid and tense, with distinct veins in the walls, and its rounded contour obliterated all the markings of health; a general want of resonance and resistance, but with no palpable tumours. The tongue clean, but red and irritable. About twice daily he passed a very large, diffuent, ash-grey, offensive motion. The chest showed consolidation of the left apex, and the heart was raised and uncovered, beating in the second and fourth spaces. The child only lived five weeks after this, having feverish attacks, frequently crying out with abdominal pain, progressively wasting, and having a cadaverous smell. After death extensive lung mischief was found. The abdominal contents were so glued together that the intestine could only be cut out in pieces, and at various parts apertures united contiguous parts of the bowel. The liver was firmly fixed all round, and highly fatty.

Great James-street, W.C.

THE ORIGIN OF CROSS-LEGGED PROGRESSION (SCISSOR-LEGGED DEFORMITY), ASSOCIATED WITH DOUBLE HIP-ANCHYLOSIS.

By R. CLEMENT LUCAS, B.S. LOND., F.R.C.S.,
SENIOR ASSISTANT-SURGEON TO, AND DEMONSTRATOR OF OPERATIVE
AND PRACTICAL SURGERY AT, GUY'S HOSPITAL.

IN the paper which I read before the Clinical Society on October 22nd, directing attention to this peculiar deformity and odd method of progression, I stated that I particularly wished to hear discussed the theory of its origin, and to learn from others their views of its cause. The speakers in the discussion which followed did not agree as to the probable cause, and each theory put forward had much sound

reasoning to support it. I therefore desire to state concisely what those theories were, with the object of gaining further information on the origin of the deformity.

For such as may not have noticed the paper it may be well to state that the deformity is associated with, and maintained by, ankylosis of both hip-joints, in a position of extreme adduction and eversion. The legs cross opposite the knees, the heels are wide apart, whilst the toes are approximated, and the patients walk from the knees instead of from the hips.

The first theory, which may be called the simple *adduction* theory, received, if I understood aright, the support of Mr. Howard Marsh. It would attribute the deformity to the action of the adductor muscles having been unopposed during the process of repair. Adduction, as is well known, is very common in hip-joint disease, but it is usually associated with flexion and inversion. Adduction with extension and extreme eversion must be very rare, and for this reason the theory of unopposed muscular contraction did not appear to me to be altogether satisfactory.

Instances of flexion and adduction, with inversion, are occasionally met with in patients long bedridden, who have no hip-joint disease. They belong to an entirely different class to that which I have described, but may be used in support of the theory of simple muscular contraction. An extreme case of this kind is figured in Dr. Little's work on deformities. In this case there was semi-flexion and adduction, causing the thighs to cross above the knees, and, as can be seen by the engraving, inversion of the legs. The author relates the case as follows: "Another remarkable contracture from preponderance of one set of muscles and habitual retention in one position, is afforded by the subject of Fig. 74, which represents the case of a lady, aged fifteen, who seven years before laboured under severe typhus fever, during which extensive sloughs posteriorly, involving very nearly the whole of the sacrum and nates, and laterally exposing both trochanters, occurred. Probably through weakening of the glutei muscles, the adductors of the thigh habitually drew the limbs inwardly, and ultimately their contraction being unresisted by volition, crossed the limbs over each other, in which uncommon position they were rigidly fixed at the time of the author's first examination." In a note it is said "she had not walked since the original illness." In my cases there was extension with extreme adduction and eversion, and it is the accompaniment of extreme eversion with adduction which leads me to think that some volition or design determined, in part at least, the peculiar deformity I have described.

The second theory, which may be called the *gravitation* theory, was very ingeniously demonstrated by Mr. Croft. It was suggested that the first hip became ankylosed in an adducted position, and then, when afterwards the patient walked with the aid of crutches, the other limb fell naturally across the one fixed, in order that the line of gravity might be between them. Against this view it may be urged that a patient walking on crutches and one leg, in consequence of disease of the opposite hip, does not, as a rule, carry the lame leg in front or behind the other, but retains it in a semi-flexed position on its proper side. On the other hand, since writing my paper, I have seen a man walking with crutches and slightly crossed-legged, who had no hip disease. He had suffered during two or three years from partial paralysis of the right side. In this case the paralysed leg fell behind the sound one, and it might be argued that it was so placed by the action of gravity. It was in the man's power to abduct, flex, or place the lame leg in any position he pleased, but he found it most convenient for progression to carry it behind and a little to the outside of the other. When walking he received the weight of his body from the crutches first upon the weak limb, then quickly transferred it to the sound one before carrying forward his crutches to take the next step. This case, if used in support of the gravitation theory, would do away with the supposed necessity for the limb first attacked to be ankylosed in an adducted position, since any adduction of the sound limb in this case must have been voluntary.

The explanation of the course of events antecedent to ankylosis which I put forward as probable—not dogmatically, but rather to elicit comments—need not be regarded as opposed to either of the other views, but may be made to include both. It would leave to the patient a certain *natural selection* or *option*, which induces him to choose by preference a position that gives most rest to the inflamed hip, and afterwards leads him to maintain or even increase the

deformity, because the position is one which allows most easy progression when both hips are ankylosed. Supposing one hip to have recovered sufficiently to bear the weight of the body, and the other hip to be in a state of acute inflammation, the patient will try to bear all his weight on the convalescent limb and endeavour to fix and rest the other. With crutches he is enabled to effect this. The limb last attacked, when carried across the other so that the patella of the latter fits into the popliteal space, is supported, fixed, and prevented from touching the ground. With lessening pain in the inflamed hip the patient becomes anxious to test its powers. He is conscious that any attempt to move the hip will cause him pain, and he accordingly tests its weight-bearing powers by dropping the foot to the ground on the spot over which it has been hanging. When assured of its power to sustain the weight of the body, he attempts to walk, and finds that the more the limbs are everted the more extensive is the movement emanating from the knees. Hence, first, for the purpose of relieving pain, and afterwards for convenience in walking, he habitually retains his limbs in a position which ankylosis eventually seals. I thought it an argument in support of this view that in both my cases the limb last attacked was the one carried in front, whereas in the case of the man suffering from partial paralysis, the weakened limb was carried behind the other; but since then Mr. Tyson has shown a man at the Clinical Society in whose case the limb last attacked was behind the other. Mr. Croft, in the discussion on my paper, pointed out that in the boy pathological dislocation had taken place in both hips without suppurative. Mr. Heath's inquiry as to the condition of the hips in the man led to the appointment of a committee, which has reported that in his case the hips are not dislocated. Thus dislocation is proved not to be the determining cause of the scissors-like deformity.

Finsbury-square.

FURTHER OBSERVATIONS ON STERTOR; ITS PATHOLOGY AND TREATMENT.

By ROBERT L. BOWLES, M.D.

(Communicated by CÆSAR HAWKINS, F.R.S.)

(Concluded from p. 373.)

THE consideration last mentioned induced me to adopt position in all conditions of the lungs in which much mucus was secreted. In April, 1866, a little child, three months old, after having suffered from slight catarrh for a few days, was seized with difficulty of breathing at night. When I arrived in the morning the child was livid, the eyes sunken and half closed, and the pulse remarkably slow, feeble, and irregular. The child breathed with great difficulty, and had a loose mucous cough, feeble and ineffective. The quantity of mucus in the chest was so great that the child could not inspire, and appeared dying. It was turned on the right side, ammonia applied to the nostrils, and ten drops of brandy administered every quarter of an hour. On the following day it breathed with greater ease, the expression had improved, and the pulse, though still slow, had a little more power. The air now entered the left side freely, and the râles were few; no breathing at the right side. The child gradually recovered, but for several days there were bronchial breathing, and bronchial voice on the right side. Before the child was turned on the right side there was no difference on auscultation between the two sides.

In bronchitis generally, and especially in the bronchitis of the old, I endeavour to leave one lung free for breathing, and then, as vital power returns, the position is gradually changed.

In the *convulsions* of children there is often a large flow of saliva and secretion in the bronchial tubes. This becomes immediately churned into foam, and greatly impedes respiration. In the lateral position all this drains away, the breathing is freed, and I have often seen recovery commence immediately.

In *epilepsy* the fit will often cease at once by removing stertor, but here it requires a little more management than

placing the patient on his side, for the spasms of the mouth, tongue, and fauces require opposing by little mechanical contrivances.

In May, 1866, I was sent for to a phthisical patient, who was said to be dying from hæmorrhage. I found him lying upon his back, partially elevated by pillows, and apparently breathing his last. His face was cold and ghastly, his jaw dropped, and his eyes widely opened and staring. He made a few unsuccessful efforts to inspire, when some large mucous râles were heard in the trachea. The pulse could just be felt feebly flickering. He was immediately placed well over on the right side, and ammonia was applied to the nostrils. A little brandy-and-water was introduced into the mouth, but there was no effort to swallow. A handkerchief was, however, soaked in brandy, and a portion left in the mouth. The mouth and tongue were quite cold. In a minute or two the respirations became longer, and air could be heard entering the uppermost lung, but none entered the lower. Gradually the râles diminished in the upper lung, air entered more freely, and the percussion sounds became more resonant. Consciousness, which had been utterly lost, gradually returned, and by the following morning he was perfectly himself, and could have transacted any business. He lived four days, breathing with one lung only.

On our arrival my friend Dr. Lewis, who was with me, was so convinced that death must take place immediately that he thought all our efforts to prolong life would be useless and unavailing.

On the subject of drowning I do not propose to consider the various modes of resuscitation, but to comment merely upon the fluid contained in the lungs of drowned persons. The Committee of this Society on Drowning came to the conclusion "that it was the entrance of fluid into the lungs, and the effects thereby produced, which was the cause of death in drowning." Professor Caspar, as a result of his prolonged researches on drowned persons, asserts that as a rule water exists in the lungs in the form of fine vesicular foam, even in those who have never come to the surface after once being submerged.

In 1861 a woman who had been taken out of the Serpentine and treated by the hot-bath at the Receiving-house was brought to St. George's Hospital about one hour afterwards. Mr. Jones, the resident medical officer, states that on admission "her breathing was fair, with loud rattling noise; her lips were livid, her pulse *very good*, her surface and extremities very cold; she was sensible and able to speak." Warmth and appropriate measures were employed, but in half an hour Mr. Jones was suddenly summoned, and only arrived to see her draw her last breath. The Marshall Hall method was immediately employed for half an hour, without the slightest signs of recovery, *but a large quantity of frothy fluid* came from the mouth. At the post-mortem examination next day, it was reported that "both lungs contained an immense quantity of frothy fluid, the bronchi were filled with fluid and injected." In this case the lungs were loaded with and paralysed by water. There cannot be a doubt that the Marshall Hall method would have unloaded the lungs, but I cannot doubt, also, that had she been placed on one side on her arrival at the hospital the upper lung would have cleared and acted quite sufficiently to sustain life. A lung containing frothy fluid does not clear immediately; the bells of foam must become gradually condensed and ooze slowly away, and to assist this nothing is more adapted than the Marshall Hall method.

Dr. Trollope of St. Leonards-on-Sea was called to a man who had been taken out of the sea. The man could speak a little, and vomited a quantity of water; but he rapidly became worse, insensibility came on, the breathing was slow and faint, and the pulse flickering.

The Silvester method was being used, and Dr. Trollope persisted in it for some few minutes. "Meanwhile," Dr. Trollope reports, "his respiration had ceased, beyond a slight mucous rattle in the windpipe; his heart's action could not be felt; jaw clenched, and lips livid. I then, finding these alarming symptoms supervening in spite of the persistence in Dr. Silvester's method, immediately had recourse to Dr. Marshall Hall's prone and postural, or 'ready,' method, and was gratified to find fluid escape from the mouth each time the body was laid on the chest, and respiration gradually set up, commencing with long-drawn respirations, or rather gaspings, at intervals. I persevered in the prone and postural movements for three-quarters of an hour, till respiration was thoroughly and satisfactorily established. The man then again vomited between a pint

and a quart of water, and was afterwards able to swallow a few tablespoonfuls of tea, and went on satisfactorily."

In March, 1862, I was called to a man who had been knocked into the sea by a heavy chain. It was calculated that he had been under water three minutes. On getting him ashore he was believed to be dead, but one of the men thought "they ought to get the water out of him," and so proceeded to roll him from side to side, and whilst this was done, a quantity of water was expelled from the mouth, and they perceived some attempt at breathing.

A few minutes after this I was on the spot, and found the man apparently dying, making occasional and feeble attempts to breathe, with a very feeble and irregular pulse. He was lying on his side with his head upon a coat, and a quantity of froth tinged with blood lying on the coat in the neighbourhood of his mouth. I observed that clear water and froth welled out of his mouth at the end of every inspiration. Active friction of the limbs, hot bottles and bricks, were carefully applied, and ammonia to the nostrils. Nearly an hour elapsed before we thought it possible he could live. He then began to moan, and in a short time a small quantity of brandy was swallowed.

In July, 1864, a man was capsized in a boat at sea. After being in the water some time he was picked up and rowed ashore. On arrival he was cold and livid, but breathing with great labour. He was immediately turned on his side by the coastguardsmen, and a quantity of frothy fluid came from the mouth. He was taken to an inn, where he was kept on his side, and where I saw him a quarter of an hour afterwards. He was then breathing with difficulty. A fine white froth, almost like milk, was oozing from his mouth and nose; his face was very livid, and meaningless in expression; his breath was cold; the limbs and body generally were almost stone cold; the pulse could not be felt. There were a few moist râles in the left side of the chest, the side which was uppermost, but the breathing was tolerably free; the breathing on the side upon which he lay was very feeble and obscure, and moist râles more abundant. He could not be roused. In half an hour he became a little restless, and then vomited a quantity of water. The pulse could now be felt, but not counted; this gradually improved. Attempts at vomiting supervened, and occasionally a partial restoration to consciousness. After another attack of vomiting, the pupils, which had been widely dilated, became contracted, and he went off into a sound sleep. He passed a most trying night from restlessness, and pain at the epigastrium; and the next day he was still livid, but better and easier. The following day pleuro-pneumonia of the right side (that which was downwards) supervened. From this he slowly recovered.

There are many interesting details connected with these cases of drowning which for brevity's sake I omit; but the cases, I hope, illustrate sufficiently that in drowning there is *some* fluid in the chest, and that all methods of resuscitation which do not provide for the removal of this fluid are utterly valueless. For my own part, my increasing experience only tends to prove that there is as yet no known method equal to that of the Marshall Hall method.

Independently of its effect upon stertor, "position" has a direct influence in many conditions allied to the apoplectic, such as chloroform poisoning, drunkenness, &c. &c.; and I have observed that in cases of great exhaustion the change from the back to the side is accompanied by immediate and great relief; the breathing, from having been carried on with evident effort, has become at once peaceful and easy.

During sleep, when the vital powers are resting, it is not the *back*, but the *side* which is selected as Nature's position; and I believe the explanation to be that on the back the diaphragm has to lift the liver and abdominal organs with each respiration, whereas on the side—especially the right side—the liver lies practically on the bed, and the diaphragm can do its work without oppression.

The general conclusions which may, I think, be fairly deduced from the present communication are:

1. That a "laryngeal stertor" may be added to the three forms I formerly defined.

2. That the three forms of stertor which have a most important connexion with the apoplectic state are the palatine, pharyngeal, and mucous stertor.

3. That these three varieties, whatever their remote cause, are the immediate result of a local mechanical condition—a condition which may always, and at once, be changed, to the great relief of the patients, and sometimes to their permanent recovery.

4. That it is necessary to keep the patient on one side, and that the paralysed side should be downwards.

5. That mucus and other fluids gravitate into, and fill up, the lower lung; and therefore that if the sides be reversed the mucus will find its way into the opposite lung.

6. That the fluid, crossing from the large bronchi of one lung to those of the opposite, becomes churned into foam, and causes dangerous obstruction to the respiration.

7. That the lung is not injured by remaining inactive and filled with mucus for a long period.

8. That these principles apply to all conditions in which mucus or fluid exists in the lungs, and also to all conditions allied to the apoplectic, whether there be mucus or not.

Folkestone.

THE ETIOLOGY OF CANCER: STATISTICS AND REMARKS.

By HERBERT L. SNOW, M.D. LOND.,
SURGEON TO THE CANCER HOSPITAL.

IN our present state of helplessness as regards the therapeutic treatment of malignant disease, any information tending to throw light on the origin of that class of maladies may (as a step in some measure towards their prevention) be deemed not unworthy attention—the more especially as I think very undue weight attaches (in the public, and even in the professional, mind) to some causes; while others are unfairly depreciated. I therefore venture to submit some statistics, taken chiefly from the records of the Cancer Hospital during the past two years; with the deductions which these seem to me to warrant.

1. *Hereditary tendency.*—Of 146 cases of uterine cancer there was some history of malignant disease having occurred in at least one other member of the family in 12 instances, with 7 very doubtful ditto. Of these 12, 4 patients reported relatives dead of the same disease; 3 of breast cancer; 2 of cancer in side (whatever that may mean); while in 3 cases the site could not be ascertained. Of 205 cases of cancer of the breast, there was a more or less credible family history in 27 instances; 6 more are marked doubtful. Of those 27, in 11 cases the mother, sister, or aunt had died of the same complaint (in 4 the mother, in 1 the mother and grandmother); 2 were stated to have died of uterine cancer, 2 of hepatic ditto. One relative (father) had died of cancer of the lip; 1 (grandmother) of cancer of the mouth: these affections being so invariably due to local irritation, I have no hesitation in excluding the cases altogether from the calculation. Again, 1 patient stated that her father had died of cancer of the breast; considering the rarity of such cases I think her statement must be regarded with doubt. In 13 cases the statement was confidently made that relatives had died of cancer, but the site was unknown. Thus of these latter cases we can only (with some show of reason) regard 15 as occurring in families where the disease might be hereditary. Taking the whole number, we find that in breast cancer hereditary tendency occurs in 13·17 per cent.; but, with the above deductions, in only 7·31 per cent. While in uterine ditto the percentage amounts to 8·21. Now, I conceive the only inference we can possibly draw from the above is, that if hereditary tendency to cancer has any predisposing influence whatever in its causation, such influence is of the very slightest, and in practice had much better be ignored altogether, as tending to mislead rather than to assist. Not long since I saw an unmistakably adenoid tumour removed from the breast of a woman, three members of whose family were stated to have died of cancer. I much doubt whether the small percentage recorded above would not be equalled by taking as many hospital patients at random, and inquiring as to the occurrence of cancer in their families.

2. *Injury.*—Of 143 cases of breast cancer, in which special inquiry was made as to preceding injury, 32 patients returned an answer in the affirmative, or 22·37 per cent.; while 12 gave doubtful replies. Among the uterine cases the idea of injury from external violence is necessarily almost excluded, yet 4 attributed their disease to falls or kicks, while many dated it from a confinement or miscarriage. Among the 205 breast cases quoted above 3 occurred in males, and in these it is noteworthy that 2 attributed their disease, with every appearance of probability, to blows, while the third gave an obscure history of injury. There can be no doubt that

mechanical injury is a real exciting cause of malignant disease; but (except in epithelioma) the frequency with which the latter so arises is greatly exaggerated, both in medical text-books and in the public estimation. I must here point out one source of fallacy; women very frequently present themselves, within a week or two after some injury, complaining of severe pain in the breast, and in a state of the greatest alarm;—and only recover their equanimity after a lapse of many months, coupled with repeated assurances of immunity from cancer. By these cases I am led strongly to consider that in many instances the blow originates the cancer, not *directly* but *indirectly*, by producing mental depression, and by concentrating the attention on the part affected.

3. *Nervous depression (especially mental trouble).*—Of 103 uterine cases in which preceding causes of mental or physical nervous depression (trouble, or very hard work) were sought for, 55 gave a history of preceding mental trouble (often combined with hard work), 10 of hard work alone, while 10 gave doubtful replies. Of 38 breast cases 24 patients gave a history of sorrow and anxiety, 4 of hard work, while 1 case was doubtful. Thus of the breast cases (although I must confess the number specially investigated in this connexion is smaller than I could wish), 73·68 per cent. gave an account of nervous depression, either mental or physical, immediately preceding the appearance of the disease, while in the uterine cases the percentage amounts to 63·1. From this I cannot help inferring that sorrow, anxiety, and hard work are very powerful factors in the production of malignant disease. The following case, in its exclusion of every possible cause of cancer save one, I regard as so typical that I cannot forbear relating it here; it is not included in the above 38. A lady aged forty, wife of a gentleman in comfortable circumstances, strong and previously healthy, leading an easy life, with no family, having a cheerful disposition, without family history of cancer, and never having sustained any injury, became greatly affected at the death of her brother after a short illness, and allowed this to prey on her spirits for some time afterwards. Within a few weeks a small lump appeared in her left breast; she paid no attention to it till six months afterwards, when, on examination, there was found a well-marked scirrhus tumour, with enlarged axillary glands.

I have above confined my remarks to malignant disease when affecting the breast and uterus, both as affording the largest number of cases for comparison and as practically the most important. I may add that, of 7 cases of rectal cancer, 1 gave a doubtful history of hereditary taint; 24 of cancer of lips; tongue, face, or mouth, give 4 instances, and 2 more very doubtful; 21 ditto of vulva, vagina, and other parts, give 2 instances. Epithelioma, wherever it occurs, is almost invariably (if not always) due to continued mechanical irritation. Nearly all the cases in which the lip, tongue, or mouth were affected could be traced to the irritation caused by a projecting tooth, or by a pipe-stem; and where these factors were absent the disease often originated at or near the angle of the mouth, where any little fissure would naturally be kept open by the motion of the parts. Two patients with epithelioma of the lip dated their malady from a piece of flesh being torn out during the extraction of a tooth; one, with epithelioma of the vulva, from a fall on the edge of a piece of board. So-called "ichthyosis" of the tongue, of course, is very apt to end in epithelioma. In 12 out of the 205 breast cases, both breasts became implicated. One case only was supposed to have followed "eczema" of the nipple.

Although I have not yet been able to procure a sufficiently large number of cases for comparison, I submit there is a strong probability that what is here affirmed of mammary and uterine cancer is also true of malignant disease (excepting, of course, epithelioma) wherever that may be situated. And I now beg to recapitulate the principal conclusions to which, I conceive, the foregoing statistics point:—

1. Hereditary tendency, as a predisposing cause of cancer (at all events, of mammary and uterine cancer), is almost valueless, if not entirely so; and in practical diagnosis should be altogether ignored, as misleading.

2. Mechanical injuries directly produce cancer in a certain percentage of cases; but this percentage is small.

3. As direct and immediate causes of cancer (especially, in my own experience, of uterine cancer), mental trouble and hard work are very potent agents; and exert more influence than any other antecedent within our present knowledge.

Bayswater, W.

THE CURE AND CARE OF THE INSANE.

By ROBERT BOYD, M.D., F.R.C.P.,

LATE SUPERINTENDENT OF THE COUNTY SOMERSET ASYLUM.

(Concluded from p. 935.)

THERE is abundant proof in the annual asylum reports of the visitors and superintendents throughout the kingdom that the Pauper Lunacy Acts hold out a premium, as it were, to the manufacture of lunatics, by enabling the parochial authorities to get rid of their troublesome, helpless, infirm and aged paupers, and thus crowding asylums with improper objects, instead of providing for them in the unions.

As the sick ward of the union is the basis of all care for the sick poor, and insanity is so frequently the result of bodily ailments, the laws regarding medical relief and pauper lunacy should be amalgamated. The county asylums have gradually become union infirmaries by the withdrawal of epileptics, idiots, paralytics, and infirm and aged persons; while by placing the workhouse infirmaries under the control of the visiting justices and commissioners in lunacy, the expense of further additions to asylums would be saved to the ratepayers, and a beneficial classification of the patients could be obtained. Within a distance of four miles from the Somerset Asylum was a workhouse not many years built for 440 inmates and containing eighty persons only, though the asylum was over-crowded and more room required.

In my annual reports the connexion between mental disorder and bodily disease is frequently reverted to. In an analysis of the causes of the first two thousand cases of insanity in the 17th Annual Report, page 28, it is shown that about one-half depended upon bodily or physical causes. Would it not be more rational to treat diseases with more care at the earliest stage, before delirium supervened, before the sufferers were beyond relief, or incapable of appreciating the efforts to restore them to health? Are they less objects for care and sympathy when suffering from sickness or accident, before being deprived of reason than afterwards? And would not measures taken at the outset have prevented much suffering, been more useful, and, perhaps, saved valuable lives from becoming mentally total wrecks? A poor man in writing to express his gratitude, concludes with this trite and significant observation, "poor people does be lost for want of means when they are sick."

Under the Poor Law the system is how to avoid relief to the poor in sickness, for the relieving officer is told that medical relief being the stepping-stone to other relief should, if possible, be avoided. Is it, then, to be wondered at that, under such a system, workhouses are comparatively empty, whilst asylums, which have been constantly added to, are still over-crowded, and insanity supposed to be increasing? This is becoming a national disgrace. The health of the poor is of the highest importance to the State, as it is from their ranks that our labourers, soldiers, and sailors are supplied. The greater evil to contend against amongst the labouring classes is intemperance; it too often brings whole families to the workhouse, and about 15 per cent. to the asylum.

In visiting the Salpêtrière in Paris it reminded me of the Marylebone workhouse, but was on a much larger scale, containing between five and six thousand female poor, including the infirm sick and insane, who are all treated as the circumstances of their cases demand. The Bicêtre, a smaller but similar institution for the male poor, is situated in a different part of Paris. M. Fabret, physician to this large hospital of Salpêtrière, states in his book, that after several years' research into the morbid anatomy of insanity, and after failing to elucidate the nature of the malady by the aid of facts so gained, he next attempted to interpret the nature of mental disorders by recourse to the doctrines of psychology, especially those of Scottish metaphysicians, for fifteen years, but at the end of that time had to lament that his labour was all vanity and vexation of spirit. My own experience of upwards of thirty years, and after having made post-mortem examinations of nearly every case that died in the Somerset Asylum from 1848 to 1868, and previously of more than 2000 in the St. Marylebone Infirmary (the results of which have been published in the Philosophical Transactions for 1861, and Willis's translation of Wagner's Physiology, p. 669), agrees with that of M. Fabret as regards the morbid anatomy of insanity. It was found that the average weight of the brain was greater in the insane than

in the sane, that the weight differed in various forms of insanity, that the left cerebral hemisphere was usually heavier than the right, especially in epileptics, and that the spinal cord was usually diseased in cases of general paralysis, the most fatal form of insanity in males. The difference in weight between the whole brains of the sexes had been previously observed, and the age at which it arrives at its maximum weight.

Workhouse infirmaries might be made most useful auxiliaries to hospitals for extending the means of clinical instruction to pupils at the bedside, which has become so essential to candidates for final examination in their knowledge of medical diagnosis and treatment; provided always that those infirmaries were no longer under the control of persons annually elected, but under visitors with power to carry out a liberal provision of food and medicine for the sick poor generally.

Dr. Babington has observed "that the mind and the body reciprocally and mysteriously affect each other, and in some maladies are so intimately connected with the disordered state of both that it is often difficult to determine on which they more essentially depend, or which they more seriously influence."

By some of the most eminent writers on insanity, as Pinel and Esquirol, the causes are considered primarily to depend on derangement of the digestive functions, and frequently to be connected with tubercular disease of the lungs. In other words, that insanity is the delirium of chronic bodily disease. If so, it would appear an argument in favour of placing the sane and insane on an equal footing as regards nursing and medical comforts, as in France, where there are no poor-laws, and the rule is insisted on in the distribution of relief, "that misfortune does not obliterate shame or destroy self-respect, and that one of the most important duties is to succour the unfortunate without causing them a blush."

The neglect of the sick poor, aged, and infirm in workhouses was frequently alluded to in the annual reports of the Somerset Asylum, and the necessity of placing them under the same kind of treatment as the insane poor insisted on.

With respect to private patients, numerous applications were made by persons for the reception of friends unable to pay the charges of private asylums. By the late Lunacy Act facilities are given for receiving this class of patients into county asylums. The intercourse of private with pauper lunatics is not desirable; the private patient becomes discontented, and renders the others so. During the acute stage of mania no inconvenience would be experienced by associating the two classes of patients. Regarding county lunatic asylums as hospitals for the treatment of insanity in the acute stage, how far might they be made available for patients of both classes, provided that, after the acute stage, the patients could be removed to asylums suited to their relative conditions of life?

It has been suggested that it would justify proceedings and afford time for the friends to make their arrangements, without injury to the patients, if all cases, not found lunatic by inquisition, were sent at once for curative treatment to the county asylum. Slight alterations in county asylums might be sufficient for such a purpose.

It has been my endeavour here to show, in the first place, that the Pauper Lunacy Acts might advantageously be abolished in favour of Medical Relief Acts, to include all cases of the poor, whether visited by sickness or insanity, without the stigma of pauperism being attached.

2ndly. That the workhouse infirmaries should, like asylums, be placed under the control of visiting justices and the commissioners in lunacy.

3rdly. That the Workhouse Infirmaries should be made available for the instruction of medical pupils and general practitioners.

Finally, and above all, it cannot be too urgently insisted on that the action of the Legislature is much needed to provide measures for the admission to and retention in lunatic asylums of none but proper cases; and that due means should be adopted for the safe keeping of harmless and incurable cases, apart from those which may admit of cure. When this desirable object has been attained, no doubt the number of recoveries will be largely increased, and by this advance in humanity the expenses diminished.

These remarks are not intended to apply to the metropolitan district, in which, under the Local Government Board, the chronic cases of insanity and the idiots have been provided for.

Bolton-row, Mayfair.

A Mirror

HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et merborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium

WANDSWORTH INFIRMARY.

CASE OF PURPURA HÆMORRHAGICA; DEATH; NECROPSY.

FOR the following notes we are indebted to Mr. James Allan, assistant medical officer.

Catherine W—, aged twenty-one, was admitted on September 15th. She had been married for three years, and had suckled her only child fourteen months, up to onset of illness. The menstrual function had not been re-established since delivery. During her married life she had worked hard as a laundress, and was so occupied until lately. Her meals had been taken irregularly, and the food was of poor quality and not always sufficient. Once, at the age of twelve, she had blood-spitting, and she had a brother "delicate in the chest."

Three weeks before admission pain was experienced in the left knee-joint, which caused her to limp. She continued at work till September 2nd, when she had pain in the left hip. She lay in bed with the knee flexed, and had a rigor. She suffered from sleeplessness, loss of appetite, and great thirst; did not perspire, but became thin. The bowels were confined.

On the 14th she spat up a large quantity of blood; the bleeding recurred next day, prior to her being taken to the infirmary. Before the hæmoptysis there had not been cough or any other chest symptom.

When examined after admission the patient was very pale, and rather thin; the hair and complexion were dark. There seemed to be acute pain in the left hip, knee, and limb generally. An expression of pain was elicited by pressure over the sacrum and lower lumbar region, along the left sacro-iliac joint, in the left groin, and on tapping the left iliac crest. The left knee was not tender or swollen, and was of the same temperature as the right. The skin was dry and harsh, and presented numerous small ecchymoses all over the body and limbs. Examination of the chest detected nothing abnormal, except over a limited area at the base of the left lung posteriorly, where there was crepitation with inspiration. Temperature in axilla 101.5°; pulse 100. Pain and excitement were quieted by the administration of opium.

On Sept. 17th she had copious hæmoptysis, the blood coughed up consisted partly of clots. After free use of ergot internally the hæmorrhage stopped, but not readily; spray from a solution of sulphate of iron was inhaled; the patient also took small pieces of ice into her mouth. Temperature in the evening 100°. A little brandy was ordered on account of faintness.

On Sept. 22nd several dark, bruise-like patches, of considerable size, were visible on the back in the lower lumbar and sacral regions. The seat of a similar patch on the left forearm was acutely painful for about twenty-four hours before discoloration took place. The small spots on the body were getting larger and purple. There was no expectoration. An aortic systolic bruit was detected. The patient was delirious during the night; the skin was dry, tongue pale, dry, rough, not coated; and there were sordes on teeth. Morning temperature 102.2°; pulse 120. Evening temperature 101.8°. Ordered quinine and digitalis; diet as before. She was restless, but not in pain; thirst was great.

On Sept. 24th she had subsultus tendinum. Morning temperature 101.2°; pulse 120. Evening temperature 101.2°; pulse 120.

She died at 3 A.M. on the 25th. Hæmorrhage had not recurred since the 17th; food taken readily throughout.

Necropsy twelve hours after death.—On the cutaneous surface there were numerous purplish macule, fewer on the posterior aspect of body and limbs than anteriorly, none on the face. The spots were round, and from one line to one and a half lines in diameter. Section showed these to be

due to extravasation of blood in the skin. Several dark patches of considerable size, irregular in outline, resembling recent bruises, were situated on the lower part of the back, one on the right thigh near the groin, and one on the posterior surface of the left forearm, near the wrist; these depended on subcutaneous extravasations. There was not much subcutaneous fat; the manubrium sterni was cut through transversely without difficulty by a strong knife. The pericardial sac contained half an ounce of yellowish serum. There were numerous extravasations on the heart's surface beneath the visceral pericardium—small, rounded, varying in size from mere points to spots a line in diameter. The right heart contained a large firm adherent yellowish-white clot, as well as some dark blood, very thin; the left heart was nearly empty, and had small white clots entangled amongst the chordæ tendinæ. The aortic arch was occupied by a thick, tenacious white clot. Under the endocardium of both ventricles there were minute extravasations, more numerous in the left. The aortic valve was slightly incompetent, the flaps were somewhat rigid, and there was atheromatous change around the commencement of coronary arteries. The heart, the left ventricle of which was hypertrophied, weighed 10 ounces. The right lung weighed 22 ounces, and was anæmic and highly œdematous throughout, but more markedly along the posterior border. There were several old, very limited pleuritic adhesions; no fluid in the right chest, nor subpleural extravasations. The left lung weighed 20½ ounces, and was œdematous, but there were no adhesions. At the base of the lower lobe, posteriorly and involving a limited area, a portion of lung, pyramidal in shape, besides being œdematous had a blood-stained appearance externally and on section; the lung tissue was not broken down, the bronchi of this part were full of dark clotted blood. There was about an ounce of reddish serum in the left pleural cavity. The intestines were remarkably pale, blanched, and distended with flatus. The stomach was also distended, and a small patch of its mucous membrane near the cardiac orifice had undergone post-mortem digestion to a slight extent. The intestine presented no lesion; contents were thin, yellowish. The mesenteric glands were larger than normal. The spleen was large, weighed 12½ ounces, was firm, and purplish on section. The liver weighed 57½ ounces, bile-stained; under the capsule, over a considerable extent of right lobe on its upper surface, there was blood extravasated, and here the capsule stripped off very readily; section at this part showed that the liver tissue was infiltrated with blood to the depth of half an inch. The gall-bladder was empty. The right kidney weighed 5½ ounces, the left 6½ ounces, the capsules were adherent, but there were no hæmorrhages; section under the microscope presented increase of intertubular tissue. The right suprarenal capsule weighed 63 grains, the left suprarenal 66 grains; the pancreas 4½ ounces. The bladder was pale and blanched, and there was a small number of minute submucous hæmorrhages. The uterus was small; length 2½ inches; weight, without appendages, 1½ ounces. There were numerous hæmorrhagic stigmata under the mucosa of body of uterus. Both ovaries were enlarged, right was 267 grains in weight, left 284 grains; both were freely movable; under the microscope they had the characters of a fibroma with several small cysts. The left hip-joint examined and found normal, also left sacro-iliac joint. The pelvic fascia posteriorly was thick and readily separable from the sacrum; between this fascia and the sacrum and ligamentous structure behind it there were numerous small hæmorrhages. The coccyx, sacrum, and contiguous part of left ilium had an unusually dark appearance on the surface; these bones were blood-stained on section, as were also the bodies of lower lumbar vertebrae. There was a hæmorrhage in the sheath of the left great sciatic nerve near its origin. Examination of the head was not permitted.

HOSPITAL SUNDAY AND SATURDAY IN THE PROVINCES.—At Gloucester the total proceeds of these collections amounted this year to £492 2s., being £110 less than in 1879. Some of the Church collections, however, have been deferred. The sum, less expenses, is thus divided: Infirmary, £257 1s. 6d.; Dispensary, £73 2s. 7d.; Children's Hospital, £72 15s.; Eye Institution, £73 12s. 7d.—At Hull the sum collected was £657 8s. 8d. (against £679 17s. 5d. in the previous year); distributed as follows: The Infirmary, £455; the Dispensary, £80; Children's Hospital, £55; Homœopathic Dispensary, £20.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

THE last ordinary meeting of the Pathological Society for the year was held on Tuesday, the 21st inst. ; J. Hutchinson, Esq., the President, in the chair. Dr. Drewitt exhibited a living example of late rickets, which some of the members of the Society considered to differ in many points from the more usual form of the disease. The debate on rickets was then reopened by a very suggestive speech from the President, and continued by Mr. Lucas ; Dr. Baxter, who made a valuable addition to the facts of the etiology of rickets ; Dr. Barlow, who spoke of the disease misnamed fetal rickets ; Mr. Shattock, and others. The meeting was prolonged beyond the usual hour, and it was late when Dr. Fagge, in a few sentences, closed the debate. Dr. Lees and Mr. Pearce Gould were appointed auditors of the treasurer's accounts, to be presented at the ensuing general meeting of the Society.

Dr. DREWITT showed a boy ten years and eleven months old, a patient under Dr. Cheadle's care at the Hospital for Sick Children ; one of six healthy children, none of whom suffered from rickets. Up to eight years of age he was well, and played about like others of his age ; but a month later he complained of aching pains in his legs, and he had to be carried to and from school, and all his bones began to bend. On admission to the hospital he was worse than at the present time ; his femora, tibiae, clavicles, and ribs were especially bent. There was great tenderness of the subcutaneous borders of the tibia and ulna, enlargement of the ends of the bones, and troublesome cough. Under good diet and cod-liver oil he rapidly got worse, but when taking eight grains of iodide of potassium three times a day he quickly improved, the tenderness of the bones disappeared, and his cough left him.—The PRESIDENT asked if the cod-liver oil was discontinued when the iodide of potassium was given, and whether it was the brown or the pale oil that was used. It was a remarkable case, and especially interesting in that anti-syphilitic remedies had done good when cod-liver oil had failed.—Mr. GAY asked for particulars of the family history of the lad.—Dr. DREWITT replied that there was no history of syphilis in the mother, who was healthy. Some of the children had had infantile thrush. The cod-liver oil was discontinued while the iodide was given.—Mr. ADAMS remarked that the case differed from ordinary rickets ; the femora were very shortened and greatly bent, but the tibiae were hardly bent at all ; the forearms were bent as if from crawling. He thought it a transitional form between rickets, mollities ossium, and osteitis deformans.—The PRESIDENT requested Dr. Fagge, Mr. W. Haward, and Dr. Drewitt to report upon the true nature of the case.

The debate on Rickets was then resumed.

The PRESIDENT.—First, I have to express a shade of regret that the debate, interesting and instructive as it has been, has not produced more in the form of pathological evidence. It may be that this evening will somewhat confuse this criticism, otherwise I think we have all of us noted that in the main it has consisted in the interchange of opinion rather than the citation of new facts. I may be asked, perhaps, what kind of facts I should have liked. Well, in reply, I should have liked definite information as to the state of the urine in rickets, and possibly the state of the blood also. Further and more extended chemical analyses of the bones at different stages of the complaint also seem desirable. Additional facts as to rickets in the lower animals, with specimens, are wanted. So also with rickets in the foetus and congenital rickets. Lastly, I should much have liked to know from careful observation whether the state of the teeth, carefully distinguishing between the first and second sets, is, or is not, modified by rickets. Amongst the parts of the subject most fully entertained in this discussion has been the relationship which exists between inherited taint of syphilis and rickets. Dr. Fagge in his opening address asked "whether syphilis may not be one of the causes of rickets," and Drs. Barlow and Lees

have presented us an excellent report, which supports to some extent the contention of M. Parrot that the cranio-tabes formerly supposed to be due to rickets—and with it some other lesions—is really due to syphilis. It is now long since we have known well that many of the malformed foreheads, most of the malformed teeth, and many cases of bent and enlarged bones, formerly considered to be of a rickety nature, are really syphilitic. The explanation of the precise cause of the deformity in the syphilitic skull has, however, been reserved for M. Parrot and Dr. Taylor, and to them we owe our present knowledge that in infancy the osseous system is often very extensively affected by a transitory form of inflammation. The skull bones and the long bones alike suffer, and the epiphysal ends are especially prone to be severely attacked. There remains, therefore, I think, no doubt whatever that in congenital syphilis a state of general periostitis is very common, which may easily be thought to resemble rickets. The child is in pain all over, and the joint ends of the bones are swollen and tender. In this condition the flat bones become vascular and soft, and it is difficult to withstand the evidence in favour of the belief that not only may they thicken, but that, under special local influences, they may atrophy and suffer local absorption. The influences which localise the thinning may be either external or internal, pressure of the brain or pressure of the pillow. If we regard the symptom named "cranio-tabes" as simply local absorption of soft bones from pressure, may we not easily admit that it is probably common both to syphilis and rickets ? Each of these diseases in its own fashion makes the skull bones vascular and soft, both make it painful for the child to move, and thus favour the occasion of injurious pre-sure. We need not, I think, go so far as to believe that syphilis is "a cause of rickets," but may rather prefer to say that syphilis may on its own account produce conditions which simulate those of rickets ? Is it not probable that to the skilled and careful observer there will in most cases be found grounds for a differential diagnosis between rickets and syphilis, and that too both in the ward and the post-mortem room ? That the two often co-exist and run their course together, is highly probable ; but that they are essentially and totally distinct, being induced by wholly different causes, will, I think, be the verdict of all who have listened to this discussion. Surely those who confuse them, or who think that rickets apart from syphilis has no existence, commit a grave clinical error. I was glad to hear Sir William Jenner's defence of the term diathesis as applicable to the state of health which induces rickets, and his refusal to allow that word to be restricted by any arbitrary definition. If we are to understand by diathesis a condition of defective health, giving during a long period proclivity to special forms of disease, then undoubtedly the rickety state is a diathesis. If, on the other hand, the term is to be restricted to the results of a specific poison, then it is not. But the latter is not a very successful employment of the word. Just in the same sense as we have a scorbutic diathesis, a tubercular diathesis, a gouty diathesis, and a leprous diathesis, so we have a rachitic one. It is merely a question as to the use of the word, and those who object to it in this sense will perhaps kindly supply us with a better. Not only, however, do I contend that the rachitic state is correctly included with the diatheses, but I wish to ask Dr. Fagge very definitely whether there are any good reasons why it should not be placed with confidence in one class of diatheses. I allude to that class which may perhaps be conveniently known as "diet-diatheses," or assimilation diatheses. In this class are to be grouped, with others, scurvy, gout, pellagra, and in my opinion leprosy, all due to some error in diet or assimilation. It is very important to bear in mind respecting all of them, that although usually the cause is defect or excess of some food element, yet that precisely similar results may ensue from defective assimilation or excretory functions. The effects of food, both negative and positive, are always relative to digestive capacity ; it may be due to the idiosyncrasy of the individual, and thus the somewhat vulgar saw as to meat to one and poison to another becomes a very literal truth. I would not insist upon this most obvious fact were it not that I think that a forgetfulness of it has done much to put us into a mist as regards the real causes of rickets and the maladies associated with it. Because defective food supply cannot in all cases be proved, it is hastily assumed that rickets is not a diet disease ; and those who think it hereditary, consider that its hereditariness points to the same conclusion. Dr. Fagge quoted a German

authority (Vogel) as insisting on its hereditariness, and saying not a word about food as a possible cause. But is not gouth hereditary? and is not gout distinctly a diet disease? I would quote leprosy as an equally strong instance, but that the facts respecting it are not so well admitted or so widely known. There is nothing inconsistent in the fact that a tendency to disease produced by diet should be hereditary. It is the organs of assimilation which are inherited. Through their peculiarity the effects of unsuitable food may be greatly exaggerated, or even the most wholesome may prove non-nutritious or injurious. The arguments which have been thought to invalidate the hypothesis of a diet cause for rickets have been held to have yet heavier weight in the case of osteo-malacia, or mollities ossium. It occurs to those who have full choice of their food, and under conditions in which it is impossible to suspect any ordinary deviation from sound rules of diet. Yet may it not be, after all, that it is an instance of defect in assimilation? I wish especially to elicit Dr. Fagge's opinion on this subject. Mollities ossium is on the Continent known as "rickets of the adult," and Trousseau in particular devotes an able lecture to the attempt to prove their identity. Yet I think we may note amongst ourselves a decided willingness to avoid this subject, and to admit that nothing whatever is known as to the real nature and relationships of mollities ossium. In the present discussion it has, I think, scarcely been mentioned. Dr. Gee told us that if a child is not rickety at a year old, it may be assumed that it will not become so. Other speakers, and amongst them definitely and emphatically Sir Wm. Jenner, have extended the period of liability; but none, so far as I have heard, have hinted that it is a liability which extends through life, and is probably almost the same in kind, though modified in its results by age, and other circumstances. Amongst the arguments which Trousseau mentions in support of the identity of rickets and osteo-malacia is the fact that they are curable by the same remedy. He is a firm believer in cod-liver oil as the best means of curing rickets, and he records a most remarkable case of advanced mollities ossium in which the patient was most definitely cured by its use. Surely we have, in such facts, not only support for the belief in their identity, but also in the theory of their being both due to defective assimilative power. Let me, in parenthesis, say that Trousseau insists that the oil must be the brown, unpurified kind. It is just possible that in the general substitution of the purified kind in English practice is one explanation of our diminished faith in the oil as a specific for rickets. If we assert that rickets is essentially a food diathesis we by no means exclude from the list of its causes such influences as cold, deficient clothing, bad ventilation, and the like. Nothing is more certain than that one and all of these may help to disorder the organs of assimilation, and prevent the perfection of digestion. Alone, however, none of them would, excepting in the hereditarily predisposed, be efficient in the production of rickets; whilst alone and quite unaided by them, defective food has been over and over again proved to be competent to that result. Defective food is then probably the main cause; defective assimilation in many cases helps the influence of defective food, and in a few cases accomplishes the whole task; the others are to be reckoned only as constituting and as helping chiefly to induce defective assimilation. If Dr. Fagge is not inclined to attempt the repetition of the diet hypothesis as the cause both of rickets in the infant and osteo-malacia in the adult, I have next to ask him whether it might not be convenient to somewhat modify our nomenclature, and place the series of related maladies in suitable juxtaposition of alliances. It is probable that peculiarities in the mode of life at different periods of life are the chief influences which modify the malady. We have perhaps the following: intra-uterine osteo-malacia, or congenital rickets; infantile osteo-malacia, or rickets of young children; osteo-malacia of adults; osteo-malacia of pregnancy; osteo-malacia of insanity; osteo-malacia of senility. It would be of much interest to say a few words in explanation of the different modes of manifestation assumed by the same malady at different periods of life, but time does not permit. I may just hint, however, that it is easy to explain both why osteo-malacia should be peculiar when it occurs to infants, and why it should be found in practice so overwhelmingly common in them in proportion to other ages. It is during the first year of life that absolutely no choice as to food is permitted, and that a sameness of dietary is attained which finds no parallel at any other. If the milk given to the infant be defective

there is no chance of escape, for it is probably the one sole article of food. The peculiarities of osteo-malacia of the infant are due to the fact that the bones are then still growing, and the cartilages unossified. At later periods no disease of epiphyseal cartilages is possible, since, for the most part, these have ceased to exist. - Dr. Fagge has drawn attention to the frequency with which symptoms of nervous disturbances occur in rickets, and has referred not only to the well-known deviations from the average in point of intelligence, but to hydrocephalus, chronic cerebritis, convulsive affections, tetany, &c. It is of not a little interest to those who believe in some bond of connexion between the two conditions to note that in adult life with certain forms of insanity osteo-malacia is constantly associated. In this instance, it has been conjectured that in some way the nervous system interferes with the nutrition of the bones. Is not the hypothesis far more likely that both the nerve centres and the bones share in a defect of assimilation, in existence probably for a long time, before any symptoms in either class of organs revealed it? It may help, probably, not a little to the full acceptance and computation of the diet theory of rickets if we emphasise an opinion expressed by both the opener of the debate and by Mr. Warrington Haward and others who have taken part in it. I allude to the belief that a large majority of cases pass unrecognised. So long as we think only of well characterised cases, so long are we likely to cherish a belief that the disease is, in some sort, a pathological entity, and due to some specific cause. If we break away from this notion and recognise what is probably really the fact—that we only diagnose exaggerated cases, and that a tendency to the same, or a slight degree of it, is present in thousands of patients to whom the term rachitis is never applied,—we become better able to realise that the malady, so far from being a specific disease, is not even a well specialised one. The same argument is applicable to the mollities ossium of adults. To put this idea in other words, it may be said that when a condition of defective assimilation in an infant rises to a certain point, and produces failure in the process of ossification, we name it rickets, and when a similar ailment in an adult rises to a certain height of severity and produces brittle bones we call it mollities ossium. For one infant who manifests the outward signs of rickets, and for one adult who shows those of mollities ossium, probably there are in each case a hundred in whom the tendency, in greater or less degree, and for longer or shorter time, is present. We recognise, name, and study only the severe and exaggerated examples. We must make a clear distinction between congenital rickets and hereditary rickets. The evidence which has been given that signs of rickety changes may be present in the mature foetus at birth by no means proves that there was in these cases an inherited disposition to rickets. As has been well observed indeed by Dr. Joseph Adams, congenital conditions of disease not seldom are hereditary. The mother is to foetus not only its progenitor, but its nurse during intra-uterine life. If rickets be a disease due to defective food and the mother's blood be in a defective condition, it may easily come about that, although the foetus originally inherited nothing, yet it may become rickety during its pre-natal period of life. A disease which is in a true sense hereditary, ought to be derivable indifferently from either parent—sperm or germ; but it is clearly possible that rickets may not be so. We must admit, I think, the evidence that rickets is occasionally congenital, the rarity with which it is so fits well I would submit with the hypothesis of its food causation, since we know that even from very feeble mothers the foetus often manages to obtain a supply quite sufficient for its full growth. It is very different when it comes to depend solely upon a single secretion, the milk of the same mother. As to the evidence of the transmission of hereditary tendency to rickets. I do not think that I have in this discussion heard any facts excepting the little fragment of evidence which I myself produced. In the case I refer to, Dr. Ormerod's, a father who had rickets in childhood and mollities ossium in adult life, had also two daughters who suffered severely from rickets. It is obvious that these children may have been themselves subjected to the ordinary food-causes of rickets, and that inheritance had nothing to do with it. I am unable to state anything as to their mother's health, or the management of their infancy. Still we may safely believe that there is nothing improbable in the idea of the hereditary transmission of a constitutional tendency to rickets—that is, to

speak definitely, of a tendency to defective function on the part of the organs of assimilation, which may, either with or without the help of contributory causes, at some time bring about such a defect in the composition of the blood as would interfere with the nutrition of the bones.

Mr. CLEMENT LUCAS.—I would not call rickets a diathetic but rather a dietetic disease; for though bad air, bad clothing, and general squalor and filth, together, perhaps, with certain constitutional states in the parents, may contribute to its production, there will, I think, be found in every case an insufficient or altogether injudicious diet. Has any gentleman present ever seen rickets without a distended abdomen? In my experience it is constant. The liver is rarely much enlarged; the spleen is very variable. I can show that enlarged spleen may be due to rickets without syphilis, and to syphilis without rickets, but the two spleens may be pathologically distinct. By far the chief cause, however, of the enlarged abdomen is the distension of the stomach and intestines with flatus, consequent on injudicious feeding. Children under nine months suffering from rickets will almost invariably be found to be bottle-fed, whereas children suffering from rickets at sixteen or eighteen months will often be found still hanging to the mother's nipple. In either case the diet is injudicious, and I will undertake to produce rickets in any child under three years of age that I may be allowed to feed improperly. As regards which child is most frequently attacked by rickets, my experience, in accord with what Sir W. Jenner said on the last occasion, was that the eldest child of the well-to-do and the later children of the poor which suffer most. The eldest child of the rich suffers because it is an experimental child, and the parents learn by practising upon it how best to feed those that follow. Dr. Fagge has shown, and I agree with him, that the younger children of the poor suffer because the parents are unable to provide sufficient food for them. He considered it could be and was hereditary in the sense of reproducing the rickety frame and a tendency to become rickety under the special favouring conditions. It was often asked why there was more frequent and greater enlargement of the epiphysis of the radius than the tibia. It is because rachitic children are four-legged animals, crawling about on hands and knees, that the wrists suffer and the ankles waste, but in children who walk upright I always find the ankles enlarged as well as the wrists; but here, again, rachitic children are continually falling, and then, as is a case in Colles' fracture, it is the lower end of the radius which receives the force of the concussion. For the same reason the beading of the ribs is a constant symptom, because the ribs are ever on the move. Another symptom to which I would allude is laryngismus stridulus. This is a local spasmodic affection found always associated with rickets. Must it not be due, then, to some local irritation of the recurrent laryngeal nerve? I think it not unlikely that the growing extremities of the tracheal rings will be found enlarged and pressing on the nerve, or possibly it may be irritated where it passes under the inferior cornu of the thyroid cartilage. If not here, the spot where it passes through the jugular foramen should be examined. It is so localised a spasm that it must be due to a local cause. No description that I have met with quite accords with my experience of the rachitic head. In the first place, it is a large head, and those who say that the head is not enlarged, but simply rendered disproportionate by a lack of development of the face, have fallen into error by including in the non-rachitic class heads which have been enlarged by antecedent rickets, the patients at the time of examination showing no enlarged epiphyses or other signs of rickets. There is a child now in the Evelina Hospital who has a remarkable head, but no enlarged epiphyses. I had some difficulty in persuading the house-surgeon and registrar that this was due to rickets till he stripped the chest and exposed a characteristic pigeon chest. There is also a boy in the hospital with most extensive rachitic deformities, on both of whose knees I have operated by Ogston's method. He is eight years of age, and has a head twenty-one and a half inches in circumference—more than an inch above the average. I got Mr. Hall White, the house-surgeon, to measure the heads of the children at present in the hospital. Of these seventeen show signs of rickets, and their average age being 4·72. Mr. White finds the average circumference of the heads to be 21·22. Comparing these with a similar number of non-rachitic children, Mr. White found, with an average age of 6·05, the average circumference was 19·95. The

rachitic head is peculiar. It is a long head and a broad head, but flat at the top. It invariably gives increased width between the eyes, showing that the base is increased as well as the vertex. In its most extreme form, it is composed of four convexities, like four scallop-shells articulated together, corresponding to the frontal, parietal, and occipital bones. The fontanelles are depressed, and remain depressed when ossification is complete. The antero-posterior ridge between the parietal bones, which is common in skulls, is absent in the rachitic skull, and a depression above a very convex occipital bone in the adult is almost characteristic of old rachitis. Thackeray's skull was undoubtedly rachitic. I could allude to very many others, and the rachitic head is not a thing to be ashamed of; indeed, he regarded it as a great good fortune.

Dr. BAXTER.—It was with a view to obtain some more exact notions as to the causation of the disease that I investigated upwards of a hundred consecutive cases of rickets, with especial reference to the following points:—The age of the parents, their health (particularly as regards the presence, in either of them, of any exhausting disease—e.g., phthisis), and such evidence of their having themselves suffered from rickets in infancy as might be furnished by the existence of thoracic deformity. The number and health of previous children, if any, were recorded. The circumstances of the mother during her pregnancy were inquired into. Next the hygienic surroundings of the patient, especially as regards exposure to damp and seclusion from sunlight. Also the existence of other disease, antecedent or concomitant, more particularly inherited syphilis. Lastly, the nature and quantity of food administered since birth. The investigation in every case was conducted with some care. A good many of the records have unfortunately been lost, though the results of the inquiry remain. But I have succeeded in recovering those of the first eighty cases; which I have analysed afresh, in order to give numerical precision to my statements. Without going into needless details, I may briefly say that no constant relation was made out between any of the above reputed factors and the development of rickets, with one exception, diet. Take, for instance, the place of the patient in the family series, on which considerable stress was laid, many years ago, by Sir William Jenner. Among my cases of rickets 19 per cent. were first-born children, 13·5 per cent. were second-born children, 19 per cent. were third-born children, 13·5 per cent. were fifth-born children, 8 per cent. were sixth-born children, 16 per cent. were seventh-born children, 2 per cent. were ninth-born children and upwards. The larger proportion of the above cases can hardly be ascribed to the influence of repeated pregnancies in exhausting the mother's health, or reducing the standard of material comfort enjoyed by the parents. Again, as to inherited syphilis, only 13·5 per cent. of my cases are noted as unquestionably syphilitic, 12 per cent. more are marked doubtful. It is, perhaps, worthy of mention that of the 23 per cent. of the whole number in whom crania-tabes was observed no less than 75 per cent. were syphilitic. This, of course, adds nothing to the weighty evidence adduced by Drs. Barlow and Lees; I allude to it in passing, because, at the time my observations were made, I had no suspicion of there being any relation between the two things. These instances are enough to illustrate the kind of negative results brought out by the inquiry. The only positive result, as I have remarked, concerned the diet of the infant. It was found that no less than 92 per cent. of the whole number had been given farinaceous food of one kind or another before the age of twelve months. Here are the figures: 42 per cent. had had farinaceous food daily from their birth, 30 per cent. had had farinaceous food daily from the age of three months, 4 per cent. had had farinaceous food daily from the age of six months, 16 per cent. had had farinaceous food daily from the age of nine months. It may be added that in many, though not by any means in all, the first onset of the disease, and its degree of severity appeared to be distinctly related to the period at which the administration of starchy matter was begun, and to the proportion between this element of the dietary and the others with which it was invariably associated. Of the 8 per cent. of cases in which no starchy food had been given before the age of one year¹ several might have been ascribed to materna

¹ It must be remembered that the fact rests on the unsupported testimony of the mothers. My strong dislike to starch-feeding was well known among the out-patients of the Evelina Hospital, and their tendency would have been to conceal or to minimise it.

feebleness, the mothers suffering, at the time, from general arthritis deformans. One child was undoubtedly syphilitic, another was bred in a cellar, to which no daylight ever penetrated, and in which gas was continually burning. In one case only could no cause be made out. The first child of young and healthy parents, living amid excellent surroundings, free from syphilitic taint, nourished exclusively at the breast, began to show signs of rickets at the age of five months. The disease was mild, but unmistakable. So far, then, the result of the inquiry seemed to point decidedly in one direction. But clinical evidence of this sort, even when drawn from a very large number of cases, affords, at best, only a certain probability; sufficient, perhaps, as a provisional guide to action; but never amounting to proof. To obtain this, a series of experiments was undertaken with puppies, kittens, rabbits, guinea-pigs, and white mice. As soon as possible after their birth they were put upon a diet of pure arrow-root jelly, with a variable quantity of added milk. Their digestive juices were speedily found to be deficient in, or destitute of, amylolytic power: the starch-jelly passing through their intestines unchanged. Let me say at once that in the issue of these experiments I was disappointed. They were fairly numerous; but in no single instance were such changes produced in the osseous system as could be considered identical with those observed in the human subject. The administration of starchy food to these young animals was always followed by the usual phenomena of inanition; when the proportion of starch was great, they died quickly; when it was smaller, death was delayed for a longer period. But, quick or slow, the course of events was the same in all. The bones partook of the general atrophy; they were thinner and more frail than in healthy animals of the same age; but they never showed any specific changes at their junction with cartilage. I attributed my failure at the time, and I think justly, to the extreme difficulty I encountered in keeping the animals alive for any length of time. In no case did they live long enough to furnish me with evidence against the starch hypothesis, as they yielded none to confirm it. I believe, a French observer, M. Tripier, failed, like myself, to induce rickets artificially in the lower animals; with the details of his work I am unacquainted, as I have never succeeded in laying hands on a copy of his memoir. It was not without some feeling of surprise that I found myself baffled by an obstacle much more serious than I had been led to anticipate from the records of success achieved by earlier experimenters. Published statements had prepared me to find spontaneous rickets not uncommon among domestic mammals, and artificial rickets easy of production. Now I am bound to own that I have never been fortunate enough to see a case of true rickets in one of the lower animals, either during life or after death. I would not be understood to question the occurrence, or even the frequency, of the disease among them; but of this I am quite sure, that many instances of so-called rickets in the lower animals are instances of a disease of the skeleton by no means identical with human rickets; while with regard to many other cases that have been placed on record, the published evidence is sufficient to enable us either to affirm or deny their identity with the infantile disease. Experiment, then, did nothing to strengthen or to weaken the result of clinical observation. We may naturally ask, if the starch-hypothesis be admitted as probable, whether any possible connexion can be suggested between two sets of phenomena, superficially so disparate, as starch-feeding and rickets? In the first place, starch may be supposed to exert some directly noxious action by undergoing decomposition in the bowel, and yielding products capable of being absorbed into the blood, and exerting an influence on the development of the bones analogous to that exerted by phosphorus in Wagner's experiments. The objection to this is that, so far as we know, starch undergoes no such decomposition; we find it in the excreta, stained with bile, but otherwise unaltered. Secondly, it has been thought indirectly harmful, owing to its lack of nutrient properties. That the digestive organs of infants and young animals are incapable of converting starch into sugar has been proved both by physiological experiment and clinical observation. Were an infant fed on starch alone it would die of starvation. It would present the same symptoms and post-mortem appearances as the diseases of which I have already spoken. But such symptoms are not present in most cases of rickets. On referring to my list I find that 54 per cent. of my cases are stated to have been well nourished, 14 per cent. not

wasted, and only 30 per cent. ill-nourished. It must be borne in mind that the proportion of starch to the really nutrient elements of the dietary is seldom very great. Thus in 60 per cent. of my cases the children were suckled up to the age of nine months; in 27 per cent. for periods varying from one to six months; while only 13 per cent. of the whole number never had the breast at all. These were usually supplied with an abundance of cow's milk. In those very rare instances in which milk is altogether withheld, the child develops well-marked scurvy in conjunction with rickets. Of this I have seen more than one example. Moreover, there is clinical evidence that an infant may suffer from prolonged ill-health, may grow pale and waste away, may be severely scourged by syphilis, and yet escape rickets. I have notes of such cases, and I find that, in every instance, the mother's milk was the only food given. Lastly, it is conceivable that starch may operate indirectly by interfering in some way with the assimilation of fatty matter. The possibility appears to meet all the facts of the case more completely than any other, and is strengthened by what we know of the remarkable curative effects of cod-liver oil. In conclusion, I shall briefly notice three objections often urged against the hypothesis that rickets is a consequence of the premature administration of starchy food. First, the occurrence of congenital rickets. Is an infant ever born with the disease? I agree with Dr. Fagge in thinking that no sufficient proof exists of the identity of so-called "fetal rickets" with the disease we are now considering. Secondly, the occasional development of rickets at puberty. This has been more than once asserted to occur, but I know of no decisive evidence on the point. Thirdly, the geographical distribution of the disease. We find an American surgeon² stating that "rickets is a disease so rarely met with in our country, that I have no experience which would entitle me to speak of it authoritatively from my own observation." We can hardly suppose that infant feeding in the United States is very different from infant feeding here. Is it possible that the author is alluding not so much to rickets as to those rachitic deformities of the limbs which call for surgical interference, and which must be ascribed less to the disease than to its improper management at an earlier period of its course? Should the three objections I have specified be found to rest on an assured foundation, any theory which connects rickets with the administration of starchy food—or indeed with any error of diet—must be given up. Those, however, who, like myself, are inclined to hold such a theory, at any rate provisionally, as according better with the facts hitherto observed than any other, may be excused if they hesitate to abandon it until driven to do so by the unanswerable logic of well-authenticated specimens brought before the Society.—Dr. FAGGE asked what proportion of non-rickety children attending the same hospital were under the same hygienic conditions.—Dr. CRISP asked how long the animals experimented on lived.—Dr. BAXTER replied that he was fully alive to the fallacy suggested by Dr. Fagge's question, and he had satisfied himself that it did not vitiate his statistics. The animals never survived longer than two months, and most of them died much sooner.

Dr. BARLOW brought forward a case of so-called Fœtal Rickets as a contribution to the question as to whether there is a true fetal rickets in any sense comparable with infantile rickets. For the fœtus from which these specimens were taken he was indebted to Dr. Herman. It was believed to be of full term, and was born dead. There was nothing in the family history which would throw light upon the case, with the exception that one previous child out of a large number had been born with turned feet. The proportions of the child were very remarkable. There was nothing special about the head and trunk, the neck was short and thick, the limbs were very stunted. The upper limbs placed close to the body did not extend further down than the umbilicus, and the lower limbs from the ilium to the heel only measured each five inches. The lungs were not expanded. No gross disease was found in the viscera. "The specimens to which I wish to call attention are the bones of the fœtus. To begin with the limb bones. The clavicle is natural. It is longer than either humerus or ulna. It will be remembered that the clavicle is a membrane formed bone. The scapula shows much thickening of bone where the cartilage joins it, so that there appear to be two thick lips, including the edge of the cartilage. The

² Markoe, Diseases of the Bones. New York. 1872.

humerus shows very large upper and lower epiphyses and a short stout shaft. On section the epiphyses are cartilaginous throughout. There is no irregularity in the line of ossification, and there is no massing up of pale bluish material such as is seen in a typical rickety long bone at the junction of shaft and epiphyses. The bone of the shaft is hard and compact on the surface and cancellous in the middle, and there is more indication of a medullary canal than is seen in full-term foetal long bones. At the outer side of the upper extremity there is a very slight extension of bone over the base of the great tuberosity. There is a manifestation of a tendency to cupping round the epiphysis, which is very marked in Mr. Shattock's specimens, to be presently exhibited. The radius is exceedingly oblique in its direction, and presents a striking sigmoid curve with the pronator tubercle in the centre. In the lower extremity the only points to which I will refer are: (1) the remarkable bend of the femur concave on the flexor aspect, (2) the absence of an ossific centre in the lower epiphysis; and (3) an invasion of fibrous tissue from the periosteum, spreading at the junction of the shaft and epiphysis. The sternum and costal cartilages show no ossification. The ribs present distinct nodosities; but instead of being at the junction of rib and cartilage, these nodosities definitely belong to the bone, and each consists of a bony cup which surrounds the end of the cartilage like a sheath. This cup, in fact, is quite similar to the rudimentary sheath pointed out in the humerus and scapula. There is a similar cup at the vertebral end of the rib. There is nothing special about the vertebrae. In the cranium the clivus is very steep, the foramen magnum small and funnel-shaped; and what is most noteworthy, there is complete ankylosis between the basi-occipital and the basi-sphenoid. This is one of the cases which would have been classed some time ago as foetal rickets; but there are essential differences alongside of some superficial similarities. First, it will be seen that, with regard to the long bones, the epiphyses generally are enlarged, at all events as compared with the shafts. In true rickets it is not the whole epiphysis, but the line of ossification which is swollen; but here it is the whole epiphysis. Second, there are signs of intrusion of fibrous tissue from the periosteum in between the shaft and the epiphysis, and also of the formation of a sheath-like prolongation around, and external to the base of the epiphysis. This is well shown in the nodosities of the ribs. Third, the shaft is singularly hard and compact, there is no trace of any fracture, and the bendings which occur are exaggerations of the normal bends. There is no thickening of periosteum or rarefaction of medullary parts of bone such as is described in rickets. Fourth, the stunted growth in length of the shafts, whilst the thickness is normal or perhaps excessive, is quite different from anything seen in rickets. Now, it might have been argued that in this child there had been at one period of intra-uterine life a rickety condition, which, having run its course, had left merely hardened bent bones. But a microscopic examination of the ends of the bone, I think, gives no support to this view. Some sections made for me by Mr. Boyd show that the cartilage in the greater part of the epiphysis is not materially altered, but along the line of ossification the cartilage cells are greatly enlarged, and the vertical row formation, which is so striking a feature in normal ossification, is here conspicuously imperfect. Thus, unlike true rickets, there is no proliferation of cartilage; indeed, the ossifying cartilage is very scanty in amount, and the primary bone areolæ do not present the characteristic organ-pipe arrangement. The subsequent development appears to depend mainly on the periosteum. Thus it happens that the growth of the shaft in length is arrested whilst it grows normally, if not, even to an exaggerated degree, in thickness. The in-growth of fibrous tissue between epiphysis and shaft, and the cup-like sheath at the base of the epiphysis, are developed from the periosteum. Several years ago specimens like this were investigated by Heinrich Müller and Urtel, and they pointed out how essentially different this lesion was from true rickets, and Urtel proposed for it the name of foetal chondritis. Two years ago Professor Eberth published a monograph on the subject, including some observations of his own on a deformed calf, which showed similar lesions. Professor Eberth shows that with some variations this condition of long bones is one of the characteristics of cretinism. The premature union of the basi-occipital and basi-sphenoid which was pointed out by Virchow as occurring in a cretin's skull which he examined, has been made too much of in the various

accounts of cretinism. Eberth shows that it is not constant in cretins. It occurs in this specimen, and has been found in others, but not always. But the peculiar arrest of growth in the length of the bones from defective proliferation and row formation of the embryonal cartilage is probably a constant feature. The disease—'achondroplasy' is the term suggested by M. Parrot—may be defined as a defective plastic power in the embryonal cartilage."

Mr. S. G. SHATTOCK related some cases of Osseous Lesions in the Fœtus. He noticed altogether nine cases; one of his own, five in the Museum of the Royal College of Surgeons, three in St. Bartholomew's. All these specimens exhibit shortening of the limbs, curvatures of the lower, and in most cases synostosis of the basi-occipital and post-sphenoid bones. And the specimens in which the soft parts still remain exhibit the facial characteristics of cretinism, depression of the root of the nose, flattening and upturning of its tip, thick rounded edge, &c. And these showed, also, a general accumulation of subcutaneous fat, such as is recorded of nearly all such cases. The histological appearances of sections of the femur of the most typical of these specimens showed the line of ossification to be irregular; the cartilage cells in front large, round or oval, and collected in groups, without a serial arrangement. Ossification had extended irregularly into the cartilage without the production of primary areolæ, and the proper alveolar formation had been effected by excavation of the calcified cartilage through means of the advancing medullary tissue. Both Eberth and Müller describe cretinism in the calf, and there is a foetal bitch puppy (No. 318, Teratological series, Mus. Coll. Surg.) which presents the characteristic cretinous habit. These specimens as a whole exhibit much that is in a general way like rickets—viz., the shortness of the long bones, the comparative enlargement of their growing ends, their deformities of curvature, and the thickening of the flat bones. The essential error of nutrition would appear to consist in an histological spoiling of the cartilage concerned in the ossification-process which fails to furnish a medium for bone-formation. And the histological accounts of such cases contain evidence of analogy between this condition and that of rickets, not a progressing rickets, for in all these cases the osseous substance has been found firm, but a sufficient analogy to render it probable that some such cases represent recoveries from rickets which has both arisen and passed away *in utero*. However, there are very few cases on record in which the bones of the fœtus have been observed unnaturally soft, and in some of these (to judge from the multitudinous fractures recorded of them) it is less probable that the condition was one of rickets than one of those, as yet, obscure forms of disease which render the bones fragile rather than flexible.

Dr. LONGHURST regarded the disease as due to imperfect nutrition, a consequence of civilisation and its attendant evils. He did not regard the disease as syphilitic. It is certain that all syphilitic children are not rickety. For twenty years of his life he had been engaged in treating the children of syphilitic parents, many of whom were syphilitic, but they were not rickety, because they were not subject to its causes, being well fed, well clothed, under good sanitary conditions, and enjoying frequent changes of climate. Tubercle and rickets may coexist, but a markedly tubercular child seldom, if ever, becomes rickety. The chemical change in the bones was a marked feature of the disease, and pointed to its being a malnutrition rather than a diathesis. He agreed with Dr. Crisp in thinking much light might be thrown upon the subject by considering the disease in other portions of the animal kingdom. Though the disease is seen in the native children in the city populations in Africa and India, it is not seen in the country districts.

Mr. SPENCER WATSON, after careful investigation, was convinced that rickets was not a form of congenital syphilis. He thought that much might be learnt by a careful study of the geographical distribution of the disease, and quoted the opinion of Dr. Chevers and others to show its rarity in India, and in districts where five members of a family were often suckled together, and whether a case had been seen of a girl seventeen years of age still unweaned. He suggested that the inquiry would be a fitting one for a committee of the Society.

Dr. GOODHART was of opinion that in some cases of rickets there was actual enlargement of the spleen. He had seen it in four cases after death, and the cases in which it was present might by their pallid look be easily picked out

from others without any examination of the belly. The change, he had found, was best described as chronic congestion; the organ was large, and tough, capsule thickened, the pulp homogeneous, with excess of hyaline fibroid material in the stroma. This, when exaggerated and viewed in their sections, would give the glue-like appearance spoken of by Sir W. Jenner. He had only noticed the enlargement of the spleen in even possible association with rickets thirty-seven times; it was therefore infrequent, and he thought, with Drs. Gee and Dickinson, that it was not an integral part of the disease, but due to some antecedent change. He was surprised the state of the blood had not been referred to; it was certainly most abnormal. The red corpuscles are in three or four sizes; there is much granular material, and where the spleen is enlarged there is some amount of leucocytosis. He should call the disease a blood condition, and the question arose why the cartilage of all tissues should take on such a generated growth, probably because it was independent of highly elaborated blood elements. He could see no *à priori* reason why rickets should not exist in the fetus. While rickets was a perverted or arrested development, osteo-malacia is a disintegration of a fully-formed tissue.

Dr. FAGGE expressed his thanks to the various speakers, who had added so much interest to the discussion, which would no doubt be of great use in stimulating research. He had been told that he had misrepresented M. Parrot, but though he had been unable to find the expression he quoted in his published speech, he was of opinion that he had heard him make use of it. He thought it would be well to get rid of the word diathesis, as no two people mean the same when they use the word. For instance, would Sir W. Jenner allow with the President that scorbutus was a diathesis? And would the President agree with Sir W. Jenner in calling inherited syphilis a diathesis? He was extremely sorry if he had not done justice to Sir W. Jenner's lectures on rickets; they were the starting-point of all that is known in this country on the subject. He himself had first learnt what he knew from them, and had constantly referred to them in later years; and it was because he thought he knew the lectures too well that he attributed the observation of the tenderness of the muscles and bones to another source. He should be glad to say anything to induce anyone to read the lectures for himself.

THE PRESIDENT conveyed the thanks of the Society to Dr. Fagge and the other members who had kindly taken part in the discussion.

The meeting then adjourned.

Reviews and Notices of Books.

An Introduction to the Study of Fishes. By ALBERT C. L. G. GÜNTHER, M.A., M.D., Ph.D., F.R.S., Keeper of the Zoological Department of the British Museum. Pp. 720. Edinburgh: Adam and Charles Black. 1880.

THE number of original works in English on Ichthyology is remarkably limited. When we have mentioned Owen's article in his "Comparative Anatomy and Physiology of Vertebrates," Rymer Jones's article in the "Cyclopædia of Anatomy and Physiology," and that of Sir J. Richardson in the eighth edition of the "Encyclopædia Britannica," we have almost given all the works to which the student could be referred for a good general account of the structure and classification of fishes. We are glad, therefore, to welcome Dr. Günther's work as an important and much-needed addition to this department of our knowledge, written by one who is well known to have devoted many years of his life to the study of this branch of natural history, and to have had at his disposal the unrivalled stores of the British Museum. The work is divided into two parts, the first dealing with the history and literature, the anatomy and physiology, the growth and variation of fishes, and their distribution, both geologically, and in existing seas, rivers, and

lakes; the second part deals with their classification and zoological characters. The first part gives in full detail the characters of the various organs; the skeleton, muscles, nerves, organs of sense, of nutrition, respiration, circulation, &c., being treated in successive chapters.

Dr. Günther supplies a useful table of the synonyms of the bones of the head given by different authors, and we notice that he does not follow in all cases the newer lights of Huxley and Parker, but retains the names conferred upon them by Owen. We need hardly say that the anatomical part is described in such fashion as to leave little to be desired, though we should have been glad of a little more detail in regard to the nervous system, which is rather curtly given, and might with advantage have been more fully illustrated. An entirely new branch of Ichthyology is opened up in the section on "The Fishes of the Deep Sea." It was long thought that the abysses of the ocean must be entirely destitute of life, partly from the total absence of light and partly from the enormous pressure which must be sustained by any animal living at depths of ten or fifteen thousand feet or more, the pressure amounting to one ton per square inch for every 1000 fathoms. The dispersion of this error is one of the important results of the observations made by the naturalists on board H.M.S. *Challenger*.

Many fish were dredged in this expedition from great depths, and the animals thus obtained present many peculiarities. Their connective tissue is so weak as to break down under the slightest pressure. The osseous and muscular systems are very feebly developed. The bones possess a fibrous, fissured, and cavernous texture; and are light, with scarcely any calcareous matter, so that the point of a needle will readily penetrate them without breaking. The ligaments connecting the bones and vertebræ break with great facility. The muscles are thin and easily torn. They are all carnivorous. The lateral line is widened, and the muciferous system is greatly developed. The colours are simple. The eyes, which in fish living habitually between 80 and 200 fathoms, are large, become smaller, or are altogether lost, beyond the latter depth, and the defect of vision is compensated for by tentacular organs of touch, or by phosphorescent organs, the anatomical characters of which are very remarkable. Fish from the greatest depth are destitute of eyes. The *Bathypophis ferox* was obtained from a dredging in which the dredge descended 2750 fathoms, and is believed to be the deepest sea fish known. A long list is given of deep-sea fishes, though, doubtless, some may have been caught by the dredge in its ascent. In regard to the distribution of fishes in time, Dr. Günther expresses no opinion as to the nature of the minute, slender, pointed, horny bodies, bent like a hook, and with sharp opposite margins, which have been found in deposits belonging to the Lower Silurian and Devonian systems, and have been described under the name of *Conodonts*. By some these have been held to be the teeth of extinct fishes, whilst others have suggested they are the remains of annelids and molluscs. He considers the first undeniable evidence of a fish or indeed of a vertebrate animal occurs in the Upper Silurian rocks, in a bone-bed of the Downton sandstone, near Ludlow. It consists of compressed, slightly curved, ribbed spines, of less than two inches in length (*onchus*); of small shagreen scales (*thelodus*), the fragment of a jaw-like bar with pluricuspid teeth (*plectrodus*), the cephalic bucklers of what seems to be a species of pteraspis, and finally coprolitic bodies of phosphate and carbonate of lime, including recognisable remains of the molluscs and crinoids inhabiting the same waters. But no vertebra or other part of the skeleton has been found. The fish was probably a plagiostome. The fish remains of the old red sandstone, or Devonian series, can be determined with greater certainty. They consist of spines named

ichthyodorulites, belonging to chondropterygians and the remains of various ganoid fishes, with others belonging to the placodermi. Devonian fishes are frequently found enclosed in "nodules." These are elliptical flattened pebbles which have resisted the action of water in consequence of their greater hardness, and this greater hardness is due to the dispersion in their substance of the fat of the animal which decomposed in them. The flags of Caithness, which belong to the Devonian era, and which contain an abundance of these fossil remains, emit a peculiar smell when freshly broken. In the Carboniferous system the chondropterygians and ganoids have numerous representatives. The fishes of the Permian group resemble those of the carboniferous. The chief forms of the Trias are shark-like fishes, cestracions and ganoids. Ceratodus appears for the first time. The Lias is very rich in piscine remains, one hundred and fifty-two species having been described. Sharks, rays, and sturgeons make their first appearance, and the homocercal termination of the vertebral column begins to supersede the heterocercal. The Cretaceous group presents clear evidence of the further advance towards the existing fauna; whilst in the tertiary epoch the teleostians have almost entirely superseded the ganoids. A few families, like the freshwater salmonidæ, seem to have put in their appearance in post-pliocene times.

The Geographical Distribution of Fishes is treated of at great length by Dr. Günther. He divides them primarily into freshwater and marine, which, however, run into one another in such a way as to render the distinction very vague. Thus in every large river truly marine forms may be found ascending for hundreds of miles, not periodically, but sporadically, evidently the commencement of a change of habit, which ultimately converts the marine into a freshwater fish. So, again, geological changes may occur so slowly as to give time for accommodation to new conditions. A remarkable instance of this is seen in the case of the Baltic, which, by the gradual elevation of Scandinavia, has become separated from the Arctic Ocean, and by the excess of supply of freshwater over evaporation, has become almost fresh in its northern part, and yet nine species belonging to the Arctic Ocean have survived the change.

The second part of Dr. Günther's work is the systematic and descriptive part, in which the Families of Fishes are shortly diagnosed, and some account given of the species which, by their structural peculiarities, or by their usefulness to man, possess special interest. Typical examples of nearly all the families are illustrated by means of excellent woodcuts, and short notes are appended of any remarkable features in their life history. Interesting particulars are given, for example, in regard to the pilot fish, stickleback, cod, flying fish, salmon, and others.

In regard to the salmon, the points which may interest many of our readers who are lovers of the gentle craft may be here summarised. In the first place, no fossils of the freshwater forms of the salmonidæ are known; but fossils of the marine forms have been found in the chalk of Lewes. Their life history presents many points of difficulty, and the species are not as yet satisfactorily determined. Some of the species interbreed, and the hybrids intermix again with one of the parent species, thus producing much confusion to the taxonomist. The coloration again is subject to variation, and cannot be relied upon for purposes of classification. The young, however, of all the species are barred. The moulting of the scales coincides in the migratory species with their sojourn in the sea. The size may vary to an extraordinary extent with food and other conditions. Thus *Salmo fario* in a small mountain pool may never exceed eight ounces in weight, but in a large lake or river may run to sixteen pounds. Again, the proportions of the various parts of the body to one another varies exceedingly in one

and the same species. The salmon offers a most remarkable instance of irregularity as regards the age at which the individuals arrive at maturity. The male parr, which Dr. Günther entertains no doubt is the young of the salmon, may become sexually mature when only seven or eight inches long. Salmon in the grilse state make their appearance every year at the mouth of the Thames, ready to reascend and to restock this river as soon as its poisoned water shall be sufficiently purified to allow them a passage. Let us hope that this good time may soon come.

Professor Günther's book contains much that will interest readers of every class, and has been got up in a manner worthy of Messrs. Black.

OVARIAN DYSMENORRHOEA, WITH RETRO-FLEXION OF THE UTERUS.

To the Editor of THE LANCET.

SIR,—In the "Mirror" of hospital practice, THE LANCET, Dec. 4th, a case is related with the above heading as having been under the care of Dr. Herman at the London Hospital. As "Wynn Williams's" stem and shield is prominently referred to in the history of the case, I hope I may be permitted to make a few remarks thereon. From the history of the case, in addition to the "tenderness on pressure over the ovaries," "much pain was caused by pressure on the body of the uterus," and "per rectum there was greater tenderness on each side of the uterus, the most being on the left side." The patient also suffered from leucorrhœa and much pruritus of the vulva, and too frequent micturition. She was treated as an out-patient between five and six months. "There was no improvement in the symptoms, which, if altered at all, got rather worse. On May 18th, 1878, admitted into the hospital, and on May 30th "Wynn Williams's" intra-uterine stem and shield was put in.

No record of any other previous treatment is given whilst in the hospital—whether or not the uterus was depleted by leeches or otherwise, &c., to allay the pain and tenderness, so as to remove the subacute metritis and ovaritis, from which the patient was evidently suffering. Many of your readers have, in all probability, expressed their astonishment that metritis, perimetritis, and pelvic abscess did not result after the introduction of an intra-uterine stem under such conditions.

Whenever there exists symptoms of acute or chronic metritis, ovaritis, &c., it is essential first of all to subdue these before having recourse to the use of an intra-uterine stem. One word in conclusion, "Wynn Williams's" stem and shield was constructed more especially for the treatment of antelexions. I do not mean to say that I have never used them in other conditions of the uterus, but I have always adapted the shield according to the nature of the flexion; in fact, to introduce the stem and shield in a case of retroflexion the shield would have to be worn upside down, as antelexion is the exact reverse of retroflexion.

Query, may not the fact of the patient having become pregnant be due to the wearing of the stem, which I have frequently found to straighten the canal of the uterus without entirely removing the exterior effects of the flexion?

Yours, &c.,
A. WYNN WILLIAMS.

Dec. 18th, 1880.

A CENTENARIAN.—The following is extracted from the *Ormskirk Advertiser*, but we have received private authentication of the truth of the statement of age:—On Monday morning last Mrs. Hannah Heaton, who had reached the advanced age of 101 years, died at the house of her daughter, Mrs. Huyton, Pygon's-hill, Lydiate, where she had resided for some time. Although she had attained such a great age, Mrs. Heaton retained her mental faculties to the last, and was able to hold conversation with her neighbours and friends on current topics to an astonishing degree, her memory being marvellous. Up to a week ago she was able to take a walk, sometimes extending half a mile, without help.

THE LANCET.

LONDON: SATURDAY, DECEMBER 25, 1880.

Introduction.

THE year 1880 has been historical indeed in the political sense. It has been so much so, and so disturbing, as to make professional and scientific men thankful for arenas of quiet unsensational work and employment in which progress is more regular and unagitated. We may notice two or three facts of almost physiological interest in connexion with great historical events in the year. On the retirement of one Premier another was called to take his place, full of physical and mental vigour, though over seventy years of age, who, after the labours of an arduous session, was able, under the guidance of Dr. Andrew Clark and Sir William Jenner, to pass successfully through a sharp pyrexial attack. The other event of as much physiological and historical interest was the march in three weeks of our troops under the able lead of General ROBERTS from Cabul to Candahar, with the loss of only two Europeans, seven sepoy, and twenty-one camp followers. Such a march was not achieved without medical anxiety, and it is not without significance recorded that the medical officers of the expedition were never absent from their posts for one hour. Though the mortality was slight, we shall probably hear more cases of sickness. The distress of Ireland has not been without such alleviation as comes from better administration and more efficient medical aid; and the disastrous fevers of former years of famine have not been repeated on any large scale.

Anatomy and Physiology.

In Anatomy and Physiology, and the allied subjects of Histology and Physiological Chemistry, several important treatises have been published, and, as usual, a very large number of separate papers or memoirs. Foremost amongst the larger works are the volumes of Dr. L. HERMANN'S "Handbuch der Physiologie," dealing with the blood and circulation, and with the physiology of secretion and digestion. This cyclopædia, to those who have mastered German, affords the best and most complete *résumé* of the science of physiology extant; though it does not constitute so marked an advance on previous knowledge as was the case with the old "Handwörterbuch der Physiologie" by WEBER, published between the years 1842 and 1853. It has the advantage, however, of being brought out more rapidly, and thus better representing the actual state of the science. Next to this is the Physiological Chemistry of Prof. GAMGEE, which well sustains the repute and scientific position of its author. It is to be succeeded by a second volume, in which the secretions will be specially considered. A smaller treatise by WURTZ, entitled "Traité de Chimie Biologique," may also be advantageously consulted. One of the best physiological textbooks, if not the best we have seen, is that just issued by LANDOIS, a translation of which would be a boon to the English reader, and we trust will be undertaken by some industrious student. New editions of the Manuals or Text-

books on Physiology by Dr. KIRKES, under the editorship of Mr. MORRANT BAKER, by Dr. FOSTER, and by Dr. CARPENTER, under the editorship of Mr. POWER, in English, and of those of BEAUNIS, BÉCLARD, FUNKE, and RANKE have appeared, as well as of WUNDT'S "Grundzüge der Physiologischen Psychologie." MILNE EDWARDS has brought his splendid work, "Leçons sur la Physiologie et l'Anatomie Comparée," to a close in the fourteenth volume. It is a model of the French style of exposition, though the arrangement adopted is rather unusual. There is a text clear, condensed, luminous; then on the same page notes, giving in detail many of the points only alluded to in the text; finally, and still on the same page, is the bibliography, which is extraordinarily copious and exact. HARTMANN of Berlin has added another to the numerous handbooks of Human Anatomy; the sections on the muscles and arteries are accompanied by rather coarsely coloured but distinct woodcuts. Under the title of "Anatomische Varietäten," KRAUSE has issued an appendix to his large work, the "Handbuch der Menschlichen Anatomie," which will be found useful to all teachers of anatomy, and indeed to all operating surgeons, since it gives details with regard to topographical anatomy and in regard to weight and measurement not elsewhere obtainable. A good German translation of QUAIN'S "Anatomy," containing much additional matter, is in course of publication by SCHWALBE.

The art of Histology has been advanced by the publication of the "Leçons sur le Système Musculaire" of M. RANVIER, though it is not clear why, if he had time to finish this treatise, he could not complete his half-published "Leçons d'Anatomie Générale," which seems to have stopped at the fifth part, to the great inconvenience of purchasers of the earlier parts. The more important contribution to this branch of physiological technic, however, is the handsome Atlas of Histology, just completed by KLEIN and NOBLE SMITH, the numerous drawings in which are for the most part original, and very faithful renderings of the objects they represent.

Though not exactly belonging to either Anatomy or Physiology, yet, as constituting very valuable and interesting additions to Biological science, two works must be mentioned: first, Mr. DARWIN'S "Movements of Plants," which, like all the volumes he has written, presents in short compass the results of an immense series of observations in this instance on a subject of surpassing interest; the other is the magnificent volume which constitutes the first instalment of the scientific results of the exploring voyage of H.M.S. *Challenger*, and which contains valuable papers by DAVIDSON on the Brachiopoda, by KÖLLIKER on the Pennatulida, by GÜNTHER on the Shore Fishes, by PARKER on the Development of the Turtle, as well as others, proving indisputably the existence of a large fauna in the abysses of the ocean hitherto held to be void and tenantless. The Ray Society have issued two well-illustrated volumes of BRADY'S "British Copepoda." A new journal, the *Archives de Biologie*, has appeared in Belgium, under the able superintendence of ED. V. BENEDEN and of CHARLES V. BAMBEKE, and the four parts that have been published contain some good articles, especially two by V. BENEDEN himself on Development. The *Journal of Anatomy*, under Professor HUMPHRY'S guidance, has been punctually issued,

and contains some excellent papers, amongst which we may particularly notice one by Dr. CREIGHTON on Bovine Tuberculosis in Man, and one by Dr. BEATSON on the disease called "Sturdy" in sheep.

Amidst the multitude of Memoirs on Physiology, it is here only possible to select a few that may be regarded as presenting special features, and even of these little more than the headings can be given. Taking the subject of Digestion, to begin with, it may be observed that WURTZ has investigated the peculiar properties of the juice obtained by incisions made into the green fruit of *Carica papaya*, which possesses a digestive property, and is capable of dissolving and peptonising albumen. The active principle is papain, which seems to be analogous to trypsin — the albumen-digesting ferment of the pancreas; and it may hereafter be usefully employed therapeutically as a digesting agent. Various observers have paid particular attention to the formation of peptones. SCHMIDT-MUELHEIM has been led from his experiments to accept as peptones only those substances which give no cloud with acetic acid and ferrocyanide of potassium, and believes he has determined the existence of a stable product intermediate between albumen and peptone, to which he has applied the term propeptone. His attempts to determine the paths by which peptones are absorbed from the intestinal canal demonstrate that the blood of a fasting dog contains no peptone, though it is present in the blood of an animal that has been fed twenty-four hours previous. On the other hand, none was then contained in the chyle, though this was milk-white. Experiments in which solutions of peptone were injected into the vessels showed that this substance rapidly disappeared, so that whilst one minute after the injection nearly the whole quantity injected could be recognised, after six minutes it was reduced to a trace, and after ten minutes had entirely disappeared. The peptone injected so changed the quality of the blood that it no longer coagulated on withdrawal from the vessels; the addition of a little fibrin ferment, however, immediately caused coagulation to take place. An important fact in view of the therapeutic injection of peptone which has been recommended was made out — namely, that the injection of this substance lowers the blood-pressure to an extraordinary extent, the pressure of the blood in the carotid artery of a dog falling from 208 mm. to 12 mm., and death rapidly ensuing. ALBERTONI, in following up this inquiry, made the observation that considerable differences occur in different animals, the injection of peptone into the vessels of dogs preventing the coagulation of their blood, though it is ineffective in rabbits and in sheep. The action of the peptones in dogs seems to be essentially on the white corpuscles. His experiments show further that the peptones when injected into the vessels rapidly disappear from the blood, and enter the tissues and organs of the body. Some good lectures on the Physiology of Digestion were delivered by EWALD, and have been collected into a small handy volume, which practitioners may consult with advantage as giving all recent work on the subject.

MAYDL has investigated the point whether the glycogen obtained from the liver and from the muscles in animals fed on meat and potatoes, on glycerin, on inulin, and on starch, was in all instances identical in composition, and produced the

same amount of sugar as tested by polarisation experiments. He satisfied himself that it was identical, and hence argues that glycogen cannot result from a direct conversion of these several substances into glycogen, but that this must be a special product of the functional activity of these tissues. Hæmoglobin crystals may, according to WEDL, be obtained in the course of from twenty-four to forty-eight hours, even from those kinds of blood which do not readily crystallise by the addition of a little strong pyrogallie acid. BÖGYES has examined the hæmin crystals obtained from the blood of a large number of mammals and birds, and finds that in all instances the form is essentially similar, and that they do not, as usually stated, belong to the rhombic, but to the monoklinic or to the triklinic system. The place of development of the red blood-corpuscles in birds rendered anæmic by bleeding has been investigated by BIZZOZERO and TORRE. The birds experimented on were the cock, pigeon, crow, finch, wild goose, swallow, and sparrow, and they adduce strong evidence to prove that the new red corpuscles are developed in the red marrow of the bones. Similar results have been obtained by OBRASTZOW, who describes in considerable detail the transitional forms between hæmatoblasts or nucleated red cells and true red corpuscles. The same results have been arrived at by RINDFLEISCH, who states that the veins and capillaries of the red marrow possess no proper wall, whilst that of the arteries is extremely delicate. MOENS discusses the formation of the first wave in the descending limb of a sphygmographic tracing. He divides the contraction of the ventricles into three periods, the first lasting 0.085 of a second from the commencement of the contraction to the opening of the semilunar valves; the second lasting 0.1 sec. which represents the period of complete patency of the semilunar valves, and the third lasting 0.115 sec., which extends to the moment when the valves close. The movement of the blood attains its greatest velocity towards the close of the second period. The recoil of the vessels which closes the semilunar valves occasions a small secondary wave, which is propagated from the valves outwards, and appears as the first wave in the descending limb. ROY and BROWN contribute a paper on Blood-pressure and its variations in the arterioles, capillaries, and smaller veins to the *Journal of Physiology*, a journal that is excellently conducted by MICHAEL FOSTER of Cambridge, but which, we fear, is scarcely supported sufficiently by the profession to prevent its editor and his colleagues, with the publishers, suffering large pecuniary losses with each number. Messrs. ROY and BROWN find that the capillary vessels possess contractility rather than elasticity, and that these are capable of undergoing individual variations of calibre, and they believe that such variations stand in relation with the requirements of the tissue. A very long and elaborate memoir on the Time Relations of the Excitatory Process in the Ventricle of the Heart, also by Professor BURDON-SANDERSON and F. J. M. PAGE, appears in the *Journal of Physiology*. They show that the rate of propagation of the excitatory state is about five inches per second, and the duration of this state is in winter frogs from 1.6 to 1.8 inches at a temp. of 12° C. Each part of the surface of the ventricle is, during the excitatory state, negative to every unexcited portion. The local application of heat shortens the duration of the excitatory state; injury weakens or diminishes the excitatory state.

CHRISTIANI believes he has established the existence of a respiratory centre in the floor of the third ventricle, which can be excited to activity through the optic and auditory nerves when stimulated. This centre induces arrest of respiratory movement in the condition of full inspiration. OSCAR LANGENDORFF adduces various facts which he interprets in favour of the existence of one or more respiratory centres in the spinal cord. KRONECKER and MARCKWALD have shown that the ordinary respiratory contraction of the diaphragm is to be regarded as a brief tetanus, since in order to produce the regular and ordinary curve of inspiration twenty excitations per second must be applied to the phrenic nerves. A discussion upon the normal curve of respiratory pressure has been carried on in Pflüger's *Archiv* between EWALD and GAD, in which the numerous points demanding attention in a proceeding apparently so simple are well brought out. The influence of mixed and monochromatic light on the excretion of carbonic acid by animals has been studied by MOLESCHOTT and FURBINI. They support the statement now generally accepted, that white light, both by its action on the eyes and on the skin, increases the excretion of carbonic acid gas. In regard to monochromatic light, the excretion of carbonic acid is as free in violet as in white light; red light somewhat raises the amount in warm-blooded animals, but has no effect in the case of frogs. In opposition to the generally accepted doctrine, SPECK finds that cooling of the external skin exerts little or no influence upon the oxidation processes in the body. The first action of cold to the surface, as in the administration of an ordinary cold bath, is to cause constriction of the cutaneous capillary vessels, and thus to drive into the general circulation the blood contained in them. Then, since no blood traverses these vessels, there is no loss of heat in the blood, and the temperature temporarily rises. On emergence from the bath, however, the cutaneous capillaries relax, and then the blood, as it traverses therein, becomes cooled down, and on re-entering the general circulation reduces it below the normal. The different results obtained by different observers he attributes to variation in the deviation of the application of the cold, and of the spasm of the vessels. Some interesting observations upon the temperature of the head have been made by MARAGLIANO of Genoa, from which he concludes first, that the temperature outside the skull is a correct index and exponent of the temperature of the brain within, though this has since been disputed. Secondly, that the temperature of the left side of the head is always higher than that of the right. Thirdly, that the temperature of the frontal and temporal regions taken at the external orbital process and over the mastoid process, is always higher than the occipital region taken over the occipital protuberance; and lastly, that intellectual activity, age, and sex exert considerable influence over the temperature of the brain. The most important histological discovery in regard to the structure of the nerves is undoubtedly that which has quite recently been published by ENGELMANN, who is a reliable observer, to the effect that the axis cylinder, which has always hitherto been regarded as continuous and uninterrupted from one extremity of a nerve to another, is in reality discontinuous; in the frog at least it presents constrictions. DASIDA calls attention to a fact that has

hitherto been overlooked—namely, that the ganglion on the posterior roots of the spinal nerves, which is always stated to be single, is in reality in many instances double, or even in some instances treble. The statements of BROWN-SÉQUARD, so long taught in our schools, in regard to the paths of conduction of motor impulses and sensory impressions on the spinal cord, have of late years been frequently impugned. The latest experiments are those of WEISS, who has made numerous sections of the cord in dogs at the level of the last dorsal vertebra. He finds that immediately after division of one lateral half of the cord in this region there is complete loss of motion and sensibility on both sides below the section. A few days after the operation the motion of the leg of the uninjured side becomes perfectly restored, whilst the leg of the same side remains paralysed. The sensibility of both legs is lowered, and apparently to an equal degree. Hyperæsthesia was never present. In the course of three or four weeks the power of moving the leg of the side of the hemisection often undergoes remarkable improvement, whilst the sensibility remains unaltered. WEISS believes that each lateral column of the cord contains both sensory and motor fibres for the two sides of the body, the former being equally, the latter unequally, distributed. STRICKER and UNGER have examined the structure of the Brain in sections stained with potassium, gold-chloride, and then hardened in alcohol. This method seems adapted to bring into extraordinarily distinct relief the various forms of cells and their ramifications, and to establish a very intimate relation between the connective-tissue cells and the nerve cells.

The precise origins of the Cranial Nerves have been investigated and delineated by DUVAL, whose observations agree well with those of LOCKHART CLARKE. WOLF observed a case in which the function of the Chorda Tympani was clearly determined in consequence of its accidental division during the operation of division of the tympanum. The effects observed were as follows: loss of the sense of taste for sweet, salt, bitter, and acid flavours on the same side for the anterior two-thirds of an inch. There was also loss of sensibility for tactile and thermic impressions. It is remarkable that complete recovery of the sense of taste took place eight weeks after the section. BLAU had a case in which the chorda tympani was exposed; mechanical irritation of it excited an acid taste in the tongue on the corresponding side, and a trembling of the muscular fibres. Some recent experiments by BIGELOW on animals, though less precise, lead to the same conclusions. The quantity of Cholesterin contained in the Brain has been determined by BENEKE, and shown to reach the large amount of 2.12 to 2.34 per cent. of the fresh brain.

In Development, HIS has contributed some important observations on the genesis of the peripheric nervous system, and has published a large work in folio under the title of "Anatomic Menschlichen Embryonem." BALFOUR has collected his researches, extending over several years, into one volume of "Comparative Embryology," which contains a large number of original and very interesting researches. KLEIN has studied the development of the Spermatic Cells and Spermatozoa. Dr. MARTIN is doing good work in the Biological department of the Johns Hopkins University in America; and an excellent memoir

on the development of the Oyster, by Mr. BROOK, emanates from the same source.

Pathology.

In the department of Pathology the year has not been unproductive. The foremost place among the investigations must be given to the researches into the part played by minute organisms in the production of disease. Although no entirely new discovery has been made, the results obtained in previous years have been confirmed and extended. The most noteworthy investigations have been, as usual, those of M. PASTEUR, into the so-called cholera of fowls and the influence upon it of inoculation, but thanks to the Brown Institution, important researches in an allied field, by which the discoveries of PASTEUR have been in part anticipated, have been carried on by Dr. GREENFIELD, whose excellent lectures have been published in our columns. Mr. LISTER'S address at Cambridge and the discussion which followed, constituted an important means for the diffusion of knowledge on the subject. In Germany the life-history of bacteria and allied organisms has been carefully examined by KUHN and FOKKER, in relation to wounds by MAX WOLFF, and as a cause of disease of the lower animals by GRAWITZ and EBERTH; while the last named observer has also studied their relation to typhoid fever. Of investigations into problems of general pathology we may especially mention those on the subject of fatty embolism by WIENER, and the elaborate series of studies on amyloid degeneration which have been published by KYBER. The infective production of tuberculosis has been proved experimentally by TAPPEINER and BOLLINGER, and the theory has been boldly applied to the origin of tubercular disease in the human subject by COHNHEIM and CREIGHTON. The influence of the nervous system on nutrition formed a subject of discussion at the British Medical Association, and it elicited some interesting facts from HUTCHINSON and BROWN-SÉQUARD. The possibility of the regeneration of the spinal cord has been demonstrated by the experiments of EICHORST. Of the diseases of the spinal cord in man, some important contributions on the subject of myelitis have been made by LEYDEN, on lateral sclerosis by DEBOVE and GOMBAULT, and on the chemical composition of the bones in locomotor ataxy by REGNARD. Interesting investigations have also been made on the changes in the nervous system in certain skin diseases, especially in anæsthetic leprosy, by TSCHIRJEW; in herpes zoster, by CHANDELEUX; and in ichthyosis, by LEOIR. In pulmonary diseases we may note the remarkable discovery in Japan of a form of hæmoptysis of parasitic origin, by BÆLZ; the investigation into the changes in the lung epithelium in pneumonia, by VERAGATH; and the termination of pneumonia in induration, by MARCHAND. Renal disease has also been a fruitful subject of research. The pathology of granular kidney has been studied by ROSENSTEIN, SAUNDBY, and LEWINSKY, the associated arterial changes by SOTNITCHEWSKY, and that of glomerular nephritis by LEECH.

Therapeutics.

Our pages have borne testimony to the fact that while in a few there may be an overweening interest in Pathology, the great body of the profession is still devoted to the cultivation of Therapeutics. Proofs too of the practical power of

Medicines emerge even in the midst of pathological discussions. To take a recent illustration, Dr. DICKINSON in the recent debate on Rickets, speaking of the visceral disease incident to it, said, "It is amenable to treatment, though slowly, under cod-liver oil, iron"—we should have added quinine—"and hygienic measures; a spleen which touched the pelvis may gather itself up so as to be nearly out of reach of the fingers." Mr. TWEEDY published a series of cases of true diphtheritic ophthalmia successfully treated by local applications of quinine. It is idle to affect contempt for medicine when such statements can be made by the most careful observers.

Amongst the various subjects in practical Therapeutics which have engaged the attention of the profession has been the employment of intra-venous injections of milk. Mr. ARTHUR MELDON published three cases in our columns in addition to five others, in which the operation was of important use. The treatment of Ringworm with Carbolic Acid by Mr. ALDER SMITH, and with Salicylic Acid by Mr. COTTLE, was well expounded in our columns. The great question of the use of Salicylates in Acute Rheumatism was boldly raised by Dr. GREENHOW in the Clinical Society. His verdict was rather discouraging in tone, based on a considerable hospital experience. But even his admissions were to the effect that no other remedy has such power over the pyrexia and pains of rheumatism. His objections were to the toxic effects of these remedies, which, it is to be hoped, and which there is good reason to believe, will be found to be avertable or controllable. The enormous interest of the therapeutics of acute rheumatism is shown in our columns by a number and variety of communications, which we cannot attempt even to enumerate. One question which has come very much to the front in these discussions is the degree in which the heart structure is affected by acute rheumatism itself, apart from medicines having a depressing effect. Notwithstanding Dr. GREENHOW'S cases, the general opinion of the Society and of the profession is to the effect that these drugs are agents of great value and significance. The question of safe anæsthetics is still actively engaging attention, with an inclination in favour of ether as compared with chloroform, or a combination of the two. The treatment of puerperal fever has been fortunately the subject of discussion by Dr. MATTHEWS DUNCAN, whose lectures will be found in our columns. They give the weight of his great authority to the new method of treatment by antiseptic injections, ergot, quinine, iron, support, &c.; treatment which has long been used by many practitioners, but which has not been enunciated by authorities with quite sufficient distinctness. One great or rather slight ray of hope appeared in the course of the year in regard to a still more distressing disease—viz., cancer. Professor JOHN CLAY of Birmingham published in our columns a paper on the use of Chian turpentine in carcinoma uteri. As this subject is noticed in another part of our summary, we will not detain the reader with it here. The therapeutical use of Arsenic has been the subject of an interesting paper by Mr. MALCOLM MORRIS, delivered before the Medical Society of London. The disagreeable disease of bromidrosis is reported by Mr. WM. BRETT of New Cross, to have yielded to the local application of oleate of mercury. The delicate question of the use of alcohol in pneumonia has

been carefully touched by Dr. OCTAVIUS STURGES and by Surgeon JOHN HOYSTEAD, who had to treat the disease at Fort Dekka (four stations up the Khyber Line route to Cabul), and found alcohol helpful. Alcohol, as a general therapeutic agent, is being subjected everywhere to most suspicious treatment, by physicians and by boards of guardians alike. It has still friends who think it indispensable, either to preserve health or to cure disease, but the wisest physicians show themselves chary either of taking or recommending much of it. Dr. SYDNEY RINGER and Dr. WM. MURRELL have found glycerine curative of flatulence, acidity, and dyspepsia. This is a thing to be noted in an age when sugar is so critically regarded by physicians. A recovery from tetanus, treated by three pounds of chloroform, inhaled over about six days, was recorded in THE LANCET. Dr. HENRY KENNEDY reminds the profession of the use of rather large doses of extract of henbane in cancer. Not the least noticeable therapeutical communication of the year is that by Dr. RODERICK KENNEDY of Kingston, Canada, on the use of large doses of olive oil for softening and causing the easy expulsion of biliary calculi. Three cases were reported, in two of which 200 calculi followed the use of the oil.

Surgery.

In looking back over the past twelve months, it will be evident that there is no lack of zeal in the study of Surgery in both its scientific and practical aspects. In all directions we find able workers plodding on and gradually, though not continuously, advancing this branch of science and art. It has always been that special interest has centred round particular departments of Surgery, and we have accordingly to note discussion and invention following along the old familiar lines. The treatment of Wounds now, as ever, occupies a large share of the attention of surgeons, and while the past year has little or nothing of a novel character to add to our knowledge of this subject, and while surgeons are as little agreed as ever on the particular details to be observed or methods employed, they are more and more at one as to the great objects to be aimed at. It is no exaggeration to say that all surgeons now claim to practise Antiseptic Surgery, though the contest is as hot as ever over the best method of carrying out this endeavour. Listerism, which is becoming daily more widely known, is, however, in some danger of being prejudiced by the indiscretion of many of its disciples, whose zeal is not tempered by knowledge. How else can we speak of descriptions of wounds healing without suppuration *because* they were dressed with Lister's gauze under a spray of carbolic lotion? Such ignorance or folly must injure a system, and will neutralise the good effect of the adhesion to it of many wise men. Few things are more to be dreaded than that the notion should ever gain credence that Listerism or any other mode of dressing is a perfect and unfailing safeguard against all danger in operations and wounds, and that its use absolves the surgeon from the serious duty of weighing well the justification for his treatment, or from the exercise of appropriate skill in the performance of operations.

Side by side with, and as a necessary result of, the general practice of antiseptic surgery, Operative Surgery slowly ex-

tends its domain over regions hitherto considered beyond its pale. On the one hand, operations upon bones for the correction, especially of rickety deformities have become common—in the opinion of some of the older members of the profession too common. On the other hand, renal tumours and calculi have been successfully removed. Nephrotomy, the name by which the operation of cutting down upon the kidney from the loin is known, has been practised by BARKER, MAY, MORRIS, and PUZEY, whilst removal of the entire kidney—Nephrectomy—has been performed by SIMON, CZERNY, BARKER, THORNTON, and LUCAS. The feasibility of each of these operations is therefore established. Whether and when they are justifiable a larger experience is required to enable us to decide. A hope often kindled, and as often disappointed, has been again raised by Professor CLAY's statements in support of Chian turpentine as a very valuable palliative, even if not an actual cure, for cancerous growths, particularly of the female generative organs. The success which was stated to have followed the administration of the drug was so marked that more than ordinary interest was excited by the announcement first made in our columns. We have published many communications on the subject, and without judging a question which is still to be fairly considered under discussion, we are not unwarranted in expressing the fear that the bright hopes at first held out have not been realised; that nothing in the nature of a cure for cancer is to be found in Chian turpentine; that it has failed even to relieve many examples of undoubted cancer of the uterus; and that, at any rate, some of the cases which have been benefited by its use are open to the fatal objection that they were not cancerous in nature, an error easily explained when the difficulty of diagnosis in the early stage of cancer is borne in mind. In the surgery of the Genito-urinary Organs the year just closing has seen BIGELOW's operation for stone in the bladder more firmly established. Increased experience has proved the truth of the chief of BIGELOW's maxims, though most English surgeons have preferred not to follow their American *confrère* in his entire contention. The evidence now before the profession appears conclusive that lithotripsy with evacuation is far preferable to the older method of CIVIALE, although whether BIGELOW has extended the limits within which the crushing operation is advisable is at present uncertain, such an astute surgeon as CADGE being of opinion that he has not. Mr. CHEYNE has shown us that Gonorrhœa must be added to the list of septic inflammations, and has introduced a mode of treatment by antiseptic bougies specially directed against this feature; his recorded results are satisfactory. HARRISON has added yet another to the long list of means at our disposal for the Treatment of Gleet—Irrigation of the Urethra—and in suitable cases this treatment, properly carried out, is very serviceable. The Treatment of Stricture of the Urethra was one of the subjects specially discussed in the Surgical Section of the British Medical Association at its annual meeting at Cambridge, and it has formed the subject of several memoirs in France and America. Internal Urethrotomy would appear to be gaining in favour with most "specialists" in this department, but Dr. GRÉGORY of Bordeaux has published an able defence of the older operation of External Urethrotomy, and a serious indictment against its newer rival.

The space at our command forbids us to speak further of the progress made in the practice of Surgery during this year, or we might refer to BAKER'S method of excising the Tongue, POLLOCK'S operation for Piles, and many others. But even such a hurried survey as we have been able to take of the year's work, while not showing us any great discovery or acquisition which can be looked upon as a landmark, is yet sufficient to assure us that Surgery is being actively pursued both as a science and an art, and is steadily advancing along the path by which its value to mankind will be enhanced.

The Royal College of Physicians.

The Royal College of Physicians has not, as usual, supplied much material for history. In accordance with a custom of which we took an opportunity of disapproving, it has re-elected its President, Dr. BENNETT, for the fifth time. The College in this custom pays a poor compliment to its Fellows, by seeming to think that they include so few fit for the chair. That Dr. BENNETT has served the College well in no way detracts from the force of our objection to a bad custom. The College showed itself alive to the movements of current opinion in the matter of Examinations. In the early part of the year, at a meeting of the Fellows, a new set of bye-laws for the College licence was adopted. The Royal College of Physicians deserves the credit of being the first of the English corporations to institute a thorough system of examinations, for the Apothecaries' Hall does not examine in Surgery, and the College of Surgeons has only just begun to appreciate that Midwifery and Toxicology, not to mention Chemistry, Physics, and Botany, are subjects of importance to the general practitioner. We understand that the Council is considering the expediency of instituting examinations in these subjects, but at present they are not included in the examinations for either the Membership or the Fellowship. The examination for the licence of the College of Physicians is divided into three parts: the first comprising Chemistry and Chemical Physics, Materia Medica and Medical Botany, and Osteology; the second, Anatomy and Physiology; and the third, Medicine, Surgery, Midwifery, and Toxicology. Students who have passed in many of these subjects are exempted from re-examination, and the effect of such a liberal scheme has been most marked. At the last examination nearly fifty students were examined in the first series of subjects, and nearly thirty in the third series. As most English students pass in Anatomy and Physiology at the Primary Examination for the membership of the College of Surgeons, the numbers for the second part are necessarily always small, but even here we understand there was also a decided increase. The profession and the public should understand that the new examination for the licence is as practical and as thorough as most university examinations, and that the Licence of the Royal College of Physicians necessitates as complete an education as that which is enforced for most of our M.B. degrees. The Gullstonian Lectures were delivered by Dr. GOWERS, the subject being Epilepsy; the Lumleian, on the Digestive Ferments, by Dr. W. ROBERTS, of Manchester; and the Croonian, on Some Points in the Pathology and Treatment of Typhoid Fever, by Dr. W. CAYLEY.

The Royal College of Surgeons.

The Council of the Royal College of Surgeons of England has during the past year manifested unusual zeal in the cause of medical education. It has resolved to take steps, either alone or in conjunction with other bodies, to institute a complete examination to be passed by all candidates for the diploma of Member or Fellow, without waiting for the fulfilment of the Conjoint Scheme. It has also recently agreed to the principle of relegating the preliminary examination to the general educational and examining bodies. With a view to diminishing the number of rejections, and to obviate a pecuniary loss for re-examining rejected candidates, the Council has resolved that all candidates for re-examination shall pay a fee sufficient to cover the costs of examination. At the annual election of members of the Council last July there were four vacancies, caused by the death of Mr. HENRY HANCOCK, the retirement by rotation of Messrs. BUSK and CURLING, and the resignation of Mr. JOHN SIMON. Mr. CADGE, Mr. BRYANT, Mr. LISTER, and Mr. THOMAS SMITH were elected to the vacancies. In January Mr. HULKE was elected a member of the Court of Examiners in the place of Mr. CURLING; in March Mr. BELLAMY and Mr. MCCARTHY were appointed to succeed Mr. WOOD and Mr. HULKE as members of the Board of Examiners, and in April Mr. COOPER FORSTER was re-elected a member of the Court of Examiners. In July Mr. ERICHSEN was elected president, and the previous professors and lecturers of the College were re-elected, with the exception of Mr. LOWNE, who had resigned the Aris and Gale lectureship, and was succeeded by Mr. GERALD YEO. Mr. LE GROS CLARK having retired from the Court of Examiners, Mr. JONATHAN HUTCHINSON was appointed in his place in October. On the 9th inst., the Board of Examiners was appointed, all the previous members being re-elected, except Mr. HEATH and Mr. POWER, whose term of office had expired. Mr. LANGTON and Mr. GERALD YEO were appointed in their places.

Army and Navy Medical Departments.

The year has been one of comparative quiet in the Army Medical Department. In February the promotion of fifty surgeons-major to the rank of brigade-surgeon took place in accordance with the provisions of the Royal Warrant of November, 1879. At the two competitive examinations for admissions into the service there was an adequate supply of candidates, and, as we learn from Netley, of a very good stamp. This justifies the inference that the provisions of last year's Warrant have been deemed satisfactory by the profession. The successful manner in which the work of the Department has been done with the force in Afghanistan furnishes very strong evidence in favour of the present system of organisation, about which so many doubts were expressed at the period of its adoption. It is gratifying to find that Sir FREDERICK ROBERTS does not, like some other Generals, ignore the officers of the Medical Department, but has brought to the notice of the Government the zealous and efficient manner in which they have performed their arduous duties. At the close of the year a Royal Warrant was published regulating the medical department of the Household Brigade and removing certain grievances of which they had just grounds to complain. If it be considered necessary to

keep them distinct from the Army Medical Department, and to conduct the service of the Guards on a different principle, it is but just that when benefits are conferred on the other medical officers those of the Household Brigade should not be overlooked. But while the year has passed quietly for the Army Medical Department it has been very different with the Indian Medical Service. In the beginning of the year a General Order was published by the Indian Government abolishing the dual administrative medical staff, and giving to the army medical officers a large proportion of the remaining administrative appointments, without apparently granting any compensation to the Indian service for those of which they were deprived—a proceeding which naturally created a great amount of indignation, alarm, and discontent. After the lapse of some weeks a second General Order was published, regulating the civil appointments held by medical officers and placing the service on such a footing as, in our opinion, more than compensated for the loss inflicted on it by the first General Order. The want of tact shown by the Government in the promulgation of the scheme in two distinct portions instead of one well devised plan was much to be regretted. The discontent excited by these new regulations caused the attention of the officers to be turned to various other points connected with the service which appeared to press unfairly upon them, and these were brought under the notice of the authorities in India and at home. The result of these representations has been that a Royal Warrant has just been promulgated removing certain differences which existed in the grades, relative rank, and regulations respecting promotion and retirement which existed between the British and Indian Medical Services, and the Marquis of RIPON has directed an inquiry to be made into the other grievances with a view to their amelioration.

Of the Naval Service we regret that we have little to say. In the beginning of the year Dr. REID was promoted to be Director-General in succession to Sir A. ARMSTRONG—an appointment which seemed to give much satisfaction to the Department. As yet no steps have been taken to remove the grievances of the medical officers or to hold out any inducement to young men to join the service. We are informed that the subject will be taken into consideration when the estimates are being prepared! Unless considerable modifications are introduced the Lords of the Admiralty may rest assured that the supply of candidates will continue, as it has been during the past year, greatly under the requirements of the service both in number and in quality.

Mirror of Hospital Practice.

In the "Mirror of Hospital Practice" we have endeavoured, as heretofore, to supply trustworthy records of cases illustrating the state and progress of medicine and surgery as practised in the principal hospitals and dispensaries throughout the United Kingdom and the Colonies. Every department of practice has been represented. During the year the notes of between two and three hundred carefully observed cases have been published. All of these possess clinical or pathological interest; some are rare, and a few unique. No pains have been spared to make the records complete, so that their value is more or less permanent. In this attempt we have once more to acknowledge with pleasure

the aid afforded by the various physicians, house-physicians, surgeons, house-surgeons, clerks, and dressers, who have supplied us with notes and other materials. Without this co-operation our task would have been more difficult, and must have been more imperfectly performed. From among reports already selected it is almost invidious to pick out cases for special notice. We may, however, mention the following as among some of the more curious or interesting of the records:—Dr. FUSSELL's case of large sarcoma of the left ilium; sarcomatous thrombosis of the left common and external iliac veins; sarcomatous emboli in the right ventricle of the heart and the right lung, and secondary deposit in the lung, from the Sussex County Hospital; Mr. MORRANT BAKER's five cases of localised scleroderma, from St. Bartholomew's; a case of profuse intracranial hæmorrhage, with intense headache, vomiting, delirium, and glycosuria, but without hemiplegia, and terminating in coma and death, from the Manchester Royal Infirmary; Dr. SINCLAIR's three cases illustrating the difficulties of recognising internal cancer, from the Dundee Royal Infirmary; Dr. FERRIER's case of left-handed epileptic hemiplegia and aphasia, from King's College Hospital; and Mr. WHEELHOUSE's case of aphasia following an injury to the left side of the head, from the General Infirmary, Leeds; Professor SPENCE's three cases of nerve-stretching, from the Edinburgh Royal Infirmary; Mr. BRYANT's series of surgical cases illustrating wound treatment, from Guy's; Mr. ROSE's successful operation for ununited fracture of the olecranon, by opening the joint and wiring the fragment to the ulna, from King's College Hospital; Mr. POLLOCK's case of successful reduction, seventy-two days after the injury, of a dislocation of the femur into the sciatic notch, in a man seventy-two years old, from St. George's Hospital; Mr. BELLAMY's case of amputation at the shoulder-joint for diffuse traumatic aneurism of the axillary artery, caused by rupture of the artery some weeks previously, during reduction of a dislocation of the humerus, from Charing-cross Hospital; Mr. ROUSE's successful removal of epithelioma of the rectum without damaging the sphincter ani, from St. George's; Mr. NEWNHAM's case of dislocation of the foot backwards, from South Staffordshire Hospital; and, lastly, Mr. CHRISTOPHER HEATH's remarkable case of removal of a large epithelioma of the lower jaw and floor of the mouth, in which, two years after the operation, there was no recurrence of the disease, and the patient was in good health.

Medical Societies.

In the various Medical Societies there have been many matters of interest brought forward, some fresh facts and observations added to the slowly-accumulating store, new methods of treatment described, old methods reconsidered, and subjected anew to criticism—all marking the slow but onward progress of our art. Before briefly surveying the work of the year in these bodies, the formation of a new Society deserves especial mention. On June 23rd a meeting was held to inaugurate an Ophthalmological Society of the United Kingdom. The extension of the scientific study of ophthalmology and its bearings on general medicine and surgery justified this step, and the large list of supporters confirmed the idea that its formation supplied a real need. Mr. BOWMAN, F.R.S., was chosen president, and already

two successful meetings have been held, when, in addition to the exhibition and description of cases, papers have been read by Mr. HUTCHINSON, Mr. CRITCHETT, and Dr. HUGHLINGS JACKSON—names representative of the various branches of the profession that have co-operated to the formation of the Society,—At the Royal Medical and Chirurgical Society several papers on surgical subjects have been read. Early in the year Mr. HEATH contributed one on the Treatment of Subclavian Aneurism by the introduction of Needles into the Sac; and more recently Mr. H. MORRIS described a case of External Carotid Aneurism, in which the sac was opened, and the vessel secured on its distal side, after a ligature of the common carotid had failed. Mr. BARKER discussed the subject of Nephrectomy, and Mr. BRODHURST that of the Treatment of Genu Valgum, in which he strongly deprecated osteotomy. On two occasions there have been discussions upon the value of Antiseptics in Ovariectomy, the practice being attacked by the authors of the papers, Mr. LAWSON TAIT and Dr. BANTOCK, and as strenuously supported by Mr. SPENCER WELLS and Mr. KNOWSLEY THORNTON. Amongst other papers bearing on surgery may be quoted one on Syphilitic Stenosis of the Pharynx by Dr. GILBERT SMITH and Mr. WALSHAM, and one on Basic Cavity of the Lung treated by Incision by Dr. D. POWELL and Mr. LYELL. The more purely scientific communications include a careful study of the comparative value of methods of Artificial Respiration in the New Born by Dr. CHAMPNEYS, a research upon Spirillum Fever by Dr. VANDYKE CARTER, an account of the remarkable lack of Amœboid Movements shown by the White Corpuscles in Leuchæmia by Dr. CAVAFY, and a contribution to Teratology by Messrs. WILLETT and WALSHAM, who described minutely a remarkable case of Skeletal Malformation.—At the Pathological Society, in addition to the plan introduced last year of exhibiting specimens without oral communication, the Council devised further means for facilitating the work of the Society by issuing a lengthy catalogue of *desiderata* as a guide to members in their selection of material. It is obviously impossible to particularise the many facts adduced before this Society; suffice it to note the discussion upon the Osseous and Articular Changes in Locomotor Ataxy, opened by Dr. BUZZARD, and the debate, to which three meetings have been devoted, on the subject of Rickets. This debate was opened by Dr. HILTON FAGGE, in a lucid survey of the present state of knowledge upon the subject; followed by a study of the subject of Cranio-tabes by Drs. BARLOW and LEES, who brought forward strong evidence in favour of syphilitic lesion being a chief factor in its production. Sir W. JENNER spoke on the second evening of the debate, and it was evident that but little has been added to the pathology of Rickets since his well-known lectures appeared twenty years ago.—The Clinical Society is always productive of much interesting matter. A report of a committee upon the effects of the Long-continued Use of Chloral was presented early in the year, but its conclusions were not as definite as might have been wished. The subject of Keloid was also reported on by a committee of this Society. The Treatment of Rheumatic Fever by Salicin and Salicylate of Soda was discussed in two papers by the President, Dr. GREENHOW, whose conclusions as to the efficacy of these

drugs in a large number of cases proved to be somewhat discouraging. Dr. GOODHART contributed a case of Rheumatic Fever, which terminated suddenly from cardiac failure whilst under treatment by the salicylate. A debate on Bone-setting occupied the attention of this scientific body on one evening, the subject being introduced by Mr. MARSH. Two novel and successful operative procedures have been brought under notice at this Society—the one, styled “Nephro-lithotomy,” or the extraction of a calculus from the kidney before secondary changes have been set up in the organ, was brought forward by Mr. H. MORRIS; the other, an Extraction of a Villous Growth from the Bladder, by Mr. DAVIES-COLLEY. Both the operations were successful, and met with deserved commendation. The operation of Nerve-suture was illustrated in a case by Mr. HULKE, and that of Nerve-stretching in a case by Mr. GODLEE and Dr. STURGE—the facial nerve being stretched for the relief of facial spasm—with marked success. Dr. LEES and Mr. BELLAMY reported a case of Trephining for Traumatic Epilepsy; Dr. GOWERS discussed the subject of Locomotor Ataxy, especially as regards its hereditary transmission and its relation to syphilis; and two remarkable cases illustrating the subject of Aphasia were contributed by Dr. F. TAYLOR and Dr. HABERSHON, one being a case of destruction of Broca’s convolution and right hemiplegia without aphasia, the other of left hemiplegia with aphasia. Both the patients were left-handed.—At the Medical Society the Lettsomian Lectures were delivered by Mr. TEEVAN upon the Treatment of Stricture, Enlarged Prostate, and Stone in the Bladder; the annual Oration by Dr. BROADBENT on the Pulse. A Committee of the Society reported upon Arsenical Poisoning by Wall-papers and Fabrics, and further inquiry was resolved upon. Amongst the prominent communications may be mentioned those by Dr. H. JACKSON on Cerebellar Tumour and on Recovery from Symptoms of Organic Brain Disease; a paper by Dr. ORD on the Treatment of Thoracic Aneurism by Galvano-puncture, and by Dr. BROADBENT on Pleural Effusion. One evening was devoted to a debate on the Lunacy Laws, and attracted considerable attention.—The lecturer this year at the Harveian Society was Dr. J. E. POLLOCK, who discussed the subject of Phthisis.—At the Obstetrical Society the most notable papers discussed were one by Mr. LAWSON TAIT on the Rotation of Ovarian Tumours; one by Mr. KNOWSLEY THORNTON on the Removal of Fibroids by Laparotomy; and cases of Extra-uterine Fœtation by Drs. BRAXTON HICKS, FOULCHER, and CARTER. Dr. GRAILY HEWITT contributed an analysis of a series of cases of Uterine Distortions and Displacements, and Dr. POOLE a case of Congenital Dislocation of both Hips.—At the Epidemiological Society a paper by Dr. JAMES EWART on Enteric Fever in India gave rise to a lengthy discussion. Indian diseases were also illustrated in papers by Dr. CHEVERS on Relapsing Fever, and by Dr. FRANCIS on the Plague.—There have appeared also from time to time in our columns reports of the Medical Officers of Health Society, and of the Association of Surgeons Practising Dentistry. It will be seen from the foregoing summary how varied have been the subjects chiefly dealt with in the past year, and although indicating only those which seem to be the more important, it must be borne in mind that many other communications have been

read of almost equal interest, the whole forming strong evidence of the flourishing condition, as well as the popularity, of the Medical Societies.

The Medical Council.

The Medical Council met in July and displayed boldly all the faults of its constitution and system of procedure. For probably the twelfth time it traversed the whole field of preliminary education, making Sir WILLIAM GULL exclaim, "We fight our battles three times over, and never come to any result: we shall go on for ever,—yes, for ever, till time shall be no more." This discussion lasted nearly a week, and embraced nearly every question in preliminary education, from the merits of Greek to those of Dutch. Nearly at the close of the meeting, Mr. SIMON carried a resolution recommending that an examination be imposed on students in the rudiments of natural science—physical, chemical, and biological. This examination is to be placed after the General Preliminary Examination, and either before beginning the medical curriculum, or at the end of the first year. It will not be for want of recommendations and examinations if the medical student of the future is not perfect. Mr. SIMON sought to get from the Council an expression of opinion in favour of urging on the Government the desirableness of deciding their course with regard to medical legislation, with the view of terminating "a period of indecision and unsettlement;" his motion was seconded by Dr. QUAIN, but it was lost. The Council evidently believed that the change of Ministry was somehow in their favour, and that if they can prolong "the period of unsettlement" the question will be abandoned in their favour. It is pitiable to see a public body so criticised and so little respected, and yet so willing to live on in helpless inefficiency. We need not notice further a meeting lasting nine days under circumstances of "unsettlement" which would have justified a formal meeting of a few hours.

Medical Associations.

We cannot bestow more than a passing notice on the work of the Medical Associations. The British Medical Association met at Cambridge, under exceptionally favourable circumstances. A very grateful feature of the meeting was the presence of the venerable Professor GROSS of Philadelphia, setting younger men an example of vigorous interest in science at an age long before which they are apt to become indifferent and selfish. Honorary degrees were conferred on those, for the most part, who had similar honours conferred by other Universities, but with a singular want of originality and boldness. The meeting was signalised by a large concourse of distinguished members and visitors, by several addresses of exceptional interest, including the Presidential Address by Dr. HUMPHRY; the address on Medicine, by Dr. BRADBURY; on Surgery, by Mr. TIMOTHY HOLMES; the address in Physiology, by Dr. MICHAEL FOSTER; in Psychology, by Dr. J. CRICHTON BROWNE, and that by Dr. W. S. PLAYFAIR at the opening of the Obstetric Section. An address in the Pathology Section by Sir JAMES PAGET, entitled *Elemental Pathology*, emptied all the other Sections, and suspended other business. This Section was also favoured by an able summary from Mr. LISTER of the Investigations of KOCH on Septicæmia and Gangrene, and of the discovery of the nature of the so-called Fowl Cholera by M. TOUSSAINT.

Guy's Hospital.

There are a few special questions or events in every year without notice of which any summary would be incomplete. In the present year we have to mention with regret a disturbance of the harmony of one of our large endowed Metropolitan Hospitals, which threatens even yet to mar its historical usefulness and fame, and has already produced the resignation of its two senior medical officers, Dr. HABERSHON and Mr. COOPER FORSTER. This discord began in an attempt on the part of the Treasurer and Governors to make fundamental changes in the nursing system of the hospital without previous consultation with the medical officers, who are as vitally interested in the efficiency and subordination of nurses and nursing as in the quality of the quinine, or of the chloroform which they prescribe. As if to accentuate the scandal of a nursing system acting independently of the medical staff, two cases came to light which greatly shocked public feeling. One, that of a patient with chronic phthisis, who was subjected to a cold bath for an hour by one of the nurses, partly apparently with a penal view, and with a slight notion that it would do no harm therapeutically. Very shortly after symptoms of acute mischief in the head appeared, and soon proved fatal. The nurse was found guilty of manslaughter. In a later case a man was brought to the hospital after a fall, with a slight scalp wound. He was seen and the wound dressed by a nurse slightly. The next day he was brought back to the hospital and found to have fracture of the skull, of which he soon died. The controversy which took place between the Treasurer and the Governors, upholding the new nursing system on the one hand, and the medical men on the other, has occupied most of the year. On the part of the Treasurer and Governors it has been disrespectful and highly unmindful of what was due to the medical faculty of a hospital which has been made famous at home and abroad by its medical faculty. On the part of the medical staff there has been a want of decision, strength, and, we had almost said, self-respect; but it would be more proper to say respect for the profession they represent. Although, however, the senior medical officers have resigned, the public scandal remains of a great hospital so badly administered financially that it is deeply in debt, that nearly a hundred beds have had to be closed, and that by a system of self election on the part of the Governors medical men have gradually been ousted from the Board of Management, and that the admission of two is now conceded as a sop to public and professional indignation. Clearly, we have not got to the end of the crisis at Guy's, which discredits the year 1880. But good will yet come out of it.

Medical Politics.

Progress in medical legislation was abruptly, but we hope only temporarily, checked by the unexpected dissolution of Parliament. The Select Committee on Medical Bills had commenced its work and took the evidence of Professors STRUTHERS and GAIRDNER, setting forth, as Professor TURNER had done before, the important work being done by the Scottish universities, and their not unreasonable anxiety that it should not be unduly interfered with by legislation, which the Profession feels to be so necessary for reducing the competition and the inequality in Medical

Licensing Boards. The fall of the old Parliament had at least this disadvantage, that it deprived medical men of the services in Parliament of Dr. LUSH, Mr. MILLS, and others who had heartily and ably helped the cause of Medical Reform. The new Parliament happily includes new medical members, who will, we believe, prove worthy successors of WAKLEY, BRADY, CORRIGAN, LUSH, and others. The new Government had not been long in office before it was interrogated on the subject of its intentions in regard to amendments of the Medical Acts. The tone of the answer of the Lord President and the Vice-president was regarded as somewhat discouraging. But there is reason to believe that Mr. MUNDELLA at least was misunderstood, and that nothing more is wanted than an unmistakable expression of the feeling of the profession to induce the Government to complete the work begun by two preceding Governments. The state of Ireland involved some questions of medical interest, but, thanks to the progress of time and of Government, we were spared a repetition of the diseases of famine on anything like the scale of the historical fevers of 1845. Various other questions of medical interest were touched but not disposed of, some of which are noticed elsewhere, the most important of these being the present shape of our Vaccination Laws.

Medico-Legal Cases.

The medico-legal history of the past year is marked by several cases of more than ordinary interest. In February LEWIS J. PAINE was convicted of manslaughter for encouraging a wretched woman with whom he lived to consume inordinate quantities of alcoholic drinks and of thus compassing her death. He was sentenced to penal servitude for life. The case is remarkable because the lethal agent was a common article of diet which the prisoner consumed in quantities nearly equal to those with which he plied his victim. The case of HOWELL *v.* WEST, in which the parent of a boy at the Epsom College brought an action against the head-master and medical attendant of the college to recover expenses in connexion with his son's illness and death, which were alleged to have been due to the carelessness of those who had the charge of him, ended in a verdict for the college authorities. The celebrated case of BAGOT *v.* BAGOT, which had been pending for two years, ended in a compromise. It will be remembered that in consequence of BAGOT suffering from locomotor ataxy in a marked form, it was alleged that he could not be the father of his wife's child, and that therefore the will which he had made, almost disinheriting the child in question, was right and proper. The inquiry at the Cork Fever Hospital into the charges preferred against Dr. MACNAUGHTON JONES of performing "a dangerous operation" (the hypodermic injection of pilocarpin), and thereby causing the death of a patient, happily showed these charges to be altogether groundless and vexatious, but the case serves to show the annoyances to which a conscientious physician may be subjected. The trial of PLEASANCE LOUISA INGLE, a nurse of Guy's Hospital, for the manslaughter of a patient and the many unpleasant facts connected therewith, is too fresh in the minds of our readers to need even a word. Three of the cases mentioned above showed that those who practise medicine and surgery must be prepared to justify their acts. In the cases of HOWELL *v.* WEST and REGINA

v. INGLE members of the profession were brought into antagonism with each other in a manner which was greatly to be regretted, and will cause the year 1880 to dwell unpleasantly in the memory.

Sanitary Legislation and Administration.

With regard to public-health matters, two events occurred during the year which peculiarly mark it. We refer first, to the acceptance by the Local Government Board of a duty of cultivating animal vaccine lymph for the public use; and, second, to the introduction into Parliament, by the President of the same Board, of a Bill for relieving persons objecting to vaccination of the discomfort arising from recurrent penalties under the existing vaccination law. The year opened with the professional discussion as to animal vaccination, its merits and demerits, in full swing. In this discussion the profession had the advantage of Dr. WARLOMONT'S assistance, who brought to their aid, in coming to a sound conclusion, the results of his unique experience in Belgium. Dr. CAMERON, M.P., moreover, who had been chiefly influential, by his introduction of the subject into the House of Commons and his ventilation of it in the public press, in bringing the matter to a crisis, helped. The Local Government Board also, recognising the importance of the discussion, delegated Dr. BALLARD to represent in it the Central Government aspects of the question. At first there was some danger of the discussion lapsing into side issues, but eventually it became evident that there was no substantial differences of opinion among all the parties taking part as to the advantages to be derived from the introduction of animal vaccine into the national system of lymph issue. It was impossible for the President of the Local Government Board to resist the weighty professional opinion brought to bear upon him, and Dr. CAMERON had the gratification in the course of the last session of Parliament of eliciting a promise from Mr. DODSON that his department would make arrangements for the issue of animal lymph from the National Vaccine Establishment. Whatever these arrangements were to be, they do not appear to have been yet completed; but Dr. CAMERON will soon have the opportunity of ascertaining what stops the way. After showing this tendency to advance in his department, Mr. DODSON curiously enough revived the Vaccination Amendment Bill which had been introduced into Parliament several years ago by Mr. FORSTER, and which embodied certain conclusions of the last Parliamentary Committee on Vaccination. The Bill had for its object to relieve objectors to vaccination from repeated penalties for neglecting vaccination, and this by exempting from further penalty persons who had once paid the full penalty that can be inflicted under the law, or who had been fined twice in a less sum. It provided, in short, a cheap and easy mode of freeing the objector from the operation of the law, the child remaining unvaccinated. It is not often that the profession as a body has shown such community of interest and manifested so earnest a desire to save the public from what it believed to be an error in policy, as in this case. Through its recognised corporations and associations, and in conjunction with representatives of almost every branch of the scientific world, it appealed so forcibly and with such cogent reasons to Mr. DODSON that the Bill was withdrawn. It is

greatly to be wished that the energetic action displayed by the profession in this case could be more frequently observed in matters more directly affecting its own interests.

The attention of the profession and of the public has been much and increasingly occupied during the year with the consideration of infectious diseases and the means for their limitation. The subject of the influence of schools in disseminating those diseases has particularly claimed attention. It is to be feared that the compulsory clauses of the Education Act while securing the object primarily aimed at, have indirectly and unexpectedly tended to a greater development of certain infectious diseases. This was probably a necessary consequence of the more certain gathering together of children in larger numbers in schools; but we have little fear that as this matter becomes clearer, medical officers of health will see their way in practice to counteract the evil, and that legislature will support their efforts in this direction. In Local Acts powers are being taken by Sanitary Authorities for the closure of schools in view of certain extending epidemics, and we have little doubt that this local legislation indicates the line in which general legislation, in this respect, will ultimately take on the subject. In connexion with this subject it may be mentioned that five corporations—to wit, Huddersfield, Lancaster, Oldham, Preston, and Stafford—obtained Local Acts including provisions for the more effectual dealing within their boroughs with infectious diseases. The provisions are, as a rule, similar to those granted to other corporations in preceding sessions of Parliament, providing especially for the notification of infectious diseases, but there were diversities which still further show that it is high time this form of legislation in regard to these diseases came to an end. It is a form which must clearly add, and is, indeed, adding, to the already sufficiently complicated character of our sanitary law. Moreover, this sort of legislation granted indiscriminately to corporations, whether they have means for giving effect to it or not, may end in bringing sanitary legislation on the subject into discredit. For it is unlikely that local authorities who have failed to exercise the comparatively slight powers in respect to infectious diseases they possess under the Public Health Act, 1875, will carry into effect the extensive powers they obtain under a Local Act.

No general legislation directly of a sanitary character took place during the last session of Parliament. The administration of the Local Government Board, notwithstanding a change of Presidency consequent upon the change of Government, calls for no particular remark on the public health side other than we have already made in respect to animal vaccination and the Vaccination Amendment Bill brought forward by Mr. DODSON; and on the poor-law side nothing occurred as affecting the medical aspects of the poor-law which requires special notice. It is remarkable, having regard to the too general defective sanitary and medical administration of workhouses, how the Board continues to escape from an endless series of public scandals in this matter. The resignation of Dr. E. C. SEATON as Medical Officer of the Local Government Board, quickly followed by his lamented death, took place early in the year. Dr. BUCHANAN, the Assistant Medical Officer under Dr. SEATON, was appointed Medical Officer to the Board in Dr. SEATON'S place,

and Mr. NETTEN RADCLIFFE succeeded Dr. BUCHANAN as Assistant Medical Officer.

Two questions concerning the public health aspects of disease occupied chief attention in the course of the year. The first question related to a discovery by Mr. W. H. POWER, of the Medical Department of the Local Government Board, that an outbreak of simulated enteric fever on board a school-ship in reality was a form of parasitism, at first suspected to be trichinosis, or like trichinosis in character, but afterwards shown to be of an unknown nature. This discovery has opened up a new field of research in parasitism, and we wait the results of its further cultivation with great interest. The second question related to an outbreak of fatal anthracoid disease among persons engaged in sorting wool in Bradford and Yorkshire. An account of this outbreak, written at the time, has been given in THE LANCET in certain remarkable papers from the pen of Dr. BELL, of Bradford (to whom the merit principally attaches of having worked out the real nature of the affection known locally as "woolsorters' disease"), and we look for a further history of the outbreak from the pen of Mr. JOHN SPEAR, of the Medical Department of the Local Government Board, who investigated the matter for that department of the Government. The pathological inquiry regarding the outbreak was carried out by Professor GREENFIELD, of the Brown Institution, and we have quite recently had the gratification of hearing the results, and of their relation to the whole question of Anthrax from his lips in the lectures he has delivered at the University of London, which ended only this week, and which are now appearing in the columns of THE LANCET. It would be difficult to exaggerate the interest and suggestiveness of these lectures, not only with reference to the pathology of anthrax, but also with reference to several questions of epidemiology of the profoundest moment. This is not the place to comment on the results of Dr. GREENFIELD'S observations, and the observations of others in the particular teachings of the pathological laboratory as to anthrax. Let it suffice to say that for the first time there was presented to the eye and ear in the course of his lectures the whole probable history of the origin, development, increase, decrease, and cessation of a virulent epidemic disease peculiar to animals, but apt to be propagated to man; and a clue was obtained to a line of research touching virulent epidemic diseases generally of the greatest promise. Moreover, it was clearly shown by Dr. GREENFIELD that questions of etiology were not alone concerned in his observations, but that these tended to confirm the researches of other observers that there was being developed side by side with our knowledge of the intimate nature of certain epizootic diseases a knowledge of a prophylaxis similar in character to that which vaccinia exercises upon small-pox. In other words, that it has become possible in the laboratory to cultivate the virulent poisons of the diseases referred to, so that they may by inoculation become protective against their own virulence.

The report of the medical department of the Local Government Board, published during the year, is especially noteworthy for containing the last and concluding part of Dr. BALLARD'S report on "Effluvium Nuisances." It is a curious comment on the administration of the Local Government Board that this remarkable and unique work

has not been published in a separate form. It is distributed through three annual reports of the medical department, and has been published in these reports almost regardless of cost; yet no attempt has been made to bring the several parts together and make them readily accessible for the purpose for which they were intended. The Board has evidently spared no money to perfect the inquiry as far as practicable, but the inquiry being completed and the results invaluable, the Board is careful that the results shall be got at only with difficulty!

No international questions relating to disease obtained much prominence during the year, but the National Board of Health raised a question of what may be called (following Dr. BOWDITCH'S phrase) the Sanitary Organisation of Nations, which may bear fruit hereafter. Of metropolitan health-questions, difficulties accompanying the execution of the Artisans and Labourers' Dwellings Acts and the proposed purchase of the interests of the Water Companies by the Government had the chief place. The former difficulties are still under consideration, and may be a subject for legislation during the coming session of Parliament; the scheme for the purchase of the Water Companies' interests fell through, but this question is pretty sure to come to the front again.

Almost as we write Dr. ALFRED CARPENTER and others are encouraging hopes (let us trust not tantalising) that the amelioration of that abomination of abominations, a London fog, is a possibility. London fog was a most deadly element in the history of 1880. The deaths from diseases of the respiratory organs, registered in London in the week ending Feb. 7th, were 1557, being in excess of the weekly average by no less than 1125! We have to thank Dr. ARTHUR MITCHELL of Edinburgh for the prominent attention which this subject has received of late. In a paper of his which appeared in the course of the year on the influence of the protracted fogs of the winter of 1878-79 on the mortality of the metropolis, he showed how disastrously they had aggravated the mortality from respiratory diseases. This paper excited great notice, and proved that much more serious inconveniences than discomfort and dirt were accompaniments of a London fog, and is causing serious efforts to be made with a view of securing the abatement of this grave nuisance.

The Epidemiological Society, under the Presidency of Sir JOSEPH FAYRER, has displayed great activity. Of the numerous important subjects it has had under consideration we may signalise especially the question of "enteric fever" and "fevers" of tropical climates. Papers were read on these fevers by Surgeon-General GORDON, Surgeon-Major DON, and Deputy Surgeon-General EWART, and a special evening was devoted to their discussion. The interest of the discussion rested mainly in the apparent divergence of views on the subject of enteric fever entertained by medical men of wide experience in India and the tropics and medical men of home experience. But it appeared that even a wider divergence existed among men of large Indian and tropical experience, and among certain of them than among the former, and men of home experience. The discussion inevitably suggested that the divergence signified wide differences in the methods of investigation pursued, and also in the phraseology made use of.

Commissions.

Early in the spring we appointed a Commission to inquire into the working of the new Sick Infirmaries attached to the Metropolitan Workhouses. The result of this inquiry showed that considerable care and attention had been bestowed on the arrangement and construction of these institutions; but our Commissioners pointed out that the medical and nursing staff fell very short of the requirements for efficiently dealing with cases of acute sickness arising among the sick poor. Our Commissioners expressed an opinion that the medical staff should be strengthened by the appointment of clinical assistants, and thus, by relieving the medical superintendent of much unnecessary work, permit him to give more attention to serious and urgent cases. They also recommended that the nursing staff should be largely increased. One point particularly was brought into prominent notice in the course of this inquiry, and that was, how important a factor sickness was among the working classes in the production of pauperism. Our Commissioners demonstrated the proposition that we have so frequently enunciated in these columns, that the sick poor will not, till the last extremity, submit to be pauperised by admission to these infirmaries so long as they can maintain the struggle outside. In consequence of this reluctance, much valuable time is lost in the treatment of disease in its earlier stages, and the case has often assumed a chronic and hopeless form before it is admitted into the sick asylum, where it remains a burden upon the rates for months, or even years, whereas if it had come under observation at an earlier period the catastrophe might have been obviated. A classification and separation of the *sick poor* from the *sick pauper* in these institutions is urgently called for. Recognising the national interest now attached to athletic pastimes, we have during the present year directed attention to some points of interest in these pursuits. Hitherto our remarks have been limited to suitability of various kinds of exercise for individuals under different conditions of life. In the forthcoming articles the various systems of training will be contrasted, and we shall endeavour to enunciate a system that shall fulfil all strictly physiological requirements, with special reference to individual idiosyncrasies. In our introductory article on the subject of Athletics generally we pointed out the revolution the sliding seat was likely to make in the art of rowing, and predicted that increased length of slide, with a slower stroke, would enable the oarsman to bring increased muscular effect to bear on his work, and so increase his pace. This statement has been borne out by the result of the recent race for the championship of the world between HANLAN and TRICKETT, the former, with an increased sliding range of seat and with a considerably slower rate of stroke, easily defeating his opponent, who was the taller and more powerful man. Feeling strongly that the use of Wines as therapeutic agents, and as stimulants and cordials by the convalescent, does not rest on precise principles, we have appointed a Commission to conduct a new series of medical and chemical investigations. Some of the reports of this Commission have appeared, and others are in preparation. We have also collected materials for a special report on Schools, which are now under consideration, and will shortly form the subject of special articles in THE LANCET.

Obituary.

It is never a satisfactory part of a summary to recall the losses of the year. This year is no exception, for it has taken away many whose labours have made momentous additions to medical knowledge, and many more whose medical practice entered into the local history of their respective neighbourhoods. We scarcely know how to select from names so representative. But a few will suffice to show how great the losses are. HENRY HANCOCK, J. A. LOCKHART CLARKE, EDWARD CATOR SEATON, DOMINIC CORRIGAN, ALFRED SWAINE TAYLOR, PAUL BROCA, FERDINAND R. V. HEBRA, ROBERT CEELY, WILLIAM BUDD, Deputy Inspector-General EDWARD GOODEVE Dr. ALFRED HUDSON, EDWARD CARR JACKSON, Dr. JOHN DEAKIN HEATON, J.P., Leeds, HENRY FRANCIS BURDETT of Birmingham, EDWARD AMPHLETT, M.A., M.B. Cantab., Deputy Inspector-General JOHN STIRLING, M.D., Surgeon-Major J. B. HANNAH, at Naini Tal, J. PEARSON IRVINE, M.D., EDWARD ISAAC SPARKS, M.B. Oxon., Surgeon-Major BRYDEN, of the Bengal Army, &c. Many practitioners have died ripe in years and honour, like Mr. LONG of Liverpool, or Mr. WM. JOY, of whom it was said that he practised fifty-five years at Northwold, never having had, or wished for, a holiday in thirty-five years save that necessitated by an attack of typhoid; or like Mr. BATEMAN of Islington, who worked fifty years with only an annual fortnight of holiday, to which he was compelled in his early life by recurrent attacks of hæmoptysis; or like Mr. MICHAEL FOSTER of Huntingdon, whose name and virtues are so happily perpetuated. Some have died in their comparative youth, like Dr. SIMPSON of Netley, or in the midst of their life and usefulness, like Dr. FAIRBANK of Windsor, or Dr. WILLIAM LAUDER LINDSAY of Perth. Some have come by their death in arduous conflicts with plague and climate, like JOHN McDONALD of Buenos Ayres, who was left out of three medical men in a population of 150,000 stricken with yellow fever; some have died with the din of battle in their ears, bravely and at their post, and lie in Afghan cemeteries, like Surgeon-Major JOSHUA HENRY PORTER. Seldom has it been more difficult to do justice to the dead than in looking over our obituary for the year 1880.

In taking leave of our readers for the year 1880, we do so with all good wishes and with good heart. The social and commercial conditions of the country at large are improving. There are evils actual and threatening, but they are chiefly such as can be prevented by individual restraint and wise laws. It only needs that statesmen and individual men and women should take counsel a little more frequently of those whose business it is to study the great laws of health, as well as those of disease, to secure an unprecedented exemption from disease and an unparalleled development of national virtue and health. The days are gone for associating the calling of Medicine with disease. Our association is with health. As a profession, we urge on all movements for its preservation, and when lost, for its recall, and for the restriction of the movements of disease.

MR. LUTHER HOLDEN a few days since delivered his last Clinical lecture at St. Bartholomew's Hospital previous to retiring from the post of acting surgeon to this institution, after a service of more than forty years.

Annotations.

"Ne quid nimis."

THE DEBATE ON RICKETS.

THE adjourned discussion on Rickets was concluded at the meeting of the Pathological Society on Tuesday last. From lack of space this week, we must postpone a full consideration of the subject until our next issue. We certainly share the President's disappointment at the almost entire barrenness of the debate in facts of any kind, and particularly new facts. Theories, opinions, and suggestions have been freely expressed and exchanged, and in this way no doubt the ground has been cleared for future workers, and we may fairly hope, with Dr. Fagge, that the real result of the discussion will be found in the new interest awakened in the subject, and in the stimulus and point it will give to investigation. It has been thus with other of the formal discussions at the Societies; they have been starting-points rather than winning-posts, in which old cumbrous and useless nomenclature, and the various text-book impedimenta of accumulated unsupported views, have been disposed of; or, to change the simile, they have been destructive rather than constructive. Those who hope that they can be other than this must be disappointed, although the ultimate result may thoroughly demonstrate their value.

FOOTBALL ACCIDENTS.

THE late fatal football accident has naturally given rise to many remonstrances against the importation into a pastime of rules which seem to involve an undue amount of danger. The regulation of such matters we must leave to our sporting contemporaries, but we would remark that, while we deprecate unnecessary and unmeaning risks of all kinds, a certain danger is inseparable from all athletic sports. The cricket-field, the hunting-field, the race-course, the racket-court, and the arena of athletic sports, all number a good many maimed, or even killed, among their votaries, but the undoubted value of athletic exercises to the individual, and the nation, more than counterbalances the occasional mishaps which must inevitably occur. While it is advisable to avoid anything approaching to brutality in our pastimes, it is equally necessary not to encourage effeminacy, especially in this age when manufacturers of "gentlemen's corsets" flaunt their advertisements in the public press, and men of the modern æsthetic school write maudlin poems in praise of each other. There are many pastimes infinitely more ruinous to health than those we have enumerated above. Dancing night after night in crowded non-ventilated rooms is among the most unwholesome and dangerous practices of modern life, and kills infinitely more persons (though more indirectly) than either the "Rugby" or the Association Rules. The men who are killed by sitting in public-houses, or (what is very much the same thing) in club houses, playing billiards or cards till the small hours and drinking "B. and S.," are not held up as warnings, while their fellows who happen to be killed while engaged in some sport which has in it a dash of nobility and pluck, are spoken of as "frightful examples" of the evils of this or that amusement. If by undue roughness or by unfairness one man kills another at a game, the ordinary law is sufficient to deal with him. This is enough protection, and we very much object to a return to anything approaching the sumptuary laws of a bygone age. The science of medicine has lately had its liberty seriously curtailed by sentimentalists. We shall very soon be restricted in our choice of diet by the followers of Sir Wilfrid Lawson. Only last session an absurd Bill about acrobats met with a certain amount of favour in the House of Commons, and if a stand be not made our Imperial Vestrymen, whose watch-

word—save the mark !—is “Liberty,” may be asked to regulate the method to be pursued in kicking a football, and impose a limit on the growing prowess of the rising generation.

THE ALBERT MEDAL.

WE have much pleasure in announcing that Her Majesty the Queen has been graciously pleased, on the recommendation of the Prime Minister and the Secretary of State for War, to award the Albert Medal for saving life to Surgeon Henry Grier, of the Army Medical Department, for his gallant and heroic conduct in endeavouring to save the life of the late Lieut. Graham, 2nd Battalion 10th Regt., stationed at Malta. Mr. Graham was suffering from diphtheria in the most virulent form, and had undergone the operation of tracheotomy for relief of some of the most urgent symptoms; the tube became blocked, and suffocation was imminent, when, other efforts having failed, Mr. Grier, at imminent risk, sucked the poisonous matter and diphtheritic membrane from the wound, and succeeded in restoring the life of his patient. Mr. Graham unhappily succumbed a day or two afterwards from exhaustion and extension of the disease. Mr. Grier is, we believe, the first member of the medical profession on whom the Albert Medal has been bestowed, and we congratulate him heartily on the honour which has been conferred on him, and through him on the medical service of the Army.

HERBALIST'S SURGERY.

AN important case came before the Coroner's Court at Old Basford on the 8th inst., which from its surgical and medico-legal aspects is alike important. From the report in the *Nottingham Daily Guardian* we gather that a man, thirty-seven years of age, was suffering from some trouble in connexion with his bladder or urethra, and on hearing from a friend of his—Mr. Marlow, a herbalist—that if sent for he could do him good, he sought his aid. The herbalist “attempted to draw his water, but instead of that drew blood.” Mr. Maltby, a surgeon, was then called in, and found the man collapsed, in great pain, and passing bloody urine; he quickly developed symptoms of peritonitis, from which he died. At the autopsy no urethral stricture was found, but there was a false passage, about three inches long, from the urethra, and piercing the neck of the bladder, which was probably the exciting cause of the fatal peritonitis. It is obvious that considerable violence must have been employed in this case, and while forcible catheterism is not justifiable, even where the passage is obstructed by a stricture, it is still less pardonable where there is no obstruction at all. The fact that skilful surgeons sometimes make false passages in front of tight strictures has no bearing whatever on such a case as this, where there appears to have been no obstacle whatever to the passage of an instrument properly used. The surgical point in the case, however, is obvious, and we need not further allude to it. The coroner was at great pains to instruct the jury as to the principles by which they were to be guided in coming to their verdict, which was that the man died from peritonitis. It is to the coroner's law that we would specially call attention. He said “a mistake had been made,” but that Marlow could not be held to be criminally responsible. He argued that as the operation of passing a catheter has been done very frequently by patients for themselves, it was an operation which an unskilled friend was qualified to do for the deceased. But he seems to have lost sight of the fact that Marlow offered his services to the man with the assurance that he could relieve him, and there can be no doubt that he gave the patient the impression that he was skilled in the treatment of such cases, and professed to be qualified to pass a catheter. Had he possessed a qualification to practise, an action for malapraxis would undoubtedly have laid against him.

A VETERINARY COLLEGE FOR IRELAND.

A DEPUTATION has waited upon the Lord-Lieutenant for Ireland, urging upon him the necessity for establishing a Veterinary School in Dublin, to supply the requirements of the sister island. The veterinary profession does not appear to have been represented in the deputation, nor do its wishes or views seem to have been obtained. The principal speaker certainly gave evidence of this in the very inaccurate statements he made on the subject, some of which were calculated to mislead. Veterinary schools in England and Scotland are self-supporting, and receive no Government assistance; but the Government is now asked to give a grant of £10,000 to commence this school, which, we feel assured, unless annually subsidised by large sums, could not exist for more than two or three years. It is also desired that the proposed school shall be empowered to grant licences to practise veterinary medicine. We look upon this request with the gravest apprehension. No medical school should be allowed to license its own students; and the Government has hitherto refused this privilege with regard to veterinary surgery, application having repeatedly been made by the Highland and Agricultural Society of Scotland for power to grant diplomas to veterinary surgeons, which was declined on the ground that the Royal College of Veterinary Surgeons was alone competent to examine and license students. The Royal College, the body corporate of the profession, has an examining board in London, Edinburgh, and Glasgow, and could also establish one in Ireland if necessary. In such a small body as the veterinary profession two or more diploma-conferring bodies would simply mean a low standard of professional education; and as this is not beneficial to owners of animals, nor yet to the animals themselves, much less to the profession, the request should be resisted.

We even seriously doubt whether there is any necessity for a veterinary school for Ireland, for the simple reason that that country can support very few veterinary surgeons; even at the present time there are many there who cannot obtain a living from the practice of their profession. They receive no countenance at all in some parts of the country by boards of guardians and others who have the bestowing of different appointments, political and religious prejudices largely influencing them. From these, and also from motives of economy, quacks and unqualified men are only too often preferred to veterinary surgeons who may be residing in the same district. From what we can learn, the supply of veterinary surgeons in Ireland is much more than equal to the demand, and to add to the present sources of supply would only increase the inconveniences and drawbacks already existing. The application has been made without due consideration, and we would suggest the collecting of evidence and obtaining the opinions of those most competent to judge, before committing the country to a new cause of expenditure, and injuring a profession which is now, by its one-portal system of granting degrees, beginning to make rapid strides.

One thing is certain—that if a school is maintained in Ireland at the public expense, the schools in England and Scotland will have strong claims also for subsidy, and will undoubtedly demand it.

DR. RICHARDSON AND THE LONDON SCHOOL BOARD.

DR. RICHARDSON has distinguished his election to the London School Board and his entry upon the duties which appertain to the members by saving the Board, if not from impending suffocation, at least from suffocative procedures. Before he had well settled down into his seat at the Board, Dr. Richardson discovered that the Board-rooms, notwithstanding the happy position of the building in which it is

situated, is so imperfectly ventilated as to threaten the members with dangerous results to their health. Dr. Richardson says nothing of what the results must have been, short of obvious evil physical consequences to the members, upon the mental deliberations of the Board; but it may be inferred, so energetic has he shown himself in the matter, that he objects to take part in deliberations of which it would be difficult to say how much of the results came from natural cerebral action, how much from foul air acting upon the cerebration. There is something particularly absurd in the conception of the chief Educational Body in the metropolis carrying on its functions under circumstances deleterious alike to sound health and clear thought for a period of several years, *without having discovered it*, and that the discovery should have been left to be made by the casual importation of a new member. The Board has reason to congratulate itself upon the election of Dr. Richardson, not only from the additional weight his presence will give to many of its deliberations, but also from his having already saved them (or being about to save them) from certain sanitary shortcomings which have unwittingly been permitted in the Board's official residence. The incident suggests that the Board would do well to ask Dr. Richardson to make a sanitary survey of the numerous new schools which have sprung up under their auspices, and which externally at least recall the premises on the Thames Embankment.

THE following resolution was unanimously passed on December 9th, 1880, by the East Surrey district of the South Eastern branch of the British Medical Association at a meeting held at Croydon:—"That this meeting desires to express to Dr. Habershon and Mr. Cooper Forster its sympathy in the painful circumstances which have led to their withdrawal from the staff of Guy's Hospital; and its appreciation of the manly spirit which has induced them to resign their respective appointments, sooner than submit to a loss of professional dignity, or sanction changes which they believed to be detrimental to the interests of the patients entrusted to their care."

At a meeting of the Master and Fellows of Gonville and Caius College, Sir George Burrows, M.D., F.R.S., and George Budd, M.D., F.R.S., members of the College, were elected Honorary Fellows of the Society.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF THE MEDICAL INSPECTORS OF THE LOCAL GOVERNMENT BOARD.

Huntingdon (Registration District).—Scarlet Fever.—This report, from the pen of Dr. Parsons, gives the result of an inquiry into the recent prevalence and long continuance of scarlet fever in the urban sanitary districts of Huntingdon and Godmanchester, and the extension of the disease (as it was feared) from the urban districts into the rural sanitary district of Huntingdon. The report presents a curious picture of the sanitary negligence obtaining in the urban districts, and the practical lapse of the public health law there in many things, as also to a great extent in the rural district. For example, Huntingdon has an old so-called "pest-house," available for use as an infectious disease hospital, but which is given up for residence to a man with a family, and which, during the whole continuance of the scarlet fever, was not used for the isolation of a single case, because, for one reason among others, the occupant had a family of young

children who might become infected. Neither Godmanchester nor the rural sanitary authority possesses hospitals. Recommendations how to deal with epidemic disease seem powerless when some of the most ordinary measures for the sanitary administration of a place are in default, seem purposeless, particularly when it appears pretty obvious that nothing short of an epidemic of cholera or plague would arouse the local authorities to a proper sense of their sanitary responsibilities. Dr. Parsons, nevertheless, makes recommendations, the necessity for which must have been as well known to the authorities before his visit as after. The threatened extension of scarlet fever into the rural sanitary district appears happily to have ended without any serious consequences; but we should have been glad to have known how Dr. Parsons, who has had previous large experience of the needs and difficulties of a rural sanitary district, would have carried into practice his recommendations to the rural sanitary district. Beneath our breath be it whispered (if a pen for the moment be assumed to breathe and whisper) the reports of the medical department have not hitherto given us much light in this direction. The department is getting too much into the habit of stating merely the requirements or permissions of the law, not suggesting how the requirements may be met. Perhaps we may get more practical light on the subject of isolation when Dr. Thorne Thorne completes the inquiry as to sanitary hospitals, on which he is now engaged.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Brighton.—The report of the medical officer of health for Brighton, Dr. Taaffe, for the quarter ending September 30th, shows that the births equalled an annual rate of 28.6, and the deaths of 22.8, per 1000 of the estimated population. The report gives particular attention to the subject of the mortality from diarrhoea among infants and young children, and enters into a detailed statement of the sort of feeding which the infants had who died of diarrhoea during the quarter. In the year 1875 Dr. Taaffe carried out a similar inquiry with reference to fatal cases of diarrhoea among infants during the summer quarter. The results of the two inquiries substantially confirm each other. The great majority of the infants were artificially fed, and of the few fed at the breast several were subjected in a measure to the evils attaching to artificial feeding. Dr. Taaffe's observations lead him to the conclusion that the fatal summer diarrhoea of infants arises from improper feeding at a season when artificial foods are peculiarly apt to undergo change, particularly if great care and cleanliness are not observed; and when the intestinal canal is under the influence of high temperature, especially if at such time the atmosphere be polluted with the effluvia from defective sewers and accumulations of putrescent filth. Dr. Taaffe's report can scarcely fail to influence the action of the sanitary authority in this matter, and exercise a generally beneficial result upon the care of infants and young children in Brighton.

SCARLATINA CULTURE IN WHITECHAPEL.

A child died a few days ago of scarlet fever in Whitechapel. The registrar of deaths gave information to the sanitary authority, and thereupon the sanitary inspector, Mr. Skidmore Wrack, visited the house where the death had occurred. He found that it consisted of four rooms only, and was inhabited by two families. In the front room on the ground floor lay three children, suffering from scarlet fever, occupying it with the father and mother; in the back room lay the body of the dead child. The two upper rooms were occupied by a man, his wife, and five children, the children having been in attendance at a Board School during the whole period of sickness in the rooms below. But for the death of the child in the lower rooms nothing of this would have become known, and when it did become known such mischief as could have been done by the infected family had probably been done. The Board School being informed of the case excludes the children from the upper rooms, and so makes their infection tolerably sure by their retention at home, if it had not before occurred. The cultivation of scarlet fever under these circumstances is unavoidable, and the only chance the sanitary authority has of limiting the extension of the disease under such circumstances is by getting the earliest information of it. Pending general legislation on the subject, cannot the Metropolitan Sanitary Authorities follow the example of some of the great northern towns, and seek special legislation?

THE SMOKE NUISANCE.

A deputation of the Manchester Association for Controlling the Escape of Noxious Vapours from Manufactories recently had an interview with the Health Committee of the Salford Corporation, in order to urge upon them the adoption of more stringent measures for the suppression of the smoke nuisance. The Salford Committee deprecated any notion that the Corporation had been heedless in this matter, and flattered itself with the belief that the Salford atmosphere was "immeasurably" superior as to freedom from smoke to that of Sheffield, Leeds, Wolverhampton, Warrington, or Bolton. They could not hope to purify their atmosphere wholly of smoke, and in making matters too stringent for the suppression of smoke, they might incur a greater evil as affecting the welfare of the operatives. Indeed, better and more readily practicable methods of smoke-consumption must be waited for before all could be done towards suppression of the nuisance to the extent that was desirable. In short, the remarks of the committee remind us of an incident in a town not far distant from and as "smoky" as Salford. Not very long ago, standing on the hills above the town on a Sunday afternoon, and chancing to fall into conversation with an operative, we remarked on the pleasant aspect of the place without its customary pall of smoke. "Bonny enough," was the answer (we do not attempt to reproduce the dialect), "but, ah! my lad, if you had seen, as I have seen, more than once, this pretty prospect day after day, with no smoke from the long chimneys, and no food in the cupboard, but with wife and children on the hearth, you would not look on this pretty scene even on a Sunday afternoon without feeling a turn inwards."

Dr. Bridges has completed his inquiry into the disagreement between the medical officers of the St. George's-in-the-East Poor-law infirmary. The evidence will be submitted to the Local Government Board, with whom rests the decision as to the results and the determination of the measures to be taken, if any, to put an end to the state of things which led the Board of Guardians to invoke the Board's interference in the matter.

It has been resolved by the Epsom Rural Sanitary Authority that a fee of 2s. 6d. be paid to any medical practitioner in the district who shall first report (on a printed form provided for the purpose) to the inspector of nuisances the outbreak of certain infectious diseases in any part of the sanitary area. The Chertsey, Dorking, and Reigate unions, it appears, have already adopted a similar regulation with advantage.

A local paper states that of sixty-nine cases of "scarlet fever" reported to have occurred recently at Darwen, in Lancashire, one only, on an inquiry made by the medical officer of health, proved to be a case of that disease.

We are glad to observe the admirable way in which our contemporary, the *Graphic*, deals with the question of vaccination, and the suicidal folly of the anti-vaccinationists.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

Under the influence of continued unseasonably mild weather English urban mortality showed a further decline last week. In twenty of the largest English towns, estimated to contain in the middle of this year a population of seven and a half millions of persons, or nearly one-third of the entire population of England and Wales, 4964 births and 2793 deaths were registered last week. The births were 221, and the deaths so many as 482, below the average weekly numbers during 1879. The deaths showed a further decline of 89 from the low and decreasing numbers in recent weeks; and the annual death-rate per 1000, which had been equal to 22.1, 20.6, and 20.1 in the three preceding weeks, further declined last week to 19.4, a lower rate than has prevailed in any week since the middle of July last. The lowest death-rates in the twenty towns last week were 13.0 in Wolverhampton, 14.6 in Norwich, 15.9 in Portsmouth, and 16.0 in Brighton. The rates in the other towns ranged upwards to 21.0 in Manchester, 21.1 in Liverpool, 23.7 in Plymouth, 24.6 in Sunderland, and 25.5 in Nottingham. During the past eleven weeks of the current quarter the death-rate in these twenty towns averaged only 21.6 per

1000, against 22.9 in the corresponding periods of the four years 1876-79.

The deaths referred to the seven principal zymotic diseases in the twenty towns, which had been 358 and 370 in the two preceding weeks, were 375 last week; they included 129 from scarlet fever, 74 from whooping-cough, 63 from measles, and only 32 from fever, principally enteric. The annual death-rate from these seven diseases averaged 2.9 per 1000 in the twenty towns, and ranged from 0.7 both in Wolverhampton and Newcastle-upon-Tyne, to 3.8 and 4.5 in Hull and Sunderland. The 129 fatal cases of scarlet fever in the twenty towns, showed a further decline from recent weekly numbers; the largest proportional fatality occurred in Sunderland, Bristol, Manchester, and Bradford. Measles fatality was largest in Brighton and Salford, and that of whooping-cough in Nottingham, Hull, and Liverpool. The deaths from fever, principally enteric, which were 78 in the twenty towns in the second week of July, have since steadily declined, and were but 32 last week. Of the 19 deaths from diphtheria last week, 12 occurred in London, and 2 in Salford. Small-pox caused 33 more deaths in London, and one in Manchester; whereas no fatal case was returned in any of the eighteen other large towns. The number of small-pox patients in the Metropolitan Asylum Hospitals, which had steadily increased from 77 to 338 in the seven preceding weeks, further rose to 273 on Saturday last. The number of new cases of small-pox admitted to these hospitals, which had been 67 and 132 in the two previous weeks, fell again to 76 last week. The number of patients in the Highgate Small-pox Hospital were 26 on Saturday last, and 4 less than at the end of the previous week.

The deaths referred to diseases of the respiratory organs in London, which had been 334 and 295 in the two preceding weeks, were 307 last week, and were no less than 239 below the corrected average number in the corresponding week of the ten preceding years; 189 resulted from bronchitis, and 79 from pneumonia. The annual death-rate from lung diseases was equal to 4.4 per 1000 in London, and 4.9 in Liverpool.

In the twenty towns last week 67 uncertified causes of death were registered, equal to 2.4 per cent. of the total deaths. The proportion of uncertified deaths did not exceed 1.7 per cent. in London, whereas it averaged 3.0 per cent. in the nineteen provincial towns. No uncertified deaths were registered in eight of the twenty towns, whereas their proportion was largest in Wolverhampton, Bradford, Sheffield, and Sunderland.

HEALTH OF SCOTCH TOWNS.

In eight of the largest Scotch towns, the annual death-rate last week averaged only 19.9 per 1000, against 24.7, 22.1, and 21.7 in the three preceding weeks; this low rate exceeded, however, by 0.5 the still lower average rate in the twenty large English towns. The rates in the eight Scotch towns last week ranged from 15.4 and 19.1 in Dundee and Aberdeen, to 25.8 and 27.6 in Leith and Paisley. The deaths referred to the seven principal zymotic diseases in the eight towns, which had been 112, 95, and 91 in the three preceding weeks, further declined to 80 last week. The annual death-rate from these seven diseases averaged 3.2 per 1000. In the eight Scotch towns the zymotic death-rate last week ranged from 1.0 in Dundee, to 4.2 and 6.2 in Paisley and Leith. The fatal cases of scarlet fever in the eight towns, which had declined in the five preceding weeks from 53 to 33, further fell to 17 last week, of which 9 occurred in Glasgow (corresponding with the number in the previous week) and 7 in Edinburgh and Leith. The 17 deaths referred to diphtheria included 10 in Glasgow and 4 in Edinburgh. The 13 deaths from whooping-cough corresponded with the number in the previous week. The 13 fatal cases of diarrhoea again showed an excess upon the average numbers for the season. The annual death-rate from lung diseases was equal to 4.9 per 1000 last week in the eight Scotch towns, against 3.9 in London; the highest death-rates from these diseases in the eight Scotch towns occurred in Leith, Paisley, and Greenock.

HEALTH OF DUBLIN.

The death-rate in Dublin showed a further decline last week. The annual death-rate from all causes within the city, which had declined from 39.6 to 27.2 in the five preceding weeks, further fell to 25.9 last week, a lower rate than has prevailed in the city in any week since the be-

Obituary.

FRANK BUCKLAND.

ginning of October, 1879. During the first eleven weeks of the current quarter the death-rate in the city averaged, however, 32.9 per 1000, against 21.0 in London, and 22.0 in Edinburgh. The 156 deaths in Dublin last week showed a further decline from recent weekly numbers, but included 24, or 15 per cent., which were referred to the seven principal zymotic diseases, or 6 more than those in the previous week; 11 resulted from scarlet fever, 7 from fever (including typhus, enteric, and simple), 3 from whooping-cough, 1 each from small-pox, measles, and diarrhoea, and not one from diphtheria. The annual death-rate from these seven zymotic diseases was equal to 4.0 per 1000 in Dublin last week, against 2.9 in London, and 2.7 in Edinburgh. The fatal cases of scarlet fever, which had been 7 and 6 in the two previous weeks, rose to 11 last week. The 7 deaths referred to fever showed a further decline from the excessive numbers in recent weeks, but were proportionally more than five times as numerous as the deaths from the same cause in the twenty large English towns. The 3 deaths from whooping-cough corresponded with the number in each of the two previous weeks. The deaths of infants differed but slightly from the numbers in the two previous weeks, while those of elderly persons showed a further decline.

THE SANITARY ASSURANCE ASSOCIATION.

A meeting of the members and subscribers of the Sanitary Assurance Association was held recently at the Langham Hotel, Sir Joseph Fayrer presiding, and Professor Tyndall taking part in the proceedings. A report of the proposed organisation of the Association was presented and adopted, and promises well for future success. One of the great advantages which the Association offers was aptly stated by Dr. Poore in the course of the meeting. Medical men, while often conscious that their patients are occupying houses which probably possess grave sanitary defects, are usually at a loss how to advise them to set about the discovery of these defects. The Association offers an easy and cheap way out of this difficulty. Persons may have recourse to it with confidence for a skilled examination and trustworthy report on their premises, and wise people will anticipate as far as practicable the need for the doctor by becoming permanent subscribers to the Association, and steadily availing themselves of the advantages it offers.

THE SERVICES.

TROOPS AT SHOEBOURNESS.

In the *Army and Navy Gazette* of the 11th inst. attention was called to the sanitary condition of Shoeburyness, which was described as "far from satisfactory. Typhoid fever is constantly occurring there, and is very prevalent in the neighbourhood." We have made particular inquiry into the matter, and find that, so far at least as the troops are concerned, this statement is quite erroneous. They are remarkably healthy, and not a single case of typhoid fever has occurred among them for a considerable period. Last year, in consequence of complaints regarding the quality of the water supplied to them, the War Office, on the recommendation of the Director-General, sanctioned the issue of spongy-iron filters to every barrack and quarter at the station, and this measure has been attended with the most satisfactory results, and the water is described as quite pure and good.

ARMY MEDICAL DEPARTMENT.—Surgeon-Major Joseph Johnston, M.D., has been granted retired pay, with the honorary rank of Brigade-Surgeon. Surgeon-Major William Snowdon Hedley, M.D., has retired upon temporary half-pay.

MADRAS MEDICAL ESTABLISHMENT.—To be Surgeon-Major: Surgeon Frederick Henry Blenkinsop.

MILITIA.—Surgeon Henry Steele, Forfar and Kincardine Artillery, resigns his commission.

WEST KENT MEDICO-CHIRURGICAL SOCIETY.—The first meeting of the twenty-fifth session of this Society took place on Oct. 8th, 1880, when an address was delivered by Dr. Harry Knight Hitchcock, who was elected President in succession to Mr. J. P. Purvis, in which he gave a *résumé* of the advancement of medical science during the past year.

DEATH has removed from our midst, at a comparatively early age, one whom the public service can badly spare, and the loss of whom has excited deep and almost general regret. Frank Buckland died at 37, Albany Street, on the morning of the 19th inst., the victim of a chronic disease which, though it had lately incapacitated him from leaving his house, yet left his mind unaffected up to the last. He was born on December 17th, 1826, and was consequently only two days over fifty-four years of age. The son of the Very Reverend William Buckland, D.D., Dean of Westminster, well known in his day as a geologist and palæontologist, but whose fame is perhaps most closely associated with the valuable *Bridgewater Treatises*, young Buckland commenced his scholastic career at Winchester School, and terminated it at Christ Church, Oxford. Selecting medicine as a career, he studied in London and Paris; and having graduated he served the office of House Surgeon at St. George's Hospital for some time. A commission having been offered him in the Household Cavalry, he joined the 2nd Life Guards in 1854 and served in the regiment as Assistant Surgeon until 1863. Whatever fancy he may have had for his profession when he first entered it, it soon became evident that his bent was zoology, or rather what is called natural history. He was fond of keeping all kinds of animals, rare or common, and even while in the Life Guards his barrack-room was often more like a miniature menagerie than the *sanctum* of a Guardsman. This characteristic he had certainly exhibited from his earliest days, but it was all-absorbing as he reached middle life, and perhaps no more keen observer of animal life or student of animal nature has been known in our days. Between him and animals and birds there almost immediately sprang up the closest intimacy, if not sympathy, and there were few creatures he could not make a companion of, more frequently an attached friend, after one or two interviews. We need not wonder that the *Field* at an early period received many communications on natural history from him, and when he left the Guards he was, if not on the staff, at least a regular contributor. *Land and Water* was started, in conjunction with a great authority on piscatorial matters, Mr. Pennell, in 1866, and it was in this periodical that he recorded all his current observations on matters connected with natural history, particularly in its practical aspect, and gave information as to sea and river fisheries. Many curious and valuable facts are recorded here, for Buckland collected material from every source, and nothing in the way of a new species or new variety, an unusual or unknown habit, or monstrosity or freak of nature of any kind, ever came amiss to him. Pisciculture, however, may be said to have been his speciality, and he had already made himself a name in connexion with it when, in 1867, the Government made him Inspector of English Salmon Fisheries, and in 1870 the trust was extended when he was appointed Special Commissioner for the Salmon Fisheries of Scotland. In this office his intimate knowledge of fish habits and fish-breeding served him and the country well, and if anyone cares to know what he has done in the way of improving the quantity and quality of various kinds of freshwater fish, increasing the supply of sea fish, introducing trout and salmon into new rivers of new countries, protecting fish from waste and unnecessary destruction, he has only to refer to the many Blue Books which contain his reports, and the reports of commissions of which he was a member. His indomitable exertion and enthusiasm led him to accomplish more in developing the resources of our rivers and seas than any other man had ever done, and his system of fish culture is so excellent that it has been adopted very largely in other countries. In this way he was a most excellent public servant, and to him the country is greatly indebted.

So long ago as 1857, he published four series of "Curiosities of Natural History," volumes teeming with strange and curious facts about many kinds of animals; in 1873 a "Familiar History of Fishes" appeared; and the "Logbook of a Fisherman and Zoologist" in 1876. Last year he edited a splendid edition of Gilbert White's perennial "Natural History of Selborne." In all these, as well as in his other writings, we find natural history treated in the most simple

and yet most attractive and instructive manner. Indeed, few can deny that Frank Buckland has done very much to popularise natural history and place it before us in its most fascinating aspect. There are none of his writings which are beyond the depth of comprehension of an average school-boy, and yet they contain great scientific truths.

Frank Buckland possessed many of his father's characteristics, and these are discerned in his writings. More especially did he inherit that genial humour and hearty appreciation of a joke which sometimes made the worthy Dean the subject of an anecdote. Vigorous in body, and original to a large extent in mind, he worked incessantly—physically and mentally. His collection at the South Kensington Museum is an example of the skill—artistic and scientific—he brought to his loved pursuit, and the patience and enthusiasm with which he was endowed. His intellect was quite clear and unclouded up to death, and he had been actively interesting himself in promoting a piscatorial show at Grimsby, and in getting up prizes for the fishermen—a class of men with whom he was most deservedly popular, and whose hard and dangerous occupation he did his utmost to ameliorate and brighten. His name will long remain green in the memories of those who knew him, as that of a good-hearted man, and a true public servant and benefactor.

Medical News.

UNIVERSITY OF LONDON.—The following candidate has passed the recent Examination in subjects relating to Public Health:—

Giles, George Michael James, St. Mary's Hospital.

UNIVERSITY OF CAMBRIDGE.—The following have passed the First Examination for the degree of M.B.:—

CLASS I.—None.

CLASS II.—Agar, B.A., Caius; Barker, Trinity; Barton, Caius; Beard, non-collegiate; Bisshopp, non-collegiate; Blaker, non-collegiate; Castle, Pembroke; Challenor, B.A., non-collegiate; Clarke, Caius; Dumbleton, St. Peter's; Dumergne, Corpus; Floyer, B.A., King's; Hinnell, Pembroke; Love, St. John's; Marshal, Clare; Nichol, Caius; Pash, B.A., Pembroke; Preston, Corpus; Raven, Emmanuel; Sidebotham, Caius; Smart, Caius; Smith, Caius; Spriggs, Caius; Stickler, Clare; Taylor, B.A., St. Peter's; Thurtell, B.A., Caius; Watts, Corpus; Wishaw, non-collegiate; Wilson, Caius.

The following have passed the Second Examination for the M.B. degree:—

CLASS I.—Sherrington, Caius.

CLASS II.—Aldred, B.A., Caius; Bostock, B.A., Pembroke; Brinton, Downing; Dill, B.A., Caius; Fowler, B.A., Caius; Griffiths, M.A., Trinity; H. Groom, B.A., Magdalene; Hewitt, B.A., Christ's; Knowling, B.A., King's; Morris, B.A., Caius; Owen, B.A., non-collegiate; Peskett, B.A., Downing; Pollard, B.A., Caius; Richardson, B.A., King's; Slater, B.A., St. John's; Spicer, B.A., Caius.

The following have passed the second part of the Third Examination for the degree of M.B.:—

CLASS I.—Alister, M.A., St. John's; Mackern, Caius; Phillips, B.A., St. John's.

CLASS II.—Bentham, B.A., Pembroke; Brunton, B.A., St. John's; Clark, B.A., Christ's; Collier, B.A., Jesus; Gripper, B.A., St. John's; Jessop, B.A., Caius; Nichols, B.A., St. Catherine's; Weldon, B.A., Caius.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Dec. 16th:—

Bathe, Anthony John, Southampton.
Farrer, Robert Thompson, Brighouse, Yorkshire.
Galpin, George Luck, Grahamstown, Cape of Good Hope.
Garman, John Cornelius, Plumstead.
Norville, Frederic Harvey, Royal Infirmary, Bristol.
Wilson, George John, Western-road, Brixton.

The following gentlemen also on the same day passed their Primary Professional Examination:—

Richard Hingston, London Hospital; Thomas Horsfall, Leeds School of Medicine; George Leonard Webster, King's College.

COLLEGE OF PHYSICIANS IN IRELAND.—At examinations held in December the following obtained the licences in Medicine and Midwifery of the College:—

MEDICINE.—Francis E. Ackerley, Joseph Boyd, Robt. Joseph Browne, Arthur Wellesley Cadman, Edmund Corcoran, Wm. Joseph Fottrell, Edw. T. Geoghegan, Jas. Foulds Joseph, Richard Francis O'Brien, Janet Monteath Rushbrook, William Augustus West, Geo. Herbert Withington.

MIDWIFERY.—Francis E. Ackerley, Joseph Boyd, Robert Joseph Browne, William Joseph Fottrell, Edw. Thomas Geoghegan, Joseph Patrick Kealy, Richd. Francis O'Brien, Janet Monteath Rushbrook, William Augustus West.

The undermentioned Licentiates have been admitted Members:—

Robert Bradshaw, David John Browne, Mark Anthony Harte, John D. Hillis, Henry Lowndes, William Kildare Miley, George Jonathan Mitchinson, Thomas Tarrant (Brigade Surgeon, A.M.D.).

UNIVERSITY OF DUBLIN.—The following degrees were conferred in the Examination Hall, Trinity College, on the 15th inst.:—

BACHELOR IN MEDICINE.—Arthur Cockle, Stuart Davis, John Galbraith, John Mason, John Charles Martin, John Michael Nicolls, George Patterson, George Scriven.

BACHELOR IN SURGERY.—Henry Lewis Clare, Stuart Davis, William Spear Gordon, John Charles Martin, John Michael Nicolls.

MASTER IN SURGERY.—William Cox Nevill.

DOCTOR IN MEDICINE.—George A. Bluett, Francis Charles McNalty, William Cox Nevill.

LICENTIATE IN MEDICINE.—William Smyth.

BEQUESTS AND DONATIONS TO MEDICAL CHARITIES.

By the will of the late Sir Francis Lycett the Brompton Hospital for Consumption receives £500, St. Mary's Hospital £100, the Royal Free £200, the Cancer Hospital, Brompton, £200, the Royal Hospital for Incurables £300, King's Cross Hospital £500, the Truss Society £100, and the Victoria Park Hospital for Diseases of the Chest £500. Miss Matilda Cohen bequeathed £100 to the Brompton Hospital and to the Hospital for Incurables, Putney, and £50 each to the Sea-bathing Infirmary, Margate, and the Royal Victoria Hospital for Sick Children. "C. M. F." has given £100, Gervase Taylor £50, "Anonymous" £50, and "H." £50 towards the funds of the Adelaide Hospital, Dublin.

CAMBRIDGE AND EPSOM.—The Shuttleworth Scholarship of £60, tenable for three years, open to all registered students of the University, has been recently awarded to Mr. G. Bernard Hoffmeister, already a Natural Science Scholar (£60 a year) of Caius, youngest son of Dr. Hoffmeister of Cowes. Mr. Hoffmeister was also First Prizeman in Science in each of his three years of residence, and previously held the Forest and Gilchrist Scholarships, £50 each, for three years from Epsom College, the latter carrying with it a Free Medical Scholarship to St. Bartholomew's Hospital. In the Natural Science Tripos list, issued on the 18th inst., Mr. Hoffmeister's name appears in the First Class, and as distinguished in Botany.

OWENS COLLEGE.—At a meeting of the Council held at the College on the 17th inst. the following members of the medical profession were, on the recommendation of the Senate, elected to the associateship of the College:—Samuel Buckley, M.B. London, 1880, F.R.C.S. Eng., 1873; John James Kent Fairclough M.D. Queen's University, Ireland, 1877; John Thomas Faulkner, M.B. London, 1880; Thomas Hahnemann Hayle, M.B. London, 1876; John William Meek, M.B. London, 1880. A Platt Physiological Exhibition, of the value of £20, was awarded to Mr. Walter Hurst.

We understand (says the "Herald and Weekly Free Press") that Dr. Forbes of Milbourn has just endowed the Inverness Dispensary with £6000. This endowment will be under the management of trustees. The medical officer, who may be one of the practitioners of the burgh, will receive £100 of the interest of the fund, whilst £20 will be added to the salary of the superintendent, the rest of the endowment being devoted to the purchase of medicines and to meet the general expenses of the institution. The present medical attendant is Mr. F. M. Mackenzie.

THE LATE ROBERT HARKNESS, F.R.S.—During last summer a costly memorial window was placed in the Examination Hall of the Queen's College, Cork, to the memory of Professor Harkness. The deceased gentleman, who was a distinguished geologist, died in 1878, and formerly held the Professorship of Geology in the Queen's College, Cork, and latterly also of Natural History.

In consequence of the recent fatal football accident in Southampton, the Mayor of that town has issued a notice prohibiting the pastime on the public lands as long as it is played according to the Association or Rugby rules, and he calls on the heads of families and schools to support him in his endeavour to modify the practice of the game.

THE Bazaar and Fancy Fair held last week on three several days, at the Ulster Hall, Belfast, for the benefit of the Belfast Royal Hospital, has, we understand, fully realised what was anticipated; and a very large amount will be added to the funds of this charity.

PROFESSOR DEWAR will give the first of his Christmas Lectures (adapted to a juvenile audience) on Atoms, on Tuesday next, Dec. 28th, at three o'clock, at the Royal Institution.

MR. W. J. FULLER, resident surgeon of the St. Marylebone Workhouse, will be granted a superannuation allowance of £80 a year on resigning his appointment.

THE Lord Mayor of London has consented to perform the ceremony of opening the new Temperance Hospital buildings in the Hampstead-road, on Friday, March 4th.

DR. O'SULLIVAN has been elected Mayor of Limerick for 1881.

CONTRIBUTORS TO THE LANCET FOR 1881. SUPPLEMENTAL LIST.

ALEXANDER, WILLIAM, Surgeon-Major, M.D., Queen's Univ., Irel., Military Station Hospital, Bradford.

BROWN, A. GARDINER, F.R.C.S. Edin., Aural Surgeon to the London Hospital.

CHRISTIE, J., M.D. (Glas.), Lecturer on Hygiene and Public Health at Anderson's College; Medical Officer of Health, Hillhead; Dispensing Surgeon to Western Infirmary, Glasgow.

CHURCHILL, F., M.D. Edin., Surgeon to the Victoria Hospital for Children; Honorary Surgeon to the Young Women's Home, Sloane-street, London.

COOKSON, S., M.D. St. And., Medical Officer and Public Vaccinator, Castle Church District, Stafford Union.

DAVIES, N. E., L.R.C.P. Lond., M.R.C.S. Eng., Hon. Physician and Surgeon, Yeatman Hospital, Sherborne.

DOWN, J. L. H., M.D. Lond., Physician to the London Hospital.

DUKE, ALLEN, M.D. St. And., Surgeon to the Dover Hospital and Chichester Infirmary.

DUNLOP, A., M.D. Edin., Honorary Medical Officer to the Jersey General Dispensary.

DUNLOP, W. M., M.B. Glas., Resident Medical Officer to the St. Pancras Workhouse, King's-road, N.W.

GILES, P. B., Jun., L.R.C.P. Edin., M.R.C.S. Eng., Medical Officer of Health, Hay Rural District.

GREENWAY, H., M.R.C.S. Eng., Medical Officer of Health, Plymouth Borough; Consulting Ophthalmic Surgeon to Plymouth Provident Dispensary.

HARRIS, V. D., M.D. Lond., Consulting Physician and Demonstrator of Physiology to St. Bartholomew's Hospital; Assistant Physician to Victoria-park Hospital.

JACKSON, T. V., M.R.C.S., Senior Surgeon at Wolverhampton and Staffordshire General Hospital.

JOHNSON, R. LOCKE, L.R.C.P., L.R.C.S. Edin., Physician to North London Consumption Hospital; Physician to St. John's Hospital for Skin Diseases, Leicester-square.

KEIR, W. INGRAM, L.R.C.P., L.R.C.S. Edin., Medical Officer of Health, Rural Sanitary Authority, and Surgeon to Cottage Hospital, Melksham.

LUSH, W. J. H., M.D., F.R.C.P. Ed., M.R.C.S., F.L.S., Hon. Visiting Medical Officer to the Andover Cottage Hospital, Associate (late Warneford scholar), King's College, London.

MAY, E. HOOPER, M.D. St. And., F.R.C.S. Eng., Surgeon to the General Dispensary and to the Training Hospital, Tottenham.

MEREDITH, W. A., M.B. Edin., M.R.C.S. Eng., Surgeon to the Samaritan Free Hospital for Women and Children, and Anaesthetist to Seymour-street Branch.

O'CONNOR, B., M.D., M.R.C.P. Lond., Physician to the Westminster General Dispensary, Gerrard-street, W.

PATON, J., M.B. Glas., Surgeon to the Greenock Hospital.

PHILLIPS, E. E., L.R.C.P. Edin., M.R.C.S. Eng., Medical Officer of Health, South-end Urban District, and Rochford Rural District.

PRIDEAUX, ENGLEDEU, L.R.C.P. Lond., M.R.C.S. Eng., Medical Officer to the District and Union House of Wellington.

RIVINGTON, W., M.B., F.R.C.S. Eng., Surgeon, London Hospital, Lecturer on Human Anatomy to London Hospital Medical College.

ROSS, R., M.D. St. And., Physician to Belfast Royal Hospital.

STOKER, W., F.R.C.S. Eng., Senior-Surgeon, Durham County Hospital.

TROUP, R. W., Surgeon-Major, M.B. Aberd., Canterbury.

Medical Appointments.

Intimations for this column must be sent DIRECT to the Office of THE LANCET before 9 o'clock on Thursday Morning, at the latest.

ALTHAM, J., M.B., has been appointed House-Surgeon to the Royal Surrey County Hospital, Guildford.

BATTLE, W. H., F.R.C.S., has been appointed Surgical Registrar to St. Thomas's Hospital Medical School for 1881, vice H. P. Porter, F.R.C.S., whose appointment has expired.

CLARKE, R., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer to the Third District of the Hailsham Union.

DINGLE, W. A., L.R.C.P.L., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer to the Houseless Poor Asylum, St. Luke's.

EMMERSON, W. L., M.D., has been appointed Public Analyst for the Borough of Stamford for one year.

FRASER, D. A., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer of Health for Burnham, Somersetshire, vice Moore, resigned.

GALBRAITH, W., L.R.C.P. Ed., L.R.C.S. Ed., has been appointed Medical Officer of Health for the South Gooforth Urban Sanitary District.

GORDON, J. A., L.R.C.P. Ed., L.R.C.S. Ed., has been appointed Medical Officer to the Ludham District of the Smallburgh Union.

GROOME, W. W., M.B., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer to the First District and the Workhouse of the Stow Union.

HALL, J. G., M.B., C.M., has been appointed Fourth Surgeon to the Aberdeen Royal Infirmary and Lunatic Asylum.

HAMILTON, G. S., L.R.C.P., L.R.C.S. Ed., has been appointed Assistant House-Surgeon to the Liverpool Northern Hospital, vice C. Shears, L.R.C.P.L., promoted.

JACKSON, G. J., M.R.C.S.E., has been appointed Visiting Surgeon to the London Diocesan Deaconess Institution, Tavistock-crescent, W., vice G. Hastings, M.D., resigned.

JAMES, W. D., M.R.C.S.E., has been appointed an Honorary Surgeon to the Sheffield Public Hospital for Skin Diseases.

JONES, R., M.B. &c., has been appointed Assistant Medical Officer to the Earlswood Asylum, Surrey, vice Spence, M.D., resigned.

KNOX, T., L.K.Q.C.P.I., L.R.C.S.I., has been appointed Medical Officer to the Workhouse of the Maguiresbridge District of the Lisnaskea Union.

MARTIN, J. W., M.D., has been appointed Honorary Physician to the Sheffield Public Hospital for Skin Diseases, vice G. H. De Wolfe, M.D., resigned.

OLIPHANT, J., M.D., has been appointed Public Vaccinator to the Western District of the Leicester Union.

PRINCE, F. T., M.R.C.S.E., has been appointed Surgeon to the St. George, Hanover-square, Provident Dispensary, vice J. H. Morgan, F.R.C.S., resigned.

ROOME, H. A., M.B., C.M., has been appointed Honorary Assistant Medical Officer to the Royal Surrey County Hospital.

ROSS, Mr. T., has been appointed Assistant to the Extra Physicians of the Royal Hospital for Sick Children, Edinburgh.

SHEARS, C. H. B., L.R.C.P.L., M.R.C.S.E., has been appointed House-Physician to the Liverpool Northern Hospital, vice D. M. Fraser, M.B., resigned.

SMALE, M., M.R.C.S.E., L.S.A.L., L.D.S.E., has been appointed Medical Tutor to the Dental Hospital of London, Leicester-square.

STOKES, H. F., L.R.C.P.L., M.R.C.S.E., has been appointed Registrar and Chloroformist to the Evelina Hospital for Sick Children.

SYKES, W. J., M.D., has been appointed Medical Officer of Health for the Portsmouth Urban Sanitary District, vice Turner, resigned. Also Public Analyst for the same District.

TAYLOR, Mr. T. P., has been appointed House-Surgeon to the Essex and Colchester Hospital, vice Wells, resigned.

THOMSON, W. S., M.D., C.M., L.F.P.S.G., has been appointed Medical Officer of Health for the Peterborough Urban Sanitary District.

WILLIAMSON, G. E., F.R.C.S.E., has been appointed Assistant-Surgeon to the Newcastle-on-Tyne Infirmary.

Births, Marriages, and Deaths.

BIRTHS.

HEELAS.—On the 14th inst., at Ersking Lodge, Primrose-hill-road, N.W., the wife of James Heelas, M.D., of a daughter.

RYAN.—On the 4th October, at Gympie, Queensland, the wife of John Pennefather Ryan, L.K.Q.C.P.I., L.R.C.S.I., of a son.

WOLSTON.—On the 19th inst., at 46, Charlotte-square, Edinburgh, the wife of Walter T. P. Wolston, M.D., of a son (stillborn).

MARRIAGES.

BROOKE—LIGHTBOWN.—On the 18th inst., at the Pendleton Congregational Church, Manchester, by the Rev. E. Walker, Henry A. G. Brooke, M.B., B.A., to Sara, fourth daughter of Henry Lightbown, J.P., of The Willows, Weaste.

CULLING—TOWNSEND.—On the 23rd inst., by licence, at St. Mary's, Ealing, Middlesex, William Robert, L.S.A.L., eldest son of the late Robert Culling, Surgeon, of West Lydiard, near Somerton, Somerset, to Jessie, third daughter of the late Arthur Townsend, Esq., of the County of Essex.

FOWLER—WATSON.—On the 18th inst., at St. James's, Piccadilly, by the Rev. J. Dyer Tovey, M.A., Robert Fowler, M.D., of 12, Old Burlington-street, W., and of Bishopsgate, E.C., to Judith, second daughter of the late John Watson, formerly of Rosenheim, West-hill, Putney-beath, and 74, Lower Thames-street. No cards.

STACPOOLE—McBAIN.—At Cromwell, Otago, New Zealand, by the Rev. B. Drake, Charles A. Stacpoole, Surgeon, to Joanna, youngest daughter of the late John McBain, of Melbourne.

DEATHS.

- DITCHETT.—On the 16th inst., at his residence, Ugate, Louth, Lincolnshire, W. D. Ditchett, J.P., M.R.C.S.E., in his 75th year.
- MILLER.—On the 10th inst., at Newport, Isle of Wight, Margaret Booth, the beloved wife of C. M. Miller, M.D., of Shire House, Sheffield, Medical Officer of Health for Carisbrooke.
- PUGHE.—At his residence, Catharine-street, J. E. Howard Pughe, M.R.C.S.E., son of the late Mr. J. Pughe, J.P., of Aberdovey, aged 35.
- ROE.—In March last, at Cape Coast Castle, Charles Roe, L.R.C.S.I., aged 25.
- WEBB.—On the 5th inst., from enteric fever, at Shrewsbury, John Rheece Wynn Webb, F.R.C.S.E., L.R.C.P.L., of Coln, St. Aldwyn's, Gloucestershire, aged 25.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

INTERNATIONAL MEDICAL CONGRESS.

LONDON, 1881.

SECTION VIII.—MENTAL DISEASES.

Dr. LOCKHART ROBERTSON, President.

Dr. CRICHTON BROWNE, LL.D., F.R.S.E., } Vice-Presidents.
Dr. MAUDSLEY,Dr. GASQUET, } Secretaries.
Dr. SAVAGE,

Proposed List of Subjects for Discussion, subject to revision before
31st December, 1880.

ANATOMY.—1. Modes of Preparation of Nervous Tissue. 2. Morbid Appearances due to Modes of Preparation. 3. Minute Structure of Special Parts of Brain.

PHYSIOLOGY.—1. Relation of Cerebral Localisation to Mental Symptoms as Hallucinations. 2. Hypnotism.

PATHOLOGY.—1. Of Idiocy, Morphological and Histological Changes. 2. Relations of Insanity to Gout, Renal Disease, Exophthalmic Goitre, and to Coarse Brain Disease.

CLINICAL.—1. "Folie à double Forme." 2. Influence of Intercurrent Diseases on Insanity. 3. Insanity due to Toxic Agents.

THERAPEUTICAL.—1. Use of Baths, of Narcotics, of Chloral Hydrate, of Opium, and of Alcohol. 2. New and Unusual Remedies.

ASYLUM ADMINISTRATION.—1. Cottage and Village Treatment. 2. New Legal Codes. Austrian, Italian, English Projects.

CIVIL RELATIONS OF THE INSANE.—1. Marriage, Wills. 2. Insanity and Aphasia.

CRIMINAL RELATIONS OF THE INSANE.—Special Asylums for Insane Criminals.

LONDON, AUGUST 2ND TO 9TH, 1881.

SECTION III.—PATHOLOGY AND MORBID ANATOMY.

Dr. SAMUEL WILKS, F.R.S., President.

Dr. BRISTOWE, } Vice-Presidents.
JONATHAN HUTCHINSON, Esq.,
Prof. SANDERS, M.D., F.R.S.E., Edinburgh,Dr. PAYNE, } Secretaries.
MARCUS BECK, Esq., M.S.,

The following subjects are those proposed for discussion:—

I.—The relations of minute organisms to certain specific diseases, such as Relapsing Fever, Ague, and Malignant Pustule (Anthrax).

II.—The relations of minute organisms to unhealthy processes arising in Wounds, and to Inflammation in general.

III.—Tubercle: 1. Its histological characters. 2. Its relation to inflammatory processes in different organs, such as the Lungs, Lymphatic Glands, Bones, and Joints.

IV.—The origin of Cancer and Sarcoma, and their relation to the Normal Tissues in which they arise.

V.—Diseases of the Kidneys: 1. The morbid histology of the different forms of Bright's Disease. 2. The relation of Renal Disease to disturbances of the general circulation, and to alterations in the Heart and Bloodvessels.

VI.—Recent Researches in the Morbid Anatomy of the Brain and Spinal Cord.

It is proposed to hold exhibitions of microscopical specimens in illustration of each of these subjects, and, further, to afford opportunities for the demonstration of methods and instruments of research, in any of those in which it would be desirable.

In thus selecting certain special subjects for discussion, it is by no means intended to exclude from consideration other pathological topics.

All communications relating to this Section should be addressed to one of the Secretaries, whose addresses are given below, and abstracts of all papers intended to be read at the Congress should be sent in by April 30th, 1881, to be submitted for approval to the Executive Committee, and to be translated into German, French, or English.

JOSEPH FRANK PAYNE, M.D., } Secretaries.
78, Wimpole-street, London, W.,
MARCUS BECK, }
30, Wimpole-street, London, W., }

THE LANCET IN 1880.

At the commencement of the year 1880 THE LANCET was permanently enlarged from 72 to 80 pages. Notwithstanding this increase of space, it has been necessary to give an average of more than THREE EXTRA pages each week during the year. The tale of our work, as shown by the GENERAL INDEX, which appears in the present number, now stands as follows:—We have devoted 2080 pages to the medical subjects of the year, giving 238 to the publication of clinical lectures, 351 to original articles by practising members of the profession, 97 to reports of hospital cases, 54 to reviews, and 401 pages to the Editorial discussion of matters of professional interest. Meanwhile the steadily and rapidly increasing demands on our public space have compelled us to appropriate 2252 pages to the use of advertisers. The projected increase of the year has been more than justified by the claims made upon THE LANCET as a medical newspaper. Some notion of the part this Journal has now assumed in the periodical literature of the profession may be gathered from the fact that during the year now closing we have printed no less than 676 letters from medical men, giving an average of THIRTEEN in each number. Some of our issues have contained upwards of a thousand advertisements, and it has been difficult to keep this section of the Journal within the limits thus indicated. One of the prominent features of our Editorial work during the year has been the development of an extended, and, as we believe, very efficient organisation for the notice of matters affecting the Public Health both at home and abroad. Medical Officers of Health and Sanitarians generally now find in THE LANCET an admirable section devoted to Sanitary Science, and a thoroughly effective channel for information and the publication of special news. Advertisers who have so signally shown their appreciation of the facilities offered by THE LANCET during the last year have been furnished with a special INDEX OF ADVERTISEMENTS, which has proved of great value both to those who announce their wares and wants and to those who seek the information advertisements supply. In the past year we have increased the size of particular numbers of the Journal as occasion required. For example, on the 8th of May and the 11th of September we issued numbers comprising ONE HUNDRED AND FOUR PAGES each. We shall pursue the same policy in 1881 which has been so successful in 1880, and, with a constantly growing circulation, we confidently hope to maintain the high position which the late Mr. Wakley, the founder of this Journal, claimed and asserted, for the trust we have received from his hands.

Notes, Short Comments, and Answers to Correspondents.

One Aggrieved.—The recent Royal Warrant removed some of the grievances which, however much our correspondent may now decry them, were put prominently forward by the officers of the department. The Marquis of Ripon has promised an inquiry into the other causes of discontent which were brought under his consideration, and, pending that inquiry, we do not think the publication of our correspondent's remarks would tend to promote the interests of the service.

Mr. A. Morris.—It is possible to obtain clinical instruction in mental diseases at most of the public asylums; and in connexion with each school of medicine there is a lecturer on Psychological Medicine who provides the teaching required.

Læsus.—Could our correspondent favour us with another letter, and it shall receive attention?

A Bart's Student.—We are strongly of opinion that no one who is not a medical man should practise dentistry, the L.D.S. notwithstanding.

Mr. E. M. Holmes is thanked.

*Enquirens, M.D., (Leeds).—*1. To a limited extent only. The water should be boiled immediately before using, and under no circumstances should more than the quantity required for a day's consumption be boiled at one time. Of course, except under circumstances where a pure water-supply can by no possibility be obtained, the use of water containing sewage would not be assented to by a medical man.—2. Fish contains a good deal of phosphorus; but, as a feeder of nerve-tissue, we hold it far inferior to butchers' meat.
Mr. M'Gill's paper will appear in an early number.

"NOTES ON THE PATHOLOGY OF DIABETIC URINE."

To the Editor of THE LANCET.

SIR,—Having read Dr. Cameron's Pathological Notes on Diabetic Urine in your impression of Nov. 18th, I beg leave to send you the following report of two specimens of urine, with some comments upon them, in the hope that they may be of interest:—

SPECIMEN 1.—Urine reddish-yellow, slightly turbid; slight flocculent deposit; specific gravity 1007; reaction acid. Contains sugar, and about one-fifth column of albumen. Microscopic examination shows numerous large granular casts, leucocytes, and squamous cells. Quantity of sugar, twenty-four grains per ounce.

SPECIMEN 2.—Urine yellow, turbid, thickish deposit; specific gravity 1009; reaction faintly acid. Contains about one-fourth column of albumen; no sugar.

Remarks.—Specimen 2 was the urine of a traveller, a gentleman who was known to be suffering from diabetes and albuminuria. Being under the impression that the sugar could not have disappeared entirely from his urine, I persevered, with every precaution necessary, to overcome the numerous fallacies generally met with in testing for glucose. Both Fehling's and Trommer's tests failed to reduce the copper, even when the test-tube was kept in hot water for some time, and even after having stood cooling some hours. With Moore's test, after several minutes' boiling, the colour of the urine was only considerably increased. Not having been successful in the reduction of copper, I endeavoured to reduce trisnitrate of bismuth in carbonate-of-soda solution; but although only a very small quantity was used, the colour of the metal was not altered in the slightest degree. Imagining, therefore, that the reason of these tests not effecting the reduction of the metals must be owing to the sugar being present in very small quantities, and the other constituents approximating their normal standard, I resolved to try Seegen's test, whereby the urea, uric acid, &c., are removed from the urine by repeatedly filtering it through charcoal. This was followed by precisely the same results as the former experiments. An attempt was made to precipitate the uric acid by nitric acid, and after standing some time I filtered the precipitated albumen and uric acid, and applied Trommer's test to the filtrate. A few drops of the solution of copper were first added, and then liquor potassæ until the liquid was only faintly acid or neutral; then on applying heat for a short time, the red deposit which characterises sugar became apparent. Is this owing to the fact, as Dr. Schunck announced in the *Philosophical Magazine* (March, 1862), that healthy urine when boiled with acids gradually deposits a resinous substance, which acquires the power of reducing the oxide of copper? Or has the glucose been replaced by a substance called inosite, which is not capable of reducing copper, bismuth, or silver in an alkaline solution, and which is found in cases of diabetes and Bright's disease?

I thought these two specimens interesting, in addition to the above, as regards the low specific gravities. I suppose it is entirely depending upon the albumen being present, as in neither of the cases was water taken or passed in excessive quantities.—Yours obediently,

Birmingham, Nov. 1880.

AUGUSTUS F. CLAY.

"SEAWEED AS A SUBSTITUTE FOR JAM."

In reference to his note which appeared in our issue last week, *Mr. G. C. Karop* writes that he meant to say it is *not* the diatom, *Arachnoidiscus japonicus*, but the seaweed on which it grows, that is used for making jelly.

Mr. G. E. Carre.—The announcement appears on p. 998 of our last issue.

THE DISCUSSION ON "LISTERIAN OVARIOTOMY."

To the Editor of THE LANCET.

SIR,—There are several inaccuracies in the otherwise admirable report of the meeting of the Medico-Chirurgical Society, published in your last issue, that I should like to correct. The first occurs in the following: "He had not once to use the ice-cap in cases treated with this solution (one per cent.), and out of 29 cases had lost eight, two deaths being from shock." It should have been: "He had not once to use the ice-cap in the last 29 cases, and out of seventy-eight modified Listerian cases had lost eight," thus giving a mortality of 10·2 per cent., or, excluding the two deaths from shock, a mortality of only 7·8 per cent. The second consists in the substitution of Mr. Heath's name for that of Dr. Keith. The third was an error on my part—viz., in the reference to the statistics collected by Peruzzi. In the second hundred the proportions were the reverse of those of the first hundred—a result which Peruzzi attributes to the combined effects of Listerism and drainage. Yet as evidence that Listerism alone could not be said to have done very much for ovariectomy in Italy, which was my argument, there still appears a mortality of over 33 per cent., with this interesting fact, that in addition to septicæmia appearing several times in the list of deaths, we have a new cause figuring there—viz., that of carbolic poisoning.

Yours faithfully,

Granville-place, Dec. 20th, 1880.

GEO. GRANVILLE BANTOCK.

DR. BARRY'S REPORTS.

WE are requested to state that Dr. Barry's Reports, which we noticed in our impression of Dec. 4th, are published by Mr. Nettle, of Settle. *Mr. Thomas Bell, (Uppingham).*—We cannot give a decisive reply until we see the MS.

Dr. Prior.—The paper is marked for insertion.

ON THE ASSOCIATION OF AFFECTIONS OF THE THROAT WITH ACUTE RHEUMATISM.

To the Editor of THE LANCET.

SIR,—I beg the favour of an opportunity to draw attention to the fact that, however lightly treated in text-books of general medicine, the connexion between tonsillar inflammations and the gouto-rheumatic diathesis has been insisted on by me, as many can testify, for upwards of ten years, and is dwelt upon at full length in my work on "The Throat and its Diseases," published in March, 1878.

Since this point was referred to by very many of my reviewers as novel, at least as to the extent that I carried the similarity of causes, symptoms, progress, and treatment of the two affections, I may assume that there was some originality in the suggestion, and that if so, I may lay claim to any credit attaching to its first publication. The fact that my book did not receive the honour of a review in your pages, perhaps justifies Dr. Fowler in thinking that he is breaking new ground in publishing his very interesting list of corroborative cases. For the same reason I claim a prominent place in your columns for this short statement of my position.

I would add that in my experience patients subject to tonsillitis are not often the victims of muscular or articular manifestations of the disease, provided the throat affection be treated by an eliminative, not by an abortive process. I therefore always commence treatment by an active purge, and combine sulphate of magnesia and potash salts with the salicylate of soda. Finally, in those few cases in which the rheumatic connexion is not clearly to be traced, and tonsillar inflammation is frequently recurring, an insanitary condition of dwelling-house, food, or vocation is generally at the root of the mischief.

Your obedient servant,

Weymouth-street, W., Dec. 1880.

LENNOX BROWNE.

Dr. W. R. Smith, (Cheltenham).—The paper will appear as early as our arrangements will permit.

Mr. Freeman.—Thanks.

THE demands of the Summary and the Index will be a sufficient explanation to our readers of the postponement of notice of many subjects.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Sturges, London; Professor Rutherford, Edinburgh; Dr. Smart, Dowlais; Dr. N. Harris, London; Dr. Keir, Melksham; Mr. Kesteven, London; Dr. Foster, Leeds; Mr. Story, Linslade; Mr. Giles, jun., Staunton; Mr. Freeman; Mr. Hodges, Leicester; Dr. Savage, Birmingham; Dr. Dunlop, London; Mr. Treves, London; Mr. Stoker, Durham; Mr. Partridge, London; Mr. Rivington, London; Dr. Taylor, Liverpool; Mr. Bell, Uppingham; Dr. Hinds; Mr. Phillips, Southend; Dr. G. W. Balfour; Mr. Jones, Lewes; Dr. Lownds, Egham; Mr. Reeves, London; Mr. Christy, London; Mr. Cookson, Stafford; Dr. Marshall, Conishead Priory; Mr. Cable, Greenwich; Mr. Paton, Greenock; Mr. Jackson, Wolverhampton; Dr. Christie, Glasgow; Dr. Dunlop, Jersey; Mr. Hooper, Newhall; Dr. Latham, Cambridge; Mr. Napper, Cranleigh; Mr. May, Tottenham; Dr. L. Down, London; Mr. Meredith, London; Mr. J. Mahomed, London; Mr. H. M. Ellis, Eastney; Dr. Waller, Edinburgh; Mr. Furneaux Jordan, Birmingham; Mr. Beal, London; Dr. O'Connor, London; Dr. Hoffmeister, Cowes; Mr. Whiteford; Dr. Stephenson, Bradninch; Mr. Higgins, London; Dr. R. L. Johnson, London; Dr. Tripe, London; Dr. Cock, Ross; Dr. Thursfield, Shrewsbury; Dr. Bantock, London; Mr. Dolan, Halifax; Dr. Alexander, Bradford; Dr. Ross, Belfast; Mr. Vacher, Birkenhead; Mr. Barnish, Wigan; Mr. Tube, Cheltenham; Mr. King, Leeds; Mr. Davis, Hereford; Mr. Smyth; Mrs. Graying, Forest-hill; Mr. Saunder; Messrs. Clark and Co., York; Mr. T aylor; Dr. Tibbits, Bradford; Dr. Caskie, London; Dr. Budd, Clifton; Dr. Drummond, Newcastle-on-Tyne; Mr. Rendle, London; Mr. Greenway, Plymouth; Dr. Bakewell, Hokitika, N.Z.; Dr. Moore, Dublin; Mr. Davies, Shorborne; Mr. Stewart, Barnsley; Dr. Lush, Fyfield; Dr. Allen Duke, Folkestone; Mr. L. Tait, Birmingham; Mr. Wilkinson; Mr. Prideaux, Wellington; H. J. F.; Lesus; E. B. D.; A Constant Subscriber; Fides; Surgeon-Major; Lecturer; Juvenal; &c. &c.

LETTERS, each with enclosure, are also acknowledged from—Mr. Miller, Newport; Mrs. Bromhead, Lincoln; Dr. Clark, Folkestone; Dr. Edge, Manchester; Mr. Gulliver, London; Dr. Waters, Liverpool; Mr. Harris, Hackney; Mr. Atkinson, Farnham; Miss Rimington, Nottingham; Mr. Spowencer, Gainsborough; Mr. Stelfox, Darwen; Mr. Collingwood, Corby; Mr. Tomson, Luton; Messrs. Sharp and Co., Newcastle-on-Tyne; Mr. M'Bain, Otago, New Zealand; Dr. Dickson, Buxton; Messrs. Maw, Son, and Thompson; A. B., Canterbury; A., Sheffield; E. J.; A. A.; Superintendent, Croydon; Medicus, Middlesbrough; Alpha, London; Alpha, Darwin; M. A., Claughton; W. S. S.; R. E., Llandover; &c.

Science, Missouri Republican, Ormskirck Advertiser, Wigan Observer, Gatlard's Medical Journal, La Escuela de Medici, Brighton Herald, Ramgiltkei Advocate, Freeman's Journal, Monmouthshire Beacon, &c., have been received.

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